Global geographic reach: A Delphi study into the future of the airline industry

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Candidate's Certification

I certify that the substance of this thesis has not already been submitted for any degree and is not currently being submitted for any other degree or qualification.

Signature

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Dedication

To George and Carina who demonstrated time and time again that loves conquers all.

Abstract

The global airline industry is dynamic and complex, with historically low profitability and a seemingly paradoxical yet symbiotic relationship with globalisation. This study conducts a strategic industry level analysis into its likely future over the next decade, with protectionism and liberalisation at its zenith. A plethora of competitive drivers, shapers, factors and forces unite to create the contemporary industry's architecture, and to influence its future prospects.

This study carefully considered the impact and role played by both geographical location (home base/nationality), and international relations (bilateralism/multilateralism), which in large measure determine where and how airlines can extend their global geographic reach. Few industries are so profoundly shaped by geographical location as is the airline industry, while political decisions embedded in international treaties such as air service agreements (ASAs), and enshrined in the bilateral system, continue to hamper multilateral efforts in many parts of the world. The interests of states remain paramount in the industry.

A five stage mixed-method Delphi study was conducted. Key findings include an evident level of participant pragmatism based on situational context, not ideologically driven conceptualisations. Underpinning participants' views, on many occasions, were their geographical region/s of best industry knowledge. Thus, high level knowledge of a particular region shaped and influenced what participants thought was possible elsewhere. The future for major European flag carriers and the big three global alliances was characterised as solid overall, even as equity investments and bilateral partnerships grow. Europe was seen as a prime example of future regional liberalisation, but more as architype than driver; the North Atlantic less so.

According to most study experts, the three major Gulf carriers are not headed for global dominance, but they will continue to be a significant part of the industry in future. Meanwhile, protectionism in Asia, particularly China, will strengthen in future, while India's future was seen as mostly too challenging to accurately forecast at present. The global airline industry will not witness liberalisation beyond what its national building blocks and bilateral structural realities are able to absorb. Even so, this will not stifle industry expansion. The industry's future appears set for growth into hitherto underdeveloped countries and regions; a trajectory that will continue over the next decade and beyond.

Key Abbreviations

AEA	Association of European Airlines
ASA	Air Service Agreement
ASEAN	Association of Southeast Asian Nations
BGQ	Background Question
CAPA	Centre for Asia Pacific Aviation
ETS	Emissions Trading Scheme
EC	European Commission
EU	European Union
FSC	Full Service Carrier
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
LCC	Low Cost Carrier
MCQ	Multiple Choice Question
MS1	Main Survey 1
MS2	Main Survey 2
PESTE	Political, Economic, Social, Technological & Environmental
PS	Pilot Survey
SAM	Single Air Market
UAE	United Arab Emirates
UN	United Nations
US	United States
WTO	World Trade Organisation
WS	Workshop

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Chapter 1: Introduction

1.1   Introduction

This introductory chapter provides an overview of the research study. Firstly, the nature of the research is covered; centred on the research problem, the research objectives and the four research questions. Next, an overview of the methodology is provided. Following this, the context of the research is summarised, including the researcher's motivation in conducting this study. After this, delimitations of scope and key assumptions are articulated, before the thesis design and structure are detailed.

1.2   Introducing the research

The global airline industry is a complex and dynamic industry that reflects a wide array of routes, markets, regions, airlines and business models, amongst others (Hanlon, 2008; Doganis, 2010). Many of the aforementioned have received little scholarly attention outside of long established air markets and airlines. Added to this, domestic air markets continue to be investigated to an extent that far exceeds their international counterparts, in large measure due to the available historical data set, and the more readily articulated parameters that they possess (Saranga & Nagpal, 2016). There is arguably no other major global industry more shaped and influenced by geographical location, and few so extensively impacted by international relations, than the airline industry (Lawton, 1999; Nayar, 1995; Richards, 1999).

1.3   Nature of the research

This section details the nature of the research problem and the context of the research questions. The following provides a summary discussion of each of these.

1.3.1   Nature of the research problem

The global airline industry is enormous, and it is an integral part of the travel and tourism industry, the biggest industry in the world (Chan, 2000; Vasigh, Fleming, & Tacker, 2013). The airline industry enables and encourages globalisation, but at the same time finds itself trapped in a globalisation paradox whereby it is constrained by national restrictions and a massive web of bilateral agreements (Debbage, 2014; Macara, 2009; Staniland, 1998). The airline industry has long been divided between those who support freedom of the air, versus

those who continue to place national sovereignty at the heart of the industry's architecture and ongoing development (Rhoades, 2008). Multilateral air market liberalisation and protectionism have become synonymous with this freedom versus sovereignty divide (Dobruszkes & Graham, 2016).

Despite this reality, little scholarly research has sought to explicitly link ongoing debates about air market liberalisation and protectionism with international relations, and that which does so is relatively dated and mostly inconclusive (Jönsson, 1981; Lawton, 1999; Nayar, 1995; Richards, 1999). This research contributes to a better understanding of how international relations and geographical location both impact and shape the airline industry. Meanwhile, international liberalisation outside of Europe is covered throughout the literature, but not to the same extent as domestic deregulation which garners significantly more focus (Button, 2009).

Added to this, the three major Gulf carriers and China's airline industry have only received relatively limited scholarly attention to date as well (Dresner, Eroglu, Hofer, Mendez, Tan, 2015; Heicks, 2010; Wang, Bonilla & Banister, 2016). Moreover, economic comment and analysis maintains a central place in connection to the airline industry (Doganis, 2010), with international relations, including international aviation law, occupying a comparatively niche location dispersed for the most part across multiple disciplines and interest areas (Havel & Sanchez, 2014).

International relations is able to provide valuable insights into multilateralism (liberalisation) and bilateralism (protectionism); although this simple dichotomy is complicated by the fact that multilateral trade blocs can be very protective, while bilateral agreements can vary from closed (i.e. tightly protected) through to considerably liberalised (i.e. open) (Burchill, 2005; Lazar, 2011). Thus, international aviation poses a myriad of challenges for international relations (Lowenfeld, 1975; Rhoades, 2008; Richards, 1999). Hooper (2014) notes that: "Nayar (1995) argued that sovereignty is not reconcilable with the emergence of an international regime to liberalise trade in air transport services" (p. 21).

Nayar (1995) points out that debates surrounding global aviation are essentially about whether the market or the state should predominately shape aviation; liberalism being the philosophy underpinning the former he argues, and mercantilism/realism the latter. He concluded that advocates of liberalism have met with "severely limited results" in aviation

(Nayar, 1995, p. 145). This mirrors debate within the international relations community between the two dominant theories of realism and liberalism, with the former focused on the balance of power amongst states, and displayed strongly with bilateralism; while the latter is concerned with decreasing state power, and in its place market forces and multilateralism (Burchill, 2005).

The global airline industry is not only trapped in a globalisation paradox, but it is also widely viewed as being in a profitability paradox whereby the industry struggles to make a consistent return on investment despite considerable growth rates and ongoing expansion (Doganis, 2010). The financial services community generally cautions against investing in the airline industry (Bisignani, 2013). Such paradoxes are challenging to unravel for international air markets as they do not readily conform to the traditional economic and political paradigms or metrics that are more easily applied to domestic air markets (Doganis, 2010).

The purpose of this research is to fill this gap and to connect international relations, particularly multilateralism and bilateralism, and geographical location (home base and nationality), to assess the global airline industry's future prospects. In this context, a fuller understanding is gained of how and why airlines extend their global geographic reach. The political, economic and geographical context in which the strategic decisions of major airlines are made is then more readily apparent.

Therefore, a mixed-method Delphi study was undertaken to address the four research questions detailed below. The Delphi method is well suited to situations where data is either challenging to locate or simply non-existent. By pooling the anonymous and independent views of airline industry experts, this thesis was able to leverage the widely recorded scholarly benefits of using this methodology, including in contexts like the global airline industry where data are limited across many air markets, regions and emerging global players.

Based on the worldview of pragmatism, and employing as implicit strategic scaffolds Porter's five forces of competition model, and the Political, Economic, Social, Technological and Environmental (PESTE) framework, this industry level analysis sought to gain key global airline industry insights from a wide range of participants, chiefly defined experts. The five stages of data collection provided a rich repository of information that allowed for patterns

and statistically significant differences to be discovered, and to utilise these to comprehensively respond to the research questions.

1.3.2 Research objectives

The core objectives of this research study are to:

- Conduct an industry level analysis of the global airline industry, including its likely future over the next decade or so, through the application of a mixed-method Delphi study;
- Investigate how and why airlines extend their global geographic reach, through the prism of international liberalisation and protectionism; and
- Forecast the global airline industry's likely future from the vantage point of major international regions, carriers, alliances and strategic partnerships.

1.3.3 The research questions

Broadly, this research sought to gain key industry insights into where the global airline industry is headed over the next decade or so. This study aims to explain how and why major airlines extend their global geographic reach by chiefly considering the extent to which both multilateral liberalisation and protectionism (bilateralism/sovereignty), will impact and shape future prospects and trajectories for the overall industry. Part of this includes unpacking both the globalisation and profitability paradoxes that the airline industry appears to many to be trapped in, together with differentiating between multilateral liberalisation and bilateral liberalisation. The former is concerned with multiple countries agreeing to liberalise air traffic rights between them, while the latter covers only two countries opening-up air access between themselves.

To achieve this overarching aim, four research questions were developed and are presented below. The first research question seeks to understand where and why participants differ in their views regarding liberalisation and protectionism, including how these inform conceptualisations covering the industry's future. Next, research question 2 is predicated on the significant global air markets of the North Atlantic and Europe, where efforts towards multilateralism have been arguably the most comprehensive to date for the airline industry (Hanlon, 2008; Button, 2009). The extent to which these developments are globally transferable is of core focus here (Button, 2009).

Research question 3 then considers the three major Gulf carriers which continue to widely impact the airline industry as their global networks expand, and as their industry power increases (O'Connell, 2011). Finally, research question 4 focuses on Asia, a global region where the airline industry is massive, and with the potential to be even bigger in the years ahead. This final research question is concerned with what this region indicates about the chances for greater liberalisation around the world (O'Connor & Fuellhart, 2014). The four research questions are:

- **RQ1:** To what extent do international liberalisation and protectionism contribute to the conceptualisation of the future of the global airline industry?
- **RQ2:** To what extent are the North Atlantic and European air markets prime examples of where the global airline industry is headed into the foreseeable future, including the multilateral liberalisation that other regions could follow?
- **RQ3:** What do the experiences and strategies of the three major Gulf carriers reveal about the likely future of both international liberalisation and protectionism, and the airline industry more broadly?
- **RQ4:** What does the Asian region reveal about the chances for greater liberalisation of the airline industry globally?

1.4   Methodology overview

This study is based on pragmatism. Pragmatism played a central role in this thesis as it unfolded across multiple sequential stages, with data emerging that then shaped each remaining stage. Other worldviews would likely have been too prescriptive and inflexible to encourage and harness such an emerging data trail. Pragmatism promotes the notion of freedom "to choose the methods, techniques, and procedures of research that best meet [a researcher's] needs and purposes"; this freedom extends to choosing multiple ways "of collecting and analysing data" (Creswell, 2013, p. 28). Pragmatists maintain that research takes place within "social, historical, political, and other contexts" (Creswell, 2013, p. 28). Pragmatism also played an important role in this research because it avoided any 'one size fits all' mentality from developing, and it was also able to better leverage five varying stages of data collection.

This research was founded on a five stage mixed-method Delphi study. The Delphi method is a forecasting technique based primarily on expert opinion, and it has been extensively

employed in both a qualitative and quantitative context, including mixed-method aviation research (Tapio, Paloniemi, Varho, & Vinnari, 2011; Linz, 2012; Mason & Alamdari, 2007). Delphi is similar to historical analogy "where the future is forecasted based on historical events" (Vasigh et al., 2013, p. 288). This study followed a multiphase approach which extended beyond the basic design elements of the exploratory (and other) approaches by examining "a problem or topic through an iteration of connected quantitative and qualitative studies that are sequentially aligned" (Creswell & Plano Clark, 2011, p. 100).

Questions and forecasts across all five stages of this study were grouped and structured around core geographical regions of the global airline industry, and based upon major airline players, and also key partnership strategies used to achieve global geographic reach. In addition, the first stage Workshop and the final stage In-Depth Interviews provided flexible mechanisms to, in the former, shape and guide the second, third and fourth stage surveys; while the latter provided grounds for both verification and expansion of data captured on the surveys.

Meanwhile, purposeful and snowball sampling allowed a wide array of geographically distributed participants from diverse professional backgrounds to be involved in this research (Baltar & Brunet, 2012), and for a delayed definition of expert to be established (Landeta, Barrutia, & Lertxundi, 2011). This situation not only meant that responses from non-experts and experts could be compared and contrasted, but also that a larger spectrum of opinions and viewpoints could be harnessed. The forecasts and interviews were then conducted with the cohort of defined experts. This progressively unfolding process sought to capture as many key industry insights as possible, while reserving the final forecasts and interviews for only those participants with demonstrated and self-rated expertise of a minimum required standard (Rowe & Wright, 2011).

1.5   The context of the research

Given the mixed-method nature of this research, it is important to establish some contextual issues that assist in better understanding what is meant by the global airline industry, liberalisation and protectionism, together with appreciating the researcher's motivations and experiences that informed this study. The following provides a brief discussion of these topics.

1.5.1 The global airline industry, liberalisation and protectionism

It is important to point out that the global airline industry does not reflect nor infer one singular and homogenous air market; the world is actually comprised of multiple air markets ranging from city pairs (i.e. a single route) through to regional single air blocs (e.g. the European single air market), and also the interactions between air markets such as across the North Atlantic. In the international arena, the industry is built on a national architecture essentially made up of a plethora of domestic air markets interacting to varying degrees with one another across national borders (Macara, 2009; Staniland, 1998; Hanlon, 2008; Rijke, 2012).

Liberalisation is defined in this research as the degree to which air service agreements (ASAs) are open to competitive forces, including the extent to which (if any) they are multilateral (Dobruszkes & Graham, 2016). Protectionism is employed in this study to refer to the regulations, policies and practices that limit or restrict air market access, including the provision of international traffic rights (Dobruszkes & Graham, 2016; de Wit, 2014). However, liberalisation and protectionism are not mutually exclusive; rather they reflect outer points along a spectrum of air market openness (Hooper, 2014). Likewise, neither is promoted in this research study as inherently superior nor inferior to the other; each needs to be dispassionately and equally understood if the global airline industry's future trajectory is to be accurately appreciated and plotted (Fan & Lingblad, 2016).

Likwise, claims that the airline industry is a paradox – whether in relation to globalisation or profitability – tend to be founded on parallels and assumptions linked with other industries, and not on what in many ways is a unique and particular industry and institutional context (Havel & Sanchez, 2014; Bartsch, 2013). Ultimately, it is only by investigating core geographical regions, air markets and major industry players that global airline industry insights can be unlocked, and their value assessed. The fact that this dynamic, complex and enormous industry is still growing considerably around the world today, and appears set to do so into the foreseeable future, only adds weight to the contention that many relevant and valuable aspects and elements pertaining to the industry are yet to be scholarly explored (Fan & Lingblad, 2016; Itani et al., 2014).

1.5.2 Motivation to conduct this research study

The researcher's motivations for undertaking this research study are many and varied, and in order to better appreciate these, a sense of the researcher's educational and professional circumstances and journey are required. The researcher is an Australian, and as such is situated at a geographical vantage point that provides a window on the airline industry, but which also does so at some distance from major air markets. The southern hemisphere is home to mostly end-of-line carriers like Qantas Airways, Air New Zealand and South African Airways. Emerging markets in South America, particularly Brazil, Argentina and Chile, face similar geographic circumstances as well (Hanlon, 2008).

In contrast, the northern hemisphere is home to the major airline markets of the world, namely North America, Europe, Asia and a growing Middle East (Hanlon, 2008). Although it is certainly true that the global airline industry could be successfully and convincingly investigated from anywhere in the world, the fact that the researcher has spent most of his life outside the major airline markets (albeit in a country with a long history of aviation achievements), does help to explain his curiosity and interest in better understanding the role of geographical location and international relations in shaping how the industry continues to develop.

Difficulties in locating information about particular aspects and regions of the global airline industry, particularly in relation to emerging air markets, have for some time frustrated the researcher. This situation, along with a growing interest in the airline industry, in large measure led to the completion of a Master of Aviation Management degree in 2011. The final capstone research project in this degree investigated the three major Gulf carriers from a strategic marketing and management perspective, and essentially asked how substantive their global rise to prominence really is? Little primary data are available on these and other emerging air markets (Itani et al., 2014), and that which exists needs be approached with an understanding of how fluid and uncertain most data from emerging air markets are. For example, "because of lack of information", research into the major Gulf carriers has had to rely on "implicit assumption[s]" on many occasions (Fan & Lingblad, 2016, p. 121).

The researcher has always been intrigued with all things international, reflected in study, travel and work, with the global airline industry encapsulating and reflecting this fascination very well. In addition, strategic issues and considerations have been of great interest to the

researcher, particularly those directly related to the forces of globalisation; the airline industry being a great enabler, and yet also captive to national interests, in this regard too (Debbage, 2014; Macara, 2009; Staniland, 1998).

For the researcher, underlying and guiding philosophies have also been of considerable interest; a journey that is best encapsulated in the worldview of pragmatism. The allure of pragmatism seems apt given the researcher's academic journey and professional development which have spanned a host of disciplines, areas and countries. Pragmatism in this sense is not about drifting between various approaches and practices, but rather about remaining open and flexible as new information and experiences add to a body of past knowledge and awareness (Creswell, 2013). Pragmatism's challenge to dogmatism, and its equal caution against overly strong scepticism, fit well with the researcher who does not want to build a view of the world that begins with immovable conclusions in search of evidence, or scepticism blinded to reality; instead, evidence should encourage conclusions, and curiosity should produce insights (Robson, 2011).

1.6   Delimitations of scope and key assumptions

The global airline industry encompasses an extensive web of interconnected concepts and related ideas. Fields such as economics (Vasigh, et al, 2013), strategic management, marketing (Shaw, 2007), human resource management (Heracleous, Wirtz, & Pangarkar, 2009), law (Havel & Sanchez, 2014), industrial relations (Bamber, et al, 2009), engineering and transport geography (Goetz & Budd, 2014) are just some of the perspectives under which the overall industry continues to be discussed and analysed in the media, industry and academic communities. Any scholarly attempt to effectively explore and investigate the global industry is well beyond the scope of a single doctoral study.

With this in mind, the research here is located within specified thematic and geographical boundaries, although still situated in a wider context in which many areas are touched on in order to strengthen the core focal points. This study was only able to achieve a better understanding and appreciation of the likely future for the global airline industry because it considered the core geographical, political and economic realities and forces that act to shape and frame the industry's growth and development, and its competitive landscape. The thesis adopts a strategic level orientation that primarily focuses on the European single air market, the three major Gulf carriers, and on China and the Association of South East Asian Nations

(ASEAN). The extent to which multilateralism is either possible or probable in future is a core concern, while finding the most appropriate forces or factors to assist in uncovering key industry insights is the challenge that this thesis attempts to tackle.

This study concentrated its central focus on key air markets and major airlines in the northern hemisphere. In this context, the study primarily looks at the US air market from an historical perspective, with most of the contemporary and future orientated discussion and analysis occurring in relation to the North Atlantic and Europe (with some coverage of the US as a result). Single air markets and regional liberalisation are core considerations here. The study then moves in an easterly direction from there to the three major Gulf carriers, and then finally further east again, onto the Asian region. Ongoing regional turmoil throughout the Middle East led to the decision to focus on the three major Gulf carriers, while regional diversity and the sheer size of Asia, led to China and ASEAN, and to a lesser extent India, emerging as the most prominent and salient focal points.

The US airline industry continues to be extensively researched, much of which retains a significant domestic focus and disposition (Button, 2009). There is evidently a considerable "body of analytical work on the US domestic market, in part linked to the deregulation of airlines in 1978" (Button, Neiva, & Yuan, 2014, p. 767). In this study, the US is closely aligned with the North Atlantic, and as such, the North Atlantic is employed as a starting point to then head progressively further east. Thus, the US air market is not ignored here, but rather other global markets are more substantially investigated to shed light on regions where contemporary research is less well developed (Wittmer & Bieger, 2011; Dobruszkes & Graham, 2016; Itani, O'Connell, & Mason, 2014).

Little scholarly research to date has directly and explicitly linked international relations and the likely future of the global airline industry, including international liberalisation and protectionism. Several notable exceptions to this general trend do exist it should be added (Nayar, 1995; Richards, 1999). Media attention, including across the aviation media, has been relatively more active, even so, headline grabbing news almost always displaces longer-term and deeper level investigative journalism, and this is evident for the airline industry overall (Dresner et al, 2015; O'Connell, 2015). Combined with this, the media tends to adopt an understandable focus on consumers (benefits and costs); a large potential target audience, with top level management and policy makers viewed and discussed in often unsympathetic and misunderstood tones (Duval, 2011; Fan & Lingblad, 2016; Forsyth, 2014; Parker, 2012).

1.7   The thesis design and structure

This section outlines and summarises how the thesis is organised and structured. Figure 1.1 below illustrates how the thesis is organised, and the contributions made by each chapter to the development of the research questions and their answers, and finally, to the outcomes of this study.
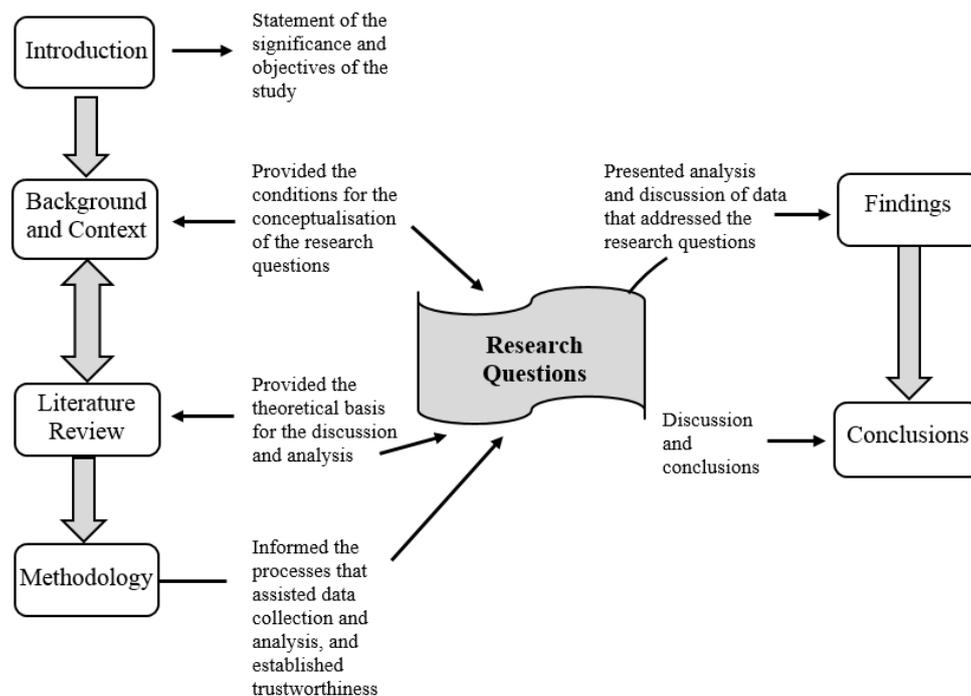
(Source: Author's own compilation)

Figure 1.1   The Thesis Design

1.7.1   Chapter 1: Introduction

This initial chapter introduces the overall topic, including the researcher's background and motivations to investigate this large, complex, and at times, seemingly paradoxical global industry. Following this, the overarching objectives and four main research questions are stated. Chapter 1 outlines the location of the topic; at the nexus between strategic airline management, international air law and air transport geography. Lastly, the chapter structure of the thesis is detailed.

1.7.2 Chapter 2: Historical and contemporary industry background

Chapter Two provides a chronological discussion and analysis of the main historical developments of the global airline industry, across just over a century of commercial flight. From sovereignty of air space international agreements in Paris in 1919, to the birth of the bilateral system in Chicago in 1944, and its formal implementation via the Bermuda I agreement in 1946, to US deregulation in 1978, open skies agreements and global alliances in the 2000s, to name a prominent few. This chapter progressively transitions to the contemporary context that the global airline industry operates within. Topic areas covered here include; the European single aviation market, the ongoing rise of the major Gulf carriers, Asia's growth, ASEAN's aspirations and China's growth, along with a look at India, climate change and the industry, and finally, the industry's apparent globalisation paradox.

1.7.3 Chapter 3: Literature Review

This chapter investigates the central literature covering the topic. It also identifies gaps that exist in the literature, including the relatively limited treatment of geographical location, international relations, the three major Gulf carriers and China. Likewise, little scholarly attention has been given to whether the EU represents a model for future liberalisation elsewhere around the world. In addition, this chapter also details the ongoing airline industry debate over "freedom versus sovereignty" (Rhoades, 2008, p. 35), including how Nayar (1995), Richards (1999) and Lawton (1999) engaged in a scholarly debate surrounding international relations and air transport in the 1990s. Linkages between international relations and the airline industry have been limited since (Havel & Sanchez, 2014). Key industry debates, issues and considerations are covered in order to provide a well-developed sense of the plurality of views that exist, and of the core underlying rationales for this diversity of opinion and understanding.

1.7.4 Chapter 4: Methodology

This chapter details the researcher's guiding worldview (or paradigm) of pragmatism. It then looks at the Delphi method used, including its multiphase mixed-method application for data collection and analysis. Aviation research that has employed the Delphi method is also covered here. The Delphi method represents a logical and defensible choice for this thesis as data for the most part is simply not available on many of the issues and topics that are likely to impact the industry's future prospects. The Delphi method provides a proven means of

collecting data in situations where the historical record and data sources are limited to non-existent. The five stages of data collection (including instruments employed) are detailed. The overarching thematic data analysis utilised is then covered, along with the statistical tools used for data analysis in this study (i.e. mostly t-tests, chi-square tests and Mann Whitney U tests). The chapter ends with ethical considerations.

1.7.5   Chapter 5: Results

Chapter Five provides the key findings from each of the five stages of data collection. The chapter begins by providing the results from the first stage Workshop, followed by conclusions and feedback from the second stage Pilot Survey. Next, the results from the Main Survey 1 and Main Survey 2 are detailed (Stages 3 and 4). Lastly, the results from the final stage In-Depth Interviews are presented (Stage 5). This chapter builds a foundation to then discuss the results in Chapter 6. What emerged strongly and clearly from this data set was that ideologically driven industry opinions were less evident that pragmatically based views that remained flexible as contexts and considerations changed between air markets, regions and major airlines.

1.7.6   Chapter 6: Discussion of Results

Chapter Six discusses and analyses the study's findings. The discussion and analysis presented here is structured on an overarching thematic analysis that anchors to each of the four research questions. Each research question is underpinned by three key themes, along with a number of associated sub-themes, all of which emerged from the data. This design and process allowed for the extraction of key industry insights from the data, including likely future global airline industry trends and trajectories surrounding liberalisation and protectionism. Situational context and pragmatism strongly emerged from the data throughout this chapter, while ideological conceptions of the industry and its future were less impactful, and tended not to be employed by most participants as binary and mutually exclusive in nature.

1.7.7   Chapter 7: Conclusion

The final chapter of the study presents the overarching conclusions surrounding the global airline industry's likely future trajectory over the next decade. The chapter focuses on answering the four research questions at a strategic level, and does so by utilising key

research findings. The chapter then covers the study's implications for theory, management practice, methodology and public policy. Finally, the limitations evident with the current research are presented, and then proposals for future research. This final chapter makes it clear that more national air markets, regions and scholarly voices need to be encouraged and considered in future, if the airline industry is to be more holistically understood at a global level. The dynamic nature of the global airline industry, together with its massive size and evident complexity, make it imperative for scholars, industry practitioners and observers alike to embrace a more expansive view of the industry if its future potential and trajectory are to be better understood.

1.8   Conclusion

This chapter provided a preview of the research study and explained the researcher's interests and curiosity in undertaking this investigation. In addition, the core research objectives, along with the four research questions, were all articulated. Next, the nature of the research together with the research methodology, were summarised. Finally, the design and structure of the thesis were outlined, including a snapshot of each chapter. The next chapter provides an historical and contemporary background to the global airline industry, while the chapter after that reviews and analyses the scholarly literature covering the industry. In this way, a theoretical foundation is formed for the subsequent methodology, results and discussion chapters, and finally, the conclusion chapter to follow.

Chapter 2: Historical and Contemporary Industry Background

2.1   Introduction

This chapter traces the historical origins and development of the global airline industry, and then covers the industry's present market structures and contemporary context. A holistic and robust treatment of future industry possibilities and likely scenarios is not possible without a firm appreciation of how the global airline industry began, developed over time, and arrived at where it is today. This chronological industry background covers just over a century, and helps to underpin this study by reinforcing the widely supported notion that to better understand the present, and to successfully look into the future, one must first develop a solid sense of the past.

2.2   Sovereignty: Delineating the skies

2.2.1   Industry overview

In the years and decades following the first powered flight at Kitty Hawk in 1903 by the Wright brothers, aviation grew rapidly throughout the US and beyond. The first "regularly scheduled airline" flight took place in Florida on 1st January 1914 (Rhoades, 2008, p. 1). Lasting 23 minutes, this airboat service heralded the dawn of commercial aviation, which has now grown into a major global industry transporting over eight million passengers per day; more than three billion per year (SMH, 2014).

The airline industry also plays a pivotal role in "travel and tourism, the world's largest industry" (Chan, 2000, p. 489). Worldwide, the airline industry generates nearly 60 million jobs and accounts for over US$2 trillion of annual economic output (Budd & Ison, 2017; SMH, 2014). Although such statistics are open to debate, as "direct, indirect and induced" economic effects relate to a wide range of considerations, including tourism and trade (Vasigh, Fleming, & Tacker, 2013, p. 19), it is still clear that air transport significantly contributes to the world economy, estimated to be at least eight percent of gross domestic product (GDP) in recent years (Hanlon, 2008; Kuhlmann, 2011b).

However, this seemingly positive picture of the industry belies the fact that throughout much of its history average profits have been "below the cost of capital" (Doganis, 2010, p. 5). In

fact, most of the time airlines do not make much (if any) money; while most other levels of the aviation value chain do (Doganis, 2010; Kuhlmann, 2011b). Though some argue that such a premise is in many respects "untrue"; the reality is that "the airline industry has had very different results depending on who is concerned" (Pilarski, 2007, p. 15).

Governments are also regularly maligned for treating the industry like "a cash cow" by subjecting it to what many claim is often onerous taxation levels (Bisignani, 2013, p. 217). The airline industry's global importance is rarely disputed, but its structure and competitive landscape are regularly misunderstood, or too closely compared with other industries such as shipping, for a more complete picture to emerge (Mendelsohn, 2014). Therefore, history becomes central to a better appreciation of the industry's contemporary context, and future possibilities.

2.2.2 The First World War

Arguably, war shaped the early years of aviation like no other force, and this is not surprising, given the destruction that airpower could demonstrably cause (Lee, 2013). Even so, it should be pointed out that countries were keen to secure their airspace even before the First World War (1914-1918), with the United Kingdom adopting the position in 1911 of "absolute sovereign authority in airspace" (Nayar, 1995, p. 147). During the same year, other countries throughout Europe followed suit, agreeing "that national sovereignty over airspace should be absolute" (Staniland, 1998, p. 71). The widespread adoption of this principle then set the foundation for the future development of commercial aviation, as it "automatically gave states control over movements at airports" (Staniland, 1998, p. 71).

The 1919 Paris Convention, under the auspices of the post war peace settlement, became the first international air law "multilateral treaty to come into force" (Lee, 2013, p. 358). This conference, and its resultant convention, affirmed that each nation-state had "complete and exclusive sovereignty over the airspace above its territory" (Dempsey, 2004, p. 237). Thus, the 1919 Paris Convention solidified the central role of states "in the emerging political and economic development of" the burgeoning industry (Dempsey, 2004, p. 237).

2.2.3 Idealism versus realism

State power continues to loom large over aviation. International commercial aviation has been dominated throughout its relatively short history by a divide surrounding "freedom

versus sovereignty" (Rhoades, 2008, p. 35). Some claim that "during its formative years, global idealism" pervaded the industry (Lawton, 1999, p. 92), while others point out that realism, based on a concern for national security, provides a better basis to explain the industry's growth and development during these initial decades (Nayar, 1995). What seems clear is that sovereignty and nationality have become the cornerstone structural attributes of the global airline industry, resulting in the long-held legal "premise…that citizenship defines ownership", thus creating "a stranglehold on the natural cosmopolitanism of the aviation industry virtually since its establishment" (Havel & Sanchez, 2011c, pp. 1-3).

Put another way, global aviation has found itself trapped in a globalisation paradox whereby it promotes and facilitates international trade and interconnectedness, but at the same time is restricted and regulated like few other industries around the world (Debbage, 2014; Macara, 2009; Staniland, 1998). Even so, a number of political scientists highlight that both idealism and realism do converge on many issues (Johari, 2012). Applied specifically to the airline industry, the "simple categorization of liberal versus protectionist philosophies" is problematic as regulatory structures are widely divergent amongst countries (Debbage, 2014, p. 37).

2.2.4 Multiple market realities

Sovereignty in international aviation is not just about ownership and control of airlines, arguably more impactful, it relates to the exchange of traffic rights between countries; that is, which airline/s and how much capacity (frequently quantified as seats per week), can operate to a particular destination country, often specified on an airport by airport basis (Hanlon, 2008). The overarching framework of freedoms of the air, combined with cabotage restrictions, which guide and often dictate traffic rights, mean that "each country or region tends to be an individual market" (Hanlon, 2008, p. 160). Sovereignty is also "the keystone upon which virtually all air law is built" (Franklin & Porter, 2010, p. 66). Therefore, commercial aviation has long "been a *global industry*, but one served by national firms" (emphasis in original) (Hanlon, 2008, p. 9).

Likewise, air routes are not always synonymous with air markets (Holloway, 2008). Markets (and routes too) can be segmented in a myriad of ways; based on flight distance – short, medium and long haul (Bilotkach & Hüschelrath, 2011); geographical levels based on regions, countries, cities or even airports (Holloway, 2008); whether such air markets are in

the northern or southern hemisphere (Hanlon, 2008); and, whether they are primary "gateway-to-gateway markets" (i.e. inter-hub) (Bilotkach & Hüschelrath, 2011, p. 366), sometimes referred to as "super hubs" (Bowen, 2010, p. 135), or secondary markets reflecting thinner markets and routes (Hogan, 2015).

The possibilities do not stop there, with air markets also being described in terms of whether they are established, maturing or emerging (Hogan, 2015). Domestic and international markets, along with bilateral, multilateral, regional and plurilateral markets are also often cited (Gaspari, 2011; Hanlon, 2008), although each frequently feeds traffic and business into the others. So, an overly narrow focus on one can be at the expense of a more complete understanding of them all. When the cyclical and seasonal air market elements are added, along with leisure markets (also referred to as tourist markets) and business markets, the market delineation options appear even more diverse (Duval, 2013). One should also differentiate between competition and trade, as liberalised bilateral agreements "have typically allowed competition to develop, but not trade"; thus, only airlines with citizenship credentials[1] are able "to participate in a route market between other countries" (Forsyth, 2012, pp. 212-213).

2.2.5   Supremacy of the nation-state

The history of the global airline industry has unfolded over a century during which empires have faded and the nation-state has proliferated. In the years following the collapse of the Soviet Union in the early 1990s, the demise of the nation-state was a popular prediction (Eudaily & Smith, 2008). In reality, since the Soviet Union disappeared, the nation-state has shown itself to be remarkably robust (Lechner & Boli, 2008). The First World War heralded the beginning of the end for empires, while decolonisation accelerated after the Second World War (1939-1945) and saw the nation-state multiply around the world. In the post Cold War era this trend has continued as many former Soviet controlled satellite countries have won independence. Despite a few notable exceptions, such as the reunification of Germany, the overwhelming trend has resulted in more states not fewer over time.

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[1] Citizenship credentials include the quasi-states of Dubai and Hong Kong (Derudder & Witlox, 2014), and the unofficial "state" of Taiwan (Dibb, 2014), amongst other administrative areas and colonial outposts around the world.

It should be noted here that some analysts view this multiplication of states as potentially weakening state power overall, rather than increasing it (Strange, 2008). Ongoing troubles in many newly created states add weight to the contention that "the nation-state…is a dinosaur that is very poorly adapted to the global economy" (Garrett, 2008, p. 249). Porter (2008b) disagrees and thinks that globalisation, and the geographic clustering that it has fostered, has simply created "new roles for government", like removing barriers to encourage economic growth and development (p. 214). States do not appear to be facing extinction any time soon, far from it.

However, despite being the preeminent political structure around the world, the nation-state still reflects a wide array of power differentials, including military, economic, demographic, geographical and resource based. This global diversity and power distribution is referred to as "the balance of power" by realists (Codevilla, 2010, p. 11). In terms of the global airline industry, these power differences are not necessarily mirrored in the scope of each country's airline industry size and clout, with small states like Singapore, Hong Kong and Dubai – the latter two being effectively "quasi city-state[s]" – able to better capitalise on economic and geographical advantages (Derudder & Witlox, 2014, p. 104 & 117).

Even so, large economic powers like Germany and Japan, together with military and economic powers like China and the US, still retain considerable airline industries. Thus, the international aviation industry is structured around the nation-state, and in the process, those states with economic, political and geographical advantages are more often than not best placed to take full advantage of its opportunities. This in part is evidence to support the notion that globalisation can actually provide politicians with "incentives to pursue interventionist economic policies", often in concert with unions, in an effort to maintain a level of national control and influence over markets (Garrett, 2008, p. 253). Likewise, it can also allow autocratic states, such as those in the Gulf, to pursue national development strategies with aviation at their heart (Derudder & Witlox, 2014).

States have clearly wanted to be the dominant force in shaping aviation, making "air transport one of the most regulated industries in the world" (Lin, 2013, p. A2). State intervention in the airline industry is ubiquitous, although the extent and significance varies widely throughout the industry (Rhoades, 2008). A wide variety "of ideological factors" have influenced the airline industry's global development, as "national pride", deeply held concerns about unregulated markets, and the conviction that airlines were primarily a public utility, "rather

than autonomous actors in the market-place", have held sway (Havel & Sanchez, 2014, p. 74).

Furthermore, national security has also been a considerable concern in relation to the airline industry, with the US still adopting the stance that foreign investment and control should be restricted to ensure the country's airlift capabilities are in no way compromised, especially in time of war (Macara, 2009). The regulatory system that underpins international aviation is predicated on "national interest" (Oum & Yamaguchi, 2006, p. 31). This reality leads to international law being used by countries as an instrument in pursuing their foreign affairs agendas, and as such, states can choose to follow or ignore international law "based on their rational interests" (Havel & Sanchez, 2014, p. 147). Further complicating moves toward greater multilateral air market liberalisation is the reality that "individual states cannot change" the bilateral system alone (Airline Leader, 2013, p. 18).

2.3   The bilateral system arrives: Chicago 1944

Events and decisions made in Chicago in late 1944 formed the foundation of the global airline industry today (Havel & Sanchez, 2011a). For just over a month from 1st November until 7th December 1944, delegates from over 50 countries attended the Chicago Conference on international aviation, with the resulting treaty referred to as the Chicago Convention (Abeyratne, 1994). As Rhoades (2008) aptly puts it: "To understand the forces that created the international aviation landscape of today, you must understand Chicago" (p. 41). Therefore, the Chicago Convention laid the foundation for "the development of the current system of the bilateral exchange of traffic rights between countries" (Rijke, 2012, p. 441).

Thus, one must also have a well-developed appreciation of the bilateral system of air traffic agreements, essentially "international trade agreements", negotiated by national governments with each other to regulate commercial airline traffic between themselves, and on many occasions beyond their territory as well (Dempsey, 2004, p. 236). Such bilateral air service agreements (ASAs) are in essence "contracts between governments" (Dempsey, 2004, p. 236). The bilateral system came to the fore at Chicago in 1944, and was enshrined into practice at Bermuda in 1946. Nonetheless, in many respects, Chicago simply reaffirmed the "prewar bilateralism [as] the governing framework for aviation" (Nayar, 1995, p. 154).

The 1944 Chicago Convention adopted an even less flexible notion of sovereignty compared to the earlier 1919 Paris Convention, although both ultimately embraced "the principal of

sovereignty of the air" based on the self-evident destructive power of war (Lee, 2013, pp. 359-360). In the case of the latter convention in Chicago, a war that was yet to end; it did so in Europe in May 1945, and in the Pacific in August 1945. This fact helps to highlight that it is not surprising that international air travel would be subject to the permission and agreement of individual states (Macara, 2009). In this regard, weaker post war states like Germany, Japan, and also Britain, found refuge in airspace sovereignty as a form of commercial protection against US economic power (Rhoades, 2008).

The US emerged from the Second World War as an economic and military superpower, while Britain teetered on the verge of financial ruin. Even so, the faltering British Empire still gave Britain geographical advantages by providing control over transit points throughout the world, a crucial plus in the pre-jet age (Richards, 1999). At Chicago the US was actually pursuing "a two-pronged…strategy, involving both multilateralism and bilateralism" (Nayar, 1995, p. 156). The US was keen to capitalise on its post war advantages, and it was willing to employ a combination of market based mechanisms, along with state power, to do so (Nayar, 1995).

Beginning in 1944, but for many decades thereafter, an international scepticism existed about US motives for promoting an open and seemingly more liberal agenda for the global aviation system (Nayar, 1995). Britain in particular viewed US calls for open worldwide air market access "as self-interest masquerading as philosophical principle" (Rhoades, 2008, p. 42). Thus, in most respects the Chicago Convention was a reaffirmation of "the international legal principles" developed 25 years before at the Paris Convention (Dempsey, 2004, p. 237). The Chicago Convention has been ratified by "virtually the entire world community" (Dempsey, 2004, p. 267; Gaspari, 2011). In 2005 the EU conceded that the bilateral system in international aviation (outside the EU single market) "will remain, for the time being at least, the principal basis of international relations in the aviation sector" (Baur, 2010, p. 239).

2.3.1   Airline nationality & privatisation

Bilateral ASAs reflect a bundle of restrictions and limitations that when combined are labelled the "nationality rule" (Havel & Sanchez, 2014, p. 123). Individual states designate airlines based on substantial ownership and effective control being "by that State or by its citizens" (Havel & Sanchez, 2014, p. 123). In addition, many states now explicitly require that an airline "must also be legally established and have its principal place of business in the

designating State" (Havel & Sanchez, 2014, p. 123). This citizenship requirement, for airlines and majority shareholders, dictates how and where the international industry can grow and develop. Thus, privatisation, particularly in the US, has not really created a more effective marketplace as foreign investment is limited "and restrictive clauses in air service agreements" abound (Morrell, 2013, p. 184). Even so, privatisation can reduce or even remove incentives that encourage government protection of airlines, and as such "open competition" (Toh, 1998, p. 67).

2.3.2 Freedoms of the air

Nine so-called freedoms of the air have been developed to guide countries in their traffic rights negotiations, although not all are widely recognised or permitted. These freedoms might be better described as a spectrum of agreed air rights, from restrictive through to open as they chronologically unfold. Although the initial first five freedoms did not attract multilateral agreement at Chicago in 1944, they did form the basis for bilateral agreements thereafter (Havel & Sanchez, 2014). Table 2.1 below details these freedoms.

Freedom	Description
First	The right to fly over the territory of a contracting State without landing
Second	The right to land on the territory of a contracting State for non-commercial purposes
Third	The right to transport passengers, cargo and mail from the State of registration of the aircraft to another State and set them down there
Fourth	The right to take on board passengers, cargo and mail in another contracting State and to transport them to the State of registration of the aircraft
Fifth	The right to transport passengers, cargo and mail between two States as a continuation of, or as a preliminary to, the operation of the third and fourth freedoms
Sixth	The right to take on board passengers, cargo and mail in one State and to transport them to a third State after a stopover in the aircraft's State of registration and vice versa
Seventh	The right to transport passengers, cargo and mail between two other States on a service which does not touch the aircraft's country of registration
Eighth	The right to transport passengers, cargo and mail within the territory of a State which is not the aircraft's State of registration (full cabotage)
Ninth	The right to interrupt a service

(Source: Rhoades, 2008, p. 43)

Table 2.1   Freedoms of the Air

However, the bilateral system that emanated from the initial development of these traffic rights, and then helped to guide their further evolution and constrain their acceptance, was not entirely the result of national power and interest. Nation states are not the only major players to influence developments throughout international aviation, a range of non-state actors have also influenced industry expansion and growth, and continue to do so.

2.4   Non-state actors

As with many aspects of the global geopolitical architecture, including established norms of behaviour, non-state actors, including intergovernmental organisations (IGOs), play varying roles in contributing to, and promoting, global order and cooperation, including the development and enforcement of "normative standards for the international aviation industry" (Havel & Sanchez, 2014, pp. 26-27). Perhaps the most prominent is the United Nations (UN), although the World Bank, International Monetary Fund (IMF), and the Organisation for Economic Cooperation and Development (OECD), are just some of the more widely recognised ones (Lechner & Boli, 2008).

Slightly different, supranational bodies – chiefly the European Union (EU) – exercise powers above the state level; the EU's executive arm is the European Commission (EC). National governments still retain most of the hard power, while the EC seeks to enforce softer powers like competition and standardisation policies and practices across the trading bloc. As is highlighted later, the EU has been able to create a single air market in many ways because of this supranational authority where individual states did not block its moves to do so – a top down approach. Even so, it is still experiencing significant challenges in forging a single sky in terms of air traffic control (ATC), and in adopting a community carrier designation outside the single bloc (Gaspari, 2011; Havel & Sanchez, 2014).

2.4.1   International Civil Aviation Organisation (ICAO)

The International Civil Aviation Organisation (ICAO) was officially formed in early April 1947 "as a specialised United Nations agency" to help regulate and coordinate the industry through agreed standards and "recommended practices…to ensure safe and orderly growth" (Maslen, 2011, pp. 44-45). Establishment of ICAO was agreed at the 1944 Chicago Convention (Guillaume, 2008). The fact that civil aviation has its own specialised UN agency

makes it "unlike virtually all other major industries" (Havel & Sanchez, 2014, p. 228). Outside of the technical and safety realms, ICAO has simply adopted "a consultative and advisory role in the economic sphere" (Abeyratne, 1994, p. 123). Despite calls throughout its history to expand its mandate, from various quarters and for a range of reasons, ICAO still remains almost exclusively focused on technical matters and safety (Onidi, 2008). In both these respects, ICAO has achieved impressive results for the industry, in the process, creating arguably the safest form of mass transportation in the world (Walker, 2016a).

More recent calls for ICAO to assume the lead role in developing a global mechanism for combating the industry's carbon emissions, and subsequent contribution to climate change, demonstrate for some that the organisation is being called upon to reorientate itself for the challenges of the twenty-first century (Gaspari, 2011). Others see this as part of a longer history of failed attempts to extend its treaty mandated scope. Getting over 190 member states to agree to global "emissions abatement" in aviation, according to Havel and Sanchez (2014), is not likely to end with a binding agreement, but rather "hortatory resolutions may be the most that ICAO will be able to muster" (p. 231). As with all major issues confronting ICAO, "political will from member States is essential" (Guillaume, 2008, p. 315).

Recent history suggests that ICAO remains conservative in the face of change. For instance, increased security for cockpit doors after the September 11, 2001 terrorist attacks in the US saw "unilateral action" take precedence over ICAO processes, as the organisation was considered too slow in its response (Silversmith, 2013, p. 223). Others present a more positive picture, particularly with respect to ICAO's support and leadership for air transport liberalisation. In this regard, ICAO's "wide membership", comprehensive mandate and "political legitimacy" are cited as central organisational strengths (Gaspari, 2011, p. 453). Supporters view ICAO as "the "natural" international organization to deal with aviation issues" (Gaspari, 2011, p. 455).

2.4.2 International Air Transport Association (IATA)

The International Air Transport Association (IATA) was also created as the Chicago Conference ended, and first met in 1945 (Rhoades, 2008). It has since gone from an airfare setting cartel to an industry trade body. Like ICAO, it too counts safety as its number one goal, although unlike ICAO, IATA has always had a decidedly commercial role and focus as well. IATA now pursues an advocacy role for the industry (Kuhlmann, 2011b). IATA's

transition from a "fare setting cartel" (Toh, 1998, p. 61), to now essentially "a trade association", resulted from successful US moves to undermine and weaken IATA "in the late 1970s", as its activities were seen as unfairly restricting US airlines (Nayar, 1995, p. 160 & 165).

Bisignani (2013), IATA's former head, concedes that he had to work hard during the 2000s to improve relations with the US, and to raise the organisation's profile there. As a key partner for member airlines, IATA continues to work toward raising the industry's global profile and championing its case (Kuhlmann, 2011b). IATA has forged "a unique relationship with world governments that has allowed it to operate in significant ways as a site for autonomous regulatory activity" (Havel & Sanchez, 2014, p. 27). Even so, as with ICAO, states' rights are sacrosanct at IATA (Bisignani, 2013; IATA, 2010).

2.4.3   Regional associations

Each major region of the airline industry has its own industry body to champion its cause to mostly political leaders and regulators. A prominent example is the Association of European Airlines (AEA), although it is experiencing internal challenges at present as a number of high profile defectors have been leaving its membership. Notably, both IAG (parent to BA and Iberia) and Air Berlin have ended their membership with the AEA over its policies and rhetoric in opposition to the three major Gulf carriers. Not surprising, given that Qatar Airways has a 15 percent stake in IAG, and Etihad Airways an even higher stake in Air Berlin (Karp, 2016; Paylor, 2015). Current controversies aside, the AEA has produced several important industry reports, including *Toward a Transatlantic Common Aviation Area* in 1999 (Havel & Sanchez, 2014), and more recently, *2050 – The Future of Transport* in 2009 (AEA, 2009). Most major regional airline associations favour foreign "investment reform" to generate a freer flow of international capital and investment (Havel & Sanchez, 2014, pp. 146-147).

2.4.4   Labour unions & flags of convenience

Labour unions continue to be a vocal special-interest group mostly opposed to changes to airline nationality rules on the grounds that 'flags of convenience', akin to the practice followed by the global shipping sector, might result (Javits, 2014; Paylor, 2014). Most concerning for unions in this regard is that wages might be reduced in higher wage markets like the US and Europe, and working conditions with them, should this practice be permitted

in aviation (Havel & Sanchez, 2014). Such a lowering of standards could see aviation follow the previous "maritime race to the bottom" (Mendelsohn, 2014, pp. 153-154). It should be noted that most concerns surrounding ownership are focused on a country's own airlines, and rarely on those of foreigners though (Macara, 2009).

Not all unions and their backers are against foreign ownership in US airlines; in fact some champion foreign ownership and criticise opponents for claiming that "possible exploitation" might result (Mendelsohn, 2012, p. 331). This view is predicated on the contention that "repeated bankruptcies of U.S. airlines" have seen industry employees suffer "huge financial losses" and foreign capital could alleviate this situation (Mendelsohn, 2012, p. 331). Clearly, unions have not always played a constructive role, with recent examples from Germany and France where powerful labour unions have held "prolonged strikes [that] have crippled the air transport value chain", encouraging passengers to switch to competitors, with any chance of sustainable profitability being extinguished, and with it, the required money to reinvest "into capital equipment" (O'Connell, 2015, paras. 10-12).

Others argue that the airline industry is not on an inevitable path toward lower "wages, benefits, working conditions, and labor standards" (Bamber, Gittell, Kochan, & Nordenflycht, 2009, p. 195). Instead, they contend "that the future directions of the industry can be improved by thoughtful leaders" focused on airline sustainability (Bamber et al., 2009, p. 195). In this spirit, the former president of the Australian and International Pilots Association (AIPA) argued in 2013, as the Australian government debated potential airline ownership changes, that "there's a problem with applying free trade logic to aviation. Most foreign carriers…are inexorably tied to their respective governments. International aviation is not a free commercial market, it has always been inseparable from issues of national interest" (Jackson, 2013, para. 5). He also added that Australia's geography meant that it had to adopt a long-term view that defended and protected the domestic airline industry, rather than simply handing it to foreign airlines (Jackson, 2013).

Thus, the bilateral system that has come to form the foundation of the global airline industry, itself built on the Chicago Convention and its reaffirmation of the central role played by national air space sovereignty, creates an "exceptional context [for] international aviation" whereby transnational operations are anchored to the "State-centred distribution of traffic rights" (Havel & Sanchez, 2014, p. 87). Bilateralism in international aviation dictates strategic planning for airlines in a manner that is rarely found in other globally orientated

industries (Havel & Sanchez, 2014). How this bilateral system took shape after the Chicago Convention is now explored.

2.5   Bermuda I & II and the encirclement strategy

2.5.1   Bermuda I & II

A short time after the 1944 Chicago Convention, the US and Britain met in Bermuda in 1946 to cement a bilateral ASA, that in combination with Chicago, would play a central role in shaping global aviation (Nayar, 1995). Bermuda I, as it became known, is widely considered as "precedent-setting" as it covered the first five freedoms of the air on agreed routes, multiple designated airlines, and no capacity or frequency limitations (Toh, 1998, p. 61). For several decades after its signing, Bermuda I acted as a template "for most bilateral international agreements" (Dempsey, 2004; Lawton, 1999, p. 92). International treaties in aviation after Chicago, according to Havel and Sanchez (2011c), "have been structured by mercantilism, zero-sum diplomacy, and the quest for a balance of opportunities" (p. 16). Compromises had to be made, with the bilateral system best able to accommodate competing national interests. It must be remembered that "national politicians have always put their own country's economic interests first" (Mardell, 2016, para. 41).

Even so, this does not mean that bilateral agreements are inflexible; on the contrary, they are "inherently flexible" some maintain (Toner & Willis, 2012, p. 17). Substantial liberalisation can still be achieved if enough bilateral agreements are liberalised, creating in effect tangible 'multilateral' outcomes, even if based on a web of country to country agreements. Equally true, bilateralism can also entrench practices and stifle attempts to be more open. In 1977, Britain essentially forced the US to sign Bermuda II (Toh, 1998). Bermuda II represented a "reversal of liberalism" and generated a public outcry in the US (Nayar, 1995, p. 162). For instance, the Bermuda II agreement saw fifth freedom rights withdrawn (Nayar, 1995). Although liberalised to some extent, the Bermuda II agreement still remains in force between the US and UK today (Hanlon, 2008).

2.5.2   Encirclement strategy

The US decided to pursue an "encirclement strategy" whereby it sought to divide and conquer other European nations, particularly The Netherlands, in order to pressure Britain to renegotiate Bermuda II (Toh, 1998, p. 66). This strategy was predicated on offering open

skies agreements to a number of European countries (Dempsey, 2004). By offering such "liberal bilateral agreements" the US was able to create a geographical "ring of European countries around Britain", and in the process, generate British anxieties that they might be effectively bypassed (Nayar, 1995, p. 157). US-EU open skies, looked at later in this chapter, continues to be least open in terms of the UK (CAPA, 2013c).

In the late 1970s, the US has also played an instrumental role in demonstrating the benefits of internal domestic deregulation, and is widely credited as providing at least inspiration to national air markets elsewhere around the world (Button, 2009; Dobruszkes & Graham, 2016). This air market deregulation approach has been labelled "big bang" in contrast to the more gradual European style of liberalisation (Sjögren & Söderberg, 2011, p. 229). The chapter now turns to this US deregulation process.

2.6   US deregulation 1978

In 1978 the US deregulated its airline industry when Congress passed The Airline Deregulation Act. This process was aimed at encouraging market growth and spurring competition (Wensveen, 2007). Despite airline deregulation in the US having dramatic consequences for many domestic carriers, the Cold War (particularly during the 1980s) generated an "obsession with protecting airspace", built as this was on a solid foundation from two world wars (Lee, 2013, p. 364), that acted to moderate the direct flow on effects internationally. It was not until the 1990s that Europe, free from the shadows of the Cold War, actively pursued a single aviation market (Woll, 2006).

Debate continues as to the overall costs and benefits of US deregulation. According to Bamber et al. (2009): "Deregulation introduced a new era of volatility to the industry [as] profits and losses" oscillated, often wildly (p. 19). Others are more positive, although within the context of also conceding that the post-deregulation industry adopted "the more cyclical nature of a competitive industry" (Vasigh et al., 2013, p. 6). The US domestic airline industry continues to be widely researched, not surprising given its relatively long history of deregulation (over three decades), and contiguous market conditions and boundaries. Economic theorists and practitioners alike have access to huge volumes of data, including historical, that simply do not exist elsewhere in the world (Belobaba, Odoni, & Barnhart, 2009). It must be remembered that the US still retains some of the most restrictive limits on

foreign ownership and control, while also closely guarding its domestic airlines from cabotage (Havel & Sanchez, 2014).

In many respects comparing domestic airline markets with international markets is like employing micro and macroeconomics to assess the industry; the former reveals an industry that "conforms to many of the rules of economic theory", while the latter indicates serious deviations from such theory and points to "chronic disequilibrium" (Doganis, 2010, p. 320). Likewise, domestic deregulation is not international liberalisation. Deregulation in the US represents "a misnomer" in many respects, as the US government retains "extensive powers" over the industry (e.g. "consumer protection issues"), while international services are still "regulated by a web of bilateral air service agreements", along with "other treaties" (Silversmith, 2013, p. 187). There is little doubt that the US airline industry changed enormously after deregulation, but equally true is that "little changed on the international front" (Baliga, Santalainen, & Lottenbach, 2008, p. 181).

2.6.1 Consolidation and megacarriers

However, change has not taken place in the domestic US air market in isolation from international considerations; far from it. One of the most palpable consequences of US airline deregulation, and certainly still ongoing, has been the wave of mergers and acquisitions (M&A) that have occurred. Today, three major legacy carriers, also referred to as megacarriers, survive; United Airlines, American Airlines and Delta Air Lines. Clougherty (2002) contends that events since 1978 in the US are not merely domestic in nature and scope, but rather "international as well as domestic competitive incentives drive airline consolidation" (p. 558). Moss (2011) agrees, claiming that "it is clear that domestic merger activity is increasingly shaped by the need to serve international markets", particularly for the major legacy airlines in the US, and more and more for low cost carriers as well (p. 394).

Airline leaders widely view mergers as having "helped bring rationality to the market"; even so, the airline business "remains brutally competitive" (Mayerowitz, 2013, paras. 2 & 12). While other domestic markets around the world have followed the US example, cross-border M&A's have only been partial to date. In this latter instance, holding companies are usually created to form an umbrella structure composed of multiple airline brands, thus ensuring that international traffic rights are not lost in the process (e.g. IAG's BA/Iberia and Air France/KLM). Once again, the US experiences after deregulation in the late 1970s reveal that

domestic airline industries retain market characteristics quite different to those found in the international airline industry arena, even if links between the two are on many occasions symbiotic from an economic perspective. Geography and politics make the global industry landscape anything but economically rational or straightforward to analyse.

2.6.2 Hub and spoke networks

Deregulation allowed legacy carriers in the US to concentrate their services around major airport hubs, and to serve a web of connected destinations through these hubs, in what became known as hub-and-spoke networks (Cidell, 2006). US deregulation did not create hubbing; in fact international airlines, particularly European airlines, "had always operated radial networks because the international regulations prevented them from doing anything else" (Doganis, 2010, p. 244). The US experiences with hubbing after deregulation have acted as an example to the rest of the world, with new entrants confronted with high entry barriers as airlines build dominant positions based on the US inspired "notion of the 'fortress hub'" (Doganis, 2010, p. 248), and often referred to internationally as "super hubs" (Bowen, 2010, p. 135).

This core innovation of hubbing, described still today by many experts in the aviation community as "game changing", remains the basis for the networks of most major airlines (G. Thomas, 2008). Hubbing experiences in the US, then in Europe and Singapore, and most recently Dubai, reveal that "a central geographical position in relation to the markets [a hub] is to serve" remains crucial to success (Doganis, 2010, p. 250). Added to this, major airlines have been increasingly lobbying their governments, and those of trading partners, to liberalise bilateral ASAs, and in the process to expand market access. This is most evident in the plethora of open skies treaties that have been signed in recent years (Knibb, 2015b); it is to these that the chapter now turns.

2.7   Open skies

Open skies is the overarching term given to the process of expanding air market access through the allocation of traffic rights. Open skies agreements can be bilateral or multilateral, with the latter also including regional agreements. Bilateral open skies agreements are the most common of these possibilities, and essentially involve removing restrictions on capacity from ASAs (Hanlon, 2008). Open skies agreements are a very visible form of liberalisation, but they are often misunderstood and sometimes misrepresented as reflecting wider non-

existent implications and liberalising processes (Havel, 2009; Woll, 2012). However, what they do clearly reflect is the pivotal role and impact of national politics, "economic priorities", and "geography itself", in more fully explaining the "progress of liberalisation" amongst signatory states (Christidis, 2016, p. 113).

2.7.1 Not so open skies

It is important to remember that most open skies agreements are essentially liberalised bilateral agreements where unlimited "third, fourth, and fifth freedom traffic rights" are exchanged between two countries (Hanlon, 2008, p. 335). In this respect, although the label 'open skies' infers otherwise, it "does not mean completely free access to routes" (Hanlon, 2008, p. 336). Multilateral, and certainly regional (or plurilateral), open skies agreements are much less common (Havel & Sanchez, 2014). The US has tied anti-trust approval for proposed airline alliances to open skies agreements, while the EU has linked domestic/regional issues, like airport slot allocations and distribution, to alliance approval (Rhoades, 2008).

Understanding the underlying motivations behind open skies agreements is necessary to better appreciate the realities beyond the simplified notion of openness versus protectionism (Dobruszkes & Graham, 2016). It is certainly challenging at times to distinguish between aspirations and rhetoric on the one hand, from facts and reality on the other (Knibb, 2015a). Nevertheless, it is certainly the case that the liberalisation of bilateral ASAs was "a logical extension of the regulatory reforms" ushered in by US domestic deregulation (Button, 2009, p. 62).

It is a widely held view that only when "domestic city pairs" are allowed to be operated by foreign airlines (i.e. cabotage permitted), "will international skies be truly open" (Toh, 1998, p. 69). Cabotage was originally a shipping term derived from French influences, but in the airline industry refers to domestic air traffic. Cabotage rights are covered in the eighth freedom of the air, and are rarely granted. Some exceptions do exist including between Australia and New Zealand, and the signatories to the 2001 Multilateral Agreement on the Liberalisation of International Air Transportation (MALIAT); "Brunei, Chile, Singapore, and New Zealand" (Hanlon, 2008, p. 133).

However, it should be added that MALIAT's lack of support from larger regional economies has relegated "it to relative obscurity" (Tan, 2014, p. 263). Meanwhile, the EU granted full

cabotage rights to members in the late 1990s. Although increasing, such rights within the EU represented "about 1% of total domestic services" in the late 2000s (Hanlon, 2008, p. 134). If the US ever allowed cabotage on any significant scale, and it remains very restrictive even by global standards in this regard, then the immediate consequences "are unlikely to be spectacular" as the US industry is very competitive (Vasigh et al., 2013, p. 176). The flow on foreign investment implications are likely to be more considerable though (Vasigh et al., 2013).

2.7.2   US-EU open skies

The largest open skies agreement in the world to date commenced in 2008 between the US and the EU. This agreement is "the biggest success" of the US strategy of linking "antitrust immunity" with open skies (Bilotkach & Hüschelrath, 2011, p. 360). Some experts maintain that this agreement represents "a dramatic "demonstration" model for regional liberalization", likely to be replicated in time in Latin America, Asia and Africa (Havel & Sanchez, 2014, p. 122). Some authors see this agreement as "a first step toward an Open Aviation Area (OAA)" across the North Atlantic (Morandi, et al., 2014, p. 306). However, in the more immediate context of the North Atlantic, the full impact of this agreement is not likely to be apparent "for some time" though (Macara, 2009, p. 14). Sceptics of the deal point out that the last time a new airline successfully entered the North Atlantic air market was in 1987 (Horan, 2010).

Even with this agreement in place, "harmonisation" of US and EU approaches to airline and alliance competition across the North Atlantic remains challenging as there is a "fundamental difference in the EU and US regulatory approaches" (Moss, 2011, p. 395). As far back as 2001, Oum, Yu, and Zhang (2001) argued that competition policy standardisation and international liberalisation "reinforce each other and should therefore be pursued simultaneously" (p. 62). Admittedly, this is easier said than done. Others point to the results of further liberalisation of the North Atlantic where consolidation has been the central outcome. This, it is argued, is evidence of "an extraordinary transformation of the industry's structure, one that will dwarf all the competitive changes since deregulation" (Horan, 2010, p. 289).

Although this US/EU agreement has in theory increased the threat of new entrants into the North Atlantic air market, the market characteristics of long-haul services are considerably different to those of medium or short-haul (Bilotkach & Hüschelrath, 2011). For example,

although Air France attempted to capitalise on open skies with the US by operating a Los Angeles (LAX) to London Heathrow (LHR) service, "it eventually withdrew from this market" to refocus on services from its Paris (CDG) hub (Bilotkach & Hüschelrath, 2011, p. 360). Attempts by Norwegian International Airlines to operate low cost long-haul flights out of Ireland to the US have faced a myriad of delays, and in consequence, have not yet been able to demonstrate whether either model – low cost long-haul, or operating outside of its traditional home base in Norway – will lead to profitable operations (Walker, 2016b).

2.7.3   Protecting free trade

The World Trade Organisation (WTO), like its predecessor the General Agreement on Trade in Services (GATS), continues to quarantine air services from inclusion (Havel & Sanchez, 2014). This exclusion has been achieved via unanimous agreement (Dempsey, 2004; Staniland, 1998). The WTO does cover some aviation services like maintenance, but most are outside its scope (Silversmith, 2013). The key trading principles underpinning the WTO, "such as the right of free transit", have been raised with respect to Russian fees for overflight, but have not formed part of any official negotiations (Baur, 2010, p. 237). The EU did try to insist that Russia's future WTO membership should be linked to the Siberian overflight issue, while Russia made such membership a prerequisite to resolving the overflight dispute; a stalemate resulted (Baur, 2010).

In the absence of extensive acceptance of the Transit Agreement, developed on the sidelines of the 1944 Chicago Conference, countries will persist in charging overflight fees (Lee, 2013). Until overflight is recognised "as the universal freedom in international air law", the global airline industry will not have even achieved a "minimum multilateralism" (Lee, 2013, p. 369). Multilateralism is more than simply bilateralism expanded, in that the former promotes a collective approach beyond national or "particularistic interests" (Nayar, 1995, p. 155). A 2008 WTO report on air transport liberalisation highlighted that despite progress in bilateral liberalisation, little has been accomplished "at the multilateral level" (Piermartini & Rousová, 2008, p. 19).

However, one considerable exception to this general rule exists; that is, in Europe. The single air market in Europe has clearly demonstrated what a multilateral air market transcending national borders actually looks like; whether it will be mirrored elsewhere around the world remains an open question. What is not in dispute is that Europe has managed to achieve a

multilateral single air market unrivalled in the world today (Gaspari, 2011; Havel & Sanchez, 2011b).

2.8   European single aviation market

Developments over the past few decades in Europe have raised fascinating and intriguing questions regarding the likely future for international air market liberalisation, and for the globalisation of the airline industry more broadly (Gaspari, 2011; Havel & Sanchez, 2014). In the late 1990s a number of industry watchers foresaw moves in Europe as creating "the prospect of replacing bilateralism with regionalism" (Toh, 1998, p. 67). Moreover, pundits speculated that Europe would likely then proceed even further "and negotiate with other countries on a multilateral basis" (Toh, 1998, p. 67).

Such sentiments were by no means entirely misplaced as the EU has successfully negotiated with the US, Canada and neighbouring countries (and others), but has faced considerable obstacles "with major and complex aviation countries such as Russia and China" (Baur, 2010, p. 239). Notwithstanding this, it is fair to say that by the early 2000s, "the EU [had] emerged as a new actor in international aviation" (Baur, 2010, p. 239). The EU enjoys a relatively "strong central authority" (the EC), which has helped it to be at "the vanguard of regional multilateralism" (Holloway, 2008, p. 239).

Despite the EU's growing role in global aviation, much of the world remains securely located under the umbrella of the bilateral aviation system. Although some see a "trend towards regional integration", with the EU at its apex (Onidi, 2008, p. 41), international liberalisation remains patchy and uneven for the most part. This being the case, a widespread view permeates the literature which maintains that the EU has helped to free-up "other international air markets by having both knock-on and demonstration effects for regions outside of the European area" (Button, 2009, p. 60). It remains challenging to decipher whether the EU single air market represents an exception to the general rule that national governments dominate the airline industry, or whether it points to a growing regionalism around the world that is seriously undermining this historical truism.

While major legacy carriers in the US have progressively merged, and in the process created three major airlines, flag carriers in Europe have instead opted for only partial mergers under holding company arrangements. Toner and Willis (2012) label this European model of holding companies as "schizophrenic arrangements" that are intended to protect "nationality"

and its associated traffic rights (p. 15). This being the case, the result is three major groups; the Lufthansa Group (chiefly with Swiss & Austrian), Air France/KLM and International Airlines Group (IAG: British Airways and Iberia).

Interestingly, and perhaps tellingly, the Chinese market is dominated by three big carriers also; Air China, China Southern and China Eastern. The Middle East is also dominated by three; Emirates Airline, Etihad Airways and Qatar Airways (Iatrou & Oretti, 2007). Other key markets are characterised for the most part by duopolies, such as All Nippon and Japan Airlines in Japan, Korean Air and Asiana Airlines in South Korea, Qantas Airways and Virgin Australia in Australia, and Malaysia Airlines and AirAsia in Malaysia. Meanwhile, Air New Zealand, Thai Airways, Singapore Airlines and South African Airways, each enjoy a flag carrier monopoly of sorts, although often with a range of regional low cost carriers as well.

What the European M&A experiences demonstrate is that the potential loss of lucrative international traffic rights (outside the EU) have weighed heavily on European airline decision making (Toner & Willis, 2012). No European flag carrier wants to jeopardise offering services to countries such as Russia and China. Nevertheless, the possible advent at some point in the future of regional air blocs along the lines of the EU example remains a somewhat open question, with supporters viewing such regional air blocs "as the natural leaders" in reforming global aviation (Toner & Willis, 2012, p. 17).

Meanwhile, the community carrier concept has found limited traction outside the EU internal air market (Garcia-Arboleda, 2012; Havel & Sanchez, 2014). Even though the US/EU open skies deal of the late 2000s, together with the global alliances, have seemingly elevated and strengthened the concept of a European airline identity (i.e. community carrier), above a distinctive national citizenship for each airline in the bloc, in reality "the legal framework…is either national or, in the case of the EU, a blend of national and supranational" (Havel & Sanchez, 2014, pp. 149-151).

2.8.1   The North Atlantic: On track to be a single air market?

The close trade and cultural ties between the US and EU, palpably shown in the airline industry with the signing in 2007 of the EU-US open skies agreement (which commenced in 2008), have raised the prospect of a single air market being established across the North Atlantic. In fact, many contend that if cross border mergers outside the EU are to occur, they

will first take place between US and EU carriers, most likely fellow alliance members (Hanlon, 2008). The North Atlantic remains one of the busiest air corridors in the world. Cooperation across the North Atlantic is strong, and has a relatively long history, with nearly 90 percent or so of traffic being carried by global alliance members (CAPA, 2013c).

Back in the mid-1990s, some two decades ago, Nayar (1995) postulated that the EU and US might soon achieve "market equivalence", likely resulting in "a certain mutuality of interests" (p. 170). He added that such a combination would be a powerful force for change in the airline industry, although with the caveat that he did not expect such a situation to emerge anytime soon, with the "real test [being] its ability to survive beyond a change in the balance of power" if it did (Nayar, 1995, p. 170). Although neither air market has managed to unite, each has provided the founding members of the big three global airline alliances, which today account for over 75 percent of total worldwide passengers (Bilotkach & Hüschelrath, 2011; Dunn, 2017). The big three global alliances are discussed next.

2.9   The rise of global airline alliances

Global airline industry expansion and geographic reach have been substantially aided by the development of the three major global airline alliances; oneworld, Star Alliance and SkyTeam. Alliances are in part used by major carriers "to leverage their domestic networks to better serve international routes" (Moss, 2011, p. 392). What seems clear is that the "global alliances have been an important part of airlines' responses to globalization" (Morley, 2003, p. 48). The underlying rationale of the global alliances is now explored.

2.9.1   Rationales and realities

A view persists throughout the literature that alliances represent "a poor man's merger" whereby airlines opt for a second best option in place of a full merger due to the regulatory constraints inherent in this latter scenario (Garcia-Arboleda, 2012, p. 100; Gaspari, 2011; Macara, 2009, p. 16). Although some international airlines would no doubt merge if the opportunity was available, airline alliances often have much more to do with expanding "global reach" than a desire to absorb (or be absorbed) by another airline (Hanlon, 2008, p. 313). Global network expansion, particularly for major US and European airlines, is also in part due to the increasing competitive pressure from LCCs (Moss, 2011), and more recently, "from the Gulf region" (Hofmann, 2011, para. 5).

Around the late 1990s some authors were also arguing that an emerging "alliance system" was blurring "the nationality of airlines" (Staniland, 1998, p. 76). For a relatively brief period of time (though not entirely extinguished), the notion of metal neutrality, especially amongst the three big global alliances, has been touted as the way of the future whereby aircraft liveries adopt alliance logos or similar pan-airline paint work, rather than traditional individual brand markings (Havel & Sanchez, 2014; Mifsud, 2011). In reality, the big three global alliances "have been slow to embrace metal neutrality" (Mifsud, 2011, p. 129).

Nevertheless, there is certainly support for the view that the major global alliances could in future become vehicles "for freeing the nation-bound airlines", and in time morph into transnational megacarriers (Havel & Sanchez, 2014; Mifsud, 2011, p. 128). Ultimately the driving force behind the global alliances, which airlines state themselves, is "the desire to expand the geographic scope of their networks so as to achieve global scale" (Iatrou & Oretti, 2007, p. 195). This is not to suggest that the global alliances are without their critics. Opponents have gone so far as to label activities amongst alliance anchor members in the US and Europe as "radical consolidation around three globally collusive alliances" (Horan, 2010, pp. 290-291).

2.9.2   Global distribution systems (GDS) & code-sharing

The global alliances evolved out of the global distributions systems (GDS), initially known as computer reservation systems (CRS) in the 1960s and 1970s. These systems became increasingly important to airlines throughout the 1980s and 1990s, with the major players including Galileo, Amadeus and Sabre (Doganis, 2010; Hanlon, 2008). While most major airlines "still rely on GDS…to distribute their tickets worldwide", travel agent commissions have been reduced, while direct online sales have increased; an avenue favoured by LCCs (Vasigh et al., 2013, pp. 378-379).

As GDS's became widespread throughout the industry, travel agents evidently developed a tendency "to book customers on flights on the first screen" (Hannegan & Mulvey, 1995, p. 131). Code-sharing – placing the flight code of an airline onto a partner's flight – then grew in popularity as this practice allowed partners to 'piggy back' onto more visible and prominent flights. Code-sharing was a key precursor to the global alliances, providing as it did global reach without the need to fly one's own aircraft (metal) to all destinations in a network (Doganis, 2010; Hanlon, 2008).

Code-sharing, frequent flyer programs and airport lounge networks allow individual airlines to offer a global service, minus the prohibitive costs and geographical constraints that would likely make such vast networks unfeasible for a single airline to ever replicate on their own. Code-sharing also allows domestic feeder traffic to be more effectively tapped at the outer points of an airline's network. However, beyond code-sharing, whereby an airline sells a ticket from one city via its partner's hub to a third city, still requires third party agreement in many cases (Doganis, 2010; Hanlon, 2008).

2.9.3   Swissair: A forerunner's cautionary tale

In the 1990s and early 2000s Swissair took code-sharing and alliance formation to a deeper level by making a series of substantial equity investments in its airline partners. Most of these partners were second tier European carriers burdened by significant debt, and in late 2001 their economic woes helped to bring about the demise of Swissair (Chang & Williams, 2002). Swissair's reluctance to join the burgeoning global alliance system, and instead build (and buy) an international alliance of its own, remains poignant to this day as debate continues as to whether code-sharing and global alliance membership are superior to substantial equity investments and unaligned status (Hermann & Rammal, 2010; Kingsley-Jones, 2013a).

Swissair did build "the first truly global alliance" in 1989 when it teamed-up with Singapore Airlines and Delta Air Lines to form Global Excellence, which included a mutual five percent equity stake (Iatrou & Oretti, 2007, p. 25). Defections later encouraged Swissair to pursue larger stakes to shore-up partnerships (Suen, 2002). Swissair's eventual bankruptcy soon gave birth to the now Swiss International Airlines, a wholly owned subsidiary of the Lufthansa Group and a fellow Star Alliance member. History does not always predict the future, but the failures of the past hold lessons. As Iatrou and Oretti (2007) observe: "It seems that airlines have come to realise that they can work together without having to buy one another's stakes" (p. 79). Etihad Airways would no doubt beg to differ as it continues to hold substantial equity stakes in a range of other airlines (Kingsley-Jones, 2013a).

2.9.4   Strategic partnering & equity stakes

Airline alliances are rarely stable and static for long, with promiscuity a prominent and enduring feature of such agreements (Iatrou & Oretti, 2007). Given the evident historical instability that has accompanied airline alliances, a debate continues as to how far airlines should go in linking themselves to partners. Do deeper relationships yield better outcomes

over the long term? Swissair's story provides some cautionary narrative about the dangers of being inexorably shackled to the fortunes of a partner, but it does not necessarily represent a broader reality that applies to all airlines equally.

A high degree of pragmatism has underpinned airline alliance formation and evolution, along with inter-airline investment, with a 'best fit' or "fill the gap" mentality strongly influencing such decisions (CAPA, 2013a). In this context, when considering the "competitive effects" of alliances, it is worth noting that a range of "non-price parameters" are also at work, including "flight frequency, schedule coordination, travel times, network size [and] frequent flyer programs" (Bilotkach & Hüschelrath, 2011, p. 376). Airport lounge networks and geographical coverage also feature here (Hanlon, 2008).

One of the most vocal opponents of the big three global alliances is Emirates Airline, on the grounds that their collusive behaviour is anti-competitive, although it is probably large enough to be wrong on such membership (O'Connell, 2012). Emirates' strategic partnership with Qantas Airways is further evidence that a global alliance member (in Qantas' case oneworld) can team-up with a major unaligned partner. Even so, this arrangement is not without complication as Emirates Airline's neighbour and rival Qatar Airways is also a oneworld member, and in early 2015 announced a ten percent equity stake in IAG (then a year later increased this to 15%), the parent company of British Airways and Iberia (likewise in oneworld).

Qatar seems to think that global alliance membership, and a substantial equity stake, are mutually reinforcing (Karp, 2016). Meanwhile, Etihad Airways is forging ahead with an alliance of its own, including a range of substantial equity stakes. Like Emirates, Etihad remains critical of the global alliances, but welcoming to individual members such as oneworld's Air Berlin in which it also has a 29 percent equity stake (Kingsley-Jones, 2013a). These three major Gulf carriers are not only impacting the global alliances, they are also generating competitive impacts for airlines around the world; the Gulf carriers are explored in the next section of this chapter.

2.10   The Gulf three: Shifting sands?

The three major Gulf carriers are not just raising questions about airline cooperation strategies, but rather are generating debate about the extent to which the airline industry's centre of gravity is moving east from Europe and the US (Bisignani, 2013).

2.10.1 Centre of the world: The new silk road

Ancient trade routes in the Middle East seem to be experiencing an airborne revival, as Dubai based Emirates Airline, Abu Dhabi based Etihad Airways and Doha based Qatar Airways grow and expand at a breathtaking pace. This rapid rise to prominence has caught many industry observers off guard, and until fairly recently, the academic literature covering these new airlines was quite thin. The media have been a little more attentive, with a fascination developing in mostly the western media about the meteoric trajectories of each host city (or quasi city-state, as some have labelled them) and their airlines. Much of this focus has noted the geographical advantages that each enjoys, lying as they do along the old silk trading routes that linked the east and the west (Derudder & Witlox, 2014; The Economist, 2010b).

Each of these airlines is able to connect most world cities using only one-stop connections via their respective hubs. While geography brings obvious advantages, others in the region, notably Saudi Arabia, Bahrain, Kuwait and Iran have similar geographical advantages, but lack the national aviation policies and business cultures to, as yet, follow suit (The Economist, 2010c). In the case of Iran, it also lacks the international relations that would deliver sufficient global traffic rights in the first place (not to mention until very recently crippling sanctions due to its nuclear program). Thus, geography brings advantages, but for these to be more fully exploited, national and international policies and strategies need to be pursued that aim to capitalise on these in the first place (Frawley, 2014).

2.10.2 Trailblazers or imitators?

Are the major Gulf carriers fundamentally changing the global airline industry, or are they just simply following on from a trend forged by European and then Asian airlines before them? It would seem that both questions, to some extent, can be answered in the affirmative. Yes, the major Gulf carriers are clearly shaking-up the global airline industry, but not necessarily to the detriment of other more established airlines, as many secondary markets are now being served that were either ignored or less important in the past. Together with this, the international air passenger (and freight) market continues to grow, and with it new opportunities for younger airlines to grow the market with new and additional services (CAPA, 2013d; Fan & Lingblad, 2016; Itani, O′Connell, & Mason, 2014).

Likewise, the Gulf carriers are also implementing strategies previously pursued by European and Asian airlines, a fact openly acknowledged by the CEO of Qatar Airways for example,

who stated several years back that the European airlines have taught the Gulf carriers a great deal and now "they should accept competition" (Dixon, 2011, p. 5). Dubai, Hong Kong and Singapore, to name a prominent few, demonstrate that economic and demographic size are not necessarily as important as the position of each in the globalised hierarchy, in part explaining why each has an airline and aviation industry of substantial size and clout, despite modest population sizes (Derudder & Witlox, 2014).

2.10.3 Levelling the playing field

Claims that Gulf airlines are awash with money from oil revenues ('petrodollars'), and that in consequence, national governments in the Gulf continue to both directly and indirectly subsidise their carriers, have seen the sporting metaphor of a 'level playing field' increasingly employed in criticisms of the major Gulf carriers (Chesen, 2006; de Wit, 2014). This criticism that they are receiving unfair competitive advantages, and thus, creating an uneven or distorted playing field, was until recently loudest in Europe, but now is most evident in the US (O'Connell, 2015). As the major Gulf carriers expand their networks in the US, the three major legacy carriers there are concerned that traffic will be diverted away from their hubs, as well as their alliance partners (Dresner, Eroglu, Hofer, Mendez, & Tan, 2015).

Clearly not all Gulf services will generate entirely new traffic, so such arguments become somewhat circular and context dependent. For instance, US consumers (and others) may indeed benefit from increased competition as prices fall and services expand, while US legacy carriers may lose market share and with it jobs. Employment will be generated and economic activity stimulated though as the Gulf airlines expand in the US (Levine-Weinberg, 2015), so the question becomes; what will the net costs and benefits be to the entire US economy? Etihad's CEO maintains that "it isn't an even playing field" to begin with, as the world is a mix of mature, maturing and emerging air markets, begging the question in his view: "So, where do you set the rule book?" (Hogan, 2015).

2.10.4 Restricting access

One central way that European and US airlines have used to try and curtail Gulf carrier growth is to push their governments to restrict access. Currently, the major US legacy carriers are attempting to make the case to their government that it should renegotiate open skies deals with the respective Gulf governments, although to date no moves have been made in this direction (Dresner et al., 2015). In Europe meanwhile, the German government has

shown greater willingness to limit traffic rights in defence of its flag carrier Lufthansa, while the Canadian government has done the same in support of its national airline Air Canada (both are Star Alliance members). Canada faced costly fallout from its decision not to expand its bilateral agreement with the United Arab Emirates (UAE), having to vacate its military base in the country as a result (Gubisch, 2011; Parker, 2012; Sorensen, 2010).

Although such punitive actions are by no means unheard of in global aviation, a clear message has been sent that the Gulf carriers, especially Emirates, are not going to accept restricted market access quietly and unopposed (O'Connell, 2011). Even so, power differentials in international relations are unlikely to see Germany or the US suffer the same retaliation as that experienced by Canada; if indeed the US opts to limit access. The economic might of Germany, together with the economic and military power of the US, suggest that such a strategy could be immediately, and for some time thereafter, counterproductive for all sides involved (Fan & Lingblad, 2016; Levine-Weinberg, 2015).

The US and most major European countries are also keen to continue selling aircraft to the Gulf carriers, so some accommodation that acknowledges the correlation between supply of such aircraft, and the need to match this with corresponding demand levels, in some cases by expanding market access, has to be achieved (Tretheway & Andriulaitis, 2015). In this respect, the global aviation industry is divided between aircraft manufacturers and airports that welcome Gulf carrier expansion; and the airline industry outside of the Gulf that is generally concerned about the competitive impacts of this growth (Levine-Weinberg, 2015).

The major Gulf carriers are not the only major airlines experiencing growth and expansion in the industry at present. It must also be remembered that arguably the biggest and most profound shift toward the east for the airline industry is to the region that Americans and Europeans would refer to as the far-east; that is, to Asia (J. J. Wang & Heinonen, 2015; Zakaria, 2011). The next section of this chapter looks at the Asian region, and explores how its airline industry will likely impact the future of the global industry.

2.11   Will this century be Asia's?

In the 1990s the collapse of the Soviet Union, and the resulting unipolar world with the US left as the sole superpower, led "most scholars" to conclude that this would be a brief historical moment followed by "the emergence of a new multipolar world" (Zakaria, 2011, p. 245). Many throughout Asia "spoke confidently of the rise of "the Pacific Century" (Tricks,

2014; Zakaria, 2011, p. 245), or even more resolutely of the Asian Century (Rizvi, 2016). This sense of the unfolding twenty-first century has much to do with China's economic, and to some extent military, rise to global prominence, but also suggests a sense of unity and regional purpose that acts to camouflage considerable differences and disparities across Asia. Traditionally, Asia has shown little enthusiasm for air market liberalisation, while China remains even more sceptical and protectionist (Tan, 2014).

2.11.1 ASEAN's aspirations

The ten member countries of the Association of Southeast Asian Nations (ASEAN) have developed a Multilateral Agreement on Air Services (MAAS) which tries "to transplant the "EU carrier" concept, but with limited success to date (Havel & Sanchez, 2014, p. 145). Hopes of achieving a single liberalised market in 2015 proved overly ambitious and unrealistic (Waldron, 2016). Etihad CEO James Hogan does not see truly open skies in ASEAN in the next decade or two, even though many state it will happen (Hogan, 2015). ASEAN, despite public displays to the contrary, remains "deeply divided" over air transport liberalisation (Tan, 2012, p. 49). For instance, fifth freedom rights are not permitted at present, preventing airlines from continuing on to a secondary point of service (Waldron, 2016).

A number of ASEAN member states hold "conservative attitudes" toward air market liberalisation, and warnings abound that attempts to achieve a single air market will end up being in name only (Tan, 2010, p. 294). No other major region of the world, with the exception of Europe "where special circumstances prevailed", has managed to achieve a regional open skies deal to create a single air market (Forsyth, King, & Lyn Rodolfo, 2006, p. 151). ASEAN will end up with "semi-open skies", not merely a European clone, but instead a "version [that] is much less ambitious" (Ballantyne, 2014, p. 22). Although ASEAN would like to achieve a single air market, "no date has been set and it looks a long, long way down the track" (Ballantyne, 2014, p. 22).

2.11.2 China's trajectory

There is widespread agreement that the Asian airline industry "is undergoing a seismic shift with China", which is seen as possessing the most extensive "growth opportunities anywhere in the world" (Mifsud, 2011, p. 129). Even so, China is new to the liberalisation trend evident elsewhere, and remains "reluctant to ease up on its economic nationalistic instincts" (Mifsud,

2011, p. 120). China is wary "of high-octane liberalization" (Havel & Sanchez, 2011a, p. 16). Furthermore, much of the focus into at least the near term (and likely beyond) will be on the domestic market, as "the geography and size of the domestic market in China suggests that its air transport sector will gradually move to a structure akin to the US" (Button, 2008, p. 36).

Similar also to the US will be China's predominately domestic orientation and focus, a market which will grow faster "than anywhere else on the planet", but with less clear indications at present as to whether any of its three major airlines will evolve into truly global network carriers (Bowen, 2010, p. 141). Geographically, the main Chinese hubs are perilously close to stronger established rivals like Cathay Pacific in Hong Kong and Korean Air in South Korea (Bowen, 2010). The big three Chinese carriers have also not been exposed to "unfettered competition", leaving them comparatively weaker with respect to Singapore Airlines and others with global reputations for high standards of service and quality (Bowen, 2010, p. 141).

Clearly, the major Chinese carriers have not felt particularly comfortable "competing head to head with foreign carriers in international markets", but they "have been learning modern management skills fairly rapidly" (Oum & Yamaguchi, 2006, p. 32). China and its airlines are also still likely to deliver increasingly huge numbers of tourists around the globe over the next decade and beyond, allowing the Chinese on many occasions "to dictate terms on market access" (Airline Leader, 2013, p. 25). China is certainly a big story, and will continue to be well into the foreseeable future (Szepan, 2015). However, its airline industry and major airlines may not achieve global prominence, let alone parity, with major airlines from the US, Europe and other parts of Asia over the next (Q. Zhang, Yang, Wang, & Zhang, 2014).

Even so, China's impact on the global airline industry is likely to be substantial, and all indications are that the Chinese authorities and leadership are not expected to lose their fondness for the bilateral systems of air service agreements, even if they also conclude open skies agreements with the US and others (Mifsud, 2011). Thus, they may very well embrace liberalised bilateral agreements, but bilateral agreements nonetheless. Multilateral agreements seem less likely, with China's reluctance to deal with the EU as a single entity when it comes to traffic rights a central case in point. China could conceivably become the single most important guardian and promoter of the bilateral system for many decades to come (Fu, Oum, Chen, & Lei, 2015; Havel & Sanchez, 2014).

2.11.3 India: Slumbering giant?

A final point should be made in this Asian section regarding India. There remains a strong feeling, particularly amongst the major aircraft manufacturers, that India is on a trajectory to become a mega-economy alongside China and the US (Button, 2008; Sidner, 2011). What is less certain compared with China is the timeframe. Bureaucratic obstacles and a raft of other internal challenges are yet to be tackled by an equally determined and resolute political leadership in India. The ongoing financial woes and other challenges experienced by flag carrier Air India suggest that the major Gulf carriers, particularly Emirates, could be well positioned to take full advantage of any international liberalisation moves in India (Bowen, 2010).

India is a prime example of a large country that has geographical advantages, yet lacks the political vision and leadership at present to realise its aviation potential globally. India could conceivably beat the major Gulf carriers at their own game, however, the Gulf airlines not only have first mover advantage, they are also unlikely to witness India turning up the competitive pressure as a fast follower anytime soon either. Air transportation in India, particularly "air travel penetration" is under half that of China, and "among the lowest in the world" (O′Connell, Krishnamurthy, Warnock-Smith, Lei, & Miyoshi, 2013, p. 168). These statistics can be read optimistically to demonstrate potential, or pessimistically to show the current reality. Either way, India has a long slow path ahead when it comes to air transport development (O′Connell et al., 2013).

Beyond a country by country, and region by region, look at the global airline industry, climate change reflects a global issue that calls for urgent and visible industry action. Climate change can be approached unilaterally (including through extraterritorial actions), bilaterally or multilaterally (Prum & Kisska-Schulze, 2015). It is to this "politically contentious" contemporary industry challenge (Havel & Sanchez, 2014, p. 217), and possible approaches to respond to it, that the chapter now turns.

2.12   Climate of change

One of the most often cited major challenges faced by the airline industry today its contribution to climate change (Manzini & Masutti, 2012). The EU has attempted to combat aviation's contribution to climate change by initially adopting a unilateral approach that

invoked extraterritorial powers outside EU airspace; a policy that has met with strong resistance (Prum & Kisska-Schulze, 2015).

Despite its relatively modest contribution to global carbon emissions, the aviation industry is coming under increasing pressure from regulators, consumers and interest groups to reduce its emissions. However, attempts by the EU to include aviation in its emissions trading scheme (ETS) have been met with opposition from many airlines who view such actions as outside the accepted parameters of the international aviation system. Such opponents contend that an industry-wide agreement forged via either ICAO and/or IATA would represent a more acceptable and workable approach (Havel & Sanchez, 2012; Manzini & Masutti, 2012; Rosenfeld, 2013).

The global airline industry is not only bedevilled by the contentious issue of climate change (Havel & Sanchez, 2014), it is also caught in a globalisation paradox (Macara, 2009; Staniland, 1998). This apparent paradox helps to reveal an industry that is unlike any other industry in the world today (Havel & Sanchez, 2014). It is to this seeming paradox that the chapter now moves.

2.13   The globalisation paradox: A transnational industry on the horizon?

The international airline industry is often characterised as being in a globalisation paradox whereby it facilitates and promotes communication and trade links throughout the world, but itself still remains deeply imbedded in a traditional industry structure based on national borders and restrictions (Macara, 2009; Staniland, 1998). This is why there are no truly "transnational airlines" in the world (Hanlon, 2008, p. 327). Transnational airlines have long been talked about, but never realised amongst major global carriers (Havel & Sanchez, 2014; Hanlon, 2008). This reality is intrinsically linked to the bilateral system of traffic rights, and to the associated considerations of air space sovereignty, home base requirements and ownership limits (Mifsud, 2011).

A cautionary note should be inserted here, as critics and sceptics of the "Western experience" of globalisation argue that deeper inspection of the structures and practices of transnational companies actually reveals that despite popular perceptions "they remain anchored largely at home" (Burchill, 2001, pp. 95-97). The idea that globalisation is mostly a 'Western experience' is further strengthen by the possibility that "transatlantic mergers" between US and EU airlines, most likely to occur between fellow global alliance members, are widely

seen as where the first truly cross border, inter-market, international mergers will take place; if and when they do so (Hanlon, 2008, pp. 337-338). Added to this, "*economic* globalization" (emphasis in original) involves "the indispensable role of geography" (Yeung, 2002, p. 285); so paradoxical is not a particularly apt description to begin with when geographical realities act to impose practical limits on both technological and economic globalisation (Sheppard, 2002).

This apparent transnational irony (or at least largely ignored aspect) means that successful globally orientated businesses are not only tailoring products and services to individual national markets ('glocalisation'), but are also embracing their heritage and national attributes as they do so. Many airlines find that their individual brands provide powerful competitive advantages, and they do not wish to see their marketing strength diluted or discarded. For instance, in 2014 Air France began a worldwide marketing campaign based on 'France is in the air' (Slutsken, 2015), while many other carriers continue to leverage their national identities and culture to position themselves in the global marketplace (Shaw, 2007).

With this in mind, over 100 years of industry growth and development built on national home base location, is unlikely to see many major legacy and flag carrier brands disappear anytime soon, with the exception of several high profile full domestic mergers from time to time. Rather than weaken national airline identity, global alliances and other forms of international cooperation, might actually act to strengthen individual airline brands as they seek to leverage larger global networks and connectivity (Shaw, 2007). Nevertheless, consumers do tend to purchase brands they view as 'best' irrespective of national origin. This attitude might "eventually emerge in markets for air travel" (Hanlon, 2008, p. 162).

Unilateral action on the part of individual states that ignores nationality requirements during traffic rights negotiations have proved few and far between as "the tightly wound aeropolitics of the bilateral system have had little tolerance for such experiments" (Havel & Sanchez, 2011b, p. 653). Even if that tolerance appeared, the bilateral system would not disappear, while some also argue that globalisation is still possible in either case anyway (Havel & Sanchez, 2011b). Others argue that unilateral actions that open air markets to foreign investment and competition are optimal, and would not require any negotiations (Vasigh et al., 2013). At the very least these differing viewpoints suggest that national business location is not necessarily an insurmountable barrier to globalisation, any more than the nation-state is

an obstacle to international agreement and cooperation – each can encourage and reinforce the other (Porter, 2008b).

2.14 Conclusion

The geographical, political and economic forces shaping the global airline industry must be assessed with similar weight if its globalising potential and national parameters are to be better understood. International air markets are significantly different compared to domestic air markets; albeit that they often feed traffic to each other. Economics represents a well-established and valuable window on the airline industry, but to achieve a wider picture of core trends and events, including plausible future scenarios, economics must be linked with geographical location and international relations. In this manner, the European single aviation market, the three major Gulf carriers, and emerging markets more generally, along with the Asian region (ASEAN countries and China especially), are better able to be placed into the airline industry's historical and contemporary context, while their future potential is better positioned to be more fully appreciated. The past, present and future have a symbiotic relationship; this is no more evident than in the global airline industry. The next chapter reviews the core air transport literature, covering issues such as geographical location, international relations, geopolitics and air market liberalisation.

Chapter 3: Literature Review

3.1   Introduction

This chapter analyses a core array of academic research that has been conducted on the global airline industry, and the key industry and media sources of industry information and news. The chapter begins by exploring the use of a framework to guide the study, and then details two well established strategic frameworks that helped to scaffold this study; the Political, Economic, Social, Technological and Environmental (PESTE) framework, and Michael Porter's five forces of competition model. Research issues and gaps are then detailed to assist in situating the main thematic areas to follow. In this context, geographical location and international relations are both assessed in terms of representing central factors that, in addition to key financial metrics like profitability, help to explain and better understand the airline industry and its likely future trajectory. International liberalisation is covered after this, followed by the main geographical and other key thematic areas of focus; namely, events and issues across the North Atlantic and in Europe, followed by the three major Gulf carriers, and finally, the Asian region.

3.2   Framing the study

3.2.1   Theoretical, conceptual and analytical frameworks

Theoretical, conceptual and analytical frameworks are widely used tools to scaffold and organise research, including in aviation. Such frameworks have also been utilised extensively with the airline industry more specifically. For instance, Alderighi, Cento, Nijkamp and Rietveld (2012) used a "theoretical framework" to investigate how European full service airlines set prices amongst each other, versus when competing with low cost rivals (p. 225). Bamber et al. (2009) looked at how engagement can improve airline employee performance via an "analyical framework" (p. 8), while Derudder and Witlox (2014) used "a schematic model" to demonstrate the symbiotic relationship "between air travel and global city-formation" (pp. 103 & 110). Meanwhile, Gudmundsson (2002) employed a "conceptual framework" to predict airline distress "using non-financial indicators" (pp. 3 & 6), and Hüschelrath and Müller (2013) utilised "a conceptual framework" to look at competition and industry exit using mostly data from the US airline industry (pp. 72-73).

Added to these examples, Lohmann and Vianna (2016) developed "a conceptual framework on the factors influencing traveller demand" with a view to better undertanding "air route suspension" (p. 200). Likewise, Pereira and Caetano (2015) created a "conceptual framework" that looked at core differences amongst airline business models (p. 74). Warnock-Smith and O'Connell (2011) opted for an "analytical framework", based on "structural equation modelling (SEM)", to contrast air policy impacts on tourism demand in the Caribbean and the Middle East (pp. 265-267). Some authors differentiate between a conceptual framework which is commonly defined as "a schema" linking various ideas and concepts together, with a theoretical framework which is guided by positivist conventions and diagrammatically shows "how various constructs are linked together" (Cooksey & McDonald, 2011, pp. 258-262).

Evidently, theoretical and conceptual are often used interchangeably throughout the literature; nonetheless, both frameworks "represent conceptualisations, and draw on theory" (Berman & Smyth, 2013, p. 2). At its heart, a conceptual framework can be viewed "as a set of broad ideas and principles taken from relevant fields of enquiry…to assist a researcher to make meaning of subsequent findings" (Smyth, 2004, p. 1). Such a conceptual framework can help to extract meaning from data, communicate findings in a structured manner, and provide "reference points back to the literature" (Smyth, 2004, p. 1). Conceptual frameworks also help to detail and map "the key concepts and factors to be investigated", and provide a valuable way to capture "emerging, fragmented or broad themes" (Lohmann & Vianna, 2016, p. 200) such as with this thesis. For instance, in their assessment of firm exit in the US airline industry, Hüschelrath and Müller (2013) detailed how their conceptual framework "guided" their research endeavour (p. 78).

The frameworks of analysis that helped to situate this study are Michael Porter's five forces of competition model (otherwise referred to as Porter's five forces), together with the PESTE framework. Porter's five forces model is aimed at better understanding industry competition, and how these five forces interact to generate the profit potential of a sector. For instance, Porter argues that "the real profit killer for the airline industry" are its "highly unusual combination of low entry barriers and high exit barriers" (Magretta, 2012, p. 202). Despite the fact that this observation applies more directly to the US airline market, and domestic air markets more generally, Porter's framework still provides "a useful start" in better understanding the global airline industry (Shaw, 2007, p. 76). Meanwhile, PESTE is widely

considered a powerful strategic model, "especially in the airline industry" (Shaw, 2007, p. 49); some aviation scholars have even described it as "the most notable" such framework for the industry (Itani et al., 2014, p. 126).

These industry level analysis frameworks are employed in this study as scaffolds to help demonstrate the need to explicitly cover both geographical location and international relations in better understanding how the global airline industry has developed, and its likely future trajectory. Without their inclusion, any global airline industry level analysis is rendered partial and incomplete. The use of two generic strategic frameworks leads more readily to airline industry specific forces and factors being uncovered in the process (Heracleous, Wirtz & Pangarkar, 2009). In a similar way, no single strategic framework should be expected to achieve "theoretical purity", but rather apparent weaknesses and paradoxes ought to be grounds for scholarly advancement and greater insight (Lado, Boyd, Wright & Kroll, 2006, p. 125).

Geographical location and international relations, including their merged counterpart geopolitics, have a significant impact on the airline industry and greatly influence how it advances, including the extent to which it can, and is likely to do so (Debbage, 2014; Duval, 2007). Both strategic frameworks are certainly able to successfully account for both geographical location and international relations. Yet, without explicit and direct treatment (i.e. a commensurate profile to existing elements), when assessing the global airline industry, these core competitive shapers whether ultimately labelled factors, forces or drivers, risk being ignored or downplayed. Few global industries, if any, are so comprehensively impacted and shaped by both geographical location and international relations as is the global airline industry (Budd, 2014; Nayar, 1995). Therefore, a robust mixed-method approach was required to thoroughly answer the research questions.

3.3 Industry level analysis

3.3.1 Industry level analysis and airline industry profitability

This study seeks to conduct an industry level analysis of the global airline industry. Industry level analysis is chiefly concerned with ascertaining an industry's "ability to generate profit" (Grant, 2013, p. 61). The challenge when assessing the airline industry is not only low levels

of historical profitability (Doganis, 2010), but how one defines profitability to begin with, as the industry has a plethora of economy wide direct and indirect impacts (Pilarski, 2007).

With respect to the global airline industry profitability, it is also not as straightforward as it might at first appear; neither to accurately ascertain, nor to prescriptively achieve (Pilarski, 2007). Myths surrounding airline profitability are common, for instance, that airports and air traffic control (ATC) providers enjoy higher average levels of profit compared to airlines. Looked at from a different angle though; "airports cannot move and are at the mercy of the airlines" (Pilarski, 2007). In contrast, aircraft are highly mobile assets (Kaplan & Shabat, 2015).

In essence, industry analysis involves exploration of all the core external forces and factors that act to shape and structure an industry, but also to differentiate between simply important and fundamental (Grant, 2013). Although valuable in understanding low profitability, "ultimately, industry analysis is not [used] to explain the past, but to predict the future" (Grant, 2013, p. 73). On a daily basis air transport managers across all levels of the industry must make decisions "about what is likely to happen in the future" (Wensveen, 2007, p. 244). As one airline industry observer puts it, current decisions and actions must be predicated "on yesterday's plan and tomorrow's expectations" (Wensveen, 2007, p. 244).

The airline industry has grown rapidly over the past half century, yet this demand has only resulted in it being "marginally profitable" (Doganis, 2010, p. 4). Outside of brief periods of "economic boom", major advances in aircraft technology (e.g. jet aircraft) and low oil prices, the airline industry remains "a highly uncertain and challenging place to achieve financial returns" (Heracleous, Wirtz, & Pangarkar, 2009, pp. 14-16). Low profitability, combined with the global airline industry's dynamic and structurally complex nature, makes using established strategic models challenging. One reason for this is that "competition in air transport varies considerably" (Duval, 2013, p. 499). The limitations of using generic models mostly surround the "one-size-fits-all" mentality that results (Tretheway & Andriulaitis, 2015, p. 102), along with their static nature (Grant, 2013).

Established strategic frameworks and theories are not a panacea for industry level analysis. For instance, game theory "does a better job of explaining the past than of predicting the future" (Grant, 2013, p. 96). Meanwhile, Porter's five forces framework is criticised for being too rigid and prescriptive (Grundy, 2006). To alleviate and address a range of shortcomings

with such frameworks in this regard, the explicit addition of both geographical location and international relations, the latter predicated on "the analysis of relations between nations" (Burchill & Linklater, 2005, p. 12), provide deeper and richer industry level analysis for the global airline industry.

These two elements can be either deliberately incorporated into an industry level analysis based on an existing framework (or combination of frameworks); alternatively, modifications and adaptations can be made to place these alongside the factors and forces covered by a particular strategic model. Any industry level analysis of the global airline industry, irrespective of the established strategic framework or model employed, remains partial and incomplete without the inclusion of both geographical location (centred on home base and nationality), and international relations (predicated on bilateralism versus multilateralism). It is simply not possible to adequately understand the global airline industry without close consideration of these two pivotal industry shapers.

In this context, the home base where an airline is permitted to operate from (in most cases in terms of both the country and major airport/s involved) is instrumental in where it can fly to, and furthermore, the partners it is likely to seek, including the extent of that cooperation. Likewise, the bilateral and/or multilateral basis upon which an airline is able to access air markets around the world, including the extent to which these agreements are liberalised, is crucial in more fully understanding the structural and competitive operating environment of a particular airline. Thus, an industry level analysis of the airline industry either globally, or on an air market by air market basis, is incapable of moving significantly beyond individual domestic air markets and into the international arena if it fails to include geographical location and international relations at a commensurate level to other key forces and factors (Duval, 2007; Tretheway & Andriulaitis, 2015). Any industry level analysis of the airline sector that crosses national borders and adopts an international view, whether partial or global, cannot be considered holistic if geographical location and international relations are not explicitly involved (Havel & Sanchez, 2014; Nayar, 1995).

This study seeks to employ the PESTE framework, along with Porter's five forces of competition framework, as implicit scaffolds to then include an explicit acknowledgement of the central roles played by geographical location, as "place remains fundamental [because airlines] remain fixed within national circumstances" (A. R. Goetz & Graham, 2004, p. 267), and of international relations, in shaping the airline industry's competitive landscape and

structure. In this context, this study does not seek to modify or adapt either framework, but rather to employ both geographical location (predicated on home base) and international relations (centred on bilateralism versus multilateralism) as key factors alongside those in each strategic framework.

Their inclusion then allows for deeper industry insights to emerge that are otherwise easily downplayed or ignore. Financial metrics alone are not sufficient to fully understand why the global airline industry is structured the way it is, nor to more holistically appreciate where it is likely headed in the foreseeable future (and beyond). Airline industry profitability (including profit generating potential) is then able to be better understood in the context of geographical location and international relations, enhancing the robustness and quality of the industry level analysis being conducted in the process.

Some authors promote the notion of onion-style models, which seek to unite and merge core elements of Porter with other strategic frameworks and models including the original PEST (Grundy, 2006). In an airline industry context, these still invariably leave out explicit mention of geographical location, while tending also to emphasise national politics over international relations and the like. One can certainly employ Porter and/or PESTE to conduct a thorough assessment of the drivers of the global airline industry (Shaw, 2007); however, close adherence to their forces and/or factors can easily lead to geographical location and international relations being missed or underutilised. Merging core attributes of various strategic frameworks does not generate clear and obvious links to geographical location or international relations either.

Without an established framework to begin with, any attempt to analyse the airline industry would likewise face the prospect of only being partial, and would also run the risk of not discovering the core ways in which the industry is unique. The distinctive characteristics that unite to underpin the global airline industry and its competitive structures (Havel & Sanchez, 2014; Bartsch, 2013) are best appreciated and understood when two well established strategic frameworks are employed, and when international relations and geographical location are added to these. In this manner, any analysis avoids being unnecessarily rigid or prescriptive, while equally being focused on core considerations highly likely to produce a robust series of key industry insights. The balancing act is to avoid reliance on a singular approach, while also eluding the inclusion of too many inputs and considerations to the detriment of being able to distil key insights.

3.3.2 Defining strategy

There is no universally agreed definition for strategy (Itani et al., 2014). Nevertheless, at its core strategy is about forging "a link between the firm and its external environment" (Grant, 2013, p. 10). In attempting to build such a connection, Rumelt (2011) argues that: "To generate a strategy, one must put aside the comfort and security of pure deduction and launch into the murkier waters of induction, analogy, judgement, and insight" (p. 245). Porter's work, especially his five forces framework, focuses on industry structure as a prerequisite to then assessing individual firm performance; this latter level is predicated on the core frameworks of "competitive advantage and the value chain" (Magretta, 2012, pp. 17-18).

However, the firm level fundamentally varies from the industry level, with each requiring a substantially different application of "management tools" to thoroughly investigate (Itani et al., 2014, p. 126). At a strategic level, an industry needs to be initially examined by conducting an "environmental scan" of all the relevant "macro-environment factors" that constitute its external surroundings (Itani et al., 2014, p. 127). Even so, industry level analysis represents a deeper investigation beyond an environmental analysis where "information overload" and cost constraints can hamper the latter (Grant, 2013, p. 61). Once again, to alleviate these unintended consequences, including the almost limitless "number of strategic variables" that could potentially be utilised, the use of an established strategic framework assists in providing key categories that streamline the process (Itani et al., 2014, p. 126).

In a highly dynamic industry like the airline industry, "structural variables" change overtime, such as when air markets are liberalised, meaning "the effectiveness of strategies should change as well" (Schnell, 2003, p. 217). Added to this, airlines operating in the same market space can perceive different strategic opportunities or threats from an identical "external stimulus" (Kangis & O'Reilly, 2003, p. 110). Thus, strategic airline management is about adopting a dynamic bigger picture longer term horizon, while avoiding getting caught in tactical skirmishes and decisions predicated on short term priorities and concerns (Shaw, 2007).

3.3.3 The PESTE framework

Second only in reported popularity amongst managers to the strengths, weaknesses, opportunities and threats (SWOT) analysis technique is that of PEST (Grundy, 2006). SWOT looks at both internal firm level factors (strengths/weaknesses), and external industry level

factors (opportunities/threats). Critics view these categories as superficial and potentially weakening a simpler split into internal and external (Grant, 2013). Over reliance on SWOT "can lead to tunnel vision" if other more nuanced techniques are ignored (McKechnie, Grant, & Katsioloudes, 2008, p. 224). In contrast, the PEST framework is highly regarded, "especially in the airline industry" (Shaw, 2007, p. 49), with some in the aviation literature referring to it as "the most notable" such strategic framework (Itani et al., 2014, p. 126).

PEST has been expanded to include 'Environmental' factors, resulting in PESTE (the acronym and specific model used in this study); while an additional factor, 'Legal', is also sometimes used to expand to PESTEL. However, legal considerations for the airline industry are best captured and "dealt with under the Political heading" (Shaw, 2007, p. 49). Others concur, and group these together to form "*Political/legal factors*" (emphasis in original), maintaining that "the legal framework, government policies and regulations…are critical and have a direct influence on aviation activities" (Itani et al., 2014, p. 127).

A PEST analysis is considered by a number of airline industry researchers to be an effective starting point, able to highlight a range of issues that help to explain poor industry performance. They maintain that if this is then followed by "a 5-forces analysis, our understanding of the industry's difficulties becomes more comprehensive" (Heracleous et al., 2009, p. 39). Others agree, maintaining that the use of multiple "strategic tools" produces a better understanding of a marketplace, including in a dynamic industry like the airline industry (McKechnie et al., 2008, p. 229). Likewise, onion-style models that specifically merge PEST with Porter's five forces framework have been detailed in the strategic management literature (Grundy, 2006). Airline industry researchers have also modified PEST to include a "socio-demographic factor" (Itani et al., 2014, p. 129); while others have investigated the airline industry using a specially devised "aviation and non-aviation factors" framework that includes "geo-economic factors", such as "climate and location" (Lohmann & Vianna, 2016, p. 201).

3.3.4 Porter's five forces of competition framework

Harvard University academic Michael Porter developed the five forces of competition framework, and is widely considered to be "one of the founding fathers of strategic management as a recognized academic discipline" (Stonehouse & Snowdon, 2007, p. 256). According to Holloway (2008), Porter's five forces of competition model is widely used and

represents a fine tuned "development of the neoclassical approach", whereby each "assess the impact of market structure on output and pricing decisions and on likely profitability" (pp. 206-208). It is not surprising then that Porter's work draws heavily on "industrial organization economics" (Sheehan & Foss, 2009, p. 245).

Porter's work has not been without critics, many of which cite how particular forces are given precedence of others, or act to ignore others altogether (Grant, 2013; Grundy, 2006). Porter's work has also been specifically challenged in an airline context, with several researchers questioning his contention "that differentiation and cost leadership must be mutually exclusive", citing Singapore Airlines as a case in point (Heracleous & Wirtz, 2009, pp. 274-275). Nonetheless, "by introducing the language and concepts of economics into corporate strategy", Porter has been able to build "a new framework" still employed by companies through to countries today (Hindle, 2008, pp. 37-38 & 296).

Thus, Porter and his supporters have countered criticisms by highlighting the enduring nature of his work, and the fact that he has been able to make a range of historically weighty areas and fields more accessible and comprehensible. Porter's work has thrived over many decades as it has managed to successfully connect "economic theory and business practice" (Magretta, 2012, p. 5). Porter's three interrelated concepts – the five forces of competition, generic strategy and value chain – represent "major analytical frameworks" and are at the core of "most business school strategy courses to this day" (Stonehouse & Snowdon, 2007, p. 257).

Porter's five forces model is essentially a framework for industry level analysis to help determine the profit realities and potential of an industry (Porter, 2008a). The framework looks at industry structure by considering rivalry amongst current firms, the threat of new entrants, the threat of substitute products or services, the bargaining power of suppliers, and the bargaining power of buyers (Magretta, 2012). The five forces framework is acknowledged as a very valuable tool, but it can come across as "highly prescriptive and somewhat rigid" as well (Grundy, 2006, p. 214). Added to this, many authors and practitioners use forces and factors interchangeably, with examples in aviation of this (Alderighi et al., 2012); so its prescriptive nature is often inadvertently relaxed and broadened when applied in any case.

Porter (2008a) does address many of the criticisms and critiques of his framework, for example, arguing that 'government' should not be included as a sixth force, but rather analysis should investigate "how specific government policies affect the five competitive forces" (p. 86). In addition, he observes that practitioners should be careful to avoid either too narrowly or too broadly defining an industry; for instance, an apparently global industry may actually consist of multiple "geographic regions" (p. 91). Others also highlight the importance of identifying an industry's major players, and defining its boundaries, including its "geographical scope", before attempting to conduct an industry level analysis (Grant, 2005, p. 84).

What seems reasonably clear is that the airline industry does reflect multiple "geographic markets" as labelled by Porter (2008a, p. 91), and that politics (i.e. government), represents a significant force impacting and shaping the airline industry's structure (Duval, 2011). Therefore, it is not merely a case of 'government policies' so much as international treaties (mostly the 1944 Chicago Convention), and the bilateral system it gave rise to, along with the associated impact of international relations with all of its norms and standards, that continue to profoundly influence the global industry's structure (Havel & Sanchez, 2011a). Airlines are rarely permitted to fly from a country that is not their home base, unless as part of a flight that originates in their home country (Forsyth, 2012). Even when they are permitted to do so, major airlines such as European flag carriers, prefer the competitive strength that home base – and the associated powerful hub airports they host – confer on them (Dobruszkes, 2009).

Along with politics, technology is often highlighted as a missing force from Porter's framework. Like government, Porter views technology as a factor affecting the five forces, not a force on its own (Porter, 2008a). Porter's view is that by itself technology is not enough to impact the structural attractiveness of an industry (Porter, 2008a). Nevertheless, social scientists do tend to downplay "the importance of technology", and as technologically driven change accelerates in time, so too "political and economic change" will evolve in tandem (Strange, 2008, p. 231). Throughout the airline industry technological advances continue to play important roles; for instance, improving aircraft range has acted to shift geographical advantages at times, with very long range aircraft in future possibly to do so as well (Derudder & Witlox, 2014; Heracleous & Wirtz, 2009).

It is undeniable that, as the former head of IATA puts it: "Aviation and technology are inseparable" (Bisignani, 2013, p. 125). Despite this, technology has a levelling effect on the

airline industry in that it equally provides opportunities to all airlines, and therefore, does not account for differences in the structure or scope of the industry. Admittedly, technology does retain the potential to rapidly allow underdeveloped air markets to "reach parity with" more developed counterparts (Itani et al., 2014, p. 130). However, parity infers an equivalence that then negates the role of technology as either a force or a factor that helps to then better situate competition within the airline industry. For instance, in the air transport literature, research on Europe has found that "the driving forces governing…changes do not depend on technological factors, but on developments in the legal, institutional, and cultural domains of the aviation market" (Alderighi et al., 2012, p. 223).

In many respects, it is not necessary to debate the merits of either including geographical location and/or international relations as additional forces, or alternatively as key factors shaping the airline industry; what is crucial is that these two central areas need to be included in any holistic analysis of the global airline industry and its likely future. Having stated this, the implicit approach of using either the current five forces framework and/or PESTE as is, reduces the visibility of both geographical location and international relations, with their inclusion not always readily apparent or straightforward. Meanwhile, utilising established industry level frameworks at the start of a research endeavour provides a scaffold to then build on and test the adapted and expanded model. In this way, a new framework is not devised from the outset, as would be the case in a grounded theory approach (Tapio, Paloniemi, Varho, & Vinnari, 2011), but rather industry specific adaptions and modifications are made to add richness and depth to the forecasts and insights being sought.

In the early 1990s, Porter (1990) conceded in his book *The Competitive Advantage of Nations* that his previous work had concentrated on the firm and industry levels, and in consequence, "the nation and its government, had a role in my framework, but a limited one" (p. xi). He then went on to state that his new book aimed to take a more complex and "holistic approach" that keeps "the theory of competitive advantage" at the core, while drawing on an array of fields including "technological innovation, industrial economics, economic geography, international trade, political science, and industrial sociology, that are not usually combined" (Porter, 1990, p. xiii).

Porter himself is quoted as observing that "airlines [do not] act like a normal business" (Bisignani, 2013, p. 213). A number of airline industry experts argue that the bilateral system and its nationality requirements mean that: "Airlines, in a phrase, do not do business like any

other business" (Havel & Sanchez, 2014, p. 123). The airline industry is considered by many experts to be "atypical", because more so than most industries, it faces a range of external factors wholly outside its control; the oil price, "significant government intervention", terrorism, infrastructure constraints and "natural disasters" to name some prominent examples (Heracleous et al., 2009, pp. 8-11). Furthermore, the airline industry also operates on "different national institutional and legal contexts" around the world (Bamber et al., 2009, p. 193).

Irrespective of which particular framework one selects as the starting point of an analysis of the global airline industry, each fails to fully and explicitly identify the core forces and factors affecting the industry, with the merging of frameworks often alleviating but not solving this central weakness. Financial metrics such as profitability are often dominant, while politics is also rarely substantially taken out of the domestic regulatory environment (Itani et al., 2014). After assessing the utility of a number of key "internationalisation theories", including close consideration and use of the five forces framework to guide the analysis, Ramón-Rodríguez, Moreno-Izquierdo, and Perles-Ribes (2011, p. 114) concluded "that the theories are capable of broadly interpreting the international expansion process within the [airline] industry".

However, what is also apparent is that "the airline industry is a unique and fascinating industry" (Bartsch, 2013; Chan, 2000, p. 489), that possesses characteristics which require explicit reference to both geographical location and international relations (Button, 2008; Lohmann & Vianna, 2016; Rhoades, 2008), in close association with financial considerations (Morrell, 2013), in order for a more detailed interpretation to take place. Peering into the future of the airline industry, Swelbar and Belobaba (2009) postulate that:

> Managers will still have to face an industry that is both capital and labor intensive and subject to the cyclicality of macroeconomic forces. And many commercial and strategic decisions will continue to face political scrutiny in an industry that is perhaps the most regulated deregulated industry in the world.
>
> What will be different for tomorrow's managers is that decisions will have to be made with a global focus, rather than a regional focus (p. 478).

Echoing these views, Hanlon (2008) maintains that airlines with the best competitive position "in the future will be those that can offer the most extensive global networks"; that is, those

with extensive "global reach" (p. 13). However, he also concedes that despite government attitudes becoming increasingly relaxed concerning many aspects of the airline industry's evolution, including in his opinion control and ownership issues, they remain unwilling to surrender (even if partially) "their sovereignty in the matter of traffic rights" (Hanlon, 2008, pp. 8-9). He concludes: "Therein lies the biggest conflict of all" (Hanlon, 2008, p. 8).

3.3.5   *Porter and the airline industry*

Porter's five forces of competition model has been used on many occasions to examine the airline industry (Delbari, Ng, Aziz, & Ho, 2016). A range of academic books about the airline industry have covered or employed the five forces model; for instance: Holloway (2008) *Straight and Level: Practical Airline Economics*; Heracleous et al. (2009) *Flying High in a Competitive Industry: Secrets of the World's Leading Airline* (i.e. Singapore Airlines); Shaw (2007) *Airline Marketing and Management*, and Flouris and Oswald (2006) *Designing and Executing Strategy in Aviation Management*.

A number of academic journal articles have also utilised Porter's five forces framework, including when investigating perceptions of the airline industry's environmental conditions (Schnell, 2005), barriers to industry entry in liberalised airline markets (Schnell, 2004), and when analysing the global industry's international development and growth (Ramón-Rodríguez et al., 2011). Porter's wider body of work, whether in terms of differentiation strategies, competitive advantage, value creation and so forth, has also been employed to assess airlines and the industry more generally. Examples include various case studies of the airline industry (Dostaler & Flouris, 2004; Heracleous & Wirtz, 2009; Kangis & O'Reilly, 2003).

A number of industry publications have also employed Porter's five forces model, most notably IATA's *Vision 2050* report (IATA, 2011). This report was commissioned under the leadership of then IATA director-general Giovanni Bisignani, who describes in his book *Shaking the Skies* (2013) how he secured the participation of Porter in the development of the report. Bisignani (2013) recounts how Porter "was excited by the prospect of studying aviation, a sector he hadn't really touched on before" (p. 213). He goes on to add that Porter later commented that he had "never come across such a mess as aviation", with its industry structure shaped by "all the uncoordinated, outdated regulations, the monopoly suppliers, the inability of airlines to act like a normal business" (p. 213).

In many ways, Bisignani (2013) inadvertently reveals how the five forces framework does not explicitly absorb the politics of the global airline industry. He spends two pages of his book summarising how each of the five forces directly relates to the airline industry, with no mention of government or politics (pp. 214-215). Separate to this section, he then details on the ensuing two pages the key things governments around the world need to do; arguing that "if governments don't change their perception of aviation, the industry will continue to be held back" (pp. 216-217). Admittedly, Bisignani may not have employed Porter's framework correctly; even so, he still helps to demonstrate how considerable disconnects can form between this framework as it stands, and analysis of the airline industry as a whole, with its low historical profitability, high levels of political control and influence, and its symbiotic connection to geographical location. This being the case, the above illustration also demonstrates that Porter's framework is an effective and valuable tool to help initiate and guide an airline industry analysis.

3.4 Research issues and literature gaps

The global airline "industry's complexity and its dynamism constantly raise new questions and open up fields that have hardy been investigated by academia" (Wittmer & Bieger, 2011, p. 6). This is particularly the case in the international arena where scholarly research is much thinner in comparison to domestic air market analysis (Dobruszkes & Graham, 2016). Within this context, the section here is anchored to the four research questions that each reflect core research issues and literature gaps. This section begins by adopting a global view of such issues and gaps, followed by the key additional strategic factors of geographical location and international relations. The next part of this section then specifically articulates the central issues and gaps that this study seeks to address in relation to each individual research question.

3.4.1 Global focus

This study offers a counterpoint to the mostly domestic market orientated deregulation studies that pervade the air transportation literature (Button, 2009; A. R. Goetz & Vowles, 2009). It also seeks to provide a global perspective on the industry, rather than an emphasis on one or two established markets, or on singular emerging markets. In this sense, the study here aims to contribute to a location within the air transport literature that is much less populated (Dobruszkes & Graham, 2016). This attempt to assess major established and

emerging air markets together, and within a global architecture, is unlike most literature on the overall topic (Itani et al., 2014). The international airline industry cannot be fully understood, particularly its likely future trajectory, without adopting a global view that in tandem acknowledges and accounts for its national structure (Forsyth, 2012). The national building blocks, and the resultant global industry, are indivisible (Lykotrafiti, 2015).

A lot of air transport research concentrates on key air markets such as the US, Europe or Asia (Forsyth, Gillen, Hüschelrath, Niemeier, & Wolf, 2013). This is no surprise given their size and extensive history, and the fact that the global airline industry is structured around multiple individual air markets, and not a single homogenous global marketplace (J. J. Wang & Heinonen, 2015). Likewise, competition in the airline industry is challenging, simply because "there is not one market" (Schulte-Strathaus, 2013, p. 397). Adopting a global view of the industry invariably leads to localised examples and situational variables that require a more focused approach to better understanding the industry as a whole (Lykotrafiti, 2015).

In this sense, the study here attempts to assume a global industry starting point, with the aim of better tracking the industry's likely future trajectory across core geographical regions. This bringing together of significant air markets, chiefly the North Atlantic, Europe, the Gulf and Asia (notably China), offers a unique way of viewing the industry that is rarely found elsewhere throughout the literature (Dobruszkes & Graham, 2016). Geographical and political considerations feature heavily when one adopts an international view of the airline industry, irrespective of whether this view is bilateral, regional or global (Duval, 2013).

3.4.2 *Geographical location*

Geographical location is fairly widely dispersed throughout the literature, but as with international relations (discussed next), it rarely achieves a central analytical place (Nayar, 1995; Vowles, 2006a). In this context, it does receive some mention in a number of discussion papers and articles covering the airline industry, particularly when looking at the major Gulf carriers (Chesen, 2006; Derudder, Bassens, & Witlox, 2013; Lohmann & Vianna, 2016; Tretheway & Andriulaitis, 2015). Geographical location is important from a strategic industry perspective because it cannot be replicated. Where an airline is based in the world matters (Allen, 2016; Flint, 2006); and this straightforward but often buried or ignored element in airline industry level analysis is brought to the fore in this study. Geographical location in this study is applied to major airlines and key hub airports, to better understand

how it helps to build competitive advantages (and disadvantages), and to encourage profitability for big industry players.

3.4.3 International relations

International relations is seldom afforded a prime position within airline industry analysis; with only several exceptions, most in the 1990s (Jönsson, 1981; Lawton, 1999; Nayar, 1995; Richards, 1999). The most notable of these scholarly articles is 'Regimes, power, and international aviation' by Nayar (1995). The fact that his work is still being cited in more recent years to detail the current state of liberalisation (Duval, 2008; Hooper, 2014), is testament to both its enduring value, and its unrivalled contribution, to the air transport literature in this regard. Nayar's seminal work, along with the other journal articles highlighted above, are explored further in Section *3.7.2 Air transport research and international relations*.

The extent to which bilateralism and multilateralism will shape the airline industry's future prospects, is at its heart, a question about the ways in which international relations will determine that future. This study, unlike most other research on the global airline industry, explicitly applies this lens across major industry players and geographical regions.

3.4.4 Liberalisation, protectionism and conceptualisations

Research question 1 reflects a number of key research issues and literature gaps in air transport. Firstly, research conducted into domestic deregulation, centred on well-established classical economic analysis, outnumbers international air market liberalisation research (Dobruszkes & Graham, 2016; Fu et al., 2015; Lykotrafiti, 2015). There is a noticeable thinning out of the air transport literature as one traverses the regulatory spectrum from domestic deregulation through to regional international liberalisation (Vowles, 2006a). Large internal air markets not only enjoy an understandably higher academic profile, but also operate within clearly definable boundaries, and have more readily accessible data, better suited to traditional economic research (Button, 2009; Dobruszkes & Graham, 2016; Hüschelrath & Müller, 2013).

Likewise, despite protectionism being a widely raised issue throughout the literature, it is often maligned or presented as obviously inferior to other core options and policies (de Wit, 2014). Although rarely openly championed elsewhere (Mardell, 2016), protectionism retains

an important place in this study as a core reference point via which to decipher the rhetoric of liberalisation from its reality, and separate its aspirations from its facts (Dobruszkes & Graham, 2016). Thus, it is not possible to discuss and analyse international liberalisation without comparative treatment and weight being given to its counterpart protectionism. A lot of air transport research does not sufficiently acknowledge that protectionism is needed to better understand liberalisation, and therefore, fails to adequately analyse its contribution (Dobruszkes & Graham, 2016).

Finally, research question 1 seeks to "give voice" to a wide range of airline industry watchers and insiders, a practice that is acknowledged to be lacking in air transport generally (Lohmann & Vianna, 2016, p. 203). Although Delphi based aviation research has to some extent given participants a chance to contribute to the aviation body of knowledge (Mason & Alamdari, 2007), this often does so in aggregate rather than at the individual participant level (Linz, 2012). Likewise, although some air transport research acknowledges that calls for liberalisation, including the sense that it is inevitable, are often ideologically driven (Dobruszkes & Graham, 2016), no research to date has sought to establish the extent to which ideology of this nature influences views on the industry elsewhere. This study aims to do so.

3.4.5 The North Atlantic and Europe

Research question 2 aims to uncover the extent to which the North Atlantic and Europe represent a wider multilateralism trend for the airline industry globally. Firstly, the probability of the North Atlantic becoming a single air market in the foreseeable future is not deeply investigated in the air transport literature (Hanlon, 2008). This study aims to contribute to this underdeveloped space. Secondly, the broader global applicability of the European example of a multilateral single air market is often only superficially assessed in the literature, but rarely are its future prospects and transferability elsewhere deeply investigated (Button, 2009). This study intends to find deeper global insights from Europe.

This study almost exclusively deals with regional liberalisation in the overall context of multilateralism (Hooper, 2014); thus, intrinsically linking it to international relations in the process (Nayar, 1995). Multilateral liberalisation takes place between three or more countries (or state-like legal entities), while regional or plurilateral liberalisation tends to refer to a group of countries in a particular area of the world agreeing to traffic rights that are applied (usually equally) across all signatory countries (Doganis, 2010; Duval, 2013; Hanlon, 2008;

Hooper, 2014). Some authors define plurilateralism as liberalisation between states anywhere in the world irrespective of geographical proximity (Duval, 2013; Gaspari, 2011). Plurilateralism outside of a regional definition of the concept is simply too limited around the world to justify its inclusion in this study; notwithstanding MALIAT (Havel & Sanchez, 2014).

3.4.6 The three major Gulf carriers

The three major Gulf carriers are significant global players, thus earning them a justifiable place in any global industry level analysis (O'Connell, 2011). Hence, this study's research question 3 is predicated on their experiences and strategies, and in turn, the global insights they generate. However, this reality is not yet substantially mirrored in the research literature (Dresner et al., 2015). It is true that emerging markets, and certainly potential emerging markets, are more challenging to understand, and more problematic to assess than established air markets (Budd, 2014). Thus, "developed countries" have formed the context for a lot of research into the airline industry (Budd, 2014; Saranga & Nagpal, 2016, p. 170). Research is made all the more difficult outside traditionally dominant air markets because the historical record is compressed, and the market characteristics and data sets vary widely (Saranga & Nagpal, 2016).

Not only is available data covering emerging air markets limited (Itani et al., 2014), but what is available must be assessed with a view to the fluidity and uncertainty that characterises most emerging air markets. For example, "because of lack of information", research into the major Gulf carriers has had to rely on "implicit assumption[s]" on many occasions (Fan & Lingblad, 2016, p. 121). Likewise, when it comes to databases that cover air service agreements and the like, not all contributors upload reliable information (Warnock-Smith & O'Connell, 2011). The Delphi method is a reliable and valuable approach, especially in aviation research, that helps in substantial ways to address such data gaps (Linz, 2012). The Delphi approach is widely lauded for its ability to provide accurate forecasting in situations where there is a "lack of appropriate historical/economic/technical data, and thus where some form of human judgmental input is necessary" (Rowe & Wright, 1999, p. 354).

3.4.7 The Asian region and liberalisation

Research question 4 seeks to discover what the Asian region reveals about the chances for greater liberalisation of the airline industry globally. China looms large in addressing this

question, yet it is not particularly well represented in the air transport literature. This is certainly changing, although the growing body of recent scholarship on China's airline industry is decidedly domestic in focus it should be noted (Cao, Lv, & Zhang, 2015; J. Wang, Bonilla, & Banister, 2016). However, a limited amount of scholarly work has been conducted on China's airline industry and its policies regarding international liberalisation (A. Zhang & Chen, 2003). This study aims to develop a clearer picture of what impacts China's airline industry is having globally, particularly in terms of liberalisation, and mostly by adopting a future orientation. Therefore, the approach toward China in this study is quite unique.

ASEAN is fairly widely covered in the air transport literature (Forsyth et al., 2006; Tan, 2012), although its stated goal of creating a single air market by 2015 has somewhat stymied future orientated research efforts that look substantially beyond this date (Tan, 2010). This study's ten year window into the future places ASEAN's single market aspirations into a context that is hard to find elsewhere in the literature. Hence, an important research gap is therefore addressed in this regard. Meanwhile, India's airline industry is not well represented in the academic literature, and when it is, it tends to be domestic in focus, much like China (O'Connell & Williams, 2006; O'Connell et al., 2013). Thus, like China, India's airline industry is not well researched in terms of its international impacts and considerations (Saranga & Nagpal, 2016). This study seeks to investigate India's airline industry within an international context, and in doing so, assist in populating this sparsely researched angle.

3.5   Thematic divisions and geographical groupings

The remainder of this chapter expands on the research issues and literature gaps above, and is dedicated to analysing and discussing the most prominent issues, debates and topic areas related to the key themes employed to address the four research questions that underpin this study. In this context, the industry role of both geographical location and international relations are firstly covered. Next, international liberalisation is assessed, followed by the three main geographical groupings of the North Atlantic and Europe, the three major Gulf carriers, and Asia (with an emphasis on China).

3.6   Geographical location

3.6.1   *Location, location, location*

Geographical location plays a central role in shaping and impacting the global airline industry and its development (Button, 2008), with Flint (2006) maintaining that the real estate mantra "location, location, location is equally true for the airline industry" (para. 1). In a similar vein, others contend that in essence "the airline business is a real estate business, and the airlines with the best hubs win" (Kaplan & Shabat, 2015, p. 208). Still others point out that geographical location remains central to better understanding the global airline industry because airlines are anchored within national borders (A. R. Goetz & Graham, 2004). This reality has led some to refer to international airlines as being "nation-bound" (Mifsud, 2011, p. 117). Airlines, for the most part, are tethered to home base even when they do manage to include a transit or intermediate stop during their journey (Forsyth, 2012).

Surprisingly, few major air transportation books have dedicated sections covering geography, including listing it in their index; nevertheless, several notable exceptions do exist (Holloway, 2008; O'Connell & Williams, 2012). An appreciation of geographical location, together with international relations and economics, helps to generate a clearer sense of how the international airline industry is structured, including where airlines can fly to in the world, and what passengers they can attract onto their services. Holloway (2008, p. 226) states that airline industry competition occurs across "four geographical levels":

1. Region to region;
2. Country to country;
3. City to city; and
4. Airport to airport.

This study is mostly focused on a region to region assessment of the global airline industry, although to some extent a country to country lens is adopted as well.

When competition in the industry is being assessed, selecting the most appropriate "geographical frame of reference" is vital (Holloway, 2008, p. 226). He adds that this fairly straightforward categorisation is complicated by the reality "that 'route' and 'market' are not necessarily synonymous" (p. 226). He notes that global carriers tend to favour a market focus and approach (the bigger picture), especially when dealing with governments and competition authorities, while consumers and regulators are best served by looking at "city-pair markets"

(p. 227). A prominent recent example of this reality is provided by the geographical route focus adopted by Transport Canada when it denied Emirates Airline increased capacity between the UAE and Canada, based on "end-to-end passenger traffic", rather than beyond traffic, or the broader market/network dynamics (Duval, 2011, p. 5).

Airlines with hubs located in geographically advantageous positions are able to attract and generate sixth freedom air traffic flows. This is why particular locations in the northern hemisphere are generally at an advantage to most places in the southern hemisphere. Europe, the Middle East and parts of Asia are at a distinct geographical advantage, while Australia, southern Africa and South America, and to some extent the US (although offset in many ways by a massive domestic market), face clear disadvantages due to their geographical location (Allen, 2016; Hanlon, 2008). Thus, airlines like South African Airways and Qantas Airways are often labelled end-of-line carriers (CAPA, 2015). Senior management at Qantas have acknowledged that the airline "will never have a network the same as hub carriers like Etihad, Emirates and Singapore Airlines because of…geography" (Allen, 2016, para. 7).

The Centre for Asia Pacific Aviation (CAPA, 2015) details how many airlines with geographical disadvantages, such as end-of-line carriers, would like to see "comparative opportunity" part of bilateral traffic rights negotiations, in an effort to limit access to sixth freedom carriers which are able to pull "traffic from beyond their hubs" (para. 32). Transport Canada has defended its policy toward Emirates "under the principles of fair and equal opportunity" (Duval, 2011, p. 5). Many sixth freedom carriers like Emirates strongly oppose such moves, maintaining that "your geography is your problem, not our solution to provide" (CAPA, 2015, para. 32). Because geography provides advantages to some, and disadvantages to others, situations invariably arise whereby "the benefits derived from a bilateral agreement are noticeably imbalanced" (Hanlon, 2008, pp. 137-138).

Likewise, the same bilateral system effectively traps "airlines in their home markets" (Hanlon, 2008, p. 334). In this context, carriers like Singapore Airlines being denied access to the Pacific Route between Australia and the US (Duval, 2008), along with Emirates Airline opting to delay plans to operate on the transpacific route between Asia and the US, due to concerns that they may be perceived as taking from, rather than growing, the market (Kingsley-Jones, 2013b), are prime examples of the geography of home base. There is little doubt that major carriers "with strong geographical locations…possess considerable advantages" (Mifsud, 2011, p. 117). Other authors note that air cargo retains a competitive

advantage over sea, rail and land transport in many "geographical locations" where physical barriers and poor to non-existent infrastructure makes it the only viable option (Button, 2008, p. 33).

3.6.2 *The study of air transport geography*

Air transport geography is a sub-field within the overall study of geography; or perhaps more accurately, a study area within the sub-discipline of transport geography. One could even add more layers and place at the apex the social sciences, then geography, followed by human geography, then transport geography, and finally air transport geography. Geographers are keen to point out that air transportation is intrinsically linked with geography due to "the very geographic nature of the industry" (Vowles, 2006a, p. 12).

Put another way; "the very definition of transport…implies a geographic dimension"; while transport geography is fundamentally "multi-disciplinary", with works cited across a large spectrum "of publications" (Vowles, 2006b, pp. 241-242). Others concur, arguing that transport studies are "inherently multidisciplinary", and that transport is at the heart of "the study of geography, just as geography is central to the study of transportation" (A. R. Goetz, 2006, pp. 230-231). Despite its traditional emphasis on quantitative research, transport geography continues to provide "great opportunities" for a diverse and expanded range of methodologies and approaches (A. R. Goetz, 2006, p. 231).

3.7   International relations and the airline industry

3.7.1 *Employing international relations in this study*

International relations emerged from political science as a standalone field of scholarly enquiry immediately after the First World War, and has been dominated by the positivist paradigm of realism, with the state at its apex (Burchill & Linklater, 2005). International relations has been fairly narrowly defined throughout much of its history to mean "the analysis of relations between nations" (Burchill & Linklater, 2005, p. 12). Today, the study of international relations continues to expand, more recently absorbing a range of post-positivist and relativist theories and approaches from liberalism, to feminism and constructivism (Griffiths, O'Callaghan, & Roach, 2014). At its heart, international relations is now commonly viewed as concerned with "the political and social interaction of state, non-state actors, and individuals" (Griffiths et al., 2014, p. vii).

As no single state, or group of states, enjoys absolute power in the world, the international political arena is widely agreed to be anarchical. Nevertheless, debate continues to rage amongst the growing array of schools and theorists within international relations as to extent of state power and autonomy, and furthermore, how, why and when states elect to cooperate, or conversely find themselves in conflict (Griffiths et al., 2014; Richards, 1999). In an airline industry specific context, state power has been an all pervasive influence on the global industry since its very beginning (Havel & Sanchez, 2011a).

International relations is employed in this study to specifically cover bilateralism and multilateralism; that is, the extent to which countries are willing to cooperate on air transport access. Each has a symbiotic connection to both protectionism and liberalisation, and also a direct relationship to airline nationality/citizenship. Thus, international relations then links closely with geographical location, with its focus in this study on home base and nationality. These areas in many ways overlap and to some extent merge, creating a geopolitical industry reality explored further in section *3.7.4 Geopolitics* below. Even so, their separation into two distinct categories of analysis encourages the production of deeper and wider industry insights overall. Therefore, international relations is used in this study as an umbrella term under which bilateralism, multilateralism, protectionism and liberalisation, together with an exploration of the role and impact of nation-states on the global airline industry, are co-located.

In essence, international relations is harnessed in this study to ascertain the extent to which countries are willing to grant air market access to other countries, and on what basis. Without achieving this fundamental and foundational understanding during any industry level analysis, major airlines and air markets around the world would simply appear, as Porter is purported to have said about the global airline industry generally; "such a mess" (Bisignani, 2013, p. 213). A more academic term widely used to describe the machinations and apparent contradictions of the global airline industry is paradoxical (Debbage, 2014; Doganis, 2010; Macara, 2009). Established strategic frameworks do not instinctively provide clarity on the global airline industry, in large part due to the industry's unique characteristics that are unlike any other industry (Bartsch, 2013; Heracleous et al., 2009; Jönsson, 1981).

Scholarly works explicitly and extensively linking international relations and international aviation are evidently sparse and somewhat dated (Jönsson, 1981; Lawton, 1999; Nayar, 1995; Richards, 1999). This is no doubt in consequence of the myriad of challenges that international aviation poses for international relations (Lowenfeld, 1975; Rhoades, 2008; Richards, 1999). Hooper (2014) notes that: "Nayar (1995) argued that sovereignty is not reconcilable with the emergence of an international regime to liberalise trade in air transport services" (p. 21).

However, Nayar's (1995) seminal work has not been without critics, the most vociferous of which has been Richards (1999). Richards' (1999) core argument is that international aviation challenges realist notions, such as those postulated by Nayar (1995), by its clear demonstration of "institution building" throughout the industry's history (p. 33). Richards' (1999) views are detailed after Nayar's (1995) below. Meanwhile, Lawton (1999) also indirectly critiqued the core contentions of Nayar (1995) when he sought to show how air transport in Europe has been Europeanised, with a partial transference of sovereignty to a supranational body (i.e. the European Commission or EC). Lawton's (1999) views and assertions immediately follow those of Nayar (1995) and Richards (1999) below.

Nayar (1995) points out that debates surrounding global aviation are essentially about whether the market or the state should predominately shape aviation; liberalism being the philosophy underpinning the former he argues, and mercantilism/realism the latter. He concluded that advocates of liberalism have met with "severely limited results" in aviation (Nayar, 1995, p. 145). This mirrors debate within the international relations community between the two dominant theories of realism and liberalism, with the former focused on the balance of power amongst states, and displayed strongly with bilateralism; while the latter is concerned with decreasing state power, and in its place market forces and multilateralism (Burchill, 2005). Global aviation clearly reveals that "there are both market forces and national politics at play" within the industry (Regan, 2017, para. 4).

Nayar's (1995) work is in a league of its own. Nayar's (1995) article sets out to examine "the specific issue-area of international aviation" in terms of realism versus regime theory (p. 140). International regimes he points out are defined by regime theorists as a host of international standards, norms, principles, practices, behaviours and rules that are either

explicitly or implicitly expected of actors in the global arena. Essentially, debate surrounds their existence to begin with, and as extension their scope, together with "their actual impact on state behaviour" (p.140).

The two main scholarly camps in this debate, Nayar (1995) argues are "realism and institutionalism" (p. 141). Realism gives the nation-state the central role in international relations, and views it as a "rational actor engaging in strategic action with other states"; while institutionalism emphasises the progressive evolution "of an international society centering on cooperation among states…based on shared values and beliefs" (pp. 141-142). Many air transport researchers, Nayar (1995) contends, look to international aviation as an obvious example of an international regime given global cooperation on safety and technical issues, and the presence and role of both ICAO and IATA.

Nayar (1995) then provides an historical overview of international aviation, building a case as he goes to challenge the notion that an international regime exists for the industry. He also notes how attempts to prove an international regime exists for the global industry have resulted in very little. For example, he challenges the commonly held view that at the Chicago Convention in 1944 the US championed liberalism and multilateralism, while Britain preferred protectionism and bilateralism. In fact, he argues, the US was pursuing a multi-pronged approach that reflected its perceived superior bargaining strength, and this was ultimately founded on national interest. Other air transport academics certainly agree with this assessment (Havel & Sanchez, 2014; Rhoades, 2008).

Nayar (1995) also cautions against viewing European experiences with air market liberalisation as having any global transferability. There is little, if any, support he argues for such arrangements and trends elsewhere in the world. Nayar (1995) concludes that in the end "the superior explanatory power of realism" is evident (p. 168). Both ICAO and IATA he posits are restricted to non-commercial areas, while state sovereignty is closely guarded and reinforced by each. The nation-state is the prime actor in international aviation he resolutely concludes (Nayar, 1995).

Nayar (1995) makes it clear that even when states are keen to cooperate on commercial matters in international aviation, all such attempts have ultimately "been driven by power and state interests", not shared norms, values or beliefs (p. 170). Nayar (1995) stresses that even bilateral traffic rights, despite being based on the notion of "reciprocity", in reality reflect

"the bargaining strength of the two states…including geographic location" (pp. 147-148). In stating this, he is one of only a few prominent air transport researchers to explicitly combine international relations and geographical location; albeit a brief mention of the latter. Interestingly, and as an implicit extension to this, he also points out that in a global airline industry context "the more powerful aviation states or coalitions have attempted to foster liberalism, even if with reservations, while the weaker states have supported mercantilism, pointing to liberalism as the policy of the strong" (Nayar, 1995, p. 170).

It has long been argued that "weak airlines" in the developing world "can never hope to survive" in a liberalised marketplace (Sochor, 1988, p. 1322). Added to this is the fact that the wealthier geographically favoured states have also mostly supported liberalism (e.g. Singapore and Dubai), based on the calculation that greater access increases hub traffic (O'Connell, 2011). Airport growth rates in the Gulf region, for instance, indicate that European hub airports may progressively lose their dominance in future (Redondi, Malighetti and Paleari, 2011). Meanwhile, as far back as the 1940s, Britain's geographically dispersed empire demonstrated the power of geographical location over the sheer power of the US in terms of air access rights – geography trumped economic and military might (Richards, 1999). However, in this latter example, geography was viewed as a competitive and strategic advantage to protect (Rhoades, 2008).

Richards (1999) openly challenges Nayar's (1995) realist analysis, and looks at why, how and when "states create international institutions", and then applies these questions to the regulation of international aviation (p. 1). He concedes that since the Second World War, international aviation has represented "an anomaly" compared with traditional "approaches to international institutions" (p. 14). In this context, he sets out to explore and address why states were willing to create "an extremely inefficient set of international institutions"; the precise "opposite of the regime" being pushed at the time by the US, aviation's and the world's "most powerful state" (p. 14). In the decades since then, Richards (1999) contends that international air markets on the whole have become increasingly competitive, but liberalisation has shown itself to be "neither inevitable or uniform across markets" (p. 27).

Richards (1999) concludes that international aviation challenges realist notions that international institutions reflect the balance of power between states (including national interest), and also the liberalist notion that such arrangements generate more efficient economic outcomes. Instead, he argues that international aviation shows how domestic

political interests dominate, as national politicians leverage international institutions for domestic purposes. In this manner, he maintains, politicians develop regulations aimed at achieving "electoral success" (p. 10). Therefore, the fact that such domestic policies are sometimes "economically inefficient", in that they can create cartels and monopolies and the like, is less relevant than whether they have achieved "political equilibrium"; that is, when votes gained are maximised, and votes lost are minimised (p. 32).

Ultimately, Richards (1999) states that he aims to apply a "positive institutional" analysis to better "understanding the role of international institutions in international relations", with international aviation a prime case in point (pp. 31-33). In this context, Richards (1999) stresses the need for institutionalists to develop testable models and hypotheses to counter those who deride the field as "yet another woolly concept" (p. 33). He cites the inability of the US at the Chicago Convention in 1944 to gets its way, as firm evidence that the realist interpretation, predicated on state power, is unable to adequately explain international aviation. He concludes that "institution building" does play a vital role in international aviation, with a need to put "the politics of institutional choice" at the apex of any analysis (p. 33). Despite this call for researchers to adopt "positive political approaches", Richards' (1999) conclusions, including a partial final concession to realists who he claims need to adopt "a more nuanced" approach to state power, provides little clarity on the industry, and too many broad calls to action. International aviation is no clearer as a result.

Meanwhile, Lawton (1999) looked at the extent to which airline policy throughout Europe was becoming Europeanised in the late 1990s; that is, individual states setting aside "perceived national interests" for a common regional purpose, and under a supranational authority (pp. 91-94). He notes how European countries have been largely unwilling to lose their authority over air transport, unlike many other economic domains. His paper sets out to prove that evidence from aviation supports the view "that a partial transference of sovereignty has occurred within the EU" (p. 91). Lawton (1999) spends much of his paper detailing the negotiations, agreements, treaties and three main "legislative packages" (1987, 1990 & 1992), that culminated in a single European aviation market.

Lawton (1999) concludes in the end that "a partial transference of sovereignty has occurred" within European air transport, and although it is yet to be fully Europeanised (notably traffic rights outside the trading bloc), air transport policy is no longer solely within the realm "of the nation state" (pp. 108-109). The UK vote in June 2016 to leave the EU has raised a range

of yet unanswered questions surrounding the EU's future, including the immediate impacts on UK aviation; and in the longer term, the extent to which EU power is centralised in Brussels, the headquarters of the European Commission (IATA, 2016).

In the early 1980s, Jönsson (1981) attempted to grapple with the question of the extent to which, if any, an "international system" (or regime) was developing (p. 274). In this spirit, he noted that international aviation remained a relevant and valuable "issue-area" in this regard, but it had to date been "largely overlooked" (p. 274). As Jönsson (1981, p. 274) highlights, this was to some extent connected to the fact that as far back as the mid-1970s, Lowenfeld (1975) had raised in an article in *Foreign Affairs* how "international civil aviation is a serious problem in international relations" (p. 36).

Lowenfeld (1975) noted aviation's lack of integration into the evolving global "economic system", the ties citizens have with national airlines and security concerns as all impacting the international relations of the industry in largely unique ways (p. 36). A substantial portion of Jönsson's (1981) article is spent providing a historical background to the airline industry, before he then assesses whether or not "complex interdependence" is taking hold in the world – a condition where non-state actors and a more dispersed set of issues take precedence over military power in the international arena.

Jönsson (1981) points out that interdependence infers and postulates a range of contentions that are challenging to prove, especially in international aviation. These include a decline in state power; the airline industry he contends does not support this view. For example, he highlights how US airline deregulation in 1978 had actually increased state involvement in the industry, even if in a different form. He also goes on to point out that US power is not decreasing in international aviation (even as observers in other fields were predicting American decline in the post-Vietnam war period of the late 1970s and early 1980s); nor is its ability to shape and develop the industry in the ways that it would like to increasing. Such contradictions ultimately lead Jönsson (1981) to conclude international aviation reveals that "further comparative studies" are required, and that the questions he raised at the beginning of his article represent "an urgent research task" (p. 302).

Therefore, scholarly work linking international aviation explicitly with international relations briefly surfaced in the early 1980s with Jönsson's (1981) ultimately inconclusive interdependence work. Such research then enjoyed a slightly longer, albeit still brief,

renaissance in the mid to late 1990s, led by Nayar (1995) and his realist arguments, challenged inconclusively by Richards (1999) and his institutionalism focus, and assessed in a Europeanisation context by Lawton (1999). All such research, in one way or another either championed or conceded the influential role played by states in international aviation, and all highlighted in varying ways the industry's contradictory and challenging realities that make any attempt to analyse it within established theories and paradigms difficult. On the whole, it is clear that Nayar's (1995) work has survived the strongest to date, as evidenced by recent citations in the air transport literature (Duval 2008; Hooper 2014).

Even so, realism still fails to account for power distributions in international aviation that do not always result in major industry players emanating from economically and militarily powerful states (O'Connell, 2011; Richards, 1999). Likewise powerful states do not always get what they desire in international aviation. This is true of post war US visions for the industry (Rhoades, 2008), and more recently extraterritorial attempts by the EU at wider change for the global airline industry have also met with limited success (Manzini & Masutti, 2012; Prum & Kisska-Schulze, 2015). What is clear is that debates in international relations applied to international aviation, have resulted in little in the way of decisive conclusions, or a substantive body of work. As "urgent [a] research task" as Jönsson (1981, p. 302) claims, the reality is that the global airline industry's seemingly contradictory and paradoxical nature have dissuaded international relations focused research on the industry, rather than attract scholarly attention (Havel & Sanchez, 2014). This study aims to assist in filling that gap, and in encouraging the reigniting of debate surrounding an issue-area and context arguably more important now than ever.

Links to international relations are acknowledged and briefly covered in more recent academic works, with some authors for instance maintaining that "a new generation of international law scholars has taken its cue from international relations theorists [such as] rational choice methodologies" where national self-interest is seen as ultimately motivating states (Havel & Sanchez, 2014, p. 10). Given that the international relations literature puts "rational choice theories" into the positivist camp (Burchill & Linklater, 2005, p. 2), and Nayar (1995) highlights how the global airline industry is able to be investigated via a realist paradigm with its focus on the balance of power between states, the industry at first appears to conform to traditional international relations paradigms.

Even so, despite the acknowledgment that "open skies agreements are also instruments of foreign policy" (Lykotrafiti, 2015, p. 94), moves are afoot to make them more commercial in orientation (Hooper, 2014), revealing in the process the core tenants of liberalism within international relations studies, with its focus on multilateralism and free trade (Burchill, 2005; Griffiths et al., 2014). However, once again things may not be as straightforward as they at first appear. For example, Woll (2012) links international relations with "political continuity and change" surrounding the 2008 US-EU open skies agreement (p. 937). She concludes that "paradoxical agreements", such as this, which are full of deliberate ambiguity about future arrangements, can actually encourage real change to the status quo over time (Woll, 2012, p. 937).

International relations certainly plays a pivotal role in shaping how the global airline industry develops. Duval (2007) in his book *Tourism and Transport: Modes, Networks and Flows* notes that:

> Worldwide, there are complex sets of arrangements, primarily political, that determine and dictate whether an airline has the ability to fly from one country to another and whether networks are indeed serviceable (p. 173).

In the 1980s, Jönsson (1981) stated that global aviation differed from other industries "by directly engaging the national security interests, the sovereignty, and the prestige of almost all countries of the world" (p. 274). By the 1990s, Wheatcroft (1990) noted that "the combined forces of sovereignty, nationalism and protectionism" shape the airline industry "perhaps more than any other industry" (p. 353).

As the new millennium unfolded, Oum et al. (2001) observed that despite mounting pressure in favour of liberalisation, "the bilateral system and national ownership laws will continue to affect the development of global airline networks" (p. 62). Just over a decade later, Toner and Willis (2012) applauded increasing calls "for a more liberalized approach to international aviation", but at the same time acknowledged that airlines around the world continue to face "restrictive arrangements" based on the bilateral system "that governs aviation services between states" (p. 13). Not long after this, Debbage (2014) made the point that even as globalisation continues apace, nation-states in his view often "act as impediments to movement" by air (p. 37).

3.7.3 Aeropolitics

A common label found throughout the air transport literature covering the role and impact of international relations on the industry is that of aeropolitics (Duval, 2011). Aeropolitics can be defined "as the processes through which, and reasoning behind, nation states develop and implement policy with respect to air access by foreign air carriers" (Duval, 2008, p. 238). Some international aviation law experts maintain that "aeropolitical acrimony" would result from "any attempt to invigorate the [Chicago] Convention's custody of economic issues", with safety the only area likely to achieve broad enough international support (Havel & Sanchez, 2011a, p. 16). The US, EU and China are also labelled "aeropowers" by these experts, denoting a sense of power and influence that is nonetheless constrained in its application outside national borders (Havel & Sanchez, 2011a, p. 17). Power in international aviation is not commensurate with military power, as the former cannot be projected as can the latter (Jönsson, 1981; Rhoades, 2008). For international air links to be forged, negotiation in the form of ASAs must be mutually agreed, and then traffic rights accessed (Duval, 2007).

3.7.4 Geopolitics

Geopolitics impact the global airline industry in many and varied ways (Debbage, 2014). Although geopolitics is "often used to infer a hardheaded approach to the world in general", it is in fact essentially about "the varied geographies of international relations" (Dodds, 2014, p. 1). The bilateral system that underpins international aviation "has traditionally had a strong geopolitical component" (Ramón-Rodríguez et al., 2011, p. 110). This being the case, experts caution "that the geopolitics of air transportation defies a simple characterization of liberal versus protectionist philosophies" as regulations governing the industry vary enormously across individual countries (Debbage, 2014, p. 37).

In identifying this spectrum of views in the 1990s, Nayar (1995) noted that the polar opposite positions of free market and nation-state exist "in theory, but always with strong reservations" (p. 146). The global airline industry is likely to reflect a system with a patchwork "of arrangements", some driven by market forces, while others will be regulated by sovereign states, for some time to come (Nayar, 1995, p. 168). The former head of IATA maintains that he was determined to push the industry body "into the real geopolitical world" (Bisignani, 2013, p. 86).

Some have compared the global airline industry to a chess game where airlines move between "different bilateral areas according to the special rules created by their geography and their governments' position and power" (Mifsud, 2011, p. 120). Boeing (2015) states that it conducts rigorous research into the "global geopolitical dynamics that influence commercial aviation", citing the risk of increasing protectionism as a key factor that could dampen future air travel demand (paras. 1-2). Meanwhile, Weber and Dinwoodie (2000) list "law, geopolitics, history and patriotism" as factors influencing the development of global airline networks (p. 59). One thing seems clear, sovereignty remains a central "building block of geopolitical architecture" (Dodds, 2014, p. 54).

3.7.5 *Globalisation and the airline industry: Predictions and paradoxes*

Globalisation and air transport have a long and symbiotic history together (Fox, 2014; J. J. Wang & Heinonen, 2015). This reality is closely aligned with ongoing debates surrounding the role and future of the nation-state, the extent and significance of globalisation, and controversies about free trade versus protectionism (Burchill, 2005; Fox, 2014; Simmons, 2000). A range of theories and ideological influences permeate the field of international relations, including liberals who view the nation-state as in demise, and realists who, according to Burchill (2005); "would remind enthusiasts for globalisation that as a preferred form of political community, the nation-state still has no serious rival" (p. 82).

Some argue that the links connecting air transport with globalisation have been understudied and "are contingent on the political, economic, and geographical characteristics of particular places" (Cidell, 2006, p. 661). Still, others counter that since the 1990s globalisation has been a key topic of academic research, "especially in geography and air transport", arguing that its "clearest manifestation…was and still is the creation and expansion of global airline alliances" (Pirie, 2014, p. 269). Others concur, maintaining that the importance of alliances "as a form of globalization in the airline industry is unprecedented" (Bowen, 2010, p. 128).

The assessment of realism's relevance to the airline industry in the mid-1990s by Nayar (1995) concluded "that the tenets of realism are more robust" throughout the industry than many had claimed (p. 140). Even so, he did concede that "increased aviation globalisation is likely to place the bilateral system under pressure" (Nayar, 1995, p. 167). Almost two decades later, Havel and Sanchez (2011a), in their article 'Do We Need a New Chicago Convention?', conclude that although far from perfect, the Chicago Convention has

demonstrated many times that it produces "cooperative benefits", and furthermore, that it is only likely to change "incrementally" (pp. 21-22). IATA's former head Bisignani (2013) argued that changes to international aviation's "regulatory framework are not measured in months or years, but in decades" (p. 122).

The coming globalisation of the airline industry is a common theme throughout the literature (Chan, 2000; Fox, 2014; Wheatcroft, 1990); yet its failure to convincingly materialise over several decades and after numerous predictions, does suggest that the nation-state is more robust than many wish to acknowledge (Eudaily & Smith, 2008). Global aviation represents "an anomaly for existing approaches to international institutions" in that the US, "the most powerful state" did not achieve its preferred outcome, nor was an efficient system created (Richards, 1999, p. 14). Even so, Iatrou and Oretti (2007) maintain that by the 1980s the airline industry was being increasingly forced by the steady growth of globalisation to service the global marketplace by operating to as many destinations as possible. Sixteen years ago, Chan (2000) maintained that factors restricting international airline mergers, and consolidation more generally, "can only impede but cannot stop the powerful globalisation tide" (p. 508).

Such sentiments appear to misunderstand or miscalculate the power of nation-states in being able to control traffic rights, and in consequence, the ultimate structure of the global industry (Hanlon, 2008; Staniland, 1998). Many industry observers have noted the globalisation paradox that the airline industry finds itself in. "It is paradoxical that the industry that has contributed so much to the globalization of commerce is not yet able to take advantage of its benefits" (Macara, 2009, p. 16). Others agree, arguing that "air transport is a deeply paradoxical industry" (Staniland, 1998, p. 71). It is "a remarkable irony" that the airline industry on the one hand allows people and organisations "to escape the limits of national markets and the impositions of national government", but on the other hand, it cannot itself fully achieve the same freedoms (Staniland, 1998, p. 71).

According to A. R. Thomas (2011) "the closed nature of the airline industry is really about politics", not simply a fear of foreign competition (p. 44). He later observes that for legacy airlines and flag carriers, "unlike for virtually every other industry", globalisation represents a serious and major threat to their established industry positions (A. R. Thomas, 2011, p. 47). Others disagree, noting how major legacy and flag carriers enjoy a wide range of competitive

advantages, including powerful hubs, that would see them comfortably weather any drastic structural changes to the status quo (Hanlon, 2008).

3.7.6 *Multinational airlines: Arriving soon?*

In tandem with talk of globalisation are persistent predictions that multinational airlines will soon develop (Hanlon, 2008; Wheatcroft, 1990). However, for multinational airlines to develop, significant change would have to occur in terms of ownership restrictions, "safety, airworthiness, licensing, and so on" (Rhoades, 2008, p. 271). A number of industry experts agree that "governments tend to follow rather than lead", so little is likely in the way of substantive change any time soon (Rhoades, 2008, p. 271). The airline industry is subject to a "double bolting system" with regard to ownership and control restrictions, whereby domestic legislation (the designating authority), and international norms and practices (reciprocity), each need to be addressed in tandem (Havel & Sanchez, 2011c, pp. 17-18).

Nationality rules have created many national carriers, in both name and spirit, "but not a single authentically transnational carrier"; a concept that is "unknown in air transport, even in the 21st century" (Havel & Sanchez, 2011c, pp. 1-2). At the same time, governments also distort the market with respect to airlines "by direct and indirect involvement", creating amongst other things, barriers to industry exit for weak and chronically underperforming airlines (Doganis, 2010, p. 322).

Wheatcroft (1990) highlighted what he saw as one of the most captivating questions for "the future of the airline industry" in the 1990s; will transnational airlines emerge, free from national ownership and control restrictions that can truly pursue their commercial interests and opportunities like other global businesses? He concluded that the forces helping to create "a transnational [airline] industry…will be irresistible and it is inevitable that the future will be dominated by a small number of large multinationals" (p. 353). A decade earlier, Jönsson (1981) observed that the pervasive nature "of the national sovereignty principle has…[prevented] the emergence in aviation of multinational corporations" (p. 300). More than a decade into the twenty-first century, and over 30 years after Jönsson's comments, Rijke (2012) noted that "the nationality clause in bilateral air service agreements" (ASAs) remains the primary barrier to airlines from different countries taking over or merging with each other (p. 444).

Benefits and costs are not equally distributed when it comes to political decisions regarding traffic rights. CAPA (2015) notes, for instance, that "Australia has a long and progressive history of liberalisation", with any disadvantages likely to be felt by "Australian *airlines* not the Australian *economy*" (emphasis in original) (para. 12). Writing in *Australian Aviation*, Chong (2015) observes that Australia, without "strong national carriers" could become vulnerable to decisions made by foreign carriers "that understandably do not have Australia's best interests as their number one priority" (p. 13). He concludes that governments must engage in a careful "and unenviable balancing act" when they agree to bilateral traffic rights (Chong, 2015, p. 13).

Others are less sentimental, arguing that politicians have a tendency to protect domestic airlines, while also contending that "most citizens are "rationally ignorant" and are unaware of the benefits of free international trade" (Vasigh et al., 2013, p. 176). Still others adopt a very different view, maintaining that "too many policymakers accept as an article of faith that an unregulated market…is the best way to build an economy in a global marketplace – and the only way to compete" (Bamber et al., 2009, p. 3).

3.8   International liberalisation

Nowhere it would appear do geographical location, together with international relations, arguably matter more for the global airline industry than when considering international liberalisation. Liberalisation in this regard can either be bilateral or multilateral; the latter becoming regional when several or more neighbouring countries are involved. One considerable segment of the academic literature strongly supports liberalisation of air markets, with some observing that this support argues that "in a free market" state aid would be curtailed and competition encouraged (Dobruszkes, Mondou, & Ghedira, 2016, p. 115).

A number of scholars make their support for air market liberalisation clear. For instance, some maintain that: "The benefits of air transport liberalization have been confirmed by many studies" (Fu et al., 2015, p. 73). Others lament the continued support that governments provide to airlines in many parts of the world, "despite the general consensus on the need for liberalisation" (Lykotrafiti, 2015, p. 94). Dobruszkes and Graham (2016) state: "Though authors report on growing liberalisation, their statements tend to lack fine-scale supporting evidence, which suggest the comments may have more ideological than empirical underpinnings" (p. 3). The broader reality remains: "While few embrace the word

protectionism, growing numbers of politicians are openly embracing the principle behind it" (Mardell, 2016, para. 9).

There is evidently both an economic spectrum from monopoly at one end through to perfect competition at the other (Grant, 2013), and a regulatory spectrum from bilateralism, usually closely associated with protectionism at the one end, and multilateralism, closely allied with liberalisation at the other (Burchill, 2005). Complicating matters further, and particularly with regard to international aviation, is the fact that bilateral agreements can be liberalised, while multilateral and regional air markets and trading blocs can still be very protective (Burchill, 2005; Lazar, 2011). This disparate landscape is noticeable with the argument that full air market liberalisation "is impossible to achieve" at present "because of economic and political realities" (Hindley, 2004, p. viii).

Added to this, despite increasing access for airlines over the last 20 years, it cannot be claimed with any degree of confidence "that there is a settled international consensus on the appropriate level of liberalisation for the global aviation sector" (Havel & Sanchez, 2011a, p. 16). When it comes to the topic of liberalisation, "it is hard to tell where rhetoric ends and reality begins" (Knibb, 2015a, para. 3). Even so, it is also hard to escape the reality that "multilateral…liberalisation definitely looks to have stalled", and even where progress appears to have been made, "that may be illusory" (Knibb, 2015a, paras. 9-10). The fact remains that "perceptions about winners and losers have always informed the debate over liberalisation. Those who expect to benefit favour it; those who foresee the benefits going elsewhere oppose" (Knibb, 2015a, para. 31).

This in part explains why the major US carriers are currently lobbying their government to restrict access to the major Gulf carriers (Dresner et al., 2015), despite the US after the Second World War championing liberalisation (Toh, 1998). According to Hooper (2014):

> …the success or otherwise of, and the desirable future direction of liberalisation, can be judged according to the perspectives of different countries and/or by different parties such as airlines and consumers…the prospects of moving towards a liberalised market as end-state will depend on the gradual ascendency of shared commitments to market-determined outcomes over self-interest (p. 21).

Like Hooper, Wheatcroft (1990) concedes that "the combined forces of sovereignty, nationalism and protectionism" are significant barriers to the emergence of a more liberalised global air transport sector (p. 353).

According to a range of experts, national ownership and control restrictions remain central impediments "to efficient industry rationalisation" (Hooper, 2014, p. 21). Even open skies agreements, chiefly the 2007 US-EU agreement, "do not mean entirely open markets in the conventional economic sense", in large part due to the "nationality clauses" which act to restrict market access (Button, 2009, p. 70). Experts point to the fact that around 90 percent of contemporary bilateral ASAs "contain nationality rules" (Rijke, 2012, p. 442). Where nationality and ownership have been less rigidly adhered to in bilateral negotiations, most notably in the case of Hong Kong, these are much more exceptions than the general rule. Hong Kong's gateway to mainland China status ensures more flexibility in this regard than most other places would hope to achieve (McNeill, 2014).

Even so, Havel and Sanchez (2011b) argue that the bilateral system would still survive long after nationality requirements were abolished. They go on to state that air transport can be globalised without ending the bilateral system, and furthermore, "substantial transnational route networks" can be developed, simply by removing the nationality requirements, and in consequence, opening "investment and market opportunities" (Havel & Sanchez, 2011b, p. 671). Thus, bilateralism does not necessary directly equate to closed and restricted market access based on national borders (Fan & Lingblad, 2016).

The great challenge, it is argued, is for the airline industry to go from globalisation enabler, to globalised itself (Havel & Sanchez, 2011c). Some highlight why established carriers are very reluctant to see the current system diluted or removed, given that "the forces of globalization are unlikely to allow preservation of the status quo forever" (A. R. Thomas, 2011, p. 46). No doubt major legacy and flag carriers are keen to maintain the core elements of the status quo, in terms of the industry's present structure and its bilateral national basis, but this view tends to downplay the role of nation-states and their enthusiasm for the bilateral system. Most states simply do not wish to cede their power and control in relation to traffic rights and air market access (Hanlon, 2008).

3.9   The North Atlantic and Europe

No more so is this state reluctance to change the bilateral system arguably more evident than in the US and Europe, where protectionism has risen to the fore of late (Knibb, 2015a). This has led some experts to ponder whether an expected cyclical upturn for the North Atlantic air market either "accelerates or dampens the geopolitics of liberalization" over the coming years (Debbage, 2014, p. 37). Chicago's DePaul University law professor Brian Havel, an expert in international aviation law, notes that concerning the contemporary circumstances of liberalisation and its link to the general economic environment: "The best antidote for Europe would probably be an improved economy overall – recessions tend to breed protectionism" (Knibb, 2015a, para. 42).

Such a reality raises the interesting question of whether the cyclical nature of the airline industry is (or will be in future) mirrored in the trajectory of liberalisation? That is, an uneven wave-like process of advancements and contractions heading forward as economic circumstances for the industry oscillate? Or will liberalisation, as some contend, advance and claim victory in the end? However, in this latter context some industry experts question whether "evolutionary theory [can] be applied to air transport development in the same way as it is to species?" (Fox, 2014, p. 72). Terms like natural progression, inevitable trajectory, unfolding reality, and so forth, tend to suggest a logical process that is self-evidently apparent for airline industry developments (Fox, 2014). This also reflects broader market research whereby "*natural* and *inevitable*" (emphasis in original) are used to characterise "market liberalisation", together with globalisation more widely (Yeung, 2002, p. 294).

The extent to which the North Atlantic and/or European Union (EU) represent a window into the global airline industry's future remains an intriguing and multifaceted question (Fox, 2014; Gaspari, 2011). Button (2009) argues that since the 1990s, Europe's single air market has provided "both knock-on and demonstration effects for [other] regions" around the world (p. 60). Pitfield (2009) also highlights the "demonstration effects" of this US-EU open skies agreement, noting that many other countries are considering (and some even implementing) "similar initiatives" (p. 311). In fact, the EU has been engaging in a policy of negotiating "comprehensive air transport agreements with selected partners all over the world" since the early 2000s; not just to promote the industry in Europe, but to also "seek to reform international civil aviation" (Gaspari, 2011, p. 428).

In contrast, Bowen (2010) notes how the major US "carriers are less internationalized than carriers based in other regions, [and despite some] expansion abroad since 2003,…they remain strongly domestic in orientation" (p. 143). Hanlon (2008) explains this by pointing out that although the US is not endowed with the same advantageous geography that facilitates sixth freedom traffic, as found in parts of Europe, the Middle East or Asia, it still enjoys a very large domestic market. Meanwhile, others point out that the EU's leadership on many industry issues could be interpreted "as divisive", with a more globally orientated approach widely viewed as more fitting for such an international industry (Fox, 2014, p. 72).

Added to this, not all countries outside the EU recognise developments "that deviate from the conventions of bilateralism"; though European admirers still contend that "the EU single aviation market prefigures what a fully liberalized system of airline ownership might look like and how it might operate" (Havel & Sanchez, 2011c, p. 30). Evidently, the situation in Europe is "quite paradoxical" in that externally EU states and their carriers must follow the bilateral system of air service agreements, while internally they can "operate out of any European country they like" (Woll, 2006, p. 58). In this sense, the European single air bloc is a larger grouping of states that still ultimately controls air access and ownership, while individual bloc members are constrained in how they can operate outside the bloc by the same bilateral system that their internal market has superseded (Havel, 2009).

This is not to suggest that major European airlines are necessarily hampered by the bilateral system outside of the internal single air market. Major flag carriers in Europe will continue to benefit from a favourable "central geographic location", including large catchment areas and big intercontinental hub airports (Franke & John, 2011, pp. 21-22). Optimists add that longer-term forecasts from experts, and the likes of Airbus, indicate that "Europe will maintain its crucial role in air transport", and that major flag carriers will be a significant part of that story as the market for low cost carriers (LCCs) matures, and as alliance partnerships strengthen (Franke & John, 2011, p. 22). This assessment is in stark contrast to the dire warnings sounded by some less than a decade earlier, at which time it was argued that the major European flag carriers faced virtual global irrelevance within ten years (circa 2014), if they did not respond successfully to the competitive threat from LCCs (Jarach, 2004).

3.9.1 The big three global alliances

The big three global alliances – Star Alliance, SkyTeam and oneworld – dominate the North Atlantic market and each have what are referred to as anchor members in both the US and Europe (Burghouwt & Veldhuis, 2006). In terms of international aviation, many argue that the global airline alliances are simply poor substitutes for full mergers; a reality that is currently not possible at present given the regulatory barriers that exist (Fox, 2014; Havel & Sanchez, 2014). Even though this view remains strong throughout the literature, others point out that "no airline is able to efficiently serve every destination its customers require with its own aircraft", and therefore, "must seek commercial partners" to assist in delivering larger networks and more service choices (EC & DoT, 2010, p. 3).

Global alliances show no signs of disappearing from the industry any time soon (Iatrou & Oretti, 2007; Kuhlmann, 2011a). Some experts argue that the global alliances will be around into the foreseeable future, but that their importance will be lower than that of their more important merger counterparts. Exactly, or even roughly, when such mergers will come to the fore is not stated, although such experts make it clear that "majors exert the greatest centripetal pull in all three alliances and their movement will determine the course of both alliances and mergers" (Iatrou & Oretti, 2007, p. 199). Not all experts are in favour of airline mergers, however; claiming that airlines "*have* learned from history [that] mergers are uncertain at best" (emphasis in original) (Bamber et al., 2009, p. 196).

A noticeable flurry of alliance related scholarly research was conducted in the early 2000s, much of it by Oum et al. (2001), Oum, Park, Kim, and Yu (2004) and Z. H. Wang, Evans, and Turner (2004), but also Evans (2001), Brueckner and Whalen (2000) and Weber and Dinwoodie (2000). At this time, Oum et al. (2001) postulated that although rising "pressure for liberalization" was projected to occur, restrictions generated "by the bilateral system and national ownership laws" would remain central in "the development of global airline networks" (p. 62). They also predicted that "in the near term alliances would remain as a dominant form of inter-airline relationship in international air transport" (Oum et al., 2001, p. 62).

More recent works on global airline alliances include Bilotkach and Hüschelrath (2011), Brueckner, Lee, and Singer (2011), Zou, Oum, and Yu (2011) and Lazzarini (2008). In 2014, Havel and Sanchez (2014) maintained that "very plausibly" the big three global alliances

"will settle down together to form the nucleus of three future global airlines" (p. 171). Once again, no date or timeframe was provided for this to occur. In contrast, what has caught many industry insiders and watchers off guard to a large extent is the rise of the three major Gulf carriers; it is to these airlines that the chapter now transitions.

3.10   The three major Gulf carriers

The three major Gulf carriers have enjoyed widespread media attention in recent years, but have received little attention to date in the academic literature, although they have "received significant attention in the trade press" (Dresner et al., 2015, p. 3). Some of this limited scholarly attention can be traced to the fact that, as Mendelsohn (2014) highlights, the Gulf carriers have expanded their global networks "far more…than anyone involved in international aviation less than a decade ago would have ever thought possible" (p. 155).

This view was echoed nearly a decade earlier when Maier (2005) asserted that "most foreign governments" initially had no concerns about giving Emirates access to landing rights because few (if any) thought the carrier would ever "amount to much" (para. 15). For instance, in the 1990s the US negotiated a number of open skies agreements with Gulf countries at a time when there was no serious competitive threat on the horizon; in fact, Etihad Airways did not even exist. Given that "air traffic rights are typically granted till perpetuity", the three major Gulf carriers have more recently been utilising these rights, and in less than a decade from 2004 until 2012 they generated combined annual traffic that went from 20 million to "75 million passengers" (Fan & Lingblad, 2016, pp. 111-113).

3.10.1 Centre of the world

One academic who has published a range of articles and chapters on the Gulf carriers, particularly Emirates, is John F. O'Connell (2006, 2012, 2015), and together as a co-author with Williams (2010, 2012). He notes that "Dubai's geographical positioning" allows Emirates to connect to markets in Europe, Asia and Africa without the need for short haul feeder flights in a marketplace "saturated with low-cost carriers" (O'Connell, 2012, p. 411). However, geographical location does not come with all positives and no drawbacks; the Gulf is at a distinct geographical disadvantage when it comes to traffic between Europe and China, with Gale (2011) calling such routings through the Gulf "circuitous" (para. 16). The media, such as *The Economist* (2010b), have highlighted how the Gulf carriers are creating a new

silk road linking east and west. This being the case, regional turmoil abounds, although "the UAE and Qatar remain comparatively stable" (Henderson, 2014, p. 111).

Moving beyond a focus solely on geography, as Lohmann, Albers, Koch, and Pavlovich (2009) put it, when looking at 'Singapore and Dubai's aviation-based transformation': "To be successful, places need more than just location" (p. 211). They note effective policies for transport, tourism strategies, political stability and "government investment" as key drivers and enablers as well (Lohmann et al., 2009, p. 211). In this context, the three major Gulf carriers are following government mandates and strategic plans to develop global networks. As such, "profitability is seen as a long-term, not short-term objective" (Doganis, 2010, p. 322).

3.10.2 Level playing field

The notion of a level playing field in global aviation is beginning to find its way into scholarly articles and analysis (Chesen, 2006), particularly in assessments of the Gulf carriers and their growing industry influence (Parker, 2012). de Wit (2014) makes it clear in his article's title what this debate, according to him, essentially boils down to: 'Unlevel playing field? Ah yes, you mean protectionism'. This sporting metaphor is used a lot throughout the literature, and increasingly so as the Gulf carriers expand their US networks, and continue to build their European services as well (Tretheway & Andriulaitis, 2015).

Arguments surrounding the fairness or otherwise of the Gulf carriers' expansion, have even led O'Connell (2015) to rebuke the US majors for distorting his academic work in an article on *Air Transport World's* website. Etihad Airways CEO James Hogan (2015) argued on Bloomberg Television that "it isn't an even playing field" to begin with, as the world is made-up of mature, maturing and emerging markets; "so where do you set the rule book?" Hooper (2014) in his article 'Has Liberalisation Stalled' agrees, pointing out that for many states attending an ICAO conference in 2013; "the concept of a "level playing field" was not generally accepted as a useful concept" (p. 19).

3.10.3   Restrict or court?

Some countries, particularly Germany and Canada, are currently restricting Gulf carrier access to their respective air markets. Duval (2011) provides a case for Transport Canada's decision to not expand its current bilateral with the UAE, based on airlines in Canada (mostly

Air Canada) not being likely to benefit (p. 5). In contrast, Forsyth (2014) conducts a cost/benefit analysis on Emirates' desire to expand services in Germany to include Berlin (a request thus far denied), concluding that even with an uneven playing field "the probable balance is that allowing Emirates to fly to Berlin would be positive for the German economy" (pp. 43-44). Airline benefit and national benefit are not necessarily synonymous (CAPA, 2015). Parker (2012), a then-senior vice president at Emirates (later at Qantas), maintains that talk of a level playing field invariably equals a call for protectionism for the most part.

Meanwhile, de Wit (2014), suggests that much of the opposition to Gulf carriers would likely dissipate or disappear altogether if they joined the global alliances, or at least code shared with current opponents. British Airways and Air Berlin, both oneworld members ended their membership of the Association of European Airlines (AEA) over its negative stance towards the Gulf airlines (Walker, 2015b). Qatar Airways remains the only major Gulf carrier to have joined one of the global alliances to date (oneworld); Etihad has equity stakes in Air Berlin, and also in SkyTeam member Alitalia, together with a code sharing partnership with SkyTeam anchor member Air France (CAPA, 2013b; Walker, 2015b). In recent times troubles at Alitalia, and failing demand more generally, have seen Etihad's future called into question (Charlton, 2017).

Despite being a vocal global alliance opponent, Emirates has a strategic bilateral partnership with oneworld member Qantas, and a more recent tie-up with another oneworld member Malaysian Airlines. In January 2015 Qatar Airways secured a ten percent equity stake in IAG, parent company of British Airways (Topham, 2015). This has since been increased to 15 percent (Karp, 2016). This leaves the three major Gulf carriers with an intriguing smorgasbord of strategic options in international alliances and partnerships (CAPA, 2013d; Walker, 2015a). The Gulf carriers also stand out from their major competitors through the linkages they are forging with secondary cities throughout the world, meeting the demand for air services through Gulf hubs rather than traditional national gateway airports and cities (O'Connell, 2012). The Gulf is not the only region experiencing dramatic air transport growth; Asia remains a major industry region, and one that reveals a range of intriguing and valuable insights into the global industry's likely future (O'Connor & Fuellhart, 2014).

3.11   The Asian century

3.11.1 ASEAN's aspirations

The ten member Association of South East Asian Nations (ASEAN) remains publicly, though not particularly vocally, committed to full liberalisation – initially set to occur by 2015. ASEAN's plans do not extend beyond fifth freedoms, meaning an airline "would still have to begin or end" a service in its "own state" (Tan, 2014, p. 268). ASEAN's aspirations have received some coverage in the literature, with Tan (2012) pointing out that ASEAN remains "deeply divided" over air market liberalisation (p. 49). Several years earlier, he noted "the conservative attitudes of some ASEAN member states towards liberalization" which were likely to both complicate and slow progress in the direction of a single air market (Tan, 2010, p. 294). Meanwhile, Havel and Sanchez (2014) observe that ASEAN attempts to replicate the EU community carrier notion have so far met with limited success. Forsyth et al. (2006) highlighted almost a decade ago, that only in Europe "where special circumstances prevailed", has a regional single air market been created (p. 151).

Journalist Tom Ballantyne (2014), writing more recently in *Australian Aviation*, argues that ASEAN will ultimately achieve "semi-open skies", not an ambitious copy of Europe's fully liberalised single market; adding that such an outcome remains "a long, long way down the track" (p. 22). AirAsia employs franchising as a mechanism to circumvent restrictions in the region, although some governments have not supported this arrangement (Havel & Sanchez, 2014). Even so, franchising is likely to "become more widespread in the future" as airlines seek to expand their brands internationally, but have no other avenue to do so other than to invest in local subsidiaries (Hanlon, 2008, p. 160). Jetstar Hong Kong's unsuccessful attempts to obtain an operating licence further demonstrate how franchising is by no means assured though (Sandilands, 2015).

3.11.2 China's rise

An area of academic research is emerging that looks at China's airline industry (J. Wang et al., 2016; Q. Zhang et al., 2014). Aviation will likely parallel China's broader economic rise, and it is expected that the airline industry will become a major aspect in China's regional growth and development (Fu et al., 2015). Even though China's "domestic [airline] market is poised for greater growth than anywhere else on the planet", the trajectory of its three major carriers in the international sphere is less certain (Bowen, 2010, p. 141). Nevertheless, many

experts agree that Asia's airline industry is experiencing "a seismic shift with China" as it continues with its world leading growth (Mifsud, 2011, p. 129).

Even so, it should be noted that "rising economic powers such as China…remain leery of high-octane liberalization" (Havel & Sanchez, 2011a, p. 16). China clearly possesses strong "economic nationalistic instincts" that it remains unwilling to shed (Mifsud, 2011, p. 120). The growing Chinese domestic airline industry is often compared with that in the US, with a widely held view that China will become increasingly similar in its key market characteristics and structure over time, particularly given its "geography and size" (Button, 2008, p. 36).

A number of Chinese academics have published English language papers on their country's airline industry, including Q. Zhang et al. (2014) who looked at 'Market power and its determinants in the Chinese airline industry'. They argue that "Chinese aviation policy reforms have not promoted enough competition" to date (Q. Zhang et al., 2014, p. 11). They also note that hubbing in China is developing along the same lines as in the US (Q. Zhang et al., 2014, p. 111). Other research has investigated domestic consolidation in China since 1997, concluding that "the evolution of China's airline industry in the post-deregulation period appears to have much in common with the US", including average airfare reductions, mergers and hub-and-spoke networks (Y. Zhang & Round, 2008, p. 142). However, "the aviation network" in China still needs to be pushed "farther in the direction of a bona fide hub-and-spoke system" (J. Wang & Jin, 2007, p. 479).

Meanwhile, over a decade ago, A. Zhang and Chen (2003) assessed China's attitudes and policies toward international air market liberalisation and strongly recommended the country adopt a more open approach. Even so, they do concede that whatever path is chosen, the fact that China has a population far greater than the US and Europe combined, means that it "will undoubtedly play a more important role in world aviation in the future" (A. Zhang & Chen, 2003, p. 46). Likewise, as CAPA's *Airline Leader* magazine highlights, massive international Chinese tourists numbers, many delivered by Chinese airlines around the globe, will allow the Chinese in large part "to dictate terms on market access" (Airline Leader, 2013, p. 25).

This is not to say that the major Chinese airlines are necessarily ready to compete "head to head with foreign carriers in international markets" (Oum & Yamaguchi, 2006, p. 32). The big three Chinese carriers have evidently not been exposed to "unfettered competition" leaving them comparatively weaker to major competitors like Singapore Airlines and Cathay

Pacific (Bowen, 2010, p. 141). Pressure is mounting on the Chinese government to reduce state-ownership, and allow more privately operated airlines into the marketplace, to achieve a more competitive airline industry (Cao et al., 2015).

3.12   Conclusion

This chapter explored and assessed a wide array of literature covering the global airline industry. The chapter began by looking at industry level analysis, and highlighted the value and challenges of using established strategic frameworks, such as Porter's five forces of competition model, together with the PESTE framework, as guiding scaffolds. These two strategic frameworks are well established and highly regarded, including in aviation research. Even so, Porter's framework tends to work best in domestic air markets, while PESTE is generally more versatile across both domestic and international contexts, but typically results in national politics overshadowing international relations. Therefore, such strategic frameworks provide a solid basis to then include explicit consideration of geographical location (home base and nationality), along with international relations (bilateralism versus multilateralism) for an airline industry specific analysis. Without the inclusion of these two central factors, any airline industry level analysis intent on an international or global scope is rendered partial and incomplete.

Next, research issues and literature gaps were identified and discussed, essentially concluding that international liberalisation is an understudied topic area in air transport research, while global perspectives on the entire airline industry, including emerging air markets, are relatively scarce. Meanwhile, geographical location and international relations are often not explicitly acknowledged, and rarely combined, in industry level analysis that covers the airline industry. Likewise, interdisciplinary research, although inherently associated with air transport, is not always easy to locate. How these interrelated elements were captured and applied in this study is covered in the next chapter which details the methodology followed.

Chapter 4: Methodology

4.1   Introduction

This chapter details the chosen methodology for this study, a mixed-method Delphi study. The methodology occurred across five chronological stages of data collection; firstly a Workshop, then a Pilot Survey, Main Survey 1, Main Survey 2, and finally, In-Depth Interviews. The chapter begins by re-stating the study's research questions, and then outlines the researcher's worldview. Next, the Delphi method is covered, including aviation applications, followed by the sampling strategy (aimed at a multidisciplinary cohort), and research design. After this, a stage by stage summary is provided, followed by the data analysis techniques used. Lastly, the chapter ends with a look at both data quality assurance and ethical considerations.

4.2   Research questions

Four research questions underpinned this study, they are:

4.2.1   Research Question 1

To what extent do international liberalisation and protectionism contribute to the conceptualisation of the future of the global airline industry?

4.2.2   Research Question 2

To what extent are the North Atlantic and European air markets prime examples of where the global airline industry is headed into the foreseeable future, including the multilateral liberalisation that other regions could follow?

4.2.3   Research Question 3

What do the experiences and strategies of the three major Gulf carriers reveal about the likely future of both international liberalisation and protectionism, and the airline industry more broadly?

4.2.4   Research Question 4

What does the Asian region reveal about the chances for greater liberalisation of the airline industry globally?

4.2.5   Capturing multiple perspectives and approaches

This study's research questions reflect contested subject matter, and consequently, an expected diversity of views. The design of each was intrinsically linked to the acknowledgement that such key topic areas produce a spectrum of informed views, because each is predicated on an array of worldviews, theories, approaches and opinions. For instance, international relations enjoys a long and close history with realism, yet continues to be shaped by liberalism, and an ongoing expansion into relativist areas like constructivism (Griffiths et al., 2014). The airline industry is not easily nor readily situated into a particular paradigm or approach (Heracleous et al., 2009). Likewise, air transport geography is becoming more pluralistic (Budd, 2014), while the Delphi method is being increasingly utilised in a mixed-method context in response to the blurring of once rigid research demarcation lines (Tapio et al., 2011).

In a similar fashion, many years ago, the strategic management literature resolved, for the most part, to embrace both qualitative and quantitative "research methods…to enrich our understanding…and generate new insights"; and, in the process, expand the field and "address of wider variety of research questions" (Hoskisson, Hitt, Wan, & Yiu, 1999, p. 447). Following on from this, mixed-method research, particularly that which collects data "using alternate methods within the same context", such as this study, generates "rich, deep, insights" (Woodside, 2010, p. 71). Just like this study's use of the two strategic frameworks of PESTE and Porter's five forces, to extract deeper industry insights from multiple "strategic tools" (McKechnie et al., 2008, p. 229); this study's research questions and methodology were selected and developed in order to ensure that such depth indeed occurs.

4.3   The researcher's worldview: Pragmatism

The worldview (or paradigm) that guided this study was pragmatism. Pragmatism promotes the notion of freedom "to choose the methods, techniques, and procedures of research that best meet [a researcher's] needs and purposes"; this freedom extends to choosing multiple ways "of collecting and analysing data" (Creswell, 2013, p. 28). Pragmatists maintain that

research takes place within "social, historical, political, and other contexts" (Creswell, 2013, p. 28).

This flexible and open approach to research has led some to refer to pragmatism as a philosophy of 'anything goes' (Robson, 2011, p. 171). In fact, pragmatism pursues a centralist agenda that attempts to avoid the philosophical extremes of dogmatism at the one end, "and scepticism" at the other (Robson, 2011, p. 28). Again, analysis of the global airline industry does not readily conform to singular paradigms, theories, ideologies or approaches (Budd, 2014; Heracleous et al., 2009). If a research endeavour is well designed, has a clear purpose and viable research questions, amongst other central elements, then "a convincing methodological rationale can be established" for a pragmatic approach (Robson, 2011, p. 171).

As Collis and Hussey (2003) point out, research conducted "in the natural sciences" usually convincingly employs a stance that is independent, objective and "value-free" (p. 48). They go on to add, that these assumptions "are less convincing in the social sciences which are concerned with the activities and behaviour of people" (Collis & Hussey, 2003, p. 48). When people are evidently divided across decades of research on the airline industry between those who adopt a realist stance versus a liberalist one (Nayar, 1995; Richards, 1999); or favour protectionism or liberalisation (Dobruszkes & Graham, 2016); or argue for the merits of either the bilateral system, or alternatively champion multilateralism (Fox, 2014; Havel & Sanchez, 2011a); then the industry's large, complex and seemingly paradoxical nature require a pragmatic approach best able to deliver deeper insights unencumbered by overly rigid research boundaries or assumptions.

This study sought to investigate and explore the views of experts in a range of fields and vocations connected to air transport, by utilising both qualitative and quantitative data, collected and analysed across five successive stages. Surowiecki (2013) contends that individual expertise is of little value unless it is "pooled with those of others to get the most out of [it]" (p. 34). Creswell and Plano Clark (2011) note that exploratory sequential mixed-method designs, such as this study, often "value multiple perspectives and deeper understanding", and can frequently shift from constructivism at the outset (where qualitative data collection predominates), to postpositivism during subsequent quantitative stages (p. 87). When looking at the airline industry from an international political standpoint, including consideration of geopolitics, realism features prominently (Hooper, 2014; Nayar, 1995),

further reinforcing the contention that shifting worldviews abound throughout the industry, and should be given a voice in a study such as this; a practice not widely found in air transport research (Lohmann & Vianna, 2016).

It is here again that pragmatism comes to the fore; pragmatists think "the forced-choice dichotomy between postpositivism and constructivism should be abandoned" (Creswell & Plano Clark, 2011, p. 44). The initial "rise in the legitimacy of Qualitative Research" saw its justification intrinsically linked to "the contrast between epistemological stances such as realism and constructivism"; however, mixed-method now emphasises "a largely pragmatist stance" (Morgan, 2007, p. 53). Others concur, contending that as a research stance becomes more pluralistic, such as when qualitative and quantitative data sets are merged, so too pragmatism becomes a more relevant worldview (Creswell & Plano Clark, 2011).

Others like Silverman (2005) argue that "it is sensible to make pragmatic choices between research methodologies according to your research problem and model" (p. 15). Pragmatism, particularly as reflected in the airline industry, maintains that competitive realities are elastic by nature, and furthermore, successful business ideas mostly revolve around "practicality and usefulness" (Hinthorne, 1996, pp. 257-258). Likewise, in international relations, pragmatism is all about "the primacy of practice" (Hellmann, 2009, p. 639).

Thus, this study is heavily influenced by pragmatism, combined with a solid regard for constructivism, and an acknowledgement of the valuable contribution made by realism. In essence, this study adopts a pragmatic worldview. This is because the multifaceted nature of the problem encapsulated in the research questions, and elaborated in the PESTE and Porter frameworks, along with the review of the literature, led to the need for pragmatism. This included utilising a mixed-method approach to capture the breadth and depth of multiple worldviews and lenses through which the airline industry is viewed, and the rationale and reasoning behind each.

4.4   The Delphi method

This study was designed and developed around the Delphi method (also referred to as the Delphi technique or study). The Delphi method is a forecasting technique based primarily on expert opinion, and it has been extensively employed in both a qualitative and quantitative context, including mixed-method research (Tapio et al., 2011). Delphi is similar to historical analogy "where the future is forecasted based on historical events" (Vasigh et al., 2013, p.

288). However, unlike historical analogy where only one or several people conduct the forecasts, the Delphi method derives its forecasts from a group of experts who independently submit their forecasts and opinions. These are often then used to form consensus forecasts (Vasigh et al., 2013).

The Delphi method is well represented throughout different fields of research, from healthcare (particularly nursing), to technology, through to education and business. The Delphi method "is intended for use in judgement and forecasting situations in which pure model-based statistical methods are not practical or possible" (Rowe & Wright, 1999, p. 354). Added to this, its popularity remains high and it has existed "for over half a century" (Landeta, 2006, p. 467).

4.4.1 Links to aviation

The Delphi method has been utilised on many occasions in transport and logistic studies, including aviation. For instance, IATA has been using Delphi for many decades to conduct "industry-wide forecasts" (Doganis, 2010, p. 206). The Delphi method has been used extensively in transportation studies over the past several decades (Schuckmann, Gnatzy, Darkow, & von der Gracht, 2012, p. 1374). The Delphi method has also been used to analyse the global airline industry (Delbari et al., 2016; Linz, 2012; Schuckmann, Linz, Gracht, & Darkow, 2011); forecast demand for airline meals (Johan & Jones, 2007), evaluate state and privately owned airlines in Latin America (Cooper, Gallegos, & Granof, 1995); to forecast EU air transport trends (Mason & Alamdari, 2007); to assess the future for European business aviation (Linz, Ziegler, & Lang, 2011); to investigate low cost carriers (Chang, Hsu, Williams, & Pan, 2008); and more recently to investigate technology myths surrounding aviation and climate change (Peeters, Higham, Kutzner, Cohen, & Gössling, 2016).

Despite the fact that the Delphi method is a complex and time consuming research methodology, with several or more stages of data collection and analysis, it is reliable and cost effective. Traditional forecasting often relies "on the availability of historical data"; data that is not always readily available, and in some cases simply does not exist (Doganis, 2010, p. 224). Many emerging markets, such as in the Gulf and Asia, have little reliable data publicly available, while the rapid growth in new markets and ever expanding network connections, makes the use of more traditional predictive models all the more challenging (Fan & Lingblad, 2016). For this study, the Delphi method provided a trusted and tested way

for the research questions to be thoroughly addressed, and for data to be generated where little currently exists (Rowe & Wright, 1999).

4.4.2 *Participant expertise*

Participants play a key role in the Delphi method as it is their expertise that forms the basis for the data collected and analysed. This study adopted an inclusive view and policy toward participation, albeit predicated on accessing airline industry expertise. Even so, Delphi based research has found that including non-experts, at least initially, encourages opinion diversity (Hussler, Muller, & Rondé, 2011). Such research has also established that non-experts tend to have less stable opinions compared to experts, but are more likely to align with expert views over time (Hussler et al., 2011). Laypeople (i.e. non-experts) help to "increase the variety of viewpoints", but self-rated experts are less likely to drop-out from a study compared to "those who rate themselves as less expert" (Rowe & Wright, 2011, p. 1489).

This attrition reality is clearly displayed in this study for the Main Survey 1 whereby only 27 percent of respondents who rated their level of industry knowledge as limited provided an email contact to receive the next survey link (i.e. Main Survey 2), compared to 87 percent for those who selected very good, and 69 percent for those who chose excellent (see Figure 4.1 below).
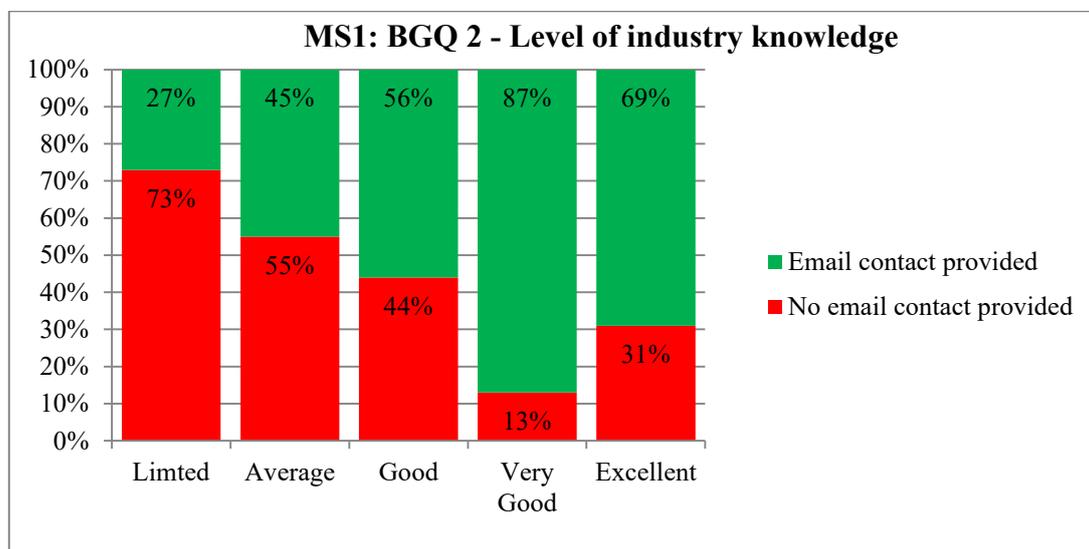
Figure 4.1   Main Survey 1: Email contact for Main Survey 2 link

The pattern and tendency shown above also reinforces the argument that a fair degree of self-selection helped to shape and influence how expert was defined in this study as those with

higher stated industry knowledge were more willing to continue. In addition, it is fair to surmise that even within the expert cohort a certain amount of self-selection occurred whereby only mostly those experts with a strong global industry knowledge elected to continue. Mason and Alamdari (2007), in their Delphi study of future trends in the European airline industry, point out that response rates tend to be lower "in studies where the experts are drawn from a larger group and the interest in the findings of the report are less directly related to the experts" (p. 306).

In their study, they directly contacted pre-identified experts in air transport, resulting in a 43 percent response rate to their first stage survey (Mason & Alamdari, 2007). In the study here, 34 out of 71 experts completed both main surveys (48%). To begin with, 73 percent of defined experts (52 out of 71) elected to be sent the Main Survey 2 link, with 34 out of this group of 52 (65%) ultimately completing the Main Survey 2. Such response rates are consistent with findings elsewhere (Linz, 2012). It must be remembered that each stage of this study saw participants (expert and non-expert alike) dedicate time and effort on a voluntary basis, with valuable contributions being made, irrespective of the number of stages actually completed.

A prescribed definition of expert at the outset would also have run the risk of potentially sidelining nonconformist views that might challenge the status quo. Delphi participants need to be selected based on "different viewpoints", including the use of "known "maverick" opinions" to contest conventional ideas (Bolger & Wright, 2011, p. 1510). However, not much research exists that directly focuses "on the processes of opinion change in Delphi" (Bolger & Wright, 2011, p. 1512). Some authors contend "that people usually do not change their opinions as much as they should", weighting their own views as superior to those of other people on most occasions (Bolger & Wright, 2011, p. 1500).

Importantly, Delphi participants need to "be selected for their capabilities, knowledge and independence" (Saizarbitoria, 2006, pp. 781-782). Ideally, Delphi participants should reflect "a broad sampling of expertise from a diverse population of individuals who are likely to affect the forecast outcome" (Parente & Anderson-Parente, 2011, p. 1710). To gain a realistic picture of a situation using Delphi, "multiple perspectives" need to be sought (Linstone & Turoff, 2011, p. 1716). Many now also question whether consensus of opinions should even be a key focus in a Delphi study, but rather "the ability to simply…discuss and refract ideas" in order to arrive at solid and effective conclusions (Lentz, 2009, p. 54). The Delphi method

has evolved to no longer push for consensus so much as to reflect a structured group communication process whereby "people…can provide valuable contributions" (Landeta, 2006, p. 468). Many now content that "a free exchange of conflicting views" is far better than aiming for consensus (Surowiecki, 2013, p. 203).

The concept of consensus was carefully crafted in this study. Consensus, based on a convergence of opinions, is only part of the equation as divergent views can be equally relevant and insightful (Hussler et al., 2011). Furthermore, consensus was only broadly encouraged (or perhaps more accurately highlighted), not explicitly requested. In this manner, participants were not pressured to agree or disagree with others, including the majority view on a particular item. In part, an atmosphere of flexibility and inclusivity was encouraged by designing a process where interaction only occurred at the beginning, during the first stage Workshop. The remaining four stages of the study involved independent completion of the surveys and interviews, and no participant interaction.

Independent views are central to a Delphi study's success (Hussler et al., 2011). Nevertheless, participant anonymity, a cornerstone of Delphi, can confer a sense of impunity for experts leading to potentially unreliable views being recorded (Landeta, 2006). Even so, anonymity has many positive benefits including reducing "undue social pressures" generated from dogmatic or dominant participants, or pressures from majority opinions, ideally resulting in views and decisions based on "merit alone" (Rowe & Wright, 1999, p. 354). The most compelling argument for anonymity is the avoidance of the "*Bandwagon effect*", whereby participants conform to group expectations and pressures (emphasis in original) (Nowack, Endrikat, & Guenther, 2011, p. 1607).

Thus, the Delphi method represents an attempt to avoid "the small-group dynamics that often skew group judgements" (Surowiecki, 2013, p. 275). One central element in effective group decision-making is that anonymity assists in getting "people to pay much less attention to what everyone else is saying" (Surowiecki, 2013, p. 65). Added to this, "a hallmark of true expertise and insight is making a complex subject understandable, [whereas] mediocrity and bad strategy" are often needlessly complex and act to mask "an absence of substance" (Rumelt, 2011, p. 40).

4.4.3 Three main Delphi approaches followed: Classical, eDelphi and hybrid

Therefore, this study drew on core elements found across a number of recognised Delphi techniques; as the Delphi method has grown in popularity, so too have its applications, with some authors identifying "ten main categories of Delphi" (Hasson & Keeney, 2011, p. 1697) This study exhibited key elements from three different Delphi approaches; the classical Delphi method, an eDelphi and a hybrid Delphi.

4.4.3.1   Classical Delphi

The aim of a classical Delphi is "to elicit opinion and gain consensus", with experts being "selected based on [the] aims of the research" (Hasson & Keeney, 2011, p. 1697). Classical Delphi typically utilises "three or more rounds", with the first round usually being an "open qualitative" one, followed by closed quantitative rounds (Hasson & Keeney, 2011, p. 1697). It should be noted that less rounds are often better and allow for "a good understanding of the issues or factors" to be gained, while maximising participation rates and avoiding data quality issues emanating from attrition (Hall, 2009, p. 19). This study employed five separate stages, with three main rounds of data collection (i.e. the two main surveys and the in-depth interviews). However, unlike in this study, classical Delphi's are "traditionally postal" (Hasson & Keeney, 2011, p. 1697).

4.4.3.2   eDelphi

This study employed online surveys, and mostly online synchronous interviews. Online Delphi studies utilising digital surveys and/or questionnaires are becoming increasingly popular throughout the academic world (and beyond), with a number of researchers referring to this approach as an 'eDelphi' study (Hasson & Keeney, 2011, p. 1697). The three online surveys utilised in this study fit comfortably into the eDelphi category, as 'electronic' tools (mostly Google based online surveys and Skype based online conferencing) were heavily relied upon to conduct the research.

4.4.3.3   Hybrid Delphi

The first stage Workshop, and final stage In-Depth Interviews, were designed to add richness and depth to the survey data collection process by encouraging a more comprehensive investigation of issues and ideas raised and captured. In this sense, the Delphi method used here would reflect a hybrid Delphi, a key example of which used a focus group, prior to a

classical two round Delphi exercise (Landeta et al., 2011). The authors here also acknowledged the potential contribution that could be made from a brainstorming session as well, but preferred a more structured and focused approach; a prescriptive focus group in effect (Landeta et al., 2011, p. 1631).

This study essentially incorporated a focus group style format for the first stage Workshop, in that it was a "carefully planned [discussion] designed to obtain information within a defined area of interest, within a permissive and undirected atmosphere" (Landeta et al., 2011, p. 1630). Landeta et al. (2011, p. 1632) recommend the use of a focus group moderator, from five to ten experts, meeting "in time and place", and for about one hour. This study's Workshop included the researcher as facilitator, five expert participants (including one observer) and it lasted for 69 minutes.

4.4.4   Timeframe adopted

This study adopted a ten year or so timeframe into the future; otherwise referred to as into the foreseeable future, or in a decade or so from now (most data was collected throughout 2014). Precision was deliberately avoided in this regard as participants might have become inclined toward a shorter-term focus if the timeframe was stated as only ten years. A range of aviation sources and research have employed a similar timeframe. For instance, Mason and Alamdari (2007) utilised a 10 to 15 year future window to conduct their Delphi study into EU network airlines, low cost carriers and consumer behaviour. Meanwhile, Iatrou and Oretti (2007) selected a ten year time period to investigate the future choices likely to be available to airlines for alliances and mergers. Likewise, Linz (2012) adopted a decade or so window into the future when investigating 'Scenarios for the aviation industry'. Heicks (2010) adopted a ten year time horizon when he sought to forecast what China's airline industry would look like in 2019.

Shorter timeframes, typically three to five years, increase the risk of participants being "too optimistic", while longer time horizons (often 20 to 30 plus years) tend to induce greater degrees of pessimism (Linstone & Turoff, 2011, p. 1715). Shorter time periods also shape forecasts by being too close to the present (Mercer, 1995), while a three to four year-long study such as here, requires enough time to generate meaningful data and analysis, but within the context an ever changing and dynamic industry. Admittedly, when it comes to issues of protectionism and liberalisation for the global airline industry, change is widely acknowledge

to be slow and incremental, and as IATA's former head states, it is measured "in decades", not years or months (Bisignani, 2013, p. 122).

4.4.5   Industry insights: Challenges predicting or forecasting

The Delphi method followed here was chiefly intended "to gain insight" (Dolnicar, Grabler, Grün, & Kulnig, 2011, p. 1025), including to provide "innovative insight" (Dobruszkes & Graham, 2016, p. 1); an overarching aim espoused in other airline industry studies as well (Lohmann & Vianna, 2016). Given that the core aim of this study was to gain key industry insights, the generation of ironclad industry predictions was not sought. It must be remembered that in the end "the actual accuracy of [a] forecast is not known until the event has occurred" (Vasigh et al., 2013, p. 304).

Furthermore, predictions in a dynamic industry like aviation are by no means straightforward or easy. Take the case of Orville Wright who in 1908, five years after his history making heavier than air flight in 1903, confidently predicted that: "No flying machine will ever fly from New York to Paris" as no engine can operate continuously "for four days" (Vasigh et al., 2013, p. 285). In 1919, only a decade after this prediction, two British aviators took just under 17 hours to complete the first non-stop transatlantic flight[2] from Newfoundland, Canada to Ireland (The Economist, 2010a).

4.5   Sampling strategy

4.5.1   Purposeful and snowball sampling

This study used a combination of purposeful sampling (also referred to as purposive sampling) and snowball sampling; both of which have been employed in airline industry focused Delphi studies (Delbari et al., 2016; Mason & Alamdari, 2007). Purposeful sampling sought to identify key potential participants and then to target data collection instruments, in this case online surveys, to them (de Vaus, 2014). Snowball sampling aims to have interested and willing participants pass on the online survey links to people they think might also be interested, including sufficiently qualified, and willing to complete them (de Vaus, 2014). Strictly speaking the three surveys (pilot and two main surveys) were designed with an initial

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[2] Today commercial airliners cross the North Atlantic in typically seven hours (less with favourable tail winds), while in the 1970s the US Air Force spy plane "the SR-71 Blackbird…set the record in" under two hours, while the now retired Concorde regularly managed the fete with passengers in just over three hours (Wittmer & Bieger, 2011, pp. 18-19).

background section that essentially meant anyone could, if they chose, attempt to complete the surveys, including those with limited industry knowledge, and only '1 to 3 years' of such knowledge.

It should be noted here that participation by an individual with no industry knowledge at all would have been highly unlikely, given that all background questions were required to be completed in full, before survey questions and forecasts could be attempted and submitted. In part, this design feature was intended to maximise the snowball effect in that initial interested parties would hopefully forward the link to colleagues and friends they felt might be more qualified to complete the surveys. Several emails from such participants to the researcher, stating that an individual had forwarded a survey link to someone they felt might be better placed to complete it, verified that this certainly did occur. Quite a number of defined experts also emailed the researcher to state that they too had forwarded the survey link to a colleague or acquaintance.

The financial, logistical and time costs involved in attempting to obtain a random sample of airline industry experts would have been significant. Combined with this, the research questions did not require a random sample in order to be comprehensively and convincingly addressed. The use of experts, including the need to specifically quantify a precise definition of expert only at the completion of the Main Survey 1, meant that establishing an exhaustive list of all those considered expert, or alternatively deciding on a quota or cluster sample, was just not feasible. According to de Vaus (2014), non-probability (or non-random) sampling is "much cheaper" and often more practical than probability (or random) sampling techniques, especially when "the population is widely dispersed" (p. 88), as in this study. What was sought in this study was a diverse range of experts to provide deep and meaningful industry insights (Linz, 2012; Minichiello, Aroni, & Hays, 2008).

4.5.2   Defining expert

It was important to define what an expert was for this study because robust parameters improve data quality. In this context, a "Delphi study is only as good as the experts who participate" in it (Yousuf, 2007, p. 6). The view was adopted during the design phase of the surveys that inclusivity was likely to produce greater overall benefits than a more prescriptive approach at the outset. Added to this, the precise definition of expert was designed to remain

somewhat fluid so as to allow for a decision to be made prior to launching of the Main Survey 2 as to where the cut-off point between non-expert and expert would be located.

The Main Survey 1 clearly articulated on its first page, in conjunction with the participant information statement and consent (PISC) form link on the second page (see *Appendix 2*), that the study was based on the Delphi method, and as such it sought the views of experts. The process of arriving at a definition of expert was robust and defensible and employed the two central merged elements of level of industry knowledge (BGQ 2)[3], together with years of that knowledge (BGQ 3); discussed further below. The fact that several noted academics in a range of air transport related fields fell outside these chosen expert parameters, based on email contacts provided, further strengthened the assertion that the defined expert boundaries were sufficiently solid.

The involvement of between "20-30 industry experts [is] a recommended panel size for Delphi surveys including quantitative and qualitative data collection" (Linz, 2012, p. 30). Others maintain that "a group of 5-13 members is" achievable with Delphi, provided a high level of expertise is evident (Johan & Jones, 2007, p. 2). Still others recommend a wider range, with "a minimum of seven and a maximum of 30" Delphi participants (Saizarbitoria, 2006, p. 782). One of the challenges is that "it is difficult to know what constitutes a real expert", particularly early on in a Delphi study (Landeta et al., 2011, p. 1630). Thus, this study opted to find as many participants for the Main Survey 1 as practical.
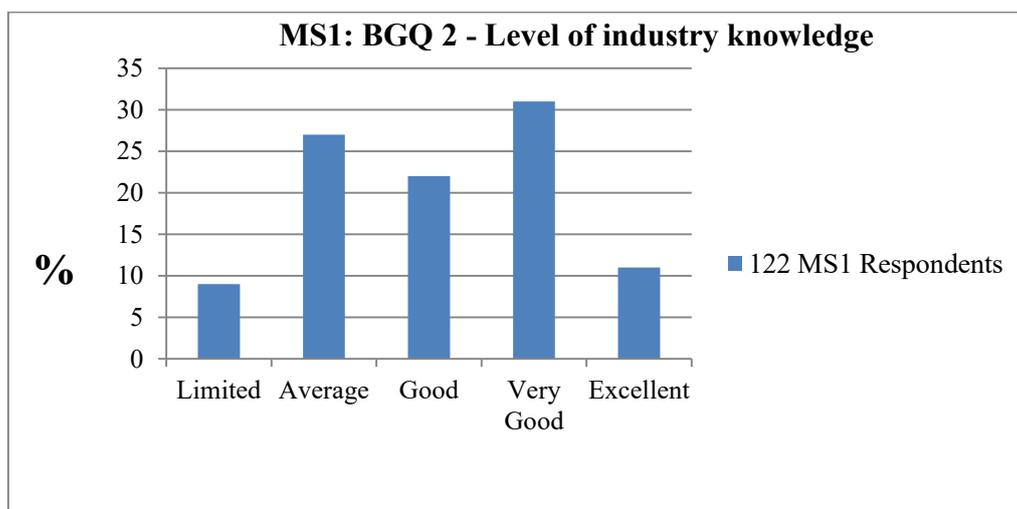
Figure 4.2   Main Survey 1: Overall knowledge of the global airline industry

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[3] BGQ = background question (i.e. the initial required questions on each survey instrument).

The distribution shown in Figure 4.2 above demonstrates that a solid process was followed to reach a definition of expert as such participants were located at or after 'Good'. Furthermore, expert was defined using both level of industry knowledge and years of that knowledge. These expert parameters resulted in four very good participants (with 3 to 5 years of knowledge each) being labelled non-expert. In addition, three good knowledge level participants (each with 3 to 5 years of knowledge) were also deemed non-expert. No participant with an excellent stated level of knowledge was excluded from the expert category.

A number of aviation focused Delphi studies report a similar average number of years of expert industry knowledge to that reflected in this study (Main Survey 1: 18.0 years & Main Survey 2: 18.6 years). For example; "17.5 years of industry experience" (von der Gracht & Darkow, 2010, p. 51); "an average industry experience of over 22 years" (Linz et al., 2011, p. 6); and "the experts had 22.7 years of industry experience" (Linz, 2012, p. 30). Meanwhile, similar air transport research recorded "17.6 years" of industry experience; noting that those with significantly less years of experience rarely deliberately provide false survey responses, but "may lack sufficient understanding of [the] industry" (Schnell, 2004, p. 417).

It should also be noted that airline industry experts, along with air transport experts more generally, are distributed throughout a wide range of work and other professional locations, many of which are not explicitly aviation focused. This reflects Vowles (2006a, p. 12) observation that researchers who study air transport represent a diverse array of professionals, "including economists, engineers, historians, marketers, policy analysts, and others". A. R. Goetz (2006, p. 230) details a similar list and argues that transportation research "is inherently interdisciplinary". For instance, a number of experts who participated in this study were academics working in various schools and departments, including business, tourism management and sociology. Likewise, many academics also had considerable industry experience, while a number of postgraduate students also had direct links to aviation, including past and present work experience (often of many years). Parente and Anderson-Parente (2011, p. 1710) adopt the view that "ideally [participants] would represent a broad sampling of expertise from a diverse population of individuals who are likely to affect the forecast outcome".

As highlighted earlier in this chapter, it was evident from the 23 non-expert participants alone, who left an email address for further potential participation at the end of the Main

Survey 1, that at least half a dozen were well-known (including published) air transport academics. Thus, expert was not decided based on a loose sense of the word, but instead on a relatively conservative combination of key parameters. This outcome also reflects the observation from Bolger and Wright (2011, p. 1501) that evidence exists which suggests "confidence and expertise are not necessarily well-correlated", but rather confidence and self-esteem are. They go on to point out, that this might actually act to undermine the notion that anonymity extinguishes "the personality traits" that confidence can encourage (Bolger & Wright, 2011, p. 1501).

Even so, Rowe and Wright (2011) contend that "self-rated experts" are much less inclined to drop out, while their views are also generally more stable than those of non-experts (p. 1489). Based on these considerations, the Main Survey 1 was then divided into expert and non-expert dichotomous groups. Again, to be considered an expert a Main Survey 1 participant needed to satisfy two minimum requirements, these were:

1. A minimum level of **Good** industry knowledge (or Very Good; or Excellent); and
2. A minimum of at least **6 to 10 years** of industry knowledge (or 11 to 20 years; 21 to 30 years; or 30+ years).

Failure to meet both these minimum requirements would place a participant into the non-expert category. The Main Survey 1 resulted in the following participant numbers (n):

- Total participants: n=122
  - Expert participants: n=71
  - Non-expert participants: n=51

4.6   Research design: Mixed-method with a multidisciplinary cohort

This research was designed as an exploratory multiphase exercise in discovering where the global airline industry is likely headed over the next decade or so, particularly how and why airlines extend their global reach. To achieve this overarching aim, a research design was developed and adopted whereby insights were sought and gained from experts across a range of fields, via a mixed-method approach utilising a combination of qualitative and quantitative data collection and analysis, resulting in the emergence of an ever evolving repository of rich data.

4.6.1 Multiphase and exploratory sequential

This study conformed to the key tenets found in the multiphase mixed-method approach, although an exploratory sequential design was to some extent adopted as well (Creswell & Plano Clark, 2011, pp. 68-90). The exploratory sequential design maintains an emphasis on the qualitative data, while using a second quantitative phase to confirm and build on the first phase (Creswell & Plano Clark, 2011, pp. 73-75). The multiphase approach extends beyond the basic design elements of the exploratory (and other) approaches by examining "a problem or topic through an iteration of connected quantitative and qualitative studies that are sequentially aligned" (Creswell & Plano Clark, 2011, p. 100). This study essentially conducted qualitative data collection for first and final stages (Workshop and Interviews), and then located in between these, the mostly quantitative surveys (pilot and two main surveys). In this context, the research here adopted a pragmatic hybrid approach, drawing on key elements of both exploratory and multiphase designs for mixed-method studies.

4.6.2 Multidisciplinary cohort

This study sought the views of a multidisciplinary (also referred to as interdisciplinary) cohort of participants. The study covers a broad range of subject areas and fields of research and practice, from airline strategy and management, to air transport geography, tourism management, aviation law, international relations and economics, to name just a prominent few. Experts on the global airline industry come from a wide array of professional backgrounds. It is also often the case that individual experts possess knowledge and experience of the industry across multiple fields. In this study it was evident that quite a number of academic experts had extensive experience working in the industry, and that academia had become a later pursuit. Added to this, from time to time industry insiders and aviation consultants alike publish academically orientated commentary, articles, chapters and books on the industry, demonstrating that there remains a considerable degree of interaction and indeed movement between the academic and applied worlds of aviation (and the airline industry more specifically).

A global industry like the airline industry does not exist and operate within neat and established topic boundaries. Expertise can be found throughout this diverse landscape of industry knowledge and experience, and this study sought to tap into this diversity to generate as many well anchored and supported insights as possible. This being said, the three most

influential areas to guide this study were strategic aviation management, air transport geography and international aviation law. Other key areas provided valuable support, and as such, this research would have been measurably weakened without their inclusion. Once again, purposeful and snowball sampling allowed such a "widely dispersed" cohort to be located at a cost, and in a time, that proved practical and workable (de Vaus, 2014, p. 88).

4.6.3   Mixed-method

This research is predicated on a mixed-method approach that combines both qualitative and quantitative methods of data collection and analysis to fully address each research question. Mixed-method is used to refer to what "has become the most popular term for mixing qualitative and quantitative data in a single study" (Harrison, 2011, p. 8). Mixed-method approaches are particularly popular with pragmatists (Robson, 2011). This study collected both qualitative and quantitative data, and employed both qualitative and quantitative data analysis.

Qualitative data was primarily collected at the beginning of the study (Workshop & Pilot Survey), and during the In-Depth Interviews at the end. The two main surveys predominately collected quantitative data using mostly multiple-choice questions, and five point Likert-type items respectively. Data analysis centred on thematic analysis, while quantitative data were also analysed using non-parametric statistical analysis centred on Chi-square tests and Mann-Whitney U tests, and parametric t-tests, to provide richness and depth to the overall thematic data analysis. Ultimately, all data sets and analytical approaches informed and strengthened each other, making any distinction relative and somewhat semantic.

For example, when investigating the influence and impact of aeropolitics, a number of authors in the air transport literature contend that quantitative methods are best "used to analyse general trends" in this regard, while qualitative methods generate more "analytically rigorous narratives" (J. J. Wang & Heinonen, 2015, p. 178). Others point out that not all factors to do with airlines and their industry position are readily captured "in a quantitative analysis", with "qualitative studies and anecdotal evidence" at times representing more effective approaches to interpret key contributing competitive drivers (Saranga & Nagpal, 2016, p. 175).

For many decades debate has continued over the perceived merits and pitfalls surrounding the spheres and associated approaches and practices of both quantitative and qualitative research.

Mixed-method approaches have also attracted much attention and examination (Creswell & Plano Clark, 2011). The intensity of this debate seems to have peaked, with Boyatzis (1998) claiming as far back as the late 1990s that "a growing number of researchers are asking for, requesting, and sometimes expecting mixed-method inquiry in the social sciences" (p. 167). In fact, over the past decade or so the air transport geography literature has expanded beyond "more conventional quantitative studies that have traditionally dominated" the field, to adopt a more diverse range of approaches (Budd, 2014, p. 18). Likewise, the air transport management literature is increasingly generating research utilising "a mixed methods approach" (Delbari et al., 2016; J. J. Wang & Heinonen, 2015, p. 176).

It is not uncommon in the aviation literature to find the Delphi method listed under 'qualitative forecasting methods', along with the likes of focus groups and historical analogy (Vasigh et al., 2013, pp. 285-289). In a similar fashion, Delphi based analysis of the logistics services industry have adopted a mostly qualitative approach augmented with quantitative statistical work to strengthen the overall findings (von der Gracht & Darkow, 2010). Concerns have been raised by transport geographers, for example, that the field's likely future could be adversely impacted if "a *false dichotomy'* between the qualitative and the quantitative" were to develop (emphasis in original) (Curl & Davison, 2014, p. 103). Authors such as Rowe and Wright (2011) contend that Delphi can be used as "part of a wider process (with qualitative and quantitative components)" where the methods (plural), together with the order of implementation, are more important decisions than selection of the most applicable Delphi method (singular) (p. 1488).

Many believe that "the traditional methodological debate over the superiority of either qualitative or quantitative research seems to have ceased recently", and they contend that this is true of Delphi as well (Tapio et al., 2011, p. 1617). Mixing both methods for data collection and analysis, especially in Delphi studies, acts to "provoke new ideas even if one material type dominates over the other" (Tapio et al., 2011, p. 1627). This has led to the view that the Delphi method is an effective "qualitative research tool" for international business studies, especially during initial rounds of the technique, with quantitative elements following this, "resulting in a robust mixed methods study" (Knab, 2009, p. 29).

4.7   Data collection instruments: Key evolutionary design elements

The overall plan in this five stage study envisaged a chronological data collection journey from initial openness through to a more closed and focused style (i.e. a funnel-like approach); albeit with a return to some degree of broadness during the In-Depth Interviews. This approach is graphically represented in Figure 4.3 below. The first stage Workshop started this pathway, and was essentially a brainstorming session. Next, the Pilot Survey adopted a mostly open-ended question format (paragraph-style), developed around key geographical regions of the global airline industry, and was constructed of largely broad multi-part questions (i.e. several linked questions combined). Many of the 12 Pilot Survey respondents commented on its "exam-like feel", while a number also recommended a format with more multiple choice questions. Time constraints and general ease of completion were highlighted as being likely benefits of such a multiple choice style.
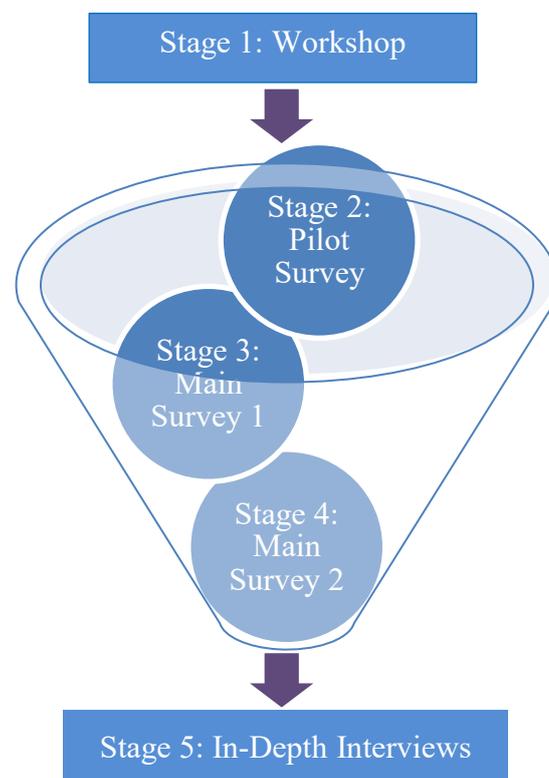
(Source: Author's own compilation)

Figure 4.3   The five stages of data collection

Following the Pilot Survey, the Main Survey 1 continued with the basic geographical structure, but with mostly multiple choice questions throughout. Although, as with other

Delphi studies, participants were provided with opportunities "to comment on and discuss the questions asked and to supply reasons for their particular responses" (Cooper et al., 1995, p. 275). A geographical structure was deemed preferable to one that mirrored either Porter's framework or PESTE, as it was concluded that such an approach might unnecessarily restrict the exploration of the roles played by geographical location and international relations in shaping and influencing the industry.

Some Delphi studies have employed Porter as the basis for their survey design (Nowack et al., 2011, p. 1612), while others that covered global aviation opted to utilise the PEST framework, in an attempt to promote neutrality "and to avoid biases in the questionnaire design" (Linz, 2012, p. 29). In contrast, in the study here such biases were considered more likely to occur if a pre-determined framework was to form the parameters of the surveys, and in the process see geographical location and international relations potentially downplayed or missed altogether. Inspiration was sought from both Porter and PESTE, rather than overly rigid survey boundaries.

The Main Survey 2 contained 27 forecasts using five point Likert scales; perhaps more accurately 'Likert-type items' in that most were standalone, with only three in a grid (scale) pattern (Carifio & Perla, 2008). The forecasts contained a combination of both "predictive and explorative" projections (Nowack et al., 2011, p. 1609). Each main geographically focused section of the Main Survey 2 also had a final paragraph-style open-ended question to allow for respondents to provide optional clarifications, comments or additional data. Thus, a general trend from openness at the outset, through to closed questions and forecasts at the conclusion, was discernible in this study. Again, the final stage In-depth Interviews saw a balance of sorts rise to the fore, in that a mix of open and closed questions permeated each interview, with a semi-structured approach followed.

4.8   Stage 1: Workshop

In mid-August 2013 the first stage Workshop was conducted at the University of New South Wales (UNSW) School of Aviation, Sydney campus. The Workshop presentation is found in *Appendix 3*. Five participants attended, although one as an observer to provide feedback afterwards, with the researcher acting as the facilitator. The Workshop lasted 69 minutes and was essentially a brainstorming exercise, whereby participants were guided by questions, ideas and stimulus via a Microsoft PowerPoint presentation, while seated around a circular

table. An initial brainstorming session is deemed important when dealing with expert forecasting because of "the wide range of viewpoints and ideas which result" (Mercer, 1995, p. 35).

The Workshop was audio recorded, transcribed and manually thematically analysed. The Workshop principally aimed to gather data for the next stage of the methodology, the Pilot Survey, thus reflecting the advice of Rowe and Wright (2011) to use "an exploratory workshop to refine first-round Delphi questions" (p. 1489). In addition, it also served to help clarify and hone the study's research questions and aims by subjecting their key tenets to a wider expert panel for feedback. The Workshop was developed on both an historical background and contemporary context analysis of the global airline industry (now Chapter 2 of this thesis), and on a literature review (now Chapter 3 of this study). Added to this, a refereed conference presentation delivered by the researcher on the study's topic, at an international air transport conference in Italy in July 2013 (one month before the Workshop), further honed and refined the Workshop's focus.

Participants were selected and invited to attend based on a range of considerations, including diversity of professional backgrounds, experiences and knowledge, along with their likely ability to be able to attend in Sydney. In addition, *WS Participant 4* was chosen as previous interactions with the researcher indicated that they were opposed to more conventional ways of economically assessing the industry, preferring instead to emphasise the people, practices and values that they felt underpinned the industry's ongoing development. The inclusion of *WS Participant 4* reflected the idea that there should be "at least one participant who is willing to challenge the status quo" (Mercer, 1995, p. 34). Such "maverick" views act to challenge "conventional thinking", and are recommended as part of "the Delphi process whenever possible" (Bolger & Wright, 2011, p. 1510). *WS Participant 4* was also the only study contributor to complete all five stages of the research.

Although expert had not been defined by the time the Workshop was conducted, a retrospective analysis of each participant's introduction, suggest that two participants were defined experts, with possibly a third. Along with the recommended inclusion of mavericks, a number of Delphi study designers also endorse the use of non-experts, also referred to as 'lay people' (Hussler et al., 2011, p. 1651), to encourage an initial diversity of opinion to be explored.

WS Observer, although happy to assist with the Workshop, preferred to observe and take notes than to actively contribute to the discussion, citing an overall perceived lack of adequate knowledge of the topic area. The other four participants were made aware of this observer status at the start of the Workshop. *WS Observer's* professional background in human geography and tourism management studies provided a valuable viewpoint on the Workshop that soon after helped to bring geography (notably geographical location) to the fore in the study.

The Workshop provided a foundation to then develop the Pilot Survey. Key themes from the Workshop were utilised to both generate and confirm areas likely to produce the most salient insights into the global airline industry. In this respect, one of the most valuable ideas to emanate from the Workshop was the central role played in the global airline industry by geography, especially geographical location. This then led to the basic geographical regions structure of the main surveys, with key sections predicated on the global industry as a whole, the big three global airline alliances, then the North Atlantic and Asia, and finally, the Gulf carriers.

Core ideas and discussion raised during the Workshop also resulted in a move away from utilising the big three global alliances as the chief topical lens into the industry's future (in combination with international relations), to a major emphasis on geographical location in tandem with international relations. In this manner, the global alliances then morphed into a key topic area alongside the core geographical regions of the North Atlantic, Europe, the Gulf and Asia. Thus, the subsequent Pilot Survey adopted the main geographical divisions that were then in large part utilised on the two main surveys, and which also reflected the four research questions and their regional focus.

The diversity of opinions evident from the Workshop, especially *WS Participant 4's* willingness to challenge the status quo, directly led to the subsequent Pilot Survey being more explicitly infused with questions aimed at uncovering varying ideological positions and preferences, in an effort to elicit participants' underlying rationales for their survey responses. For example Question 10 asked: *How accurate do you think the following statement is? 'All but a few global airlines will struggle to get anywhere near profitability in the foreseeable future, and will only survive due to government protection and the lack of any serious competition'*. A recognised Delphi expert in aviation who attended the researcher's conference presentation covering this study (again, a month before the Workshop), personally

recommended that questions and forecasts be worded in an intellectually provoking manner to encourage a higher response rate and longer answers (Anonymous, 2013).

4.9   Stage 2: Pilot Survey

The online Pilot Survey went live in early November 2013 and closed in mid-December 2013. A copy of the Pilot Survey is located in *Appendix 4*. The survey hyperlink was directly emailed to potential participants to increase the response rate and to manage overall numbers. Approximately 25 people were emailed the Pilot Survey, with 12 respondents completing the survey. Most potential participants were contacts made during the air transport research conference in July 2013, at which the researcher presented a paper on the study's proposed topic and aims. Other similar surveys investigating the airline industry have "pre-tested with aviation experts in academia and industry" (Schnell, 2004, p. 417).

In addition, a number of associates and longer term professional contacts were utilised that allowed for an initial phased (or staggered) approach to the Pilot Survey's dissemination. This policy allowed initial feedback to be captured from several individuals, before the survey was more widely shared. This process led to one initial participant highlighting for background question 4 (BGQ 4) that: "If the respondents are familiar with two or three regions, this question doesn't allow them to answer that way". A simple format change from single to multiple response, without altering the content, then meant that geographical best industry knowledge could be more readily captured.

Pilot Survey participants were not required to complete the survey in full, only to provide answers and/or feedback as they felt necessary. Although only anecdotal evidence is available on how many of the 12 respondents here continued to future stages of the research (anonymity precludes a precise number), four were interviewed for the final stage. The considerable size of the Pilot Survey likely contributed to many of these participants deciding to opt out of the study at this initial stage. A valuable early lesson was learned with the Pilot Survey that most participants are not only time poor, but also reluctant to engage with a lengthy and overly ambitious survey.

4.9.1   Pilot Survey structure

The Pilot Survey was mainly developed to be a reflection of what the subsequent Main Survey 1 was intended to contain; that is, mostly open-ended questions with paragraph-style

answers sought. The Pilot Survey also had a section with 12 closed questions, statements and forecasts, using corresponding five-point Likert scales for responses (i.e. in a grid pattern). The use of such scales is common practice in surveys, including those covering the airline industry (Schnell, 2004). This section of the survey was included to test the format and style to be employed on the Main Survey 2, and to also gauge views on a range of applicable areas. In essence, this represented a piloting of the types of forecasts to be used on the Main Survey 2. The Pilot Survey was designed around a number of key sections, with dedicated boxes for feedback and comments at the end of each. Piloting and pre-testing are important elements to any successful research undertaking (de Vaus, 2014; Linz, 2012).

The Pilot Survey began with a background section whereby respondents were asked four required questions before gaining access to the survey. These four background questions covered professional capacity, overall knowledge of the global airline industry, years of that knowledge, and geographical region/s of that knowledge (the latter illustrated below). A decision was made not to include gender or nationality, as neither was deemed important enough[4]. Each of the Pilot Survey background questions were replicated on the two main surveys; although with only expert parameters on the Main Survey 2, together with the addition of an initial question that asked if participants had submitted the Main Survey 1 (yes or no?). Below is a screenshot of BGQ 4 from the Pilot Survey.

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[4] Any attempt to quantify the impact of gender on survey response patterns would have been outside the stated scope of this study's core aims and research questions, and as such would have represented a research tangent (albeit an important area that is to date under researched in air transport). Nationality is not important to this study, but rather where a participant's knowledge is geographically located. In this regard, an Australian participant, for instance, with high level knowledge of the European airline industry is relevant to this study because of the latter, not the former. Thus, citizenship does not therefore equal level of industry knowledge or experience.

Figure 4.4   Pilot Survey: BGQ 4 (required)

A range of surveys and literature were studied in order to develop the most suitable background questions, and to ensure that the study's survey data could be interrogated and grouped in ways that would reveal underlying influences and divisions. The geographical regions of the global airline industry background question was based on similar categories employed by Boeing (2015), Linz (2012) and Fry, Humphreys, and Francis (2005).

4.9.2   Participant feedback on the Pilot Survey

The most obvious and easily identifiable point of consensus amongst participants was that the Pilot Survey was too long. This feedback referred to both the overall length of the survey (i.e. the number of questions included), and the general length of each question (i.e. too many parts and/or too much supporting information). A suggestion was made by several participants that many of the questions would be better utilised as interview questions, rather than on a survey instrument. Likewise, a multiple choice question format was suggested by a number of participants, reflecting the flexibility inherent in contemporary Delphi approaches, such as when Cooper et al. (1995) investigated Latin American airlines, and allowed respondents "to add to (or alter) the initial questions and to suggest additional questions for use in subsequent rounds" (p. 275). Each multiple choice survey section (on the subsequent

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Main Survey 1) then ended with a paragraph-style question/answer box where participants could leave additional (optional) comments, clarifications and/or any other information they felt was relevant.

This feedback on the Pilot Survey was then instrumental in developing the more user-friendly and ultimately shorter Main Survey 1. Ideally, this updated survey should have been re-piloted; however, attrition would likely have jeopardised sufficient participant numbers in later stages. Added to this, the Pilot Survey did adequately demonstrate that the key topic areas covered were likely to produce quality data, including grounds for relevant and appropriate forecasts on the industry's future. The process of refining, collating and transitioning Pilot Survey paragraph-style questions into multiple choice questions for the Main Survey 1 also revealed that key topic areas had been sufficiently piloted. Following this, a limited initial release of the Main Survey 1 then confirmed that the new format was well received overall; as covered in the next section.

4.10   Stage 3: Main Survey 1

The Main Survey 1 went live in early February 2014, and closed for responses in early March 2014. The Main Survey 1 is reproduced in *Appendix 5*. This survey received 124 responses of which 122 were usable; the two unusable survey responses had only two or three questions completed each. Although the Main Survey 1 mirrored the Pilot Survey in many respects, a more streamlined and concise survey was developed out of the earlier Pilot Survey and its resulting feedback from participants. The two main surveys were also developed with a strong degree of standardisation in structure and format, similar to that pursued and recommended by Linz (2012), in an effort to decrease participant uncertainty and potential confusion, while increasing the response rate.

Potential respondents were directly emailed the survey link for the Main Survey 1. Initially, Pilot Survey participants were contacted; the 11 out of 12 who left an email contact for future participation. Next, a wide array of people sourced from the aforementioned air transport conference, journal articles, books, internet searches, university contacts, and professional forums and emailing lists, were all emailed the survey. This purposeful approach was then linked with a snowball method whereby participants were encouraged to feel free to share the survey link (as detailed earlier in this chapter).

A second-tier of potential participants were sourced from well-known university departments and faculties around the world with links to aviation, along with journalists who cover aviation, including from media outlets such as Flightglobal, the Centre for Asia Pacific Aviation (CAPA), Aviation Week, The Australian, The Sydney Morning Herald, The Economist, Bloomberg and the Wall Street Journal (WSJ). Response rates from this overall cohort were evidently low, with only four journalists (3% of all respondents) completing the Main Survey 1. Journalism is a particularly demanding and busy profession, and this reality no doubt impacted response rates for this cohort.

Seventy-five participants out of 122 (61%) total survey respondents left an email contact, with 52 out of 71 experts included in this tally (73% of experts). In contrast, only 23 out of 51 non-experts left an email contact (45% of cohort). A policy of inclusivity was followed, leading to an exclusive group of experts to complete the Main Survey 2 forecasts, and later In-Depth Interviews. This approach gave the unfolding process a better chance of following the emerging data trail, instead of pre-emptively limiting the scope and possibly losing valuable data and/or feedback as a result. As highlighted earlier, non-expert participation early on in a Delphi study, increases both diversity and ultimate quality (Hussler et al., 2011).

The Main Survey 1 contained 18 multiple choice questions (excluding the initial four background questions, and a final thoughts question at the end of the survey). These MCQs were a mix of single and multiple response format. The table below summarises the main elements and format to each MCQ.

MAIN SURVEY 1	3 single response options + 'other'	4 single response options + 'other'	Multiple response options + 'other'
MCQ number:	6, 9, 14, 18, 20 & 21	7, 4, 12, 17 & 18	5, 11, 13, 16 & 22
Scale single response options (no 'other'): MCQ 8 (4 options) and MCQ 15 (5 options)			

Table 4.1   Main Survey 1: MCQ elements and format

Pilot Survey responses were manually thematically analysed to reveal key themes and issues deemed most relevant to better understanding where the global airline industry is likely headed into the foreseeable future (see section *4.14.1 Thematic analysis* below). This process also revealed areas of repetition on the Pilot Survey, in conjunction with allowing for the extraction of the essential focus for each of the 19 multi-part paragraph-style questions. The

19 Pilot Survey questions were then refined and reduced into 18 more focused multiple choice questions for the Main Survey 1. Pilot Survey responses also helped to determine if Main Survey 1 MCQs would contain three or four single response options (plus 'other'), or multiple response options (plus 'other').

In this manner, questions and the resulting response data from the Pilot Survey were grouped into those deemed likely to elicit a single response from participants, and those more suited to multiple responses whereby all selected responses are given relatively equal weight. To strengthen this process, and to allow for widely divergent views, together with the possibility that a major response category may have been inadvertently omitted, 'other' was built into each MCQ (with the exception of the two scale based questions noted above). Added to this, four optional extended answer sections, and a *final thoughts, comments or observations about the global airline industry's future* question (Q23), were included to capture any additional data.

Following this, the 19 Pilot Survey questions were compared and contrasted alongside the 18 Main Survey 1 questions, in order to establish if any major themes or issues had been inadvertently missed, or not adequately covered. Finally, a limited release was conducted for the Main Survey 1, with several Pilot Survey participants asked to complete the survey, and provide some initial feedback. This feedback, along with final supervisory comments, then saw the Main Survey 1 go fully live soon thereafter with no changes deemed necessary.

Thus, an initial literature review, the brainstorming Workshop and then the Pilot Survey all played vital roles in developing, structuring and formatting the Main Survey 1. The Workshop and the Pilot Survey engaged participant feedback to the extent that the Main Survey 1 was built on a mostly new multiple choice format, without the need to re-pilot it and potentially increase the attrition rate. At the very least this not only reveals the evolutionary and emerging nature of the Delphi method employed, but also shows that the core content and geographical focal points in this study remained essentially constant from the Pilot Survey to the Main Survey 1, even as the question format changed. Style did not trump substance in this respect; rather an updated style (and format) encouraged a higher completion rate and improved quality as a result. Substance prevailed, but style ensured this outcome was achieved.

4.11   Stage 4: Main Survey 2

The Main Survey 2 went live in early April 2014, and is shown in *Appendix 6*. It was directly emailed to the 52 expert participants who left an email contact on the previous survey. This final survey closed for responses in late May 2014. Thirty-four responses were obtained from these defined experts. Although new participants were not actively discouraged from being involved, they were not openly or deliberately recruited. The first background question on the survey (BGQ 1) asked if they had completed the Main Survey 1 (yes or no?). The no option contained a message in brackets informing people that if they had not previously participated their data may not be fully utilised. The iterative (two-stage) nature of the main surveys, including the use of embedded feedback, meant that participants completing both main surveys were deemed more likely to provide higher quality forecasts, than those experiencing the data collection process for the first time. No new participants completed the survey (i.e. all 34 participants selected 'yes' to BGQ 1).

In keeping with the philosophical underpinnings of the Delphi method, summary feedback from the Main Survey 1, but also drawn from the study's literature review, and to some extent the Pilot Survey and Workshop, was provided in each Main Survey 2 section, and at times prior to an individual forecast. While mindful of avoiding overloading or overwhelming participants with information, this summary feedback was envisioned to assist in their generation of answers, including in encouraging them to have added confidence in providing a forecast.

The Main Survey 2 was generally designed to encourage agreement, reflecting a consensus orientated Delphi (Landeta, 2006). This was as a result of the way forecasts were worded, and of how embedded feedback from the Main Survey 1 was employed. In addition to this, the Main Survey 2 was also designed to capture new data, or at least not to simply repeat a question from the Main Survey 1. For instance, the Main Survey 1 (Figure 4.5 below) indicated that participants were divided when asked on MCQ 6: *Are national flag carriers increasingly becoming a part of history, or are they here to stay?* This result was then used as the basis for Forecast 19 shown below (Figure 4.6). By focusing on EU flag carriers this result could then also be used in conjunction with a range of other forecasts on the major Gulf carriers to discover what likely future the major European airlines face, including the extent of competitive threats.

6. Are national flag carriers increasingly becoming a part of history, or are they here to stay?

○ They are definitely disappearing from the global industry

○ Most of them are here to stay

○ Some of them will survive, but most will likely disappear in the next 10 years or so

○ Other: [＿＿＿＿＿＿＿＿＿＿＿]

Figure 4.5   Main Survey 1 & MCQ 6: National flag carriers

F19: EU flag carriers, particularly Air France, British Airways and Lufthansa, will still be the dominant European airlines for long-haul flights 10 years or so from now.
Most experts were not overly optimistic about the future for flag carriers. Even though only 12% said that they are definitely disappearing from the global industry, a further 43% thought that most are likely to disappear in the next 10 years or so. However, 41% did state that they are here to stay.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Figure 4.6   Main Survey 2 & F19: EU flag carriers

This forecast and its imbedded feedback could have been worded in a different manner. Consensus was encouraged, but not expected. Agreement was closely allied with the notion of consensus by extracting the areas of highest agreement on the Main Survey 1, and then generating corresponding forecasts emanating from these; although again being careful to produce new data, and not to simply re-confirm or repeat data already collected. It should also be noted that areas of evident polarisation of opinion on the Main Survey 1 were used as the basis for several forecasts as well. All decisions about survey content and length ultimately require trade-offs and compromises. Decision making in this regard is often based on the information being sought, and in this case it was simply to gauge the likely future for the major EU flag carriers.

This style and format likely explains why agreement (strongly agree/agree) occurred on the Main Survey 2 on 63 percent of occasions, while disagreement only happened on 18 percent of occasions. Neutral was selected 19 percent of the time. Interestingly, this did not result in an extensive amount of consensus overall. A total of seven forecasts achieved consensus (set at 75% or higher), while a further five were close (to within one or two percentage points). In total, 13 forecasts scored 70 percent or higher (plus one sub-option which scored 70%).

Therefore, 15 forecasts did not achieve consensus, including the three forecasts that each contained three sub-options (F17 on the future of the global alliances, F21 on the Chinese carriers, and F26 on the alliance future options for the Gulf carriers). Six forecasts achieved 50 percent or under, as did three out of nine sub-options. These results would suggest that linking the notion of consensus with agreement provided a user-friendly and predictable style, rather than a format that skewed results or lacked appropriate rigour. Participants were not unduly pressured to provide particular answers, but rather to confirm or expand their opinions based on the summary feedback provided.

Much like the way in which the Pilot Survey multipart questions were refined into the Main Survey 1 multiple choice questions, so too the Main Survey 2 forecasts represented a refinement from the Main Survey 1. As followed earlier, both main surveys were placed alongside each other with key findings and response patterns from the Main Survey 1 directly informing the composition of the Main Survey 2 forecasts. For instance, environmental issues and concerns were ranked highest from Main Survey 1, MCQ 5; this then underpinned Forecasts 1, 2 and 3 on the Main Survey 2. In this example, as throughout the main surveys, geographical location and international relations provided the central lenses through which each was then worded, including scale wording (agreement or probability). The forecasts were:

Figure 4.7   Main Survey 2 and climate change: Forecasts 1, 2 and 3

These three forecasts sought to establish how important participants thought climate change was for the airline industry (F1), how likely a successful industry response was (F2), and finally, how applicable the topical and widely publicised EU ETS is for the industry (F3). These forecasts aptly demonstrate how geographical location (i.e. Europe based ETS), and international relations (likely extent of multilateralism on the issue), guided the development of the forecasts. They also show that strong wording (e.g. "vitally important" and "comprehensive response") are preferable and help elicit higher response rates; again, as recommended at an air transport conference by a Delphi aviation expert to the researcher (Anonymous, 2013).

It was not simply a case of asking a range of interesting and topical airline industry focused questions and forecasts, but rather using established industry level analysis frameworks to scaffold each survey's structure, and then geographical location and international relations more specifically to underpin each survey section. Added to this, participant responses from each of the first four stages, mostly closely those from the Main Survey 1, then guided the development of the most pertinent areas to focus on for the Main Survey 2. Data from the Main Survey 1 were also collated and represented in graphical form, and then analysed statistically, to more readily extract key findings to subsequently generate a comprehensive list of potential forecasts. These forecasts were then refined to reduce repetition, and a final list of 27 forecasts ultimately chosen for the Main Survey 2.

A table in Microsoft Word was also developed to place questions from the three surveys into columns alongside each other. In this way, Main Survey 2 forecasts were then gradually refined based on questions from the earlier surveys, with forecasts then either included or excluded based on an assessment of their likelihood to generate new data within the parameters of the existing geographical and topical boundaries. This process helped to minimise repetition across the two main surveys, and to ensure that valuable questions from the Main Survey 1 were not overlooked as the forecast list progressively shortened. It also allowed the Pilot Survey to directly inform the Main Survey 2, as its generally lengthier responses compared to the Main Survey 1 provided a rich repository of data on several occasions.

4.12   Stage 5: In-Depth Interviews

From July through September 2014 semi-structured In-Depth Interviews were conducted with 13 interviewees (*Interviewee 1 to 13*). The interview pro forma is given in *Appendix 7*. Interested participants were sourced from the Main Survey 2; a final section asked for volunteers, and gave the option of being interviewed via telephone, Skype, or face-to-face if in Australia or New Zealand. Seventeen participants were interested in being interviewed (i.e. 50% of the Main Survey 2 respondents); again with 13 out of 17 (76%) ultimately being interviewed. The original aim was to conduct interviews with 8 to 12 people, representing as wide a spectrum of expert opinion as possible/practical.

Other airline industry research has also coincidently "conducted 13 interviews", based on a semi-structured format, asserting in the process that "the air transport management academic literature" (unlike "in other disciplines"), has tended to neglect "respondents' own words", in effect robbing them of their voice (Lohmann & Vianna, 2016, p. 203). Meanwhile, other airline industry studies have conducted "30 semi-structured face-to-face interviews" as a first round for a Delphi study (Delbari et al., 2016, p. 26).

The column graph below shows a summary of the total times each of the 17 participants who were willing to be interviewed selected strongly agree through to strongly disagree on the five point Likert-type items for the Main Survey 2, versus the 17 participants who were unwilling (i.e. did not leave their contact details) to participate in the Interviews. This graph reveals that there were no significant differences between the two groups in terms of their levels of agreement/disagreement (number of times each was selected), indicating that a willingness to be interviewed was not based on more strongly held opinions, thus potentially skewing the resulting data. Both cohorts were similarly positioned in terms of answer strength and spread of opinions.
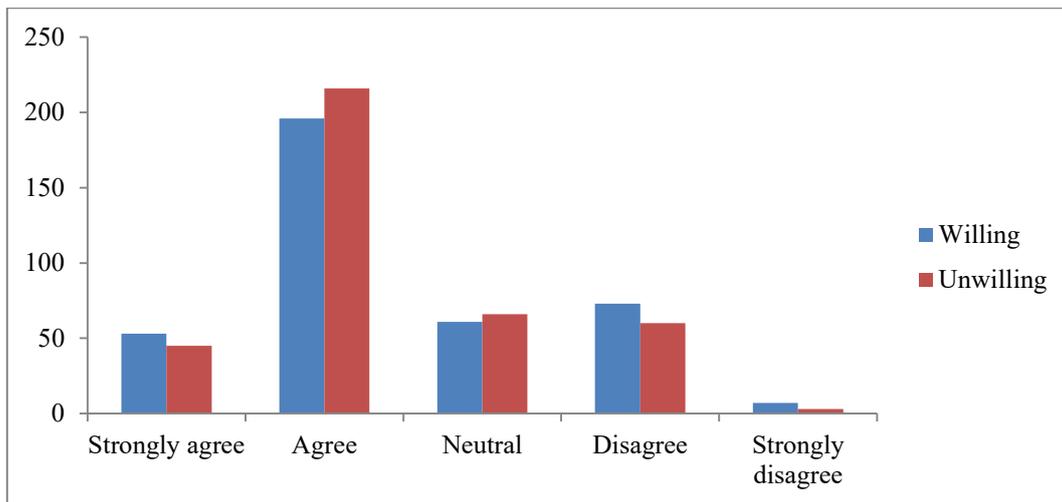
Figure 4.8   Main Survey 2: Interview willingness and levels of agreement

4.13 Data and in-text referencing

Data from across all five stages of this study have been coded and abbreviated in an effort to readily and efficiently identify and locate sources, while aiding readability and flow. This is particularly the case with Chapter 6 where the core discussion and analysis of the study's findings occurs. Workshop participants (*WS Participant 1 to 4*) are individually paraphrased or quoted, while extended answer data received across all three surveys are displayed utilising mostly background question (BGQ) data on first usage for a participant.

That is, a participant's capacity (e.g. academic or Acad), level of industry knowledge (e.g. Average or AVER), years of knowledge (e.g. 3 to 5 years or 3-5yrs), region/s of best industry knowledge (e.g. United States and Canada or USC; Europe or EUR), data collection instrument (e.g. Main Survey 1 or MS1), and participant number (based on timestamped submission), were all placed in brackets as an in-text reference the first time a participant is referred to in-text. For instance:

Figure 4.9   Survey participant coding example for in-text referencing

Interviewees are referenced in this study in much the same way as participants more generally; however, since their quoted and paraphrased data are more extensively employed throughout, summary details for each are provided in Table 4.2 below, and are not then reproduced in-text. Details are based on the Main Survey 2 background question responses.

Interviewee Codes			
Acad	Academic	ASIA	Asia
Postgrad	Postgraduate Student	OCEA	Oceania
Consult	Aviation Consultant	USC	United States & Canada
Journ	Journalist	EUR	Europe
GD	Good	IND	India and South Asia
VG	Very Good	LAM	Latin America
EX	Excellent	ME	Middle East
yrs	Years	Int.	Interviewee [1 – 13]
Interviewee number		Code for in-text reference/citation (Capacity, Level, Years, Region/s and Interviewee no.)	
Interviewee 1		(Acad, GD, 30+yrs, OCEA, ASIA & IND, Int.1)	
Interviewee 2		(Acad, VG, 11-20yrs, OCEA & ASIA, Int. 2)	
Interviewee 3		(Acad, EX, 11-20yrs, OCEA & EUR, Int.3)	
Interviewee 4		(Acad, VG, 21-30yrs, OCEA, USC & EUR, Int. 4)	
Interviewee 5		(Acad, VG, 6-10yrs, OCEA & USC, Int. 5)	
Interviewee 6		(Postgrad, GD, 30+yrs, OCEA, ASIA & ME, Int. 6)	
Interviewee 7		(Postgrad, VG, 6-10 yrs, OCEA, Int. 7)	
Interviewee 8		(Postgrad, VG, 11-20yrs, ASIA, Int. 8)	
Interviewee 9		(Consult, VG, 6-10yrs, EUR, Int. 9)	
Interviewee 10		(Journ, EX, 21-30yrs, OCEA, ASIA & ME, Int. 10)	
Interviewee 11		(Postgrad, GD, 6-10yrs, OCEA & ASIA, Int. 11)	
Interviewee 12		(Acad, VG, 11-20yrs, LAM, Int. 12)	
Interviewee 13		(Acad, VG, 21-30yrs, ASIA, USC & EUR, Int. 13)	

Table 4.2   Interviewee codes and details

4.14   Data analysis

The data from this five stage study were analysed using qualitative thematic data analysis, supported by a range of descriptive statistics, and with several non-parametric and parametric

inferential statistical techniques. This approach broadly mirrors that taken by von der Gracht and Darkow (2010) in their Delphi-based analysis of the logistics services industry. They highlight that their "research, and especially scenario development, is mainly based on qualitative research, even though we provide statistical data to support our qualitative findings" (p. 58). The study's data analysis is detailed in the sub-sections below.

4.14.1 Thematic analysis

Thematic analysis played a vital role in delineating and structuring this study, and was employed across all stages of the collected data, and was also used to guide and shape how each of the five research stages developed and unfolded. Thematic analysis involves "encoding qualitative information" (Boyatzis, 1998, p. 161). According to Boyatzis (1998), thematic analysis is "something to be used to assist the researcher in the search for insight" (p. vi). Thematic analysis, sometimes referred to as content analysis or cluster analysis, analyses data, such as that derived from mixed-method Delphi studies, to "distill out various themes and different views regarding the themes" (Tapio et al., 2011, p. 1618).

In this study, themes were manually located and recorded in a Microsoft Word document created and refined for this purpose. Concurrently, the thematic data analysis plan (Table 4.3 below) was also created; this too was progressively refined, and evolved in tandem with the aforementioned Word document, with both containing all the key themes and sub-themes. This was an iterative process that eventually saw all such themes distilled into those employed in the study's final version. The literature on qualitative data analysis highlights how Microsoft Word represents a robust, user friendly and inexpensive way to analyse text, and contains "many features" to those found in dedicated "special-purpose software" (La Pelle, 2004, p. 85).

For example, all 13 interview transcripts were organised into a pre-developed Word template, then printed and carefully analysed and read multiple times, and notes taken. After this, a second Word document was used to separate and classify each interview theme and sub-theme, with applicable sections of each transcript cut and pasted into this central document; each linked via codes to the interviewee involved. Additional text from the Workshop, itself thematically analysed utilising the identical process as that above, was then added, along with text from all three surveys. Each piece of data were identifiable via an instrument code and a participant code. As Gibbs (2009) contends, analysing themes and sub-themes, and

hierarchical codes more generally, requires deeper inspection that involves the need to "look for patterns, make comparisons, produce explanations and build models" (p. 78).

This analytical approach saw the core geographical themes emerge, as the global airline industry was separated into geographical regions and major carriers likely to provide the most salient insights. As highlighted earlier in this thesis, major industry players and clear geographical parameters of reference, are key considerations in any industry analysis (Grant, 2013; Holloway, 2008; Porter, 2008a). These geographical themes then guided the development of the surveys, which in turn both generated and confirmed emergent themes that then steered the interview development process. Minichiello et al. (2008) concentrate on thematic analysis of in-depth interviews and detail how a code list is initially developed to describe all the concepts from the interviews conducted. Next, these codes are compared across all the interviews by finding "emergent themes that can be identified by grouping some of the codes" together (p. 280).

In this study, data well placed for thematic analysis was located across all five stages of data collection, although it was predominately linked to qualitative data found in the Workshop, Pilot Survey and In-Depth Interviews. The Main Survey 1 did contain four extended answer sections, together with a final thoughts question at the end, all in paragraph-style response format. In addition, 16 out of the 18 multiple choice questions on this survey included 'other', for participants who wished to provide a different answer to the options given, or to provide clarification. The two remaining questions used a Likert-type item format. The Main Survey 2 contained 27 Likert-type item forecasts, along with a final thoughts question at the end (paragraph format). Thematic analysis helped to cluster survey responses into key themes and sub-themes, while statistical analysis (i.e. descriptive statistics through to non-parametric and parametric inferential statistics) was utilised to discover significant variations in participant responses and views.

The use of In-Depth Interviews at the end allowed semi-structured questions to emerge from the data collected, and for deeper insights to be gained into how and why expert participants converged and diverged in their views on the global airline industry, and its likely future trajectory. This design also allowed for the interview data, and corresponding thematic analysis of that data, to then help guide and shape how the main survey data was collated, grouped and assessed (again, with the clustering of key themes). Therefore, although data was collected in a sequential manner, it was ultimately analysed in a multidirectional way.

Table 4.3 below illustrates how data from across all five stages were assembled into the thematic data analysis plan; the example of research question 4 (RQ4) is provided:

RQs	Themes	Sub-Themes	Definition	Indicators	Examples	Chapter links	WS & PS	MS1 & MS2	Interviews
RQ4 *What does the Asian region reveal about the chances for greater liberalisation of the airline industry globally?*	Asian context	Global significance	The significance of the Asian airline industry globally, and its regional cohesiveness	Participants' conceptions regarding Asia's airline industry and its global significance.	In the "Asia Pacific area there are huge restrictions in terms of movement of people" (Int. 3)	Ch. 2: Literature Review	WS Q1 PS Q16 PS Q29 (Forecast 7)	MCQ 17 MCQ 18 MCQ 22	Question 6
		Regional divisions							
	China's global impact	Protectionism	The extent to which China will seek to protect its airline industry into the future, and how competitive China's big three airlines will become internationally.	How participants view China's attitudes toward liberalisation, and how competitive they think China's airlines will be in future.	"Definitely, no doubt China is going to be one of the major global [air] markets, China alone" (Int. 8)	Ch. 3: Industry Background and Context	WS Q9 PS Q16 PS Q17 WS Q10	MCQ 5 MCQ 19 Forecast 20 Forecast 22 Forecast 21	Question 3
		Global competitiveness							
	Unanticipated results	ASEAN optimism	The likely key industry insights to come from both ASEAN's stated single air market ambitions, and India's airline industry in future.	Participants' views on ASEAN's single air market aspirations, and India's airline industry and its likely future global impact.	ASEAN are "behind the grand plan, but they're a fair bit further on, surprisingly further on, than I thought" (Int. 2) India has too much "government bureaucracy", and its airline industry could do with "some sort of internal deregulation", along with greater emphasis on "more commercialisation" (Int. 8)	**Ch. 5: Results** **Ch. 6: Discussion of Results**	PS Q16 PS Q19 WS Q9 WS Q10	MCQ 11 MCQ 20 Forecast 23	Question 1
		India unknowns							

Table 4.3   Thematic Data Analysis Plan (RQ4)

The *Thematic Data Analysis Plan* for this study is provided in *Appendix 8*.

4.14.2 Statistical analysis employed

This study built a narrative by utilising a range of statistical methods, chiefly descriptive statistics, chi-square tests, Mann Whitney U-tests and t-tests (each detailed further below). The study also considered a wide array of survey questions and forecasts, along with interview data. This way, a written picture was able to be developed that more fully explored where the global airline industry is likely headed over the next decade or so.

In this study, statistics are used to discover the richness and depth of the data collected, with the end result being a journey of unearthing valuable industry insights. An exhaustive range of statistical methods have not been used in this study, rather an appropriate and defensible variety of techniques that were likely to generate the diverse insights sought. The fact that this study may very well produce more questions than it actively answers is viewed as a core strength. Informed and robust debate is arguably more important and valuable than concrete predictions founded on inflexible claims.

4.14.3 Descriptive statistics

An array of data from this study were best analysed in terms of descriptive statistics. For instance, survey participants were asked on a number of occasions to use a tick box format, making inferential statistical analysis not always possible to accurately conduct. This tick box multiple response format was valuable in allowing participants to detail the range of options that they rated highly or of equal importance. For instance, on the Main Survey 1 participants were able to nominate big news stories for the industry over the next decade or so (MCQ 5), along with the international regions most likely to form a single air bloc (MCQ 11). In addition, they could select the most significant consequences of a North Atlantic single marketplace (MCQ 16), and identify the countries and/or regions that will feature more prominently throughout the industry in future (MCQ 22).

Not all tick box format questions were restricted to descriptive statistical analysis only. The background questions covering geographical regions of best industry knowledge, confirmed that North America, Europe, Asia and Oceania dominate, while Africa, Latin America and the Middle East are much less represented. A traditional single option multiple choice question likely would not have captured this plurality; that is, breadth and depth of industry knowledge – a point also recorded by a Pilot Survey respondent. In this example, geographical regions of best industry knowledge groups were able to be created that did not generate ties; for instance, Europe (excluding Russia) with the group 'other'. Afterwards, these dichotomous groupings could undergo more complex statistical testing across a range of survey questions and forecasts.

The five geographical groupings, and the number of expert participants in each dichotomous group, are given below in Table 4.4 for the Main Survey 2 (the same groupings were also generated for the Main Survey 1, although participant numbers were higher due to more responses being received).

Geographical region of best industry knowledge	Regional Code	Group 1: [Region]	Group 2: 'Other'
Europe (except Russia)	EUR	n=18	n=16
Oceania (Australia, New Zealand & Pacific Islands)	OCEA	n=16	n=18
Southeast Asia; Japan, South Korea and Taiwan; China (including Hong Kong)	ASIA	n=15	n=19
US and Canada	USC	n=12	n=22
Middle East; India (and South Asia); Latin America (Mexico, Central & South); Russia and Commonwealth of Independent States (CIS)	EMER MKTS	n=10	n=24
	TOTAL:	**n=34** expert respondents (Group 1 + 2) for each above	

Table 4.4   Main Survey 2: Binary groups for BGQ 5

Descriptive statistics also allowed for an initial assessment of the 27 forecasts on the Main Survey 2. Mean, mode and median, along with standard deviation, sample variance, Kurtosis and skewness, were all found for each of the 27 forecasts. Meanwhile, column graphs provided an additional visual mechanism for gaining an overall sense of where convergence, including consensus, and divergence of opinion were clearest. Thus, descriptive statistics generated a foundation upon which locations could then be identified to conduct deeper statistical investigation. They also allowed data to be interrogated in a manner that made results more readily visible and comprehensible.

4.14.4 Inferential statistics: Non-parametric and parametric tests

Although parametric tests make certain assumptions about random samples and distributions, and non-parametric tests do not, a wide range of tests now exist "to deal with virtually any situation" (Robson, 2011, pp. 451-452). Furthermore, "a pragmatic approach is suggested" shaped by the data available for analysis (Robson, 2011, p. 452). Inferential statistical techniques were used across both main surveys. Non-parametric inferential statistical techniques, mostly chi-square tests and Mann-Whitney U tests of association, were performed with a range of multiple choice questions from the Main Survey 1, while parametric t-tests dominated data analysis for the Main Survey 2, and its Likert based forecasts. All chi-square tests, Mann-Whitney U tests and t-tests conducted for this study where, like other airline industry studies with a strategic management orientation, done so "at a confidence level of 95%...(average P-value <0.05)" (Itani et al., 2014, p. 134).

4.14.5 Chi-square test

More than 100 chi-square tests were utilised across the Main Survey 1. Chi-square refers to "a measure of the degree of association or linkage between two variables" often detailed as counts in table cells (Robson, 2011, pp. 431-432). Chi-square looks at "the differences between the observed and the expected frequency for each cell" (de Vaus, 2014, p. 254). Statisticians caution against individual cell counts falling below five, with Fisher's exact test a suitable substitute in such cases (Robson, 2011). In this study for instance, chi-square tests were performed on the academic and non-academic cohorts, in conjunction with a number of other single response multiple choice questions. Studies in civil aviation benchmarking have utilised chi-square tests (Fry et al., 2005), while chi-square tests have also been employed in the exploration of Delphi opinion change and forecast accuracy (Bolger, Stranieri, Wright, & Yearwood, 2011). The following chi-square test calculator, available on the website *Social Science Statistics* (Stangroom, 2016), was utilised in the study here:

(Stangroom, 2016)

Figure 4.10   Chi-square test calculator

4.14.6 Mann Whitney U test

About 70 individual Mann Whitney U tests were conducted across both main surveys. "The *Mann-Whitney U test* is a non-parametric equivalent of the unpaired two-group *t*-test" (emphasis in original) (Robson, 2011, p. 452). In this study, for instance, the Mann-Whitney U test was applied to Main Survey 1, MCQ 15, which used a Likert-type item to look at the likelihood of the US and EU creating a single air market across the North Atlantic. As the

five response points on this question could not be said to be equidistant, and were thus ordinal-level data (and not interval-level), a series of Mann Whitney U tests were conducted. In a similar fashion, and for the same reason, Forecast 17 (global alliance futures) and Forecast 26 (Gulf carrier alliance options) were each subjected to a range of Mann Whitney U tests as well. In essence, Mann Whitney U tests in this study were conducted on survey questions where response scales were utilised, but where t-tests were inappropriate due to the ordinal-level data involved.

4.14.7 t-tests

In total, close to 300 individual t-tests were performed across the Main Survey 2. "The t-test is a very widely used method to compare two means" (Robson, 2011, p. 449). Previous airline industry studies have employed t-tests, for instance, research into the perception of regulators and managers regarding airline industry structure (Schnell, 2005, p. 224). In the study here, t-tests were mostly conducted across the majority of Main Survey 2 forecasts. A range of groupings were devised, five of which were based on geographical regions of best industry knowledge, and then each paired with the group 'other' (as covered above in Table 4.4). Additional binary groupings included free market supporters and sceptics from Forecast 10, and those who thought liberalisation was inevitable versus those who did not on Forecast 13. These groupings then effectively resulted in Main Survey 2 participants being sub-divided into two cohorts at a time, whose responses to specific forecasts in turn could then be compared and contrasted. Statistically significant differences were then recorded and their relevance assessed and interpreted.

4.14.8 Data analysis software

Survey responses were downloaded directly from Google Docs to Microsoft Excel 2010. Excel was initially employed to conduct the data analysis using mostly its data analysis add-in. Experienced researchers include using Excel and its "add-in Data Analysis package" on their lists of appropriate and defensible software for postgraduate data analysis (Cooksey & McDonald, 2011, p. 509). Almost all the data analysis techniques required and sought were available through Excel, with the remaining tests (chi-square in particular) able to be performed via the website *Social Science Statistics* (www.socscistatistics.com) (Stangroom, 2016). The latter proved more user-friendly though, and was employed for most t-tests as well. Even so, the use of two pieces of software for data analysis did allow for an added

mechanism for verifying results and reducing errors, while Excel proved more straightforward for generating graphical representations of the study's results; a strength of Excel that has been noted by other researchers (Cooksey & McDonald, 2011).

4.15   Data quality assurance

This study does not attempt to claim that the research results are readily and easily transferable to a general population, including of experts in air transport and related fields. What this study did aim to do was to locate, collect, collate, discuss and analyse a range of key insights into the global airline industry, and in doing so, provide core conclusions that can be accessed and utilised by industry watchers and insiders to better understand the industry. The applicability of this study's data and analysis is of more concern and focus, than the generalizability of its findings. Even so, it must be acknowledged that this distinction is more technical than actual, as semantics aside, this study intended to produce relevant and high quality findings, discussion and analysis, as well as conclusions, that are for a diverse audience of industry observers and practitioners.

In a very straightforward sense, this study sought as wide array of expert views as possible, so as to discover and investigate how the industry arrived at where it is today, and where it might be headed over the next decade or so. Accuracy of forecasts, like generalisability, is less important than quality of arguments and extent of insights provided. Accuracy is fraught with challenges for a study such as this, not the least of which because forecasts are being provided on a dynamic and ever changing global industry. In this sense, the greatest value in many respects of these forecasts is in the industry insights they provide, more than how precise they may or may not be on any given consideration. Added to this, the ten year (or so) timeframe for the forecasts means that there is no exact way to assess their accuracy anyway (at least not for nearly a decade). Again, even after such time, their greatest value is likely to remain as a result of the insights they provided, including why they may not have ultimately transpired.

4.16   Ethical considerations

Human Research Ethics Committee (HREC) approval was gained from UNSW in July 2013 (HREC Ref: **# HC13204**); the Stage 1 Workshop was conducted the following month. A copy of this approval letter is provided in *Appendix 1*. Throughout all five stages of the study, participants' anonymity and confidentiality were carefully maintained. A wiki site was also

constructed to provide details on the progress of the study, with all participants (and potential participants) given the details of this on the consent form (http://global-airline-industry-delphi-study.unsw.wikispaces.net/Home). Again, a copy of the PISC form is available in *Appendix 2*. This document had to be agreed to by each participant before each stage was conducted.

4.17   Conclusion

This chapter detailed the methods and approaches of data collection and analysis for this five stage study. The study was designed and built around the Delphi method, in a multidisciplinary, mixed-method and emergent context. The researcher's pragmatic worldview (or paradigm), which included a considerable appreciation for constructivism, and an enduring regard for realism, guided the study and aligned well with the flexible and evolving nature of this research. The dynamic global airline industry and its likely future trajectory were explored by capturing the views of defined experts across a Workshop (brainstorming session), a Pilot Survey, two main surveys, and finally In-Depth Interviews; each of which was covered in this chapter. Next, the data analysis techniques employed were detailed, and their use explained and justified. The chapter concluded with coverage of data quality assurance, chiefly the trustworthiness and applicability of the research, and finally it looked at the key ethical considerations related to the study. The next chapter details the results from across the five stages of research, followed by a discussion of those results in Chapter 6.

Chapter 5: Results

5.1 Introduction

In the previous chapter, the methodology for this research was detailed, including the rationale for the five stage mixed-method Delphi study employed. This chapter provides the key findings from each of these five stages of data collection. The chapter begins by providing the results from the first stage Workshop, followed by conclusions and feedback from the second stage Pilot Survey. Next, the results from the Main Survey 1 and Main Survey 2 are detailed (Stages 3 and 4). Lastly, the results from the final stage In-Depth Interviews are presented (Stage 5).

Each stage of this study is diagrammatically summarised in Chapter 4, section 4.7 (Figure 4.3). Not only does each chronological stage represent an evolution from its predecessor, but the sum of the data was designed to be of more value in providing key practical and theoretical insights, than each stage being viewed in isolation. In this context, the chapter here charts an emerging data trail that culminated in a rich repository of data for discussion and analysis. This latter process is achieved across the ensuing Chapter 6, and concluding Chapter 7.

5.2 Stage 1: Workshop

The first stage Workshop was conducted to brainstorm ideas about the global airline industry and its likely future trajectory with professionals familiar with and experienced in the industry. The Workshop was held in Sydney on 14th August 2013 and lasted 69 minutes. The Workshop comprised of 15 semi-structured questions (WS Q1 to WS Q15) and was audio recorded, transcribed and thematically analysed. The Workshop focused heavily on the big three global airline alliances (i.e. Star Alliance, SkyTeam & oneworld), but also covered global issues and considerations for the airline industry as well.

5.2.1 Sample characteristics

The Workshop involved four active participants, and one observer who provided post-Workshop feedback and advice (n=5). Summary details for all five participants are provided in Table 5.1 below:

Participant:	Participant background information
WS Participant 1	Postgraduate student and research assistant – aviation • 4 to 5 years of industry knowledge and experience, including one year working at both an Asian airline and airport. • Undergraduate and postgraduate degrees in aviation.
WS Participant 2	Academic – aviation management • 35 years of industry knowledge and experience (formerly employed in airline management for a major Asia-Pacific airline) • Airline consultancy (both international and domestic) • Doctorate of Business in airline strategy (Asia-Pacific)
WS Participant 3	Academic – finance and economics • 2 to 3 years research experience in aviation, along with teaching experience with undergraduate and postgraduate courses in aviation • PhD in banking and finance
WS Participant 4	Postgraduate student & aircraft engineer (retired) • 30 years of experience in airline engineering (domestic and international) • MBA level research paper focused on airline industry in Australia
WS Observer	Academic – geography and economics with emphasis on aviation management • 7 to 8 years in tourism economics/management study, research and teaching • 4 years part-time industry experience • PhD in aviation (LCCs and regional tourism)

Table 5.1   Workshop participant summary

Retrospective analysis of each participant's background information reveals that *WS Participant 2*, *WS Participant 4* and *WS Observer* would all qualify as defined experts according to the parameters subsequently established at the completion of the Main Survey 1. In contrast, *WS Participant 1* and *WS Participant 3* would not.

5.2.2   Workshop findings

After an initial presentation outlining the proposed research (lasting about 10 minutes; see *Appendix 3*), Workshop participants were asked a series of 15 semi-structured questions over the next hour covering the global alliances, and the airline industry and its likely future more broadly. The Workshop commenced with an exploration of key industry challenges and opportunities over the next decade. Workshop participants were firstly asked (WS Q1) what they thought would be "key airline industry challenges over the next decade or so?" Discussions began with *WS Participant 2* nominating "infrastructure congestion", while *WS Participant 1* noted that low cost carriers (LCCs) would remain a big industry story over the next 10 years, especially in Asia, including full service carriers pursuing LCC subsidiaries. *WS Participant 2* added that LCCs would likely face cost pressures, particularly in Asia, and concluded this question with the statement that "prices are obviously going to go up".

In terms of likely opportunities (WS Q2), *WS Participant 2* observed that Africa is yet "to really start", and also contended that he saw "a shift in emphasis from the US and Europe to the Asia-Pacific"; a trend he concluded was clearly visible with aircraft orders for instance. *WS Participant 4* then ended this topic area with the argument that airline management needs to form an alliance with staff, much like Southwest Airlines has done, concluding that "a lot of this comes back to leadership".

After this, the discussion focused on globalisation, nationalism and alliances. *WS Participant 3* began by highlighting the car industry as a prime example of how the airline industry is similarly responding to the forces of globalisation by providing products and services in a cheaper and more efficient manner around the world. Following on from this, *WS Participant 4* warned though that national culture, including a sense of arrogance, is acting to block airline industry progress in the context of globalisation, particularly for western governments who have all but given up on supporting their local airline industry. *WS Participant 2* argued that globalisation of the airline industry is already happening by stealth in that the three major Gulf carriers have a geographic advantage and are using that to build extensive global networks; "because they are in the right place to do it". Nevertheless, *WS Participant 2* conceded that the US and EU "are very protective of the North Atlantic because it is such a large revenue source".

Participants then discussed the future for alliance logo aircraft (WS Q4). *WS Participant 2* dominated this short discussion, immediately responding that "they are a branding idea that have fallen away quite quickly". *WS Participant 3* then asked a broader clarifying question on how successful alliances have been on issues to do with quality, standards, pricing and homogenisation? *WS Participant 2* responded that often airlines are barred from cooperating on pricing, before contending that wet leasing amongst alliance member airlines would help, but conceded that this is yet to happen. *WS Participant 4* then added that "a strong sense of nationalism" blocks major carriers like Emirates Airline and Singapore Airlines from surrendering their strong brand names. *WS Participant 2* concluded the discussion here by noting that for consumers, alliances are more about frequent flyer relationships with a particular airline and "what works most efficiently for where you live".

The topic of frequent flyer programs then encouraged the Workshop discussion to turn to covering claims by some that alliances are formed to overcome regulatory barriers, while the argument is also made that frequent flyer programs are the glue that holds members together

(WS Q5). Only *WS Participant 2* provided a response here, briefly commenting that they are able to share revenue without the need to negotiate bilateral agreements which are time consuming. *WS Participant 2* ended by adding that "alliances are network extension tools", with distribution and marketing flexibility, and leveraging of partner strength at hub airports; all of which are powerful reasons to join he maintained.

Discussion on the current realities for alliances then transitioned into debate over the future for the global alliances. Here WS Q6 through WS Q8 provided the discussion scaffold. Firstly, participants were asked if they agreed with Emirates CEO Tim Clark who vocally opposes the global alliances; or Qatar Airways CEO Akbar Al Baker who supports them (WS Q6)? *WS Participant 2* emphatically stated that he was on Qatar's side. *WS Participant 3* noted that it depends whether an airline is in an alliance or not. He then used trading blocs as an example; maintaining that such blocs are viewed differently by member countries, as opposed to those outside. *WS Participant 4* agreed with these sentiments, adding that many alliances are problematic as they might be "helping to spread markets", but they are also "disenfranchising people at the same time".

This comment then inspired WS Q7 which asked about whether airline employees compare standards, conditions and so forth? *WS Participant 1* believed they do; in contrast, *WS Participant 2* voiced the view that frontline staff reflect "a complete disconnect" when it comes to knowledge of other airlines, while senior management are rarely placed into alliance partners. *WS Participant 4* then questioned; "what does this say about communication generally?" *WS Participant 2* replied that many airline cultures, together with the national cultures they embody, are insular. He concluded that this then means that alliance membership for many airlines is not producing maximum value. Next, participants were asked about whether strategic bilateral partnerships were weakening the global alliances (WS Q8)? Only *WS Participant 2* responded, arguing that this practice has been going on for some time in the airline industry, and that "if you're smart you just go for the best fit".

The latter half of the Workshop shifted to discussion on liberalisation and protectionism, including the likely impact on alliances if regulatory barriers were removed (WS Q9)? Once again, only *WS Participant 2* replied here, stating that more weight needs to be given to the history of the global alliances, in that early relationships were forged out of global distribution systems (GDS's), via code sharing to have flights displayed on GDS screens as early as practical/possible.

Following on from this, the topic of likely benefits to the global alliances of a freer flow of industry capital (WS Q10), then sparked a debate between *WS Participant 2* and *WS Participant 4*. *WS Participant 4* responded first by stating that "margins have become even less attractive with deregulation". *WS Participant 2* retorted that a freer flow of capital would see consolidation throughout the industry, leading to perhaps 50 to 100 fewer international carriers and "a reduction of about 11 percent in operating capacity". He added that this assessment was based on "a perfect world with a free market and government not shovelling in money and playing games".

WS Participant 4 countered that "most successful carriers have governments as major players". *WS Participant 2* disagreed, maintaining that "successful" depends on one's definition; "so in terms of growth yes, but in terms of profit no". *WS Participant 4* continued that "some global carriers are part of a larger plan to build national brands at whatever the cost; there are obviously political issues in this so-called free market" he remarked. Following this, *WS Participant 4* cited Emirates Airline and Singapore Airlines as prime examples of formidable players in the global industry. *WS Participant 2* agreed with Emirates being in this category, but felt Singapore had lost its place to the likes of Cathay Pacific; he concluded that "Singapore is a bit too far south and off the edge, while also being caught in the vortex of the LCC revolution in Asia".

This lively debate was then further encouraged with WS Q10 which queried whether "regulation" was a bad word? *WS Participant 4* argued that "regulation is usually poorly implemented" by mostly politicians and lawyers, and not the real industry experts. *WS Participant 3* disagreed with this assessment, and felt that deregulated markets are more efficient. *WS Participant 1* ended the discussion here by stating that regulation provides some measure of protection for airlines, noting the example of "government bailouts".

The focus then shifted to the specific air market of the North Atlantic and the likelihood of it becoming a single air market within a decade. *WS Participant 2* was optimistic that the international markets would come together, but did not think this would include "access to the domestic markets". He argued that "the US will still be protecting its domestic market in a decade from now". *WS Participant 1* contended that "these things always fail [and therefore] it was not going to work". *WS Participant 4* argued that "trading blocs always protect themselves, and the US will be no different in 10 years from now".

Attention then moved to the future prospects for the big emerging air markets of China and India (WS Q13). *WS Participant 2* observed that "India's infrastructure is way behind, while China is largely keeping up with what is happening". *WS Participant 1* agreed with this assessment. *WS Participant 4* extended this assessment by highlighting the fact that as incomes rise in China, so too will "demand for air travel". A follow-up question then queried "what about elsewhere?" (WS Q14). *WS Participant 4* replied that Indonesia was "a country to watch", while *WS Participant 2* noted that "South America has already shown itself to be a template for Africa in future with consolidation and network developments of late".

The final question put to Workshop participants simply asked if they had "any final thoughts" (WS Q15)? *WS Participant 2* postulated that "higher level relationships within the global alliances are strong point to follow". He went on to comment that "Etihad is trying to do what Swissair attempted a generation ago, that is, buy an alliance. Swissair was horrendously unsuccessful the last time around" he concluded. He then ended with the view that "Etihad is trying to bring together a series of dysfunctional pieces; why buy a chunk of Air Berlin and Air Serbia? It is beyond me". *WS Participant 1* provided the final opinion at the Workshop, forecasting that "the Asia-Pacific region wants an open skies agreement and will still be working on that in the next decade".

Immediately after the Workshop ended, *WS Observer* provided feedback to the researcher, based in large part on notes he had taken during the brainstorming session. *WS Observer* highlighted two important observations, which in combination with feedback after an air transport conference presentation in July 2013 on the study (one month before the Workshop), helped to significantly hone its subsequent focus. *WS Observer* noted that geography – particularly geographical location – had surfaced several times, while liberalisation and protectionism had also emerged as overarching themes throughout. He also commented on *WS Participant 4's* contrarian views and role in the discussion, especially his evident distrust of simply looking at the global airline industry from an economic perspective, without also carefully considering the role of national culture and government policies for instance.

5.3   Stage 2: Pilot Survey

The second stage was a Pilot Survey which was utilised to pre-test questions intended for the subsequent Main Survey 1, but also a number of forecasts likely to be included on the Main

Survey 2. The Pilot Survey was conducted in November and December 2013. It contained four participant background questions, 18 core open-ended questions, and 12 forecasts utilising a five-point Likert scale (i.e. a single grid). In addition, the survey also contained six general feedback sections, and two specific feedback questions covering further question/forecast ideas, and final thoughts. Please see *Appendix 4* for the full Pilot Survey instrument.

5.3.1   Pilot Survey sample characteristics

The Pilot Survey involved 12 participants (n=12) and contained four participant background questions designed to test core intended avenues to interrogate survey data, and to provide the means in future to define expert. The four background questions were:

Participant Background Information	
1.	Which of the following categories best describes the capacity in which you are responding?
2.	How would you rate your overall knowledge and/or experience of the global airline industry?
3.	How many years of knowledge and/or experience do you have of the global airline industry?
4.	Which geographical region/s of the world are you most familiar with in terms of the global airline industry?

Table 5.2   Pilot Survey: Participant Background Information

Most Pilot Survey participants came from academia (58%); either academics (25%) or postgraduate students (33%). The remaining participants selected aviation consultant (25%) or airport management (17%) as their response capacity. Overall industry knowledge was stated as Average (17%), Good (50%) or Very Good (33%). Years of knowledge/experience were given as 3 to 5 years (17%), 6 to 10 years (50%), 11 to 20 years (17%) or 30+ years (17%). The number and percentage of participants who chose each of the following as an industry region they are most familiar with (multiple response format) were:

- US and Canada: 2 (17%)
- Europe (except Russia): 3 (25%)
- Middle East and North Africa: 2 (17%)
- Asia (China, Northeast Asia & ASEAN): 2 (17%)
- Latin America (Mexico, Central & South): 2 (17%)
- Sub-Saharan Africa: 1 (8%)
- Russia & CIS: 0 (0%)
- Oceania (Australia, NZ & Pacific Islands): 7 (58%)

- India (including South Asia): 2 (17%)
- Other [not specified]: 1 (8%)

Nine Pilot Survey participants (75%) would be categorised as expert based on the parameters established after the subsequent Main Survey 1, leaving three (25%) as non-experts. One participant out of the 12 only provided responses in the survey feedback sections, while 10 participants gave a response to each of the 12 forecasts (Q23 to Q34).

5.3.2 Pilot Survey conclusions

Pilot Survey data were mostly utilised to gauge question relevance, content and clarity. To this end, the survey contained four key topic sections that each contained open-ended questions intended for paragraph-style responses, along with 12 forecasts using a five-point Likert scale covering a range of statements that looked at where the global airline industry is likely headed in future. The main sections and individual questions (Q) of the survey were:

1. Where is the global airline industry headed? (Q5 to Q10);
2. The big three global airline alliances - Star, SkyTeam & oneworld (Q11 to Q14);
3. The North Atlantic and Asian regions (Q15 to Q18);
4. Emerging Markets: India, the Middle East, Brazil and Africa (Q19 to Q22); and
5. Forecasts: Do you agree or disagree? (Q23 to Q34).

The Pilot Survey also contained six general feedback sections located after each main topic division, together with Question 35 which asked if participants had an industry forecast of their own, and Question 36 which asked for "final thoughts…?" These paragraph-style response areas overwhelmingly resulted in feedback that the questions were too long and time consuming to complete. Aside from formatting and style issues raised in all section feedback locations throughout the survey, only one suggested question or forecast was given in Question 35; that is: "More consideration to Airbus and Boeing".

One participant summed up the cohort's overall sentiments when they wrote for Question 36: "I think the questions are too long and make the respondent reluctant to take the time to give the detailed answers that are required". Other participants provided recommended solutions to this unanimous view, including: "A lengthy questionnaire for the open-ended type. Perhaps in-depth interviews may work better?" One participant suggested: "Keep questions shorter and more focused", echoing other participants who felt that questions tended to contain "very

long sentences" and contained too "many things". Another suggested: "In order to get [a] high response rate, I suggest you should modify all the questions with optional answers for anybody to choose". Subsequently, a multiple choice format was adopted for the Main Survey 1. It is to this survey that the chapter now turns.

5.4   Stage 3: Main Survey 1

The Main Survey 1 was based in large part on the content of the previous Pilot Survey, but with more streamlined questions in mostly multiple choice format, rather than the earlier open-ended paragraph-style questions. It was conducted in February and March 2014. The Main Survey 1 contained four slightly modified participant background questions, 17 main multiple choice questions (MCQ 5 to MCQ 22), and one "final thoughts, comments or observations" open-ended question (Q23). The full survey instrument is available in *Appendix 5*.

5.4.1   Main Survey 1 sample characteristics

The Main Survey 1 contained 122 useable responses (n=122); two partial survey submissions were removed from the data set. This total cohort was then divided into 71 experts (n=71) and 51 non-experts (n=51).

5.4.2   Main Survey 1 findings

The Main Survey 1 contained four updated participant background questions that were designed to provide important avenues to interrogate survey data, and also the means to define expert. The four background questions were:

Participant Background Information	
BGQ 1	Which of the following categories best describes the capacity in which you are responding?
BGQ 2	How would you rate your overall knowledge of the global airline industry?
BGQ 3	How many years of knowledge do you have of the global airline industry?
BGQ 4	Which geographical region/s of the global airline industry are you most knowledgeable about?

Table 5.3   Main Survey 1: Participant Background Information

In terms of the capacity of expert respondents (BGQ 1), the largest single cohort was academic (61%); though when the category postgraduate student (6%) was added, the total cohort from academia was then 67 percent. The only other categories of any note were

aviation consultant (8%), airline management (6%) and journalist (6%). However, when combined together the non-academic cohort amounted to 43 percent.

Self-rated overall expert industry knowledge (BGQ 2) was given as Good (34%), Very Good (48%) and Excellent (18%). Meanwhile, years of industry knowledge (BGQ 3) were: 6 to 10 years (34%); 11 to 20 years (35%); 21 to 30 years (13%); and, 30+ years (18%). Average years of expert industry knowledge was 18 years, while for non-experts it was 11 years.

Experts nominated their best industry knowledge as being in Europe (55%), Oceania (45%) and the US and Canada (39%). See Figure 5.1 below:
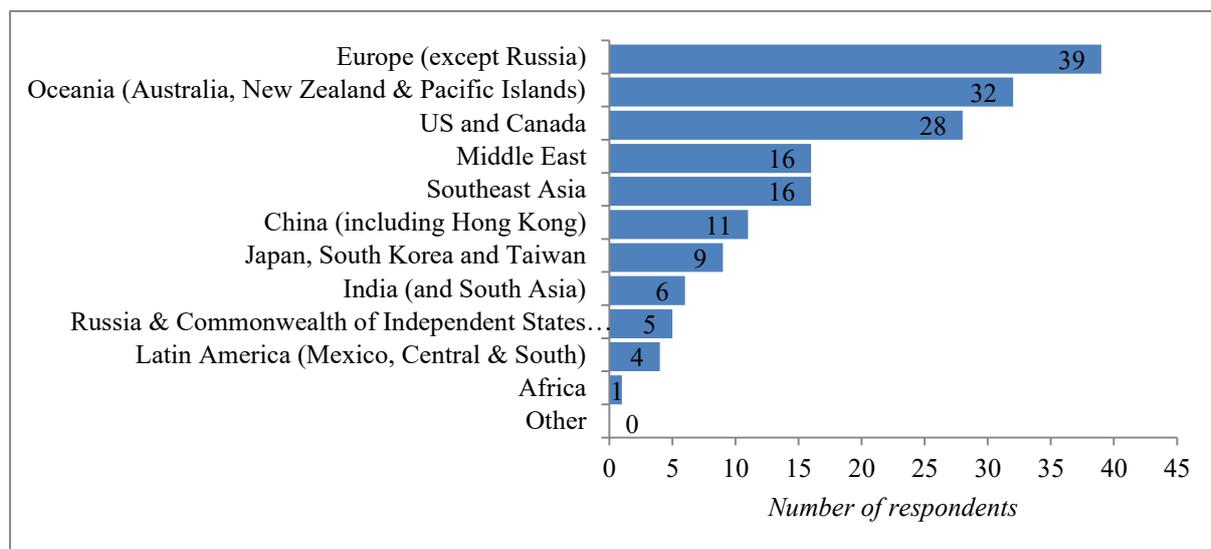
Figure 5.1   Main Survey 1 & BGQ 4: Best industry knowledge by geographical region

Even so, when grouped together the Asian region (excluding India and South Asia) was 51 percent, leaving the remainder to be grouped together into Emerging Markets (45%). Thus, the rank order then becomes:

1. Europe: 39 (55%)
2. Asia: 36 (51%)
3. Oceania: 32 (45%) & Emerging Markets: 32 (45%)
4. US and Canada: 28 (39%)

In total, 167 individual regional selections were made by the 71 expert respondents for BGQ 4; an average of 2.4 each. The distribution then of best industry knowledge as a proportion of the total stated knowledge was: Europe (23%), Asia (22%), Oceania (19%) and Emerging

Markets (19%), and finally, the US and Canada (17%). Nearly half of respondents (49%) chose only one region for BGQ 4, while one third (33%) nominated two or three regions; 18 percent of participants selected four or more regions.

5.4.3 The global airline industry's future

The first main topic section of the Main Survey 1 contained seven multiple choice questions (MCQ 5 to MCQ 11) under the banner: "Where is the global airline industry headed?"

Where is the global airline industry headed?			
MCQ5	What will likely be the big news stories for the global airline industry over the coming decade and beyond?		
	1st	*Environmental concerns/issues*	68%
	2nd	*Airport congestion (including slot allocation)*	58%
	3rd	*The continued rise of the major Gulf carriers*	55%
	4th	*Infrastructure constraints*	52%
	5th	*The rise of the Chinese airline industry*	41%
		Oil price	
MCQ6	Are national flag carriers increasingly becoming a part of history, or are they here to stay?		
	a.	*They are definitely disappearing from the global industry*	11%
	b.	*Most of them are here to stay*	43%
	c.	*Some of them will survive, but most will likely disappear in the next 10 years or so*	45%
	d.	*Other*	1%

Table 5.4   Main Survey 1: MCQ 5 and MCQ 6

The first topic question on the survey (MCQ 5) was designed as a mechanism to encourage participants to begin considering where they thought the global airline industry was headed into the foreseeable future. It is clear from the highest ranked responses, chosen by half or more of participants, that environmental considerations (68%), airport congestion (58%) and infrastructure constraints (52%) will have a high news profile in future, along with the major Gulf carriers (52%).

The next question (MCQ 6) then asked participants to specifically ponder the future for national flag carriers, with a majority of experts of the view that most will definitely or likely disappear from the industry in future (56%). One participant left the comment in 'other': "Countries that adopt SIA [Singapore Airlines] or M-E [Middle East] type strategies will remain and succeed". A solid minority of participants thought that most flag carriers are here to stay (43%).

The next question (MCQ 7) attempted to gain a sense of participants' underlying ideological motivations in terms of regulation and free market principles. A majority of 51 percent saw

both regulation and liberalisation as coexisting into the future, while just over one fifth (21%) were solely in favour of the free market, and 13 percent were in contrast supportive of significant regulation. The imperfect nature of the industry (15%) category was utilised to allow for realists who might not have an underlying ideological position, so much as they try to view the industry for what it actually is. Non-experts also mostly fell into the middle two response categories for MCQ 7, although with less support for the free market (6%), and more for significant regulation (28%). Non-expert results are shaded green.

MCQ7	Which of the following political/economic positions best captures your overall view of the global airline industry and its IDEAL regulatory future?			
	a.	*Significant regulation is required because most governments need to closely regulate the airline industry as it is crucial to national economic development and growth*	13%	28%
	b.	*Some regulation of air markets will always be needed, however, this reality can (and should) coexist with varying levels of liberalisation heading forward*	51%	50%
	c.	*The industry is imperfect and always will be. It is how it is. Likewise, change will almost always be slow and incremental, with significant international liberalisation only occurring on a limited basis (with the exception of the EU)*	15%	16%
	d.	*The free market should be the basis for most (if not all) air markets around the world, with little to no national interference*	21%	6%
MCQ8	Globally, at what rate is international air market liberalisation currently progressing at?			
	a.	*Too slow*	39%	12%
	b.	*About right*	46%	39%
	c.	*Too fast*	9%	20%
	d.	*No opinion*	6%	29%
MCQ9	Will national sovereignty have less impact on the development of the global airline industry in the foreseeable future?			
	a.	*Unlikely, as the nationality-based bilateral system of air service agreements (ASAs), along with national restrictions on ownership and control, will continue to remain strong*	19%	12%
	b.	*Likely, as multilateral ASAs and open skies agreements are progressively taking hold around much of the world*	39%	47%
	c.	*Its impact will vary and developments will be mixed*	42%	41%

Table 5.5   Main Survey 1: MCQ 7, 8 & 9

MCQ 8 built on MCQ 7 in that it aimed to gauge the pace at which participants thought air market liberalisation should be progressing at. The clear directional pull here was that, if anything, global liberalisation should be accelerating (39%). Only nine percent felt the opposite, while six percent had no opinion, indicating that the vast majority of expert participants possessed a view on the overall topic of liberalisation. In contrast, almost one third of non-experts (29%) selected no opinion for MCQ 8. The next question (MCQ 9) then sought to establish the impact that participants thought national sovereignty would have on the airline industry in future. Experts were fairly evenly split between less impact in future

(39%), and varied impacts (42%). Only about one fifth (19%) of experts thought the bilateral system will remain strong in future.

As shown in Table 5.7 below, MCQ 10 then focused on the case example of the European Union (EU), and sought to assess its applicability as a model for liberalisation elsewhere around the world. Experts thought that the EU was either definitely an example (3%), or a prime example (59%), meaning that 62 percent of experts were mostly positive about the EU's exemplar status for the global industry with regards to international liberalisation.

MCQ10	Is the European Union (EU) single air market a prime example of the international liberalisation that will happen elsewhere around the world in the foreseeable future?		
	a.	*Definitely an example of what is coming for the global airline industry*	3%
	b.	*A prime example, but with slow, patchy and uneven progress around the world*	59%
	c.	*The EU has followed a mostly unique path to liberalisation, and is unlikely to provide meaningful insights into the future of the industry elsewhere*	17%
	d.	*The EU single air market is now actually more a reflection of the US domestic market, than a prime example applicable for other countries and/or regions*	21%
MCQ11	Which of the following international regions do you think is most likely to form a regional air bloc (single air market) with full cabotage rights, and no internal restrictions on ownership and control, within the next 10 years or so?		
	1st	*EU with surrounding countries*	46%
	2nd	*Australia/New Zealand with surrounding countries*	44%
	3rd	*ASEAN countries*	40%
	4th	*North Atlantic (US & EU)*	25%

Table 5.6   Main Survey 1: MCQ 10 & MCQ 11

This majority expert optimism about the EU's international applicability was also reflected in the rank order emanating from MCQ 11. This question asked participants to select the region/s most likely to form a single air bloc in future, and the EU with surrounding countries was ranked first with 46 percent of participants selecting it. Australia and New Zealand (44%) and ASEAN countries (40%), were not far behind the EU; however, the North Atlantic (25%) was well behind all three. No region received 50 percent or higher here though, and the question did include full cabotage rights and no ownership or control restrictions, it should be pointed out.

5.4.4   The big three global airline alliances

The second main topic division within the Main Survey 1 covered the big three global airline alliances – Star Alliance, SkyTeam and oneworld. Three questions in this section looked at their industry longevity (MCQ 12), their main rationale (MCQ 13), and whether bilateral

alliances were weakening the major global alliances (MCQ 14). Table 5.8 below details the findings from each of these questions.

The big three global airline alliances - Star, SkyTeam & oneworld				
MCQ12	Are the big three global airline alliances - Star, SkyTeam & oneworld - a permanent feature of the industry? How would you characterise their future prospects?			
	a.	*They will be around for a long time to come*	43%	
	b.	*They are facing the real prospect of extinction*	9%	
	c.	*Not all three will survive, but two might*	25%	
	d.	*Four or more big global alliances are likely to exist in the foreseeable future*	20%	
	e.	*Other*	3%	
MCQ13	How would you best describe the main rationale for the global airline alliances?			
	a.	*Substitutes for full mergers (given regulatory barriers)*	14%	
	b.	*A cost effective way to achieve global geographic reach and coverage*	40%	
	c.	*A cheaper option to merging that also achieves economies of scale, scope and density benefits*	28%	
	d.	*An effective mechanism for turning competitors into partners*	18%	
MCQ14	Are bilateral alliances, including agreements between competing alliance members, weakening the major global alliances?			
	a.	*Yes, they are weakening the very rationale for the global alliances*	23%	
	b.	*No, they are just a reflection of the pragmatic nature of the industry*	36%	
	c.	*Somewhat, depending on the exact bilateral alliance being considered*	41%	

Table 5.7   Main Survey 1: MCQ 12, 13 & 14

Whether via contraction (24%) or expansion (20%), the global airline alliances are likely to persist according to the experts, in one way or another, throughout the industry well into the future (43%). Only nine percent of experts thought that the global alliances are facing the real prospect of extinction. Two participants selected 'other'; one contended that: "They will remain but will grow much more fragmented and weak". The other argued: "They are likely to mutate into something new. Some alliances based on current arrangements and new commercial tactical arrangements".

The longevity (or otherwise) of the global alliances is no doubt linked to their perceived rationale for existence, and MCQ 13 aimed to discover what participants thought the main rationale was. The geographic reach and coverage afforded by alliances was the most selected option here (40%), followed by the economic benefits they produce (28%). Experts were less inclined to think that the global alliances exist primarily to turn competitors into partners (18%), or to overcome regulatory barriers that currently prevent full mergers (14%). Forty respondents out of 71 (56%) selected only one option for MCQ 13; that is, geographic reach (55%); economic benefits (32.5%); competitors into partners (7.5%); and, substitutes for full mergers (5%). Clearly, geographic reach and coverage was the most selected option for MCQ 13, and substitutes for full mergers the least favoured response.

Finally, this section of the Main Survey 1 asked whether bilateral alliances were weakening the major global alliances (MCQ 14)? The least chosen response option for this question was: "Yes, they are weakening the very rationale for the global alliances" (23%). Seventy-seven percent of experts responded either no (36%) or somewhat (41%). The survey then turned to the North Atlantic and Asia.

5.4.5   The North Atlantic and Asia

In this topic section of the Main Survey 1, the North Atlantic was firstly covered with MCQ 15 and MCQ 16. After these two questions, MCQ 17 and MCQ 18 looked at the Asian region. Finally, MCQ 19 focused specifically on the rise of China. Table 5.9 below covers MCQ 15 and MCQ 16.

The North Atlantic and Asian regions			
MCQ15	How likely do you think it is that the US and EU will create a single North Atlantic air market in the foreseeable future?		
	a.	*Zero chance*	6%
	b.	*Unlikely*	44%
	c.	*50/50*	34%
	d.	*Likely*	13%
	e.	*Almost certain*	3%
MCQ16	What would be the most significant consequences of such a single North Atlantic marketplace?		
	a.	*Flag carriers would soon disappear*	9%
	b.	*Major US carriers would merge with major EU flag carriers*	26%
	c.	*US airlines would develop a significant presence within the EU*	25%
	d.	*EU airlines would operate a substantial number of services within the US*	24%
	e.	*Single North Atlantic airline brands would replace national brands*	12%
	f.	*Other*	4%

Table 5.8   Main Survey 1: MCQ 15 and MCQ 16

Exactly half of all experts rated the chances of the US and EU creating a single air market across the North Atlantic as either unlikely (44%) or zero chance of happening (6%). Just over one third (34%) thought the odds of this happening were even, while only 13 percent thought likely, with an additional three percent almost certain it would happen in future. The subsequent question, MCQ 16, asked what would be the most significant consequences of such a single air market? Opinions were mixed; however, there was little support for the notion that flag carriers would disappear (9%), or that single airline brands would replace national brands (12%).

No individual option in MCQ 16 received an outright majority; this is also noticeable when the data is displayed according to how many experts chose each option. For instance, 42

percent of experts selected "major US carriers would merge with major EU flag carriers", reflecting (as above) 26 percent of total selections made. Three experts left comments in 'other'; one predicted that low cost carriers would increase, while another forecast "more choices". A third expert stated; "price drop outbound US", while a final expert argued: "Probably not much will happen, as with EU-US liberalisation – not many new services emerged".

The next part of this topic section looked at Asia, and then specifically at China. Table 5.10 below details the three questions and findings in the latter part of this topic area of the survey.

MCQ17	What role do you think the Asian region will play in shaping the global airline industry over the next decade and beyond?		
	a.	*The twenty-first century will be the Asian century and the airline industry will be a big part of this*	39%
	b.	*Asia is losing ground to the Middle East and a resurgent Europe and US*	13%
	c.	*Asia will follow the lead from elsewhere, rather than drive or greatly influence developments throughout the global industry*	23%
	d.	*The real story for the global industry in the region is China, elsewhere developments will be mixed*	25%
MCQ18	Will open skies agreements and increasing liberalisation take hold in the Asian region in the foreseeable future?		
	a.	*No, the Asian region is too politically fragmented*	30%
	b.	*Yes, it is only a matter of time*	31%
	c.	*Smaller intra-regional single air markets within Asia are more likely*	39%
MCQ19	The rise of China is a much discussed and debated contemporary issue. What impact will a bigger and stronger China have on the global airline industry?		
	a.	*Massive and far-reaching*	17%
	b.	*The growth story will be significant, but profits will be as elusive as ever*	48.5%
	c.	*Moderate, but mostly a domestic story with less international impacts being felt*	28.5%
	d.	*Limited, as China is likely to play catch-up to other major global regions and industry players for some time to come*	6%

Table 5.9   Main Survey 1: MCQ 17, 18 & 19

Results for Asia indicated that participants were mostly divided over the region's future prospects. This was demonstrated for MCQ 17 where 39 percent saw the twenty-first century as the Asian century; 36 percent combined thought Asia is either losing ground to elsewhere (13%), or following the lead from elsewhere (23%). The remaining quarter thought the real story in the region was China (25%). These divisions were also noticeable on MCQ 18 where open skies and increasingly liberalisation in Asia were seen as either unlikely (31%), likely (30%), or only likely to be on an intra-regional scale (39%). Meanwhile, results for China on MCQ 19 were clearer with a comfortable majority (65.5%) of the view that China's impacts on the global industry would be either massive (17%) or significant (48.5%). A further 28.5

percent thought that the impacts would be moderate and mostly domestic, while only six percent of participants thought that China's global impact would be limited.

5.4.6 Emerging air markets

The final topic area of the Main Survey 1 looked at emerging air markets. Table 5.11 below details the three questions and the responses that constituted this section.

Emerging Markets				
MCQ20	What role and impact do you think that India will have on the global airline industry over the next decade or so?			
	a.	*Very little; India faces too many challenges that need addressing*	56%	
	b.	*A major role and impact is likely in the foreseeable future as the country continues to grow economically*	11%	
	c.	*The impact will be significant, but not as significant as China*	33%	
MCQ21	How significant do you think the three major Gulf carriers (Emirates, Etihad & Qatar) are to the global airline industry?			
	a.	*The most significant players in the global airline industry today, and growing more so*	29%	
	b.	*Significant, but just one of a number of key industry stories now and into the foreseeable future*	61%	
	c.	*Not as significant as they would have the industry believe*	10%	
MCQ22	As you scan the world and the global airline industry, what countries and/or regions do you think will rise to feature more prominently throughout the industry in the coming decade and beyond?			
	1st	*China*	80%	
	2nd	*Asia*	50%	
	3rd	*India*	34%	
	4th	*Brazil*	29%	
	5th	*Indonesia*	26%	
	6th	*Africa*	17%	
	7th	*North Atlantic*	13%	
	Iran was the only country or region added to 'other' here.		1.4%	

Table 5.10   Main Survey 1: MCQ 20, 21 & 22

Most experts (56%) on MCQ 20 thought that India's role and impact on the global airline industry in future will amount to "very little". Only 11 percent thought that India's role and impact would be major, although a final third of participants (33%) did think India's impact will be significant, but not to the same extent as China. Experts on MCQ 21 were more supportive of the notion that the three major Gulf carriers are the most significant players in the global airline industry today, with 29 percent of the view that they are "the most significant players". A further standalone majority of 61 percent saw them as significant, but in a wider context with other key industry players. The remaining 10 percent of experts here felt that the major Gulf carriers are "not as significant as they would have the industry believe". Therefore, 90 percent of experts for MCQ 21 did not think the major Gulf carriers are simply about marketing spin as this latter response option inferred. In MCQ 22, China

topped the list, with Asia in second place. Meanwhile, consistent pessimism about the North Atlantic across the Main Survey 1 was on display here again as this region ranked last at 13 percent.

The final section on the Main Survey 1 (Q24) stated: "If you are happy to be emailed the Main Survey 2 of 2 in a few months time, please leave your email address below". Seventy-five participants out of 122 (61%) total survey respondents left an email contact, with 52 out of 71 experts included in this tally (73% of experts). In contrast, only 23 out of 51 non-experts left an email contact (45% of cohort). These 52 experts were then emailed the link for the Main Survey 2; the findings of this latter survey are now detailed in the next part of this chapter.

5.5   Stage 4: Main Survey 2

The Main Survey 2 was conducted in April and May 2014. The survey was emailed directly to the 52 experts who indicated on the Main Survey 1 that they were happy for it to be emailed to them. As covered in Chapter 4, the Main Survey 2 was comprised of 27 forecasts utilising five point Likert-type items, along with an initial participant background section (see *Appendix 6*). A "final thoughts, comments or observations about the global airline industry's future" question ended the survey (Q28). For data analysis, response categories were given a numerical value from left to right of 1 to 5 (e.g. Strongly disagree = 1/Strongly agree = 5). This way the statistical strength of each response, together with other statistical techniques, could be employed to interrogate the findings; as utilised next in Chapter 6 to discuss and analyse the findings presented here.

5.5.1   Main Survey 2 sample characteristics

As stated, the Main Survey 2 was only sent to the 52 experts from the previous main survey who had opted to receive it. Of this group, 34 experts completed the Main Survey 2 (n=34). Only the five background survey questions were required on this survey, while the remaining 27 forecasts and final question were all optional. The vast majority of forecasts were completed by all 34 experts; however, several forecasts were not. The most notable in this regard was Forecast 26 covering the future alliance options for the three major Gulf carriers. As highlighted again later in this chapter, between three and five participants opted not to provide a forecast across the three sub-options given for Forecast 26.

The Main Survey 2 contained five participant background questions. The first of these questions asked if the participant had earlier submitted the Main Survey 1. All 34 respondents answered "yes" here. The remaining four background questions mirrored those on the previous Main Survey 1, and were as follows:

Participant Background Information	
1.	Did you submit the Main Survey 1 of 2 in February/March 2014?
2.	Which of the following categories best describes the capacity in which you are responding?
3.	How would you rate your overall knowledge of the global airline industry?
4.	How many years of knowledge do you have of the global airline industry?
5.	Which geographical region/s of the global airline industry are you most knowledgeable about?

Table 5.11   Main Survey 2: Participant background information

As shown in Table 5.13 below, the overall cohort from academia increased on the Main Survey 2 to just over three quarters of all participants (76%). The remaining groups within this cohort for the Main Survey 2 were three journalists (9%), two aviation consultants (6%), and lastly, one each from airline management (3%), tourism management (3%) and ground engineering (3%).

Response Capacity			
Main Survey 1		Main Survey 2	
Academic	61%	Academic	64.5%
Postgraduate	6%	Postgraduate	11.5%
Total Academia:	67%	**Total Academia:**	76%

Table 5.12   Main surveys: Academia cohort

Self-rated overall knowledge of the global airline industry (BGQ 3) on the Main Survey 2 was provided as Good (23.5%), Very Good (56%) and Excellent (20.5%). The only point of note here in comparison to the Main Survey 1 was that Very Good increased from 48 percent to 56 percent, while Good correspondingly decreased from 34 percent to 23.5 percent. Excellent remained essentially unchanged at 18 percent and 20.5 percent respectively. Years of industry knowledge (BGQ 4) were a little higher on average for the Main Survey 2 as opposed to the Main Survey 1; 18.8 years versus 18 years. The years of industry knowledge for the Main Survey 2 were: 6 to 10 years (35%); 11 to 20 years (23.5%); 21 to 30 years (26.5%); and, 30+ years (15%).

Meanwhile, as displayed in Figure 5.14 below, the spread of geographical best industry knowledge remained fairly consistent across both main surveys, with the Main Survey 2

achieving an 11 percent higher result for Asia. No other region returned a double digit difference here.
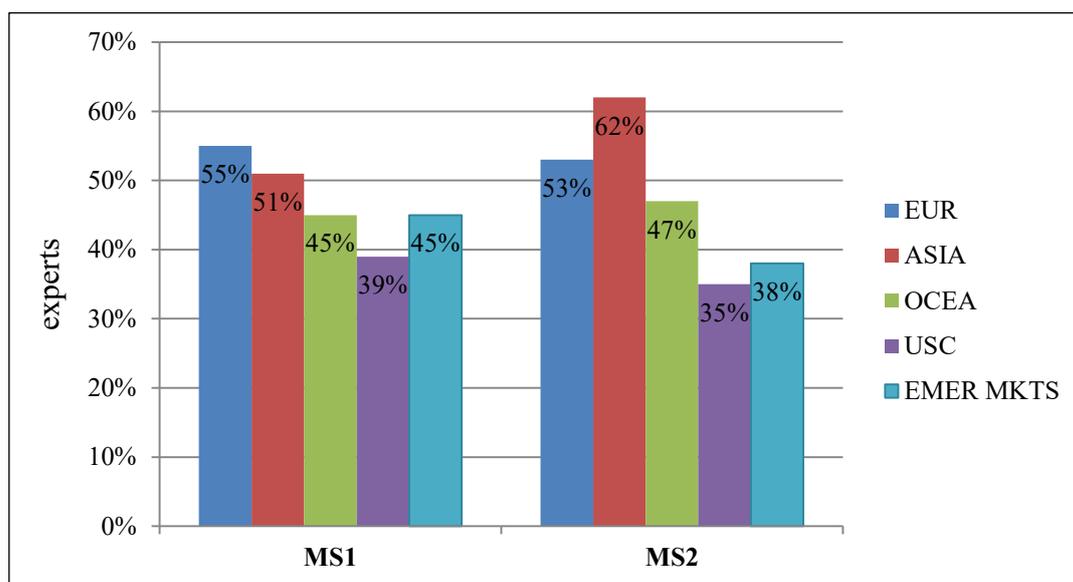
Figure 5.2   Main surveys: Geographical regions of best knowledge

5.5.2   Industry-wide findings

The first 13 forecasts (F1 to F13) focused on a range of future orientated industry-wide issues and factors. The first three forecasts (Table 5.13) covered the industry and climate change:

		Disagree 50% +	Neutral 50% +	Agree 50% +	75% +	Mean
F1	It is vitally important that the global airline industry develop a comprehensive response to climate change in the foreseeable future.	9%	18%	73%		3.85
		Unlikely 50% +	Neutral 50% +	Likely 50% +		
F2	The global airline industry will develop a comprehensive response to climate change and as a result substantially reduce its carbon emissions within the next 10 years or so.	29%	18%	53%		3.32
		Disagree 50% +	Neutral 50% +	Agree 50% +		
F3	Recent attempts by the EU to include aviation in its emissions trading scheme (ETS), although unpopular with many airlines, is a likely future model of how to effectively deal with global airline industry emissions.	26.5%	23.5%	49%		3.29

Table 5.13   Main Survey 2: Forecasts 1, 2 & 3

Forecast 1 achieved close to consensus agreement (73%) that the industry must develop a comprehensive response to climate change; however, only a slim majority of 53 percent

thought that the industry will do so over the next decade (F2). Meanwhile, no core category achieved a majority in Forecast 3 in terms of the EU ETS being a likely future model for curbing industry emissions.

After this, Forecasts 4 and 5 sought to gauge the likely impacts on liberalisation in future of indirect regulations (i.e. infrastructure constraints and congestion) (F4), together with the potential for re-regulation (F5). Table 5.14 below details these two forecast results:

		Disagree 50% +	Neutral 50% +	Agree 50% +	75%+	Mean
F4	Even if liberalisation increases around the world over the next decade, indirect regulations like airport congestion and other infrastructure constraints will moderate or limit any potential benefits.	12%	12%	76%	76%	3.74
F5	Re-regulation is likely to slow efforts towards greater liberalisation for much of the global airline industry over the next decade or so.	47%	26%	27%		2.82

Table 5.14   Main Survey 2: Forecasts 4 & 5

Forecast 4 achieved consensus agreement (76%), while Forecast 5 produced divided results with a pull toward disagreement (47%). Therefore, experts thought for the most part that indirect regulations will moderate or limit any potential benefits from increasing future liberalisation, but did not view on the whole re-regulation as a particularly serious possibility.

This topic section then turned to oil prices and profitability across Forecasts 6, 7 and 8:

		Disagree 50% +	Neutral 50% +	Agree 50% +	75% +	Mean
F6	Most international airlines have not responded effectively to historically and persistently high oil prices, and are unlikely to do so in the foreseeable future.	38%	27%	35%		2.97
F7	The global airline industry would have higher levels of overall future profitability if more consistently underperforming and loss making airlines were allowed to fail and exit the industry.	15%	9%	76%	76%	3.94
F8	Profitability will be a key measure of global airline industry progress and development over the next 10 years or so.	3%	15%	82%	82%	4.03

Table 5.15   Main Survey 2: Forecasts 6, 7 & 8

As shown, experts were divided on how effective airlines have been at responding to persistently high oil prices over time (F6), but were in consensus agreement (76%) that

industry profitability would be higher if industry exit were made easier (F7). Moreover, experts were in even stronger consensus agreement (82%) that profitability will be a key industry metric in future (F8).

As shown in Table 5.16 below, attention on the survey then turned to bilateralism (F9), free market principles (F10), the EU's industry power and influence (F11), regional air blocs (F12), and finally, the inevitability of liberalisation (F13).

		Disagree 50% +	Neutral 50% +	Agree 50% +	75% +	Mean
F9	Bilateralism will still be a significant force and influence for the global airline industry into the foreseeable future.	6%	9%	85%	85%	3.88
F10	The global airline industry is not well suited to free market principles now, or into the future.	35%	24%	41%		3.06
F11	In a massive and highly complex system like the global airline industry, the EU can provide interesting insights into its likely future, but beyond that, its power and influence to shape the industry's future development is limited.	3%	17%	74%		3.74
F12	Regional air blocs (single air markets) similar to that currently represented by the EU, will become the dominant market structure for the global airline industry in the next 10 years or so.	23%	15%	62%		3.44
F13	Full (or close to it) international air market liberalisation is inevitable; the only area of real debate concerns how long it will take to achieve.	41%	12%	47%		3.06

Table 5.16   Main Survey 2: Forecasts 9 to 13

Amongst these final five forecasts in this first topic section of the Main Survey 2, Forecast 9 achieved strong consensus agreement (85%) that bilateralism will remain a significant force into the future for the airline industry. This put Forecast 9 equal second with Forecast 16 on strategic partnering (detailed later), in terms of highest levels of consensus across all 27 forecasts on the survey. Forecast 20, looked at later in this chapter, was the only forecast to return a higher result; that is, 88 percent agreement on Asian region protectionism continuing in future.

Meanwhile, experts were divided on the industry merits of free market principles for Forecast 10, but came close to consensus agreement in Forecast 11 (74%) that the EU has limited industry power and influence globally. Even so, a majority of experts (62%) in Forecast 12 did think that regional air blocs like that in the EU would dominant the industry structure in future. Lastly, experts were divided in Forecast 13 about the inevitability of liberalisation.

5.5.3 The global alliances: Star Alliance, SkyTeam and oneworld

The next topic area of the Main Survey 2 contained four forecasts (F14 to F17) covering the major global alliances; Star Alliance, SkyTeam and oneworld. Table 5.17 below provides the details and key findings of these forecasts.

		Disagree 50% +	Neutral 50% +	Agree 50% +	75% +	Mean
F14	Greater or limited future international liberalisation will not substantially impact the future development of the major global alliances.	35%	18%	47%		3.12
F15	Buying substantial equity stakes (10% or higher) in other airlines is becoming a more effective way for individual airlines to build strong and lasting partnerships than simply codesharing, global alliance membership or strategic agreements.	17%	15%	68%		3.5
F16	Strategic partnering outside global alliance structures will become a significant feature of the airline industry over the next 10 years or so.	3%	12%	85%	**85%**	4.01

F17	How would you characterise the likely future strategic position of each of the three big global alliances in 10 years or so from now?		Weaker 50% +	Unchanged 50% +	Stronger 50% +	75% +
		a. Star Alliance	12%	26%	62%	
		b. SkyTeam	30%	35%	35%	
		c. oneworld	29%	18%	53%	

Table 5.17   Main Survey 2: Forecasts 14 to 17

Forecast 14 clearly shows that experts were divided on the likely impact of liberalisation on the big three global alliances. However, a majority of experts (68%) in Forecast 15 were sure that buying substantial equity stakes was becoming a more effective way for airlines to build lasting partnerships with other airlines than "codesharing, global alliance membership or strategic agreements". More resolutely, experts were in strong consensus agreement in Forecast 16 (85%) that strategic partnering outside alliance structures would be a significant feature of the industry heading forward. Finally, Forecast 17 revealed that most experts thought the big three global alliances would either remain unchanged or grow strategically stronger in future; when combined the results were: Star Alliance (88%); oneworld (71%); and, SkyTeam (70%).

5.5.4 The North Atlantic and Asia

The third major topic section on the Main Survey 2 covered five forecasts concerning the North Atlantic and Asia (F18 to F22). As detailed in Table 5.18 below, Forecast 18 looked at US foreign airline ownership and control restrictions; Forecast 19 at the future for EU flag carriers; Forecast 20 at Asian region protectionism; Forecast 21 at the competitive standards of the big three Chinese carriers; and finally, Forecast 22 looked at the significance of China's airline industry in comparison to the US and EU.

		Disagree 50% +	Neutral 50% +	Agree 50% +	75% +	Mean
F18	US foreign airline ownership and control restrictions will not be lifted or eased any time soon.	9%	18%	73%		3.88
F19	EU flag carriers, particularly Air France, British Airways and Lufthansa, will still be the dominant European airlines for long-haul flights 10 years or so from now.	12%	15%	73%		3.82
F20	Asian countries like China, with actual or potential domestic air markets of significant size, are highly unlikely to grant unrestricted (open) market access to foreign airlines into the foreseeable future (and mostly, if not exclusively, on a bilateral basis only).	6%	6%	88%	88%	4.12

		Unlikely 50% +	Neutral 50% +	Likely 50% +	75%+	Mean
F21	The big three Chinese carriers will become global airlines on par with major international competitors within the next 10 years or so.					
a.	Air China	15%	15%	70%		3.64
b.	China Southern	12%	27%	61%		3.64
c.	China Eastern	16%	28%	56%		3.47

		Disagree 50% +	Neutral 50% +	Agree 50% +	75%+	Mean
F22	China's airline industry will rival those of the US and EU within the next 10 years or so.	9%	20%	71%		3.62

Table 5.18   Main Survey 2: Forecasts 18 to 22

All five forecasts in this section, including the three sub-options for Forecast 21, achieved majority agreement, but only one (F20) exceeded the nominated 75 percent consensus level. Forecast 18 nearly achieved consensus agreement (73%) that US restrictions would remain into the future. Similarly, Forecast 19 came just as close to consensus agreement (73%) that the major EU flag carriers will still be the dominant long-haul carriers in Europe in a decade or so from now.

Meanwhile, Forecast 20 covering Asian region protectionism achieved the survey's highlights level of consensus across all 27 forecasts; 88 percent of experts agreed that significant air markets in Asia, such as China, would continue to limit foreign airline access. Finally, Forecasts 21 and 22 specifically focused on China, and saw most experts of the view that China's big three airlines would achieve parity with international competitors (56% to 70%); and that China's overall airline industry would rival both the US and EU in the next decade or so (71%).

5.5.5 India and the global airline industry

The fourth topic division on the Main Survey 2 contained a standalone forecast (F23) on India's impact on the global airline industry; Forecast 23 is shown below:

		Disagree 50% +	Neutral 50% +	Agree 50% +	75%+	Mean
F23	It is currently not possible to accurately predict the nature and extent of India's impact on the global airline industry over the next 10 years or so.	21%	6%	73%		3.73

Table 5.19 Main Survey 2: Forecast 23

On Forecast 23 experts almost achieved consensus agreement that India's impact on the global airline industry is too challenging to predict over the next decade or so (73%).

5.5.6 The three major Gulf carriers

The final survey topic section had three forecasts (F24 to F26) on the major Gulf carriers:

		Disagree 50% +	Neutral 50% +	Agree 50% +	75%+	Mean
F24	Within the next 10 years or so, the strategy of attempting to restrict access to the major Gulf carriers will have mostly (if not totally) failed.	26%	21%	53%		3.35
F25	The three major Gulf carriers will not be able to fully realise their global ambitions without significant further international liberalisation.	15%	17%	68%		3.59
F26	In 10 years or so, which of the following alliance options is most likely to be the case for each of the major Gulf carriers?					

		Star	SkyTeam	oneworld	Unaligned	New
a.	Emirates Airline	20%	3%	23%	47%	7%
b.	Etihad Airways	24%	17%	10%	35%	14%
c.	Qatar Airways	10%	16%	58%	13%	3%

Table 5.20 Main Survey 2: Forecasts 24 to 26

Forecast 24 just managed to achieve majority support for the contention that restricting Gulf carrier access will fail within the next ten years or so (53%). In terms of the perceived need

for further liberalisation for these carriers to realise their global growth ambitions, Forecast 25 managed 68 percent agreement. Meanwhile, the status quo at the time of the survey for the major Gulf carriers and global alliance membership was reflected across Forecast 26; the most selected sub-options were unaligned for both Emirates (47%) and Etihad (35%), while Qatar achieved the only majority here (58%) for its current oneworld membership. Forecast 26 was also where a number of participants chose not to venture a response; Emirates four blank responses (12%), Etihad five (15%), and Qatar three (9%). Again, these findings support the status quo in that Qatar's future seemed more certain than its unaligned counterparts, especially the dynamic and fluid alliance situation that Etihad was demonstrably in at the time.

5.5.7   Global industry growth and expansion

The final forecast (F27) on the Main Survey 2, as shown below in Table 5.21, contended:

		Disagree 50% +	Neutral 50% +	Agree 50% +	75%+	Mean
F27	The global airline industry has a lot more 'global' yet to come in terms of more regions and countries being drawn into its architecture.	3%	20%	77%	**77%**	3.82

Table 5.21   Main Survey 2: Forecast 27

This final forecast established that most experts were in consensus agreement (77%) that there is a lot more 'global' to come in terms of international airline industry growth and development in future. The Main Survey 2 ended with an opportunity for participants to volunteer to take part in the In-Depth Interviews to follow; the last section of this chapter covers these interviews.

5.6   Stage 5: In-Depth Interviews

The final stage of this study's data collection involved In-Depth Interviews with experts (n=13) which took place from July to September 2014. These Interviews were semi-structured and designed to add richness and depth to the survey data. As detailed in *Appendix 7*, the Interviews contained six core questions and one "final thoughts" question. Interviews were conducted either face-to-face (4), via video conference using Skype (6) or Google Hangouts (1), or via telephone (2). Interviews averaged 31 minutes duration each, while the median was 34 minutes. Interviews were audio recorded, transcribed and thematically analysed.

The 13 interviewees were all sourced from the Main Survey 2. At the completion of the Main Survey 2, 17 participants left email contact details for potential involvement in the Interviews, of which 13 were interviewed. Average years of industry knowledge were 18.8 years, slightly higher than the 18.6 years for the expert participants from the previous stage. As shown in Table 5.22 below, the level of expert knowledge amongst interviewees was higher for the Very Good category (62%), and correspondingly slightly lower for the remaining two categories compared to the main surveys.

Level of Knowledge	Main Survey 1	Main Survey 2	In-Depth Interviews
Good	34%	23.5%	23%
Very Good	48%	56%	62%
Excellent	18%	20.5%	15%

Table 5.22   Level of expert knowledge for Stages 3 to 5

Geographical expert knowledge, based on the region/s of best industry knowledge, shifted in the direction of Oceania for the Interviews (31%), with Asia alongside also at 31 percent here. Meanwhile, Europe progressively fell down the rankings, from the top spot on the Main Survey 1 (23%), to second on the Main Survey 2 (23%), and finally to third for the Interviews (14%). This is shown below in Figure 5.3 for Stages 3, 4 and 5:
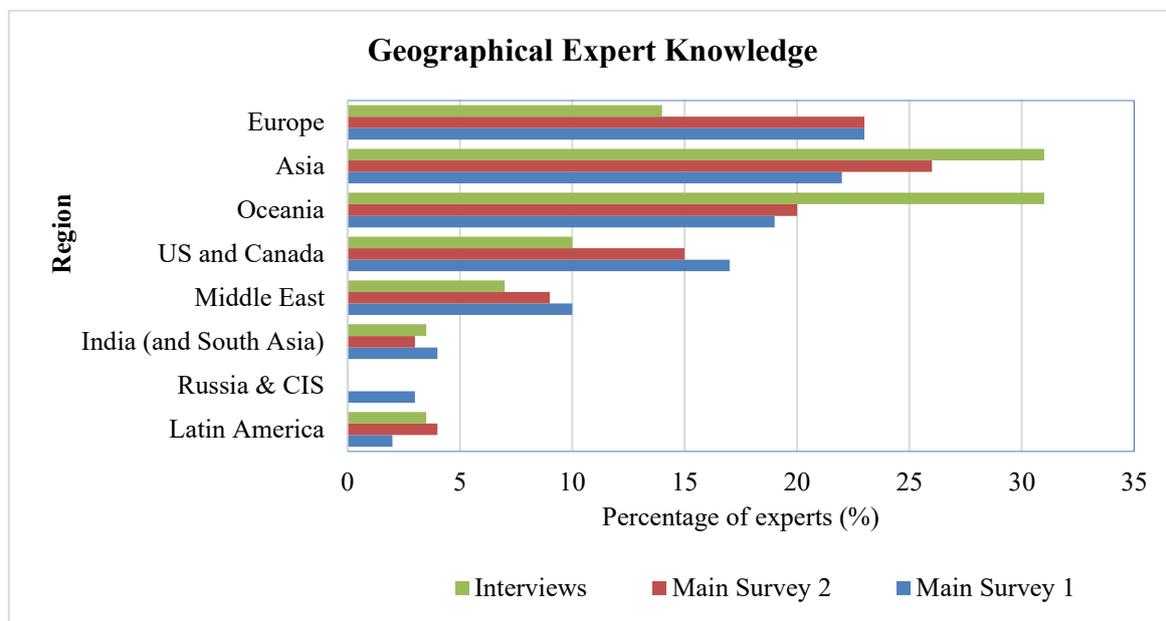
Figure 5.3   Geographical expert knowledge for Stages 3, 4 & 5

When the 17 willing to be interviewed participants are compared with the 17 participants who did not leave their contact details, the data shows little difference in their total responses across the Main Survey 2. The column graph below shows a summary of the total times each of the 17 participants who were willing to be interviewed selected strongly agree through to strongly disagree on the five point Likert-type items for the Main Survey 2, versus the 17 participants who were unwilling to participate in the Interviews. This graph reveals that there were no significant differences between the two groups in terms of their levels of agreement/disagreement (number of times each was selected), indicating that a willingness to be interviewed was not based on more strongly held opinions, thus potentially skewing the resulting data. Both cohorts were similarly positioned in terms of answer strength and spread of opinions.
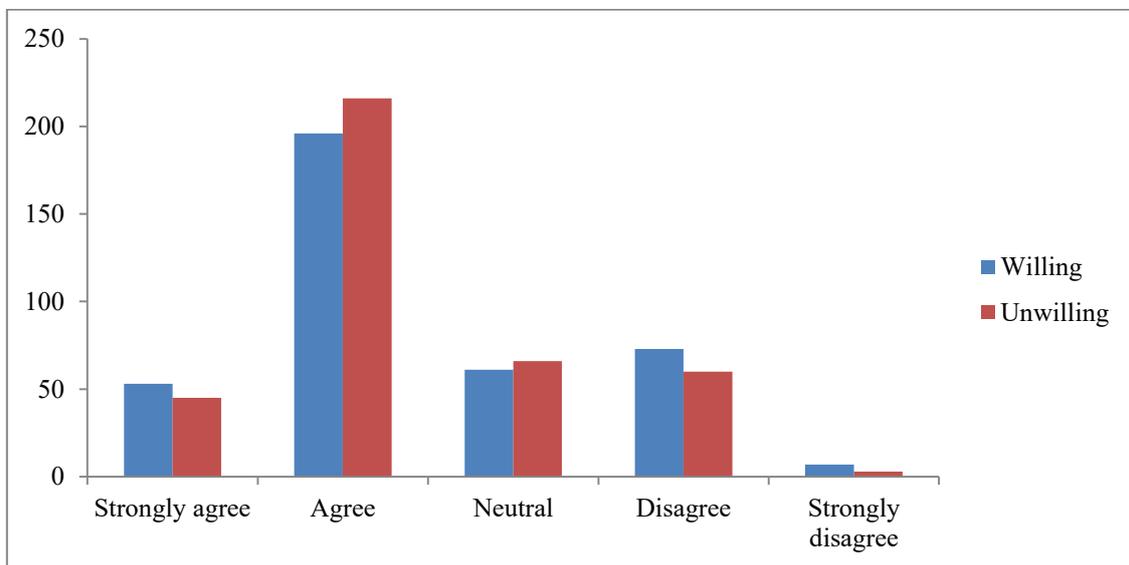
Figure 5.4   Main Survey 2: Interview willingness and levels of agreement

5.6.2   In-Depth Interview findings

As highlighted, the In-Depth Interviews were developed around six core questions (*Appendix 7*). These questions then sparked follow-up questions and clarifications at times. After the six core questions and associated sub-questions, interviewees were given a final opportunity to then provide any additional comments or observations.

5.6.3 The role of governments in the industry

The first interview question asked: "Do you think that governments generally play an important role in the global airline industry, or do you think they interfere too much?" Only

two interviewees (15.5%) thought that governments interfere too much in the industry, while a further two (15.5%) were of the view that government influence throughout the industry varies widely from country to country. Nine interviewees (69%) felt that governments, and as an extension regulation, play important roles in the industry. *Interviewee 7* summed-up sentiments for this majority group when he stated: "I can't see any other body or organisation that could play a similar successful role other than a national government".

5.6.4   Bilateralism or multilateralism in future?

The second interview question covered the future for the bilateral system; it asked: "Will the bilateral system continue to underpin the airline industry in future, or will multilateralism progressively become the norm?" A clear majority of interviewees (69%) felt that multilateralism is weakening the bilateral system, with *Interviewee 11* reflecting this when he observed that there is "a gradual shift towards multilateralism" around the world. This being the case, 31 percent of interviewees thought that the bilateral system would continue, with *Interviewee 5* capturing sentiments here when he argued that: "The reality is that the bilateral system exists for a reason" and it will not be replaced any time soon. He went on to highlight its economic benefits which he contended should not simply be "traded away".

5.6.5   The global impact of Emirates, Etihad and Qatar

The third interview question asked: "Are the three major Gulf carriers – Emirates, Etihad and Qatar – changing the global airline industry in a big way? If so, how?" A majority of 62 percent of interviewees thought that the major Gulf carriers are changing the industry, but most were also keen to place their global ascendency into a broader international context. For instance, several of these interviewees noted their wider impacts on airline business models, including marketing campaigns. *Interviewee 4* reflected majority sentiments when he argued that the Gulf carriers have raised the competitive bar, but that global airline competition was too extreme for any one airline or cluster of airlines to dominate the entire industry. A further 23 percent of interviewees did not think these carriers are changing the industry in any significant manner, with several questioning the sustainability of their policies. A final 15 percent saw the situation as mixed, with some impact but with it not necessarily being globally significant.

5.6.6   *Future China protectionism and liberalisation*

Interview question 4 queried: "Is China likely to adopt a fairly open approach to liberalisation over the next 10 years or so, or is protectionism more likely to occur?" Interviewees were divided on this question, with progressive openness into the future attracting the most support here at 38 percent. Those that were unsure, or thought "it will [not] be an either/or" situation (*Interviewee 6*), numbered 31 percent, while those who felt China would remain protectionist also achieved 31 percent support here. Polar opposite views here were encapsulated by *Interviewee 9* who contended that China "will never be interested" in openness. Meanwhile, *Interviewee 11* argued that: "I think they will have to be more open because the market demands it, and expects it".

5.6.7   *The EU's approach to liberalisation*

The fifth Interview question enquired: "Is the EU a good example of the likely international liberalisation that might take place elsewhere?" Only 15.5 percent saw the EU as definitely a model, while a further 15.5 percent were unsure. In contrast, 69 percent of interviewees did not think the EU was a future liberalisation model; this could then be divided into those who viewed the EU as unique (46%), versus those who simply stated that the EU was not an example (23%). This majority cohort was reflected in the views of *Interviewee 13* who maintained that: "The mechanisms which brought the European Union into a multilateral free market aren't, to be fair, in other parts of the world".

5.6.8   *Profitability as an industry metric*

The sixth and final key topic question during the interviews asked: "How useful and insightful is profitability as a metric of global airline industry health and development, given the industry has struggled historically to achieve consistent or high levels of profit?" A majority of interviewees (54%) thought that profitability is an important and valuable metric for the airline industry. For example, *Interviewees 4* and *9* emphatically stated: "Absolutely, absolutely". A further five interviewees (39%) did not see profitability as pivotal because, according to *Interviewee 2*, the airline industry represents "almost a classic public good", while *Interviewee 1* felt that air transport "has become a necessity". A final interviewee, *Interviewee 7* (7%), saw huge profit fluctuations, along with other big and dynamic industry numbers, as merely "the nature of the airline industry".

5.6.9 Final comments and observations

The interviews ended with the question: "Any final comments or observations?" Three interviewees had nothing to add (23%) here. Climate change was mentioned twice, while alternate fuels was also raised on two separate occasions. *Interviewee 8* raised concerns that "air travel is going to be the exclusive right for rich people only again" if the industry keeps being taxed the way it is, including environmental taxes and levies. Similarly, *Interviewee 4* thought that the US airline industry in particular is "bifurcating into sort of tourist versus business class". Issues and topics to receive a single mention by one interviewee only were:

- The increasingly importance of customer service for the industry;
- The next oil shock;
- The crucial role played throughout the industry of leadership;
- The ongoing growth and impact of low cost carriers (LCCs);
- Industry skills shortages and a lack of planning for their impacts;
- Profitability will be a big industry challenge in future; and
- It will be intriguing to see how the major Gulf carriers develop in future.

5.7 Conclusion

This chapter detailed the findings from all five stages of this study, including conclusions and feedback from the Pilot Survey. The first stage Workshop and second stage Pilot Survey played important roles in honing the overall focus of the research study, and in establishing the boundaries of the subsequent main surveys and Interviews to follow. These two initial stages also revealed the pivotal role that politics plays in the global airline industry, and furthermore, that liberalisation and protectionism are equally important factors and forces in unearthing deeper insights into where the industry is likely headed in future. Geographical location also surfaced as a central theme across both these initial stages of the study.

Following on from this, questions and forecasts across both main surveys revealed a fairly even mix of consensus agreement of 75 percent or higher, majority agreement below this, and divided opinions. Likewise, the 27 forecasts on the Main Survey 2 resulted in seven forecasts achieving consensus agreement set at 75 percent or higher, while a further five forecasts got to within one or two percentage points of this. Remaining forecasts were either majority agreement considerably below consensus level, or reflective of divided opinions.

The In-Depth Interviews reflected and elaborated on this earlier distribution of agreement, neutrality and disagreement found across the main surveys. The Interviews helped to reveal that liberalisation and protectionism are not viewed for the most part as mutually exclusive, nor was one seen by most participants as more positive or ideal than the other. Situational context plays an important role here for most participants, including based on varying geographical regions. It is to these and other core realities illuminated by this research that the thesis now turns. Discussion and analysis of the results of this study are covered in Chapter 6 to follow, with overarching findings and conclusions then detailed in the final Chapter 7.

Chapter 6: Discussion of Results

6.1   Introduction

The preceding chapter detailed the results from across the five stages of this study, and this chapter discusses and analyses those findings. The discussion and analysis presented here is structured on an overarching thematic analysis (see *Appendix 8*) that anchors to each of the four research questions (see Chapter 1, section 1.4). Each research question is underpinned by three key themes, along with a number of associated sub-themes, all of which emerged from the data. This design and process allowed for the extraction of key industry insights from the data, including likely future global airline industry trends and trajectories surrounding liberalisation and protectionism.

The discussion and analysis here also takes place within the context of the two conceptual frameworks employed – Porter's five forces of competition and PESTE – together with the addition of international relations and geographical location (see Chapter 3, section 3.3). This umbrella-like scaffold for data analysis provided a very effective mechanism to delve into all five stages of data collected during this study, including by providing a means to link stages together, and to interrogate the sum of the data.

The chapter begins by exploring the diversity of participant conceptualisations regarding liberalisation and protectionism (RQ1). Next, the chapter assesses the extent to which the North Atlantic and European air markets are prime examples for the industry, particularly with regard to liberalisation and protectionism (RQ2). Following this, the experiences and strategies of the three major Gulf carriers are considered in light of the likely future for liberalisation and protectionism (RQ3). Lastly, the Asian region provides a central lens via which to gauge the chances for greater liberalisation of the industry globally (RQ4). Liberalisation and protectionism play pivotal roles in better comprehending the global airline industry's future. Future global industry expansion, profitability and major players are all more holistically understood when liberalisation and protectionism are placed at the apex of airline industry analysis.

6.2   Conceptualisations of liberalisation and protectionism

Study participants converged and diverged in their views regarding liberalisation and protectionism, and these variations helped to shape and explain envisaged future scenarios for

the industry. Understanding the rationales that underpin participants' views on the topic of liberalisation and protectionism then assists in better appreciating why divergent industry futures are perceived the way they are, and what important insights can be extracted as a result.

This section is structured around three key themes that emerged from the data and is anchored to RQ1. Firstly, the main theme of situational context is covered, and begins by reporting key participant views regarding the industry's ideal regulatory future, the merits of applying free market economics to the industry, together with the rate and perceived inevitability of liberalisation, and finally, the impact of state power on the industry. After this, the key theme of sustainable air markets is investigated, whereby exogenous constraints (airport congestion and infrastructure constraints), industry profitability and industry exit are all assessed in terms of their contribution to understanding liberalisation and protectionism. Finally, the key theme of geographical expertise is explored to discover the ways in which liberalisation and protectionism, and the future of the airline industry more generally, are perceived by different participants according to regions of best industry knowledge.

6.2.1   *Situational context*

A central theme to emanate from this study's data was that of situational context whereby participants displayed an evident level of pragmatism in their views based on the merits of a given situation. This study employed a definition of pragmatism that aligns with that provided by the Merriam-Webster online dictionary. Pragmatism is defined as a noun which refers to "a reasonable and logical way of doing things or of thinking about problems that is based on dealing with specific situations instead of on ideas and theories" (Merriam-Webster, 2016).

This key theme was demonstrated by a wide range of interviewees who observed that the global airline industry reflects a heterogeneous array of industry realities and priorities. For instance, *Interviewee 5* contended that "each state internationally has a number of different issues to contend with, and none of them are quite the same". States clearly have "different views and conflicting interests" when it comes to the global airline industry (Lykotrafiti, 2015, p. 94). Out of this main theme emerged three sub-themes; one covering ideological preferences, another looking at the progression of liberalisation (i.e. its perceived rate and inevitability), and a final sub-theme covering state power (i.e. sovereignty and bilateralism).

Economic/Political ideological perspectives

Main Survey 1, MCQ 7 asked participants (single response format) to select the political/economic position which best captured their view of the global airline industry's ideal regulatory future. As shown below in Figure 6.1, pragmatism was strongest here with just over half of the 71 experts (51%) selecting the option with a combination of regulation and liberalisation for the industry heading forward.

MS1 MCQ 7

- Significant regulation is required [government control] 13%
- Some regulation coexisting with varying levels of liberalisation [pragmatism] 51%
- Industry is imperfect and always will be with limited liberalisation outside EU [realism] 15%
- The free market should be the basis for air markets [free market] 21%
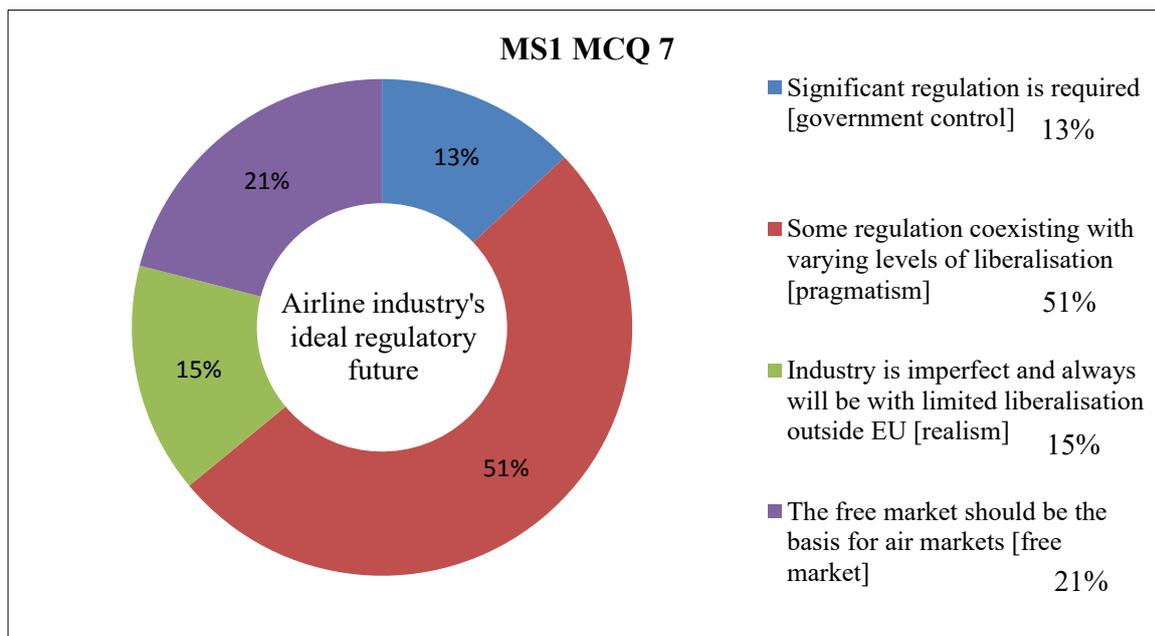
Figure 6.1   MCQ 7: Political/economic positions and IDEAL regulatory future

Meanwhile, just over one fifth of experts (21%) supported a free market approach for the industry. In many ways the remaining two categories could have been combined, however, their separation does provide valuable insights into those experts who supported significant regulation on the grounds that "it is crucial to national economic development and growth" (13%), and experts who viewed the industry for how they see it as being in reality, and not what they think it should be (15%). Either way, pragmatism based on some degree of each still attracted the most support here. Data from this study, at the very least, demonstrates that "liberalisation should not be considered a binary attribute" (Dobruszkes, Mondou, & Ghedira, 2016, p. 120).

The only paired groups to return a significant chi-square test result for MCQ 7 were experts with non-experts (The chi-square statistic was 8.145. P-value was 0.043). Non-experts were just over twice as likely to support significant regulation as experts (28% versus 13%), while

being three times less likely to support free market principles for the industry (6% opposed to 21%). Experts were clearly more in favour of free market principles for the industry. The result for MCQ 7 above is not as dramatic as it might first appear. It would seem that this difference, along with the later grouping of free market supporters and sceptics for Forecast 10 on the Main Survey 2 (looked at below), did not lead to much difference in the way that each group responded to questions and forecasts throughout. Political and economic ideological preferences and stances did not appear to influence, for the most part, how participants responded to questions and forecasts.

Free market principles and the industry's future

Situational context, and its relationship with the ideological perspectives of participants, saw the development of Forecast 10 from the earlier MCQ 7. This forecast sought to establish the extent to which experts thought that free market principles suited the airline industry, as opposed to MCQ 7 which was more concerned with the ideological camps occupied by participants. Forecast 10 contended: *The global airline industry is not well suited to free market principles now, or into the future.*

	F10	
Mean		3.059
Median		3
Mode		4
Standard Deviation		1.071
Sample Variance		1.148
Kurtosis		-0.912
Skewness		-0.123
Range		4
Minimum		1
Maximum		5
Sum		104
Count		34

Chart: Forecast 10
- Strongly agree: 6%
- Agree: 35%
- Neutral: 24%
- Disagree: 29%
- Strongly disagree: 6%

LEVEL OF AGREEMENT: 41% (DISAGREEMENT: 35%)
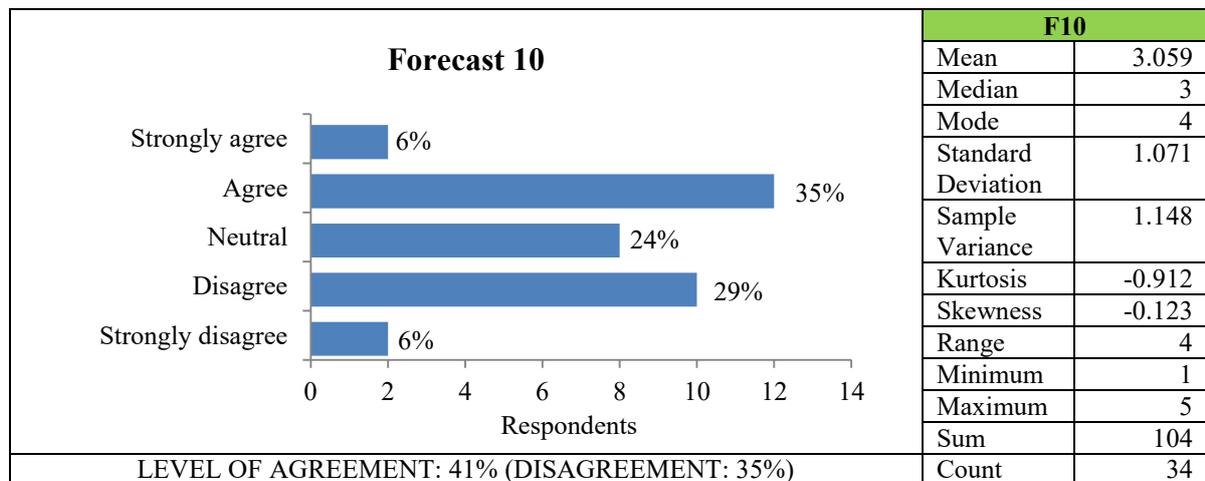
Figure 6.2   F10: The global airline industry and free market principles

What is initially obvious here is the split distribution. Included in this, nearly a quarter of experts (24%) chose to remain neutral, while only two respondents each (6%) opted for the strongest level of either agreement or disagreement. Evidence across the two main surveys (and Interviews) suggests that a divide indeed does exist in aviation between those who favour open markets, and those who prefer more closely regulated markets (Rhoades, 2008). However, a third group who think it varies according to the individual market in focus also

represented a significant cohort. In this manner, participants occupied various key points along a continuum of opinions, and not simply the ends or opposing sides of an argument or issue. Again, support for both free markets and regulation remained situational for many participants in this study, and not an either/or construct.

Thus, some participants argued that opening-up air markets would rationalise capacity, while others contended that a degree of protectionism (including regulatory oversight) ensures that capacity is not allowed to be added in ways that would generate substantial market imbalances. This latter view correlates well with those in the literature who contend that "a *degree* of liberalisation" (emphasis in original) needs to "be acknowledged and computed" before any assessment of liberalisation's progress or future prospects can be made (Dobruszkes et al., 2016, p. 120).

Progression of liberalisation

A second sub-theme to emerge from the overall main theme of situational context was that of the progression of liberalisation. This sub-theme emerged at the Workshop where all four participants were of the view that future liberalisation would be patchy and uneven. This data then led to the development of MCQ 8, which covered the perceived rate of liberalisation, and also saw the formulation of Forecast 13 gauging the inevitability of liberalisation. MCQ 8 asked participants to make a value judgement when it queried: *Globally, at what rate is international liberalisation currently progressing at?* The largest single cohort of experts (46%) opted for the pragmatic response of "about right"; a further 39 percent selected "too slow", with the remaining experts selecting either "too fast" (9%) or "no opinion" (6%). The relative directional pull here towards progressively increasing liberalisation amongst 85 percent of experts is by no means unsurprising.

Inevitability of international liberalisation

Expanding on the progression of liberalisation sub-theme was the related topic of the perceived inevitability of liberalisation in future. Forecast 13 sought to establish the extent to which experts felt liberalisation is inevitable; it contended: *Full (or close to it) international air market liberalisation is inevitable; the only area of real debate concerns how long it will take to achieve.* Like the free market principles forecast (F10), this forecast also resulted in a split distribution, although with evidently less neutrality.

	F13	
Mean	3.059	
Median	3	
Mode	4	
Standard Deviation	1.043	
Sample Variance	1.088	
Kurtosis	-1.440	
Skewness	-0.123	
Range	4	
Minimum	1	
Maximum	5	
Sum	104	
Count	34	

Forecast 13

LEVEL OF AGREEMENT: 47% (DISAGREEMENT: 41%)
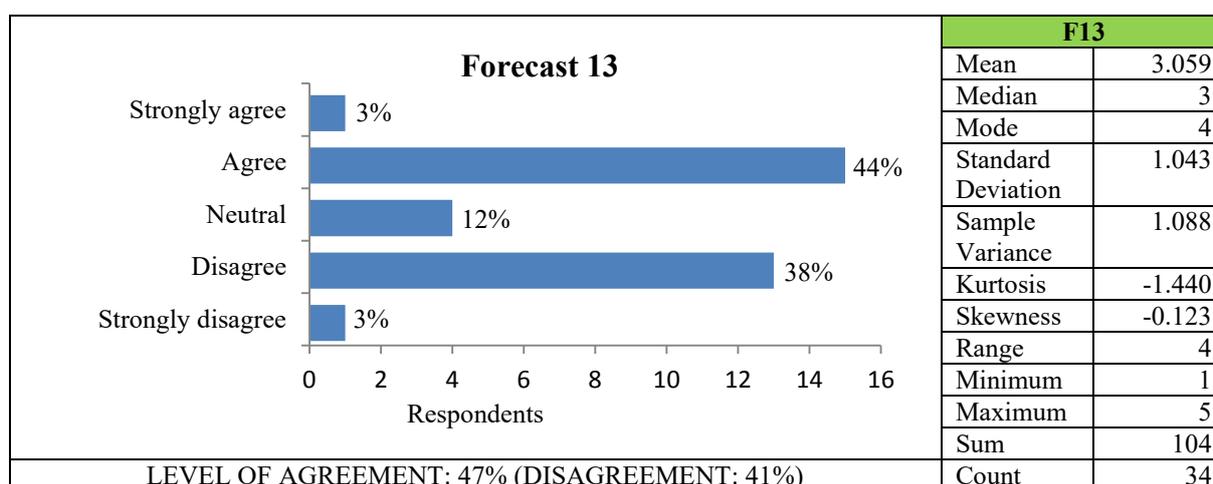
Figure 6.3   F13: The inevitability of international liberalisation

The results here further suggest that many experts adopted a pragmatic approach that views regulation and liberalisation as being able to successfully coexist, rather than being mutually exclusive. The forecast did state "full (or close to it)…liberalisation" in an attempt to differentiate between those who view widespread liberalisation as the end game, compared to those who see liberalisation as just one part of the overall mix in future. The two strongest categories here only received one response each.

Experts were in more agreement here for the inevitability of liberalisation (47%) than they were supportive of free market principles in Forecast 10 (35%). They were also less neutral here in Forecast 13 (12%) compared to Forecast 10 (24%). Thus, free market principles should not be seen as synonymous with liberalisation, as the latter can be achieved without necessarily creating a free market. There are evidently multiple ways "to implement liberalization" (Lykotrafiti, 2015, p. 94), with bilateral liberalisation being an important case in point (Forsyth, 2012; Horan, 2010). Forecast 13 simply sought to establish how inevitable participants thought more extensive global liberalisation was, with any attempt to gauge bilateral liberalisation's progress requiring a country by country treatment to be accurate.

One significant t-test result occurred for Forecast 13 whereby experts with best industry knowledge in Oceania tended more strongly toward a mirror reverse distribution that favoured disagree (63%) over agree (25%). The T-value was 2.455. The P-value was 0.010. Perhaps such Oceania best industry knowledge experts are informed by a region that itself continues to demonstrate the limits to liberalisation, even as more open air markets in Australia and New Zealand have been actively pursued (Forsyth, 2012). One would reasonably expect experts with best knowledge in Asia to achieve a similar result if the

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broader Asia Pacific region's protectionist history were at play here (O'Connor & Fuellhart, 2014); but this was not the case.

For Oceania experts, this tendency toward being cautious, and to some extent pessimistic, about the inevitability of liberalisation, likely reflects a region dominated by Australia where pragmatic decisions, like preventing Singapore Airlines from flying to the US via Australia, and similar "international air transport policy…make achieving comprehensive international air transport liberalisation more difficult to achieve" (Forsyth, 2012, pp. 226-230). It is also the case that Oceania best knowledge experts would represent less intra-regional diversity than the much more diverse Asia and Europe cohorts, where a multitude of big countries in each reflect a plethora of interests, viewpoints and approaches to liberalisation (Gaspari, 2011; Tan, 2014).

The fact that the two groups for Forecast 13 did not significantly influence the results elsewhere throughout the other Main Survey 2 forecasts reinforces the claim that views on the inevitability of liberalisation, like support or opposition to free market principles, did not shape or influence forecasts for the most part throughout this study. The perceived rate and inevitability of liberalisation, like ideological perspectives on the subject, are not grounds to explain differing participant views across a range of industry trends and issues elsewhere; situational context overrides universal truths.

State power and air markets: National sovereignty and bilateralism

A third and final sub-theme to emanate from the key theme of situational context was that of state power; in an international air market context, the role and impact of sovereignty and bilateralism (Bartsch & Williams, 2017). In essence, multilateralism is the extent to which states are willing to enter into agreements whereby a degree of state power is diluted in favour of a collective agreement involving three or more states (Burchill, 2005). As many authors point out, state power has always been ubiquitous throughout the global airline industry since its inception (Bartsch & Williams, 2017; Havel & Sanchez, 2011b).

The overall pragmatic tendency amongst most experts, based on situational context, and with an emphasis on progressively increasing future liberalisation, was also displayed in the results for Main Survey 1, MCQ 9, which asked: *Will national sovereignty have less impact on the development of the global airline industry in the foreseeable future?*

Experts who chose "its impacts will vary and developments will be mixed" (42%) just edged out those who selected "likely, as multilateral ASAs and open skies agreements are progressively taking hold around much of the world" (39%). Only 19 percent thought: "Unlikely, as the nationality-based bilateral system of air service agreements (ASAs), along with national restrictions on ownership and control, will continue to remain strong". No significant chi-square or Mann Whitney U test results were recorded for MCQ 9. As is demonstrated many times in this study, the lowest ranked option here, although only attracting 19 percent support, varies widely when individual market contexts are focused on.

Intriguingly, this does not mean that experts overall thought that bilateralism throughout the global airline industry is likely to disappear any time soon, as demonstrated in Forecast 9 below. Experts in this study did not directly equate national sovereignty with bilateralism. Forecast 9 makes this perfectly clear, as consensus agreement totalling 85 percent was achieved (although only 9% strongly); Forecast 9 stated: *Bilateralism will still be a significant force and influence for the global airline industry into the foreseeable future.*

	Forecast 9		F9	
Strongly agree	9%		Mean	3.882
Agree	76%		Median	4
			Mode	4
Neutral	9%		Standard Deviation	0.640
Disagree	6%		Sample Variance	0.410
Strongly disagree	0%		Kurtosis	3.544
			Skewness	-1.370
			Range	3
			Minimum	2
			Maximum	5
			Sum	132
LEVEL OF AGREEMENT: 85%			Count	34
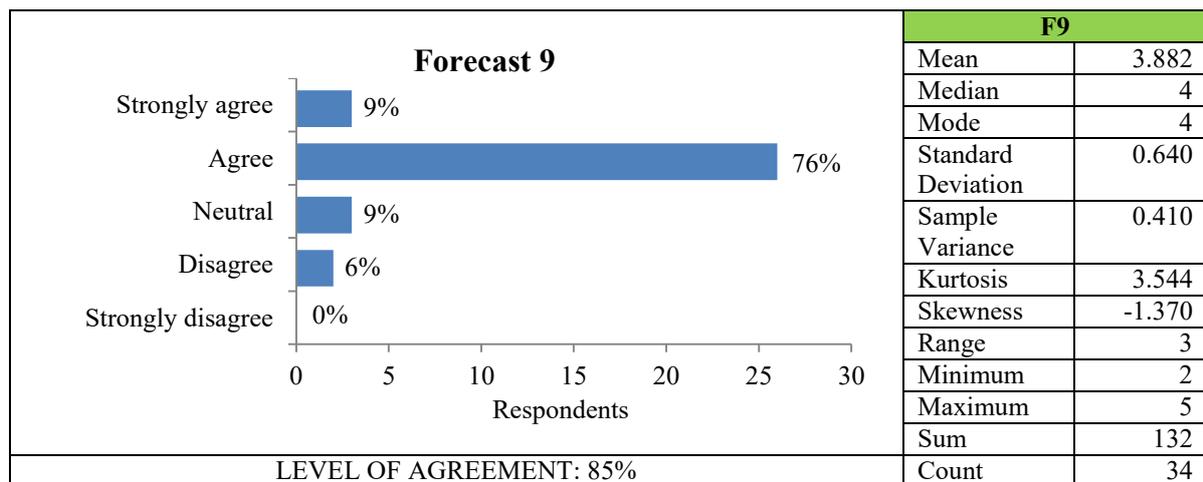
Figure 6.4   F9: Bilateralism and the global airline industry

In many ways the results above for Forecast 9 strengthen the argument that pragmatism remained the most pervasive influence for experts in this study. Experts here were not contending that bilateralism will necessarily be the most significant force into the future (the statement does not make such a claim), but they did believe it "will still be a significant force and influence". The emphatic result here, although admittedly tempered to some degree by only nine percent selecting strongly agree, does serve to demonstrate that liberalisation's evolution within the airline industry's architecture is predicated on a long and continuing history of bilateralism (Forsyth, 2012). Within this context, the results for MCQ 9 suggest

that participants still thought commercial interests might progressively moderate narrower national interests though.

One significant t-test result was achieved for Forecast 9; experts with best industry knowledge in emerging markets unanimously agreed that bilateralism will still be a significant force in future. The associated 'other' group here only managed 79 percent agreement in comparison (T-value was 1.944. P-value was 0.030). It is no surprise that experts with such best industry knowledge achieved universal agreement to Forecast 9; many air markets in emerging markets such as Russia, India and China remain fond of the perceived benefits that bilateralism is seen to confer on countries (Havel & Sanchez, 2011a). This is reflected in observations by *Interviewee 3* who argued that "bilateral agreements are really helpful" outside of Europe in connecting countries that "probably would not be connected" if market forces alone were the main driver.

National sovereignty and bilateralism continue to shape how and where the global airline industry develops (Havel & Sanchez, 2011a). This reality is readily captured by the PESTE strategic framework under 'Political', but less so Porter's five forces model of competition. This being the case, PESTE's 'Political' category still tends to lead toward domestic politics, rather than international political considerations emanating from sovereignty and the bilateral system of ASAs. Added to this, neither PESTE nor Porter intuitively account for how this global web of agreements then confers greater geographical locational advantages on some countries and cities more than others (Budd & Ison, 2017). Likewise, this ever evolving web of agreements generates choke points in high traffic areas, which in turn act to restrict industry development, in much the same way that many regulatory and taxation measures are also accused of doing (Bisignani, 2013). Air transport's economic circumstances and sustainability are considered next.

6.2.2   Sustainable air markets

A key theme to emerge across both main surveys was that of economically sustainable air markets. Put another way, the economic health and longevity of the airline industry. Liberalisation and protectionism can only be comprehensively understand by examining air market dynamics, and how these in turn act to shape attitudes toward opening up or protecting air markets. This theme revolved around three sub-themes; exogenous constraints, profitability and industry exit.

Exogenous industry constraints

To begin with, non-regulatory exogenous constraints like airport congestion and infrastructure limitations plague the airline industry in many parts of the world (Knieps, 2014). According to IATA's former head, the global airline industry is subject to an array of constraining forces that act to restrict its freedom to grow and develop. These constraints can impose regulation-like affects that can be very significant (Bisignani, 2013). Some of the biggest impacts are those related to infrastructure, which can then be subdivided into the two key areas of airport congestion, and other infrastructure constraints, such as poor airport road and rail links, air space congestion, and airport curfews (Holloway, 2008; Kaplan & Shabat, 2015).

For many cities, airports and even countries around the world, capacity constraints are certainly moderating attempts to liberalise air markets (Knieps, 2014). On this point experts were in consensus agreement. Main Survey 1, Forecast 4 made the case that: *Even if liberalisation increases around the world over the next decade, indirect regulations like airport congestion and other infrastructure constraints will moderate or limit any potential benefits.*

	F4	
Mean		3.735
Median		4
Mode		4
Standard Deviation		0.790
Sample Variance		0.625
Kurtosis		0.919
Skewness		-1.043
Range		3
Minimum		2
Maximum		5
Sum		127
Count		34

Forecast 4

Strongly agree 9%
Agree 67%
Neutral 12%
Disagree 12%
Strongly disagree 0%

LEVEL OF AGREEMENT: 76%
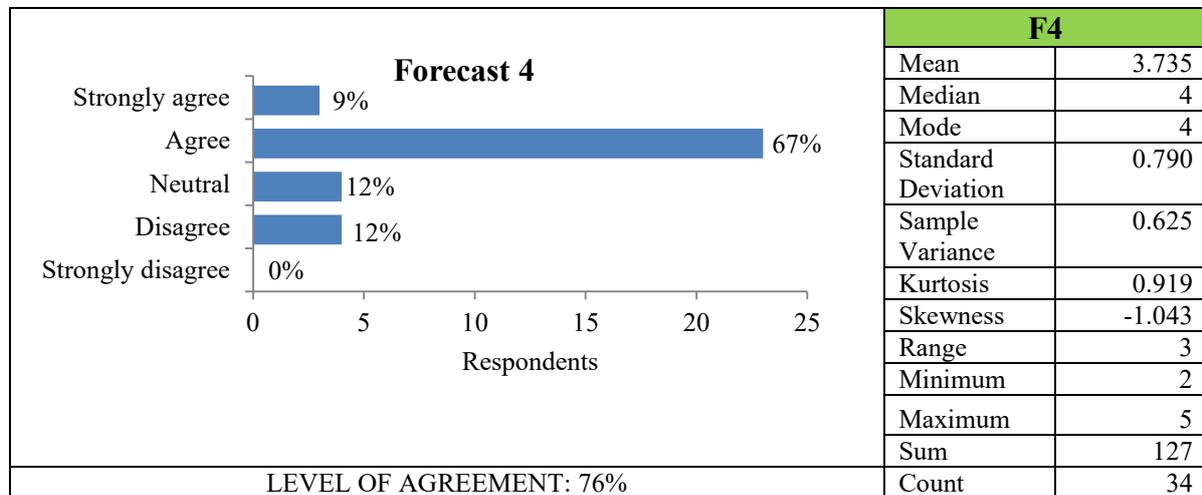
Figure 6.5   F4: Indirect regulations – airport congestion and infrastructure constraints

In many ways, this forecast initially appears straightforward and logical. The fact that a quarter of experts either disagreed or were neutral, together with consensus being just reached rather than convincingly so, suggests that exogenous constraints are by no means likely to be universal in their impacts, nor insurmountable in their challenges. This being the case, it is also true that for most experts such constraints will likely keep a lid on any future benefits

derived from increasing air market liberalisation. With global air passenger traffic forecast to continue growing for decades to come, the need to "build a lot more runways" and supporting infrastructure is clear (Bisignani, 2013, p. 219).

One grouping consisting of experts with best industry knowledge of Asia, paired with the group 'other', returned a significant t-test result (T-value was 1.792. P-value was 0.041). Those in the Asia group were in more agreement with Forecast 4 (87%) compared to the remaining experts (68%). Concerns over exogenous constraints are particularly salient in Asia at present (O'Connor & Fuellhart, 2014), and so it is understandable that experts with best regional industry knowledge in Asia would generate a statistically significant higher level of agreement for Forecast 4. The fact that those with best industry knowledge in Europe, another region well known for its infrastructure challenges (Button, 2009), did not return a statistically significant result here, might link to the fact that more pressing industry issues dominant at present, including competitive threats from the Gulf (O'Connell, 2011), along with environmental concerns and pressures (Manzini & Masutti, 2012).

The issue of exogenous constraints fits comfortably with Porter's barriers to entry. Airport congestion and infrastructure constraints are key ingredients in shaping air transport development, and act to often entrench the power and positions of established carriers (Wensveen, 2007). However, these exogenous forces are less clearly absorbed into the PESTE framework, and would likely need to fall under the 'Economic' category as they are in consequence of competitive concentration, and also relate to market power and monopolistic and duopolistic dominance (Horan, 2010).

Industry profitability

The main theme of sustainable air markets, with its links to the future prospects for both air market liberalisation and protectionism, cannot be fully understood without consideration of industry profitability. Profitability not only helps to explain support levels for either liberalisation or protectionism, but also the extent to which it can provide a window into how the industry is performing at any given point in time, including into the foreseeable future. After all, Porter's five forces framework is all about understanding "the underpinnings of competition and the root causes of profitability" (Porter, 2008, p. 87).

Profitability was first discussed at the Workshop. It is no secret that the global airline industry has historically struggled to generate and maintain sustainable profits (Pilarski, 2007). As

Interviewee 5 put it: "Thin margins don't even begin to describe it". However, this does not then mean that profit remains any less important to the industry, in fact, many expert participants were adamant that profitability is actually becoming more important. Forecast 8 proposed that: *Profitability will be a key measure of global airline industry progress and development over the next 10 years or so.*

Forecast 8 (bar chart)	F8	
Strongly agree — 23%	Mean	4.029
Agree — 59%	Median	4
Neutral — 15%	Mode	4
Disagree — 3%	Standard Deviation	0.717
Strongly disagree — 0%	Sample Variance	0.514
	Kurtosis	0.786
	Skewness	-0.567
	Range	3
	Minimum	2
	Maximum	5
	Sum	137
LEVEL OF AGREEMENT: 82%	Count	34
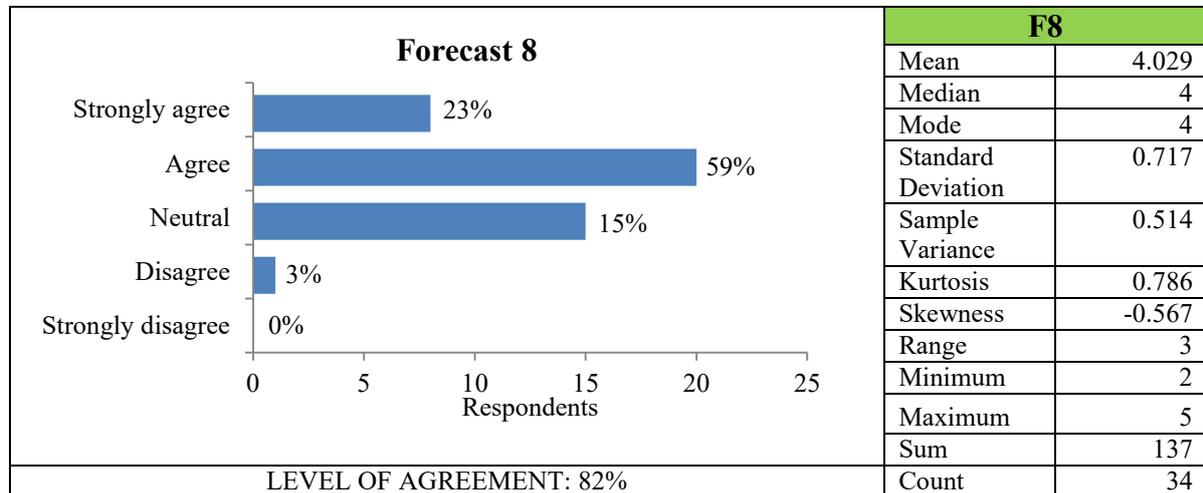
Figure 6.6   F8: Profitability as a key future industry metric

The results here lend themselves to a range of core interpretations. Just because profitability is (or increasingly will be) a key industry metric, does not mean that most airlines around the world will necessarily be profitable in future. Even so, the fact that most experts thought it "will be a key measure of global airline industry progress and development" demonstrates that, according to them, profitability will play a central role. This high level consensus agreement is evidently predicated on a plethora of perspectives and rationales. For instance, in the aviation literature, perceptions surrounding airline industry financial results vary widely "depending on who is concerned. Clearly, the industry has not been in a state of decline"; nor does it reflect a classic "maturing industry" with players enjoying "a harvesting phase" (Pilarski, 2007, p. 15).

Only one grouping returned a significant t-test result for Forecast 8; experts with an excellent level of industry knowledge were in unanimous agreement here, while good level experts were more divided between agree (62.5%) and neutral (37.5%). Interestingly, experts with a stated knowledge level of good are much less convinced that profitability will be a key future industry metric compared to those who rated themselves as having an excellent level of

industry knowledge. Those most confident in their industry expertise are equally assured that profitability is becoming increasingly relevant for the industry.

Industry exit

Looked at together with Forecast 7 below, experts maintain that profitability would be even higher if industry exit was more widely allowed throughout the world. Forecast 7 proposed that: *The global airline industry would have higher levels of overall future profitability if more consistently underperforming and loss making airlines were allowed to fail and exit the industry.* Experts were in consensus agreement here (76%).

	F7	
Mean		3.941
Median		4
Mode		4
Standard Deviation		1.013
Sample Variance		1.027
Kurtosis		-0.287
Skewness		-0.805
Range		3
Minimum		2
Maximum		5
Sum		134
Count		34
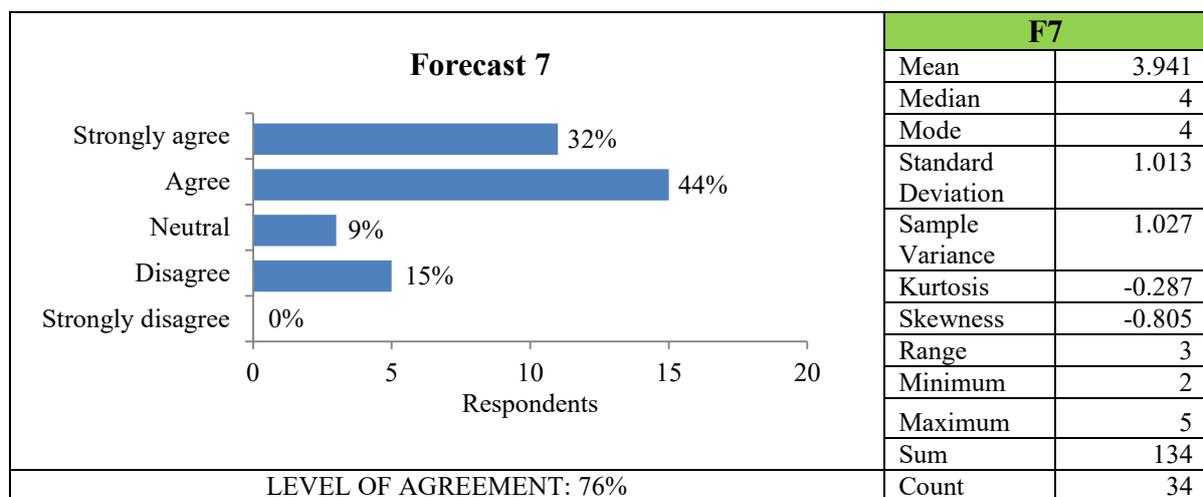
Figure 6.7   F7: Allowing industry exit for underperforming and loss making airlines

This forecast achieved the highest level of strongly agree on the entire Main Survey 2 (11 respondents or 32%), with essentially one third of experts choosing this option. This is enhanced by the fact that no expert opted for strongly disagree. Thus, the close to borderline consensus agreement here has to be considered in the more complete context of the strength of that agreement. As a reference point, Forecast 7 above achieved a mean score of 3.94, higher than the 3.88 attained by Forecast 9 covering bilateralism where consensus agreement totalling 85 percent was reached. The results here reveal that most experts would concede that the industry is not good at shedding uncompetitive and financially unviable airlines (Doganis, 2010; Hanlon, 2008).

Two groupings returned significant t-test results for Forecast 7; Europe as a region of best industry knowledge and 'other'; and the US and Canada as a region of best knowledge and 'other'. Both the Europe group, and the US and Canada group, achieved near unanimous

agreement for Forecast 7; 94 percent and 92 percent respectively ('other' in each being 56% and 68%). These two massive air markets have experienced a great deal of consolidation in recent decades, and now have arguably the most internally competitive single air markets in the world; albeit Canada perhaps to a lesser extent (Button, 2009). Therefore, it is by no means astounding that experts with best industry knowledge in these two regions would be in very strong agreement with the notion of allowing easier industry exit for financially weak or unviable airlines.

Porter's five forces framework would indicate that the mere threat of new entrants can shape competition in a market (Dobruszkes et al., 2016; Porter, 2008). Thus, without this threat the competitive benefits of a more efficient marketplace are not able to be realised (Forsyth, 2012). What Porter's framework does not intuitively account for is when there are no direct threats, but instead broader network dynamics outside a nationally bound industry that act to shape the competitive environment (Mifsud, 2011). This indeed occurs with the global airline industry (McNeill, 2014). By having broader 'Economic' and 'Political' categories, PESTE is able to discover the machinations and peculiarities that shape and drive international aviation, but where Porter is too prescriptive, PESTE is arguably too general.

Porter himself, when talking about his five forces framework, also appears to miss the reality of the international airline industry to some extent when he observes:

> The real profit killer for the airline industry has been the highly unusual combination of low entry barriers and high exit barriers. That's a rare configuration of forces. So it's not all that hard to start a new airline, but if the company goes out of business, the airplanes don't go away (Magretta, 2012, p. 202).

Porter seems to be referring to domestic airline industries here, perhaps shaped in large measure by the US industry specifically, as servicing international air markets is contingent on state agreement at both ends of a route, and that agreement is predicated on citizenship and principle place of business. Airline start-ups cannot simply enter international air markets at will (Duval, 2007). Geography matters, and it is to this that the chapter now moves.

6.2.3 Geographical expertise

A main theme to emerge as the data from this study were analysed was that of geographical expertise. This theme surfaced as a wide range of survey responses underwent various statistical tests based on geographical regions of best industry knowledge. It was discovered

that not only does best industry knowledge vary from geographical region to region around the world, but also that participant conceptualisations vary geographically as well. Although no explicit air transport research outlined in the literature to date has explored such geographical variations amongst participants, a number of studies have investigated "personal perceptions" of the airline industry, noting that "functional experience influences the perception of problems" (Schnell, 2004, p. 417).

This key theme generated two sub-themes: Firstly, knowledge dispersion – the breadth and depth of best industry knowledge on a geographical region by region basis. Secondly, geographical conceptualisations of the global airline industry whereby differing views are accounted for based on a region by region basis, and their influence on opinions elsewhere gauged.

Knowledge dispersion: Geographical expertise levels

One significant hurdle that limits a fuller understanding of events and issues within emerging airline markets is an evident lack of regional expertise and knowledge. For instance, five out of six participants who selected Africa as a geographical region of best industry knowledge on the Main Survey 1 were non-experts, while no experts on the Main Survey 2 chose Africa on this same background question. Africa's airline industry is only beginning to receive more media and scholarly attention of late (Good, Derudder, & Witlox, 2011; Karp, 2012; Njoya, 2016). Likewise, emerging air markets are progressively receiving greater scholarly attention, but it is also generally the case that the developing world receives limited investigation on the whole (Dobruszkes & Graham, 2016).

Geographical expertise invariably leads to consideration of demographics, particularly the population profile of countries, and those sub-groups within an overall population who drive air traffic demand, and also readily links to tourism demand as well (Dobruszkes et al., 2016; Itani, O'Connell, & Mason, 2014). In this sense, the traditional PESTE framework has also been utilised to generate an expanded 'Social' category by some authors to become "Socio-demographic factors" that seek to account for things like "expatriate communities" (Itani et al., 2014, p. 129). These shapers of demand certainly impact the structure of the industry, and explain for example why Dubai has sought to become a tourist destination in its own right (Henderson, 2014), and why Lebanese expatriate communities (diaspora) encourage strong air links to an otherwise insecure and unstable home country (Itani et al., 2014).

To better understand and contextualise the role and contribution of geographical location in this study it is useful to also consider the geographical spread of best industry knowledge amongst participants. A researcher's location can in turn influence the spread of expertise in a study, and this no doubt occurred to some extent here as well. In Table 6.1 below, best industry expertise for this study is represented here in terms of the amount in relation to the total expertise pool – survey respondents could select more than one geographical region of best knowledge. For instance, 39 out of 71 (55%) experts chose 'Europe'; leading to 39 out of 167 items selected being European based expertise (23%). Rank order remains unchanged in either system. The latter system is employed below.

Region	MS1	MS2	Interviews
Europe	23%	23%	14%
Asia	22%	26%	31%
Oceania	19%	20%	31%
North America	17%	15%	10%
Middle East	10%	9%	7%
India	4%	3%	3.5%
Latin America	2%	4%	3.5%
Africa	>1%	0%	0%

Table 6.1   Geographical regions of best industry knowledge

The trend of decreasing expertise from Europe and the US, and the corresponding increasing expertise from Asia and Oceania, is likely partly explained by the researcher's home base being located in Australia. As shown in the aviation Delphi study by Linz (2012), a researcher's location (in his case Germany) does seem to influence the geographical spread of expertise. His study's expertise profile was: "Europe (49%) and North America (25%), Asia (9%), South-America (7%), Africa (5%), and Oceania (5%)" (p. 30). One must also remember that aviation expertise is understandably concentrated in the major world air markets of North America, Europe and Asia in any case (Linz, 2012).

Geographical conceptualisations: Many and varied

A second sub-theme to develop out of the overall key theme of geographical expertise was that of geographical conceptualisations. This sub-theme covered the extent to which a participant's region/s of best industry knowledge shaped and influenced how they conceptualised the industry's likely future. This is relevant in this study in terms of liberalisation and protectionism because each assists in framing how and why participants

view future industry prospects through the prism of their geographical knowledge. As detailed throughout this chapter, statistically significant differences between binary groups created out of each survey's background questions, revealed that participants possess widely divergent views based on these geographic regions of best industry knowledge.

International relations (predicated on bilateralism) both reflects and reinforces the bilateral system, while geographical location confers an unequal distribution of competitive advantages and disadvantages throughout the industry, resulting in a mostly pragmatic political game of international trade negotiations (Forsyth, 2012). A range of statistically significant variations in survey responses, and collation of key Interview themes, based on geographical location of best industry knowledge, strongly suggests that how people view the airline industry is not so much influenced by their ideological preferences – chiefly the degree to which they align with the key tenants of free market principles and liberalisation – but rather the geographical location where their industry knowledge is highest.

The region/s a participant knows best about the airline industry influences and shapes their view of not only those regions rated highest, but also those regions in which their knowledge is deemed lower. Added to this, issues and considerations with industry-wide implications, notably those directly linked to liberalisation and protectionism, tended to produce statistically significant results mostly in relation to this geography of best industry knowledge. Therefore, it is not simply a case of different regions, countries and air markets having a plethora of characteristics and situational considerations, but also that how people view each region and/or issue is often determined by that person's region of highest industry knowledge. If pragmatism mostly trumped ideology, then geography of best industry knowledge, to a significant extent, best explained this pragmatism. This chapter now takes a region by region approach, beginning with the North Atlantic and Europe.

6.3   The North Atlantic and Europe: Prime international examples?

The North Atlantic and Europe are widely seen as international exemplars and likely regions of future global airline industry consolidation (Havel, 2009; Knibb, 2015). This section is structured around three main themes that emerged from the data; probability, transferability and status quo longevity; and their associated sub-themes – each is anchored to RQ2. Firstly, the key theme of probability arose whereby the likelihood of the North Atlantic becoming a

single air market was investigated. The sub-theme controlling ownership, particularly restrictions in the US, evolved from this overarching theme.

Another major theme to surface was that of transferability – is the EU model of regional liberalisation relevant elsewhere? Two sub-themes surrounded and supported this; extraterritoriality – the EU's power outside the trading bloc; and, regionalism – will single regional air blocs take hold in other parts of the world in the foreseeable future? The final key theme of status quo longevity, together with the two sub-themes of global alliances and flag carriers, sought to assess the survivability and staying power in future of major incumbent industry players, especially those in Europe.

6.3.1   Probability

The major theme probability assessed the chances of change occurring across the North Atlantic, as a first major location for wider international liberalisation (Hanlon, 2008). The North Atlantic air market and its likely future are extensively addressed in the aviation literature (Button, 2009; Gaspari, 2011; Horan, 2010). Given that it straddles two of the largest air markets in the world this is unsurprising (Bombay & Gergely, 2008; Horan, 2010). Both sides of the North Atlantic offer valuable insights into where the global airline industry is likely headed over the coming decade or so.

US ownership and control restrictions

Despite the signing of the US-EU open skies agreement in 2007, the North Atlantic is far from a free or single air market (CAPA, 2013c; Hanlon, 2008). This reality was reflected the sub-theme controlling ownership. When looked at solely from the vantage point of the US, the probability of a single air market across the North Atlantic seems low, at least one that is free of any substantial restrictions and likely to involve cabotage (i.e. domestic city-pairs). All four Workshop participants were not optimistic that the US would relax ownership or control restrictions in the near-term. The US may be a keen public advocate of open skies, but it retains some of the most restrictive controls on foreign airline ownership and control in the world today (Havel & Sanchez, 2014).

The US approach to "open skies agreements" demonstrates their important role as "instruments of foreign policy" (Lykotrafiti, 2015, p. 94), and of how US national interest in these agreements is "blatantly protective of US carriers" (Doganis, 2010, p. 57). Added to

this mix, the policy of "citizenship purity" continues to act as a cornerstone of the global industry's regulatory framework (Havel & Sanchez, 2011c, p. 2). This reality is regularly criticised for holding back industry growth and development by restricting market access to only citizen airlines (Lykotrafiti, 2015).

Most study participants were evidently not particularly optimistic about this situation changing any time soon. This is shown in the results for Forecast 18 which postulated that: *US foreign ownership and control restrictions will not be lifted or eased any time soon*.

Forecast 18		F18	
		Mean	3.882
Strongly agree — 26%		Median	4
Agree — 47%		Mode	4
Neutral — 18%		Standard Deviation	0.977
Disagree — 6%		Sample Variance	0.955
Strongly disagree — 3%		Kurtosis	1.159
		Skewness	-0.993
		Range	4
		Minimum	1
		Maximum	5
		Sum	132
LEVEL OF AGREEMENT: 73%		Count	34
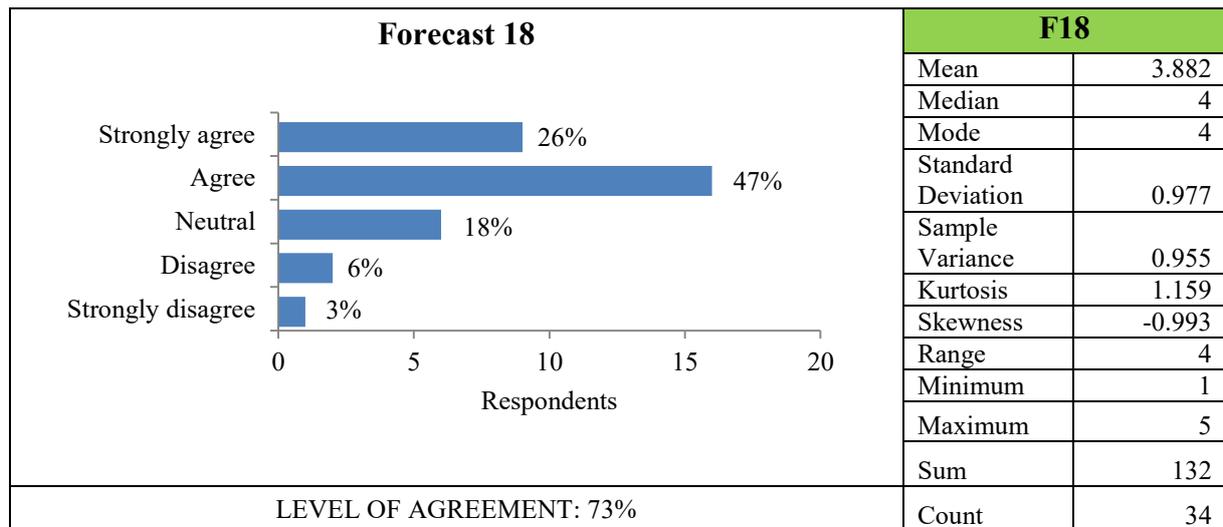
Figure 6.8   F18: US foreign ownership and control restrictions

According to most experts in this study (73%), US restrictive domestic air market policies are unlikely to change into the foreseeable future. Therefore, a truly single North Atlantic air market is likewise improbable. Three groups returned a statistically significant t-test result for Forecast 18; Oceania as a geographical region of best industry knowledge, 21 plus years of industry knowledge and free market supporters from Forecast 10. All of these groups were in stronger agreement for this forecast than their counterparts ('other', 6 to 20 years & free market sceptics from F10). Levels of agreement were: Oceania (88%), 21 plus years (86%) and free market supporters (92%).

The result for Oceania might in part be explained by the difficulties experienced by Virgin America in beginning operations in the US domestic market, and a keen interest in the media in Australia due to links with Virgin Group's founder, and investor in Virgin Australia airlines, Richard Branson (Flightglobal, 2016; Hammond, Welch, & Schlangenstein, 2016). The result for the 21 plus years group suggests that those with a longer industry knowledge

horizon tended to be more pessimistic about the chances for change in the US anytime soon. US ownership and control restrictions have a long and well documented history (Button, 2009; Chang & Williams, 2001).

Interestingly, free market supporters (from F10) were the least optimistic when it comes to the US easing or lifting such restrictions. These respondents are potentially acknowledging the difference between how air markets should be in their view, and how air markets actually are. Forecast 18 demonstrates that expert aspirations or preferences do not appear to present a serious barrier to uncovering industry realities, no matter how undesirable they may be for some. Ideologically driven scholarly works indeed exist in air transport, particularly those in favour of liberalisation (Dobruszkes & Graham, 2016), but when confronted with the diversity of the global airline industry, such positions invariably become situationally flexible and context specific, as this study and this individual forecast both demonstrate.

This forecast also reinforces the notion that the US is likely pursuing an open skies agenda that best serves its national interests, rather than the interests of the global airline industry more broadly (Rhoades, 2008). This point was specifically raised by two interviewees. *Interviewee 6* argued that the US likes to "push free markets, but really they emphasise self-interest". *Interviewee 13*, an acknowledged "free market economist" agreed, noting that the US has encouraged liberalisation since the mid-1940s, but always "as and when it suits and benefits the US carriers".

North Atlantic single air market

A key theme to emerge in this study was that of a specific single North Atlantic air market. This theme was first uncovered at the Workshop where three out of four participants (75%) were not optimistic at all about a regional single air market in future. *WS Participant 1* summed up the group's majority sentiments by simply stating "these things always fail". *Participant 4* (*Interviewee 6*) argued that "trading blocs always protect themselves, and the US will be no different in ten years from now". In contrast, *WS Participant 2* was more optimistic and, although agreeing that the US would still be protecting its domestic market in a decade from now, "in terms of the international markets coming together then yes".

Thus, although a single air market across the North Atlantic is widely discussed (Hanlon, 2008; Havel, 2009), such a notion is not strongly supported by this study's data. The North

Atlantic ranked fourth on a list of ten regions on MCQ 11 thought mostly likely to form a regional air bloc (multiple response). The top four were:

1. EU with surrounding countries (45%);
2. Australia/NZ with surrounding countries (44%);
3. ASEAN countries (39%); and
4. North Atlantic (US & EU) (25%).

These results are further strengthened by MCQ 15 (single response format) which revealed that only 16 percent of experts thought a North Atlantic single air market in the foreseeable future was either likely (13%) or almost certain (3%). The question asked: *How likely do you think it is that the US and EU will create a single North Atlantic air market in the foreseeable future?*
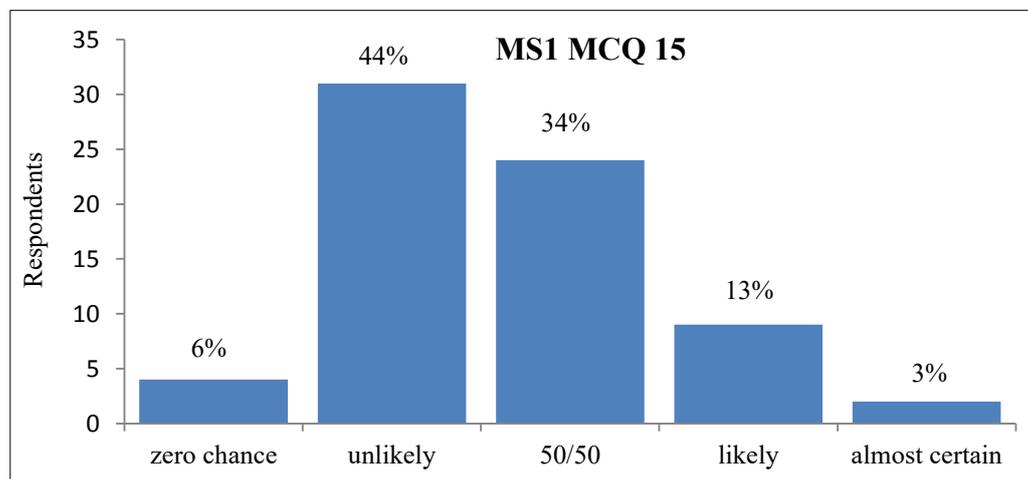
Figure 6.9   MCQ 15: Likelihood of a single North Atlantic air market

Looking west from Europe across the North Atlantic might not see dramatic industry changes in the foreseeable future, but what about further east? It is to the transferability of Europe's air transport model that the chapter now moves.

6.3.2   *Transferability*

The key theme transferability covered the extent of Europe's power as a global model of liberalisation – is Europe a powerful force, a prototype or a mostly unique experiment? Throughout the air transport literature there is an evident split between those who view Europe as a prime example of the regional liberalisation of international air markets that is

considered to be coming soon (Gaspari, 2011), versus those who view Europe's situation as mostly unique and unlikely to be replicated elsewhere (Hanlon, 2008; Havel & Sanchez, 2014).

MCQ 10 asked if the EU was *a prime example of the international liberalisation* likely to occur elsewhere in future? Most experts (57%) selected the EU as: "A prime example, but with slow, patchy and uneven progress around the world". The results for MCQ 10 were:

MS1 MCQ 10

- Definite example for the world
- Example, but slow, patchy and uneven elsewhere
- EU mostly unique with few insights for elsewhere
- EU now like US domestic market

69 expert respondents (single answer format)
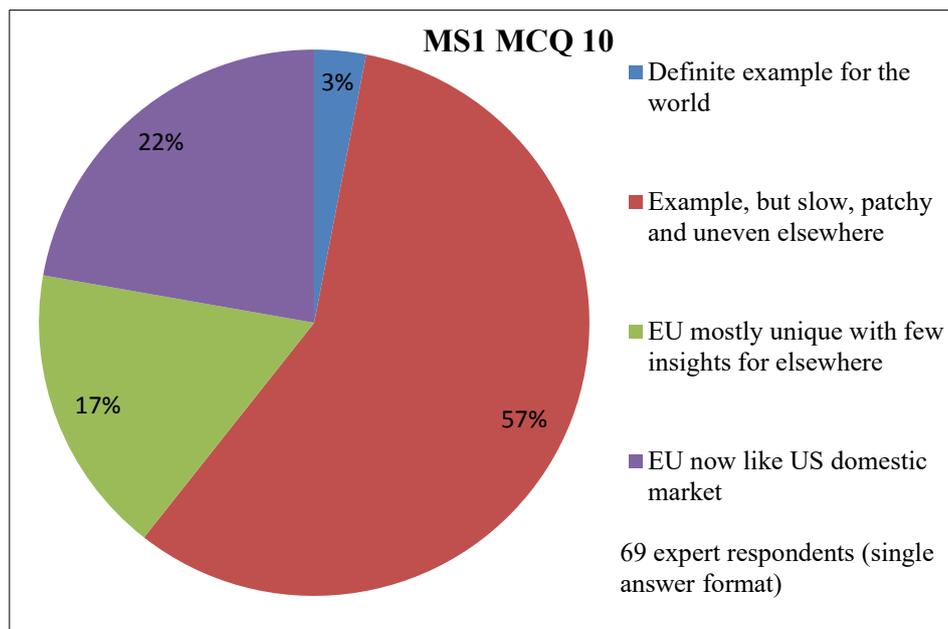
Figure 6.10   MCQ 10: EU single air market as a prime global example

The fact that the majority of other experts here chose either to select the EU as a mostly unique liberalisation context (17%), or as being more a reflection now of the US domestic market (22%), demonstrates that the vast majority of experts were not confident that the EU and its single air market are significant forces for future change throughout the industry. The EU can show the way, but that does not mean the way will be directed or controlled from Europe; results later in the chapter covering the EU and aviation's contribution to climate change further strengthen this conclusion.

How powerful and influential is the EU?

Forecast 11 attempted to gauge how powerful the EU single air market is as a force for future industry change; it postulated: *In a massive and highly complex system like the global airline*

industry, the EU can provide interesting insights into its likely future, but beyond that, its power and influence to shape the industry's future development is limited.

	F11	
Mean		3.735
Median		4
Mode		4
Standard Deviation		0.751
Sample Variance		0.564
Kurtosis		0.903
Skewness		-0.880
Range		3
Minimum		2
Maximum		5
Sum		127
Count		34

Forecast 11

- Strongly agree 9%
- Agree 65%
- Neutral 17%
- Disagree 9%
- Strongly disagree 0%

Respondents

LEVEL OF AGREEMENT: 74%
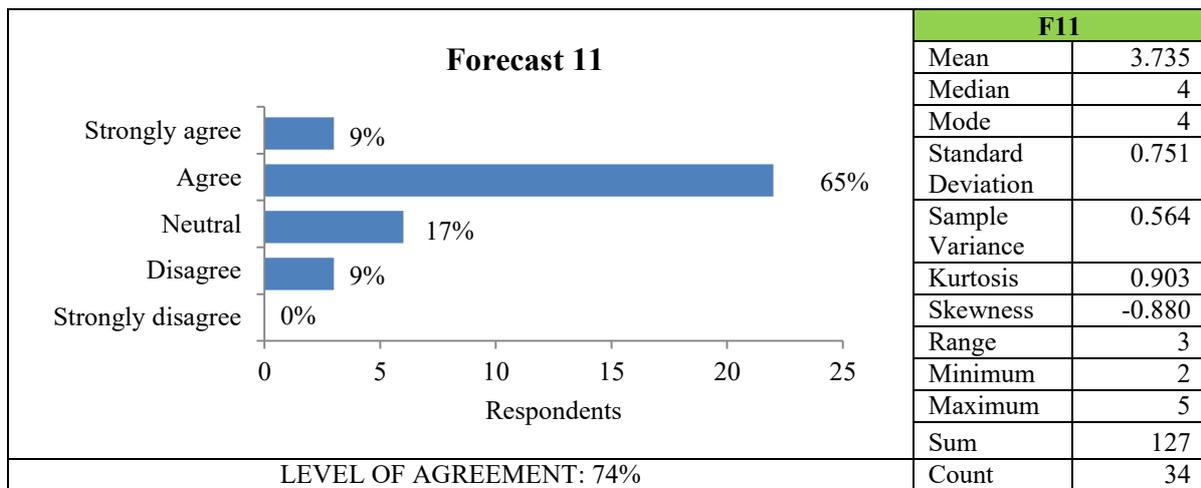
Figure 6.11   F11: EU airline industry's insights, power and influence

This forecast very nearly reached consensus (74%), although strongly agree was not a substantial part of this. This high level of agreement indicates that most experts were not confident that the EU will be a big part of the global airline industry's development in the future. This is not to say that its example has no inherent value, just that it may not be particularly direct or dominating elsewhere. Three groupings resulted in a significant t-test result for Forecast 11: Europe as a region of best industry knowledge (83% agreement); excellent level experts (almost unanimous agreement); and, free market sceptics from Forecast 10 (close to unanimous agreement as well).

Excellent level experts, who incidentally contained as many Europe as a region of best industry knowledge experts as the good level experts group did (excellent/good binary groups), were clearly of the view that the EU is more about insights than it is about being a global model (T-value was 2.99. P-value was 0.005). Likewise, and not altogether unexpectedly, free market sceptics from Forecast 10 concurred with this assessment (T-value was 1.937. P-value was 0.032). On the other hand, only 58 percent of free market supporters agreed with Forecast 11 above. This suggests that the EU as prime example is a stronger proposition for most experts than the more definitive notion of being a powerhouse for change, nor oppositely, an anomaly that deviates from the general rule.

What is arguably the most interesting out of these three statistically significant results is that for Europe as a region of best industry knowledge (T-value was 1.778. P-value was 0.042).

The fact that those experts with best industry knowledge in Europe are more inclined to agree with Forecast 11 (83%) suggests that observations and comments found throughout the air transport literature that highlight Europe's mostly unique journey to a single air market, can be said to be founded on a fairly solid footing (Hanlon, 2008; Havel & Sanchez, 2014; Tan, 2014).

Most experts seem to think that the EU is unique and will not dictate or drive events elsewhere throughout the global airline industry, especially those with highest knowledge of the region. In essence, the EU is not considered a conduit for future industry development. The added fact that excellent level experts also agreed here, the firmest category of expert in that none fell outside the defined expert category, simply reinforces the forecast. Thus, although Forecast 11 just failed to reach consensus, and with little of this based on strongly agree, it is actually a more compelling result than it might at first appear. In this sense, those with highest knowledge in Europe are displaying an equally high level of pragmatism based on situational context, whereas those experts with limited to no knowledge of Europe may be less sure about the European experiment to begin with.

Interviewee 5 repeated the question about the EU and then ventured an answer: "Is it a model? I don't think it is to be honest…it hasn't really changed a huge amount with respect to international" considerations. *Interviewee 7* agreed, noting that the EU and the Eurozone make "complete sense [but] I see the European example as an anomaly". *Interviewee 2* elaborated on this same point, arguing that "the Europeans had a sort of cultural…advantage; let's be realistic, it's taken them 40 odd years…even the aviation stuff came in fits and starts".

Interviewee 8 concurred, stating that although the EU represents a good model, it "is not easily replicable in other contexts, because of population, geography, economy and different political systems". *Interviewee 13* noted that "the [supranational] mechanisms which brought the European Union into a multilateral free market aren't, to be fair, in other parts of the world". He then went on to give the examples of ASEAN and Africa, both of which have "no effective mechanism" to push national governments into collective agreement, and therefore, to translate stated aspirations into actions. Havel and Sanchez (2011a) agree with such sentiments, contending that the US and China for instance "are equally unenthusiastic about…supranational institution-making" like that associated with the EU (p. 10).

Most interviewees (69%) felt that there was merit in taking a close look at the European airline industry and single air market, but stopped short of labelling it a global model to be wholly replicated elsewhere, or powerhouse for wider industry change. This conservative and cautious approach to Europe's wider global power and influence is captured in the air transport literature as well (Button, 2009; Gaspari, 2011; J. J. Wang & Heinonen, 2015). However, this is not to infer that regional air blocs are unlikely in future, a reality explored in the next section.

Regional air blocs

The transferability theme in terms of regional liberalisation was first raised at the Workshop, then across the surveys, before interviewees were asked: "Are we headed towards a global airline industry composed of regional single air markets?" In this context, Europe's wider industry power might be limited, but as stated earlier, its "demonstration effects" could be more pronounced (Button, 2009, p. 60). The result for Forecast 11 above is further strengthened by Forecast 12 which covered the future for regional air blocs and stated: *Regional air blocs (single air markets) similar to that currently represented by the EU, will become the dominant market structure for the global airline industry in the next 10 years or so.*

	F12	
Mean	3.441	
Median	4	
Mode	4	
Standard Deviation	0.927	
Sample Variance	0.860	
Kurtosis	-0.917	
Skewness	-0.544	
Range	3	
Minimum	2	
Maximum	5	
Sum	117	
Count	34	

Forecast 12

Strongly agree — 6%
Agree — 56%
Neutral — 15%
Disagree — 23%
Strongly disagree — 0%

Respondents

LEVEL OF AGREEMENT: 62%
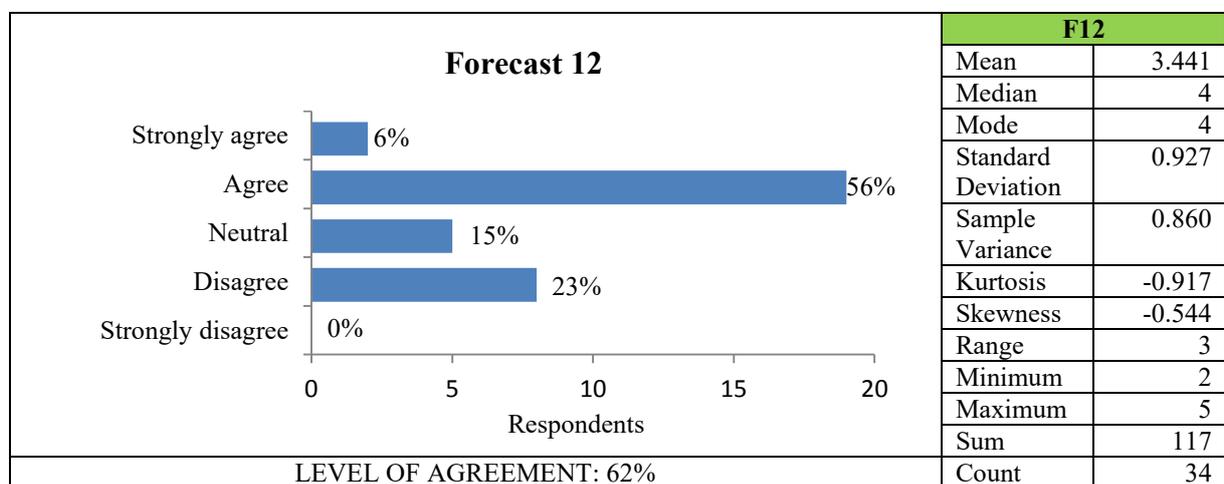
Figure 6.12   F12: Regional air blocs will become the dominant market structure

Although most experts did think that regional air blocs are likely in the future, opinion was by no means unanimous or strong, and not particularly close to consensus (62%). Nevertheless, only about a quarter of experts actually disagreed with this forecast (23%), and none strongly. When considered with Forecast 11 earlier, Forecast 12 here is reaffirming that

the EU does provide valuable insights, and furthermore, that regional single air markets are definitely going to be part of the global airline industry's future. As well, use of the phrase "dominant market structure" does not mean experts who disagreed here thought that regional air blocs would not feature at all, just that they might not necessarily dominate the structural industry landscape. Again, most experts thought that they will be the dominant structure in any case.

If the nation-state is to be mostly superseded by trading blocs in future, the experiences of the EU amongst others indicate that barriers have actually "been raised *between* blocs" even as they have be reduced "*within* blocs" (emphasis in original) (Burchill, 2005, p. 75). This view was postulated at the Workshop by *WS Participant 3* who argued that trading blocs "seem to work great if you are in, but such trading blocs are viewed differently from the outside as the barriers are usually very high". This being the case, liberalisation between air blocs would likely be more straightforward and comprehensive than on a country by country basis as is predominately the case at present. As such, geographic fragmentation across the airline industry would be better addressed (Gaspari, 2011).

Three groupings composed of geographical regions of best industry knowledge returned significant t-test results for Forecast 12; Europe, Asia and emerging markets. The Europe group achieved consensus agreement of 78 percent. Meanwhile, both Asia and emerging markets were evenly split between agree and disagree. When the Europe group's result for Forecast 12 is considered alongside that for Forecast 11, it becomes apparent that insights from the EU are likely to be substantial according to this cohort, although more as archetype than via replication or direct export. Asia and emerging markets best knowledge experts are much less convinced. This in part is shown with opposition to the EU's recent attempts at extraterritoriality with regard to aviation emissions; a sub-theme covered next.

Climate change and extraterritoriality

Aviation's contribution and response to climate change was first raised by participants on the Main Survey 1. This concern most directly links to RQ2 in that the EU would like to influence the global airline industry in its attempts to combat aviation's impact on climate change (Prum & Kisska-Schulze, 2015). The attempted inclusion of aviation into the EU's emissions trading scheme (ETS), particularly outside the EU, has raised a range of intriguing questions surrounding three core areas:

1. **Extraterritoriality** and the EU's power to regulate airlines from outside the bloc;
2. The **role of ICAO** (and to some extent IATA) in developing a workable global response to aviation emissions; and
3. The **EU's role in global aviation** more generally (an exemplar or an enforcer?).

On MCQ 5 (multiple response) experts nominated 'Environmental concerns/issues' as the top ranked likely big news story out of 16 categories for the global airline industry over the next decade and beyond (68%). The second ranked item was 'Airport congestion (including slot allocation)' (58%); then, 'The continued rise of the major Gulf carriers' (55%); and finally, 'Infrastructure constraints' (52%).

This data then generated three forecasts on the Main Survey 2. These forecasts sought to establish the perceived importance (or desirability) of the global airline industry responding to climate change (F1); the likelihood (or probability) of the industry developing an effective response (F2); and lastly, the suitability (or feasibility) of the EU's emissions trading scheme (ETS) as a model to do so globally (F3). In this manner, the issue of climate change and the airline industry was employed as a means to assess how a global issue impacting the industry could be approached and dealt with. Climate change also assists in directly addressing RQ2, as it provides a sense of whether the industry will follow Europe's lead, or opt for a different path in future.

The results for each of these forecasts revealed that experts were almost in consensus agreement that "it is vitally important for the industry to develop a comprehensive response to climate change" in Forecast 1 (73%), but were less certain in Forecast 2 (53%) that the "industry will develop a comprehensive response over the next 10 years or so". Finally, Forecast 3 covering the EU's ETS, only managed to attract half of the experts (50%) who agreed that it was "a likely future model of how to deal effectively with global airline industry emissions". The remaining experts in Forecast 3 were fairly evenly split between neutral and disagree (although only one strongly). The need for action is evidently clearer in these results than the precise plan of action to be followed.

MS2 F1, F2 & F3

Legend:
- F1 - Desirability
- F2 - Probability*
- F3 - EU ETS suitability

Strongly agree/agree & Highly likely/likely categories have been merged
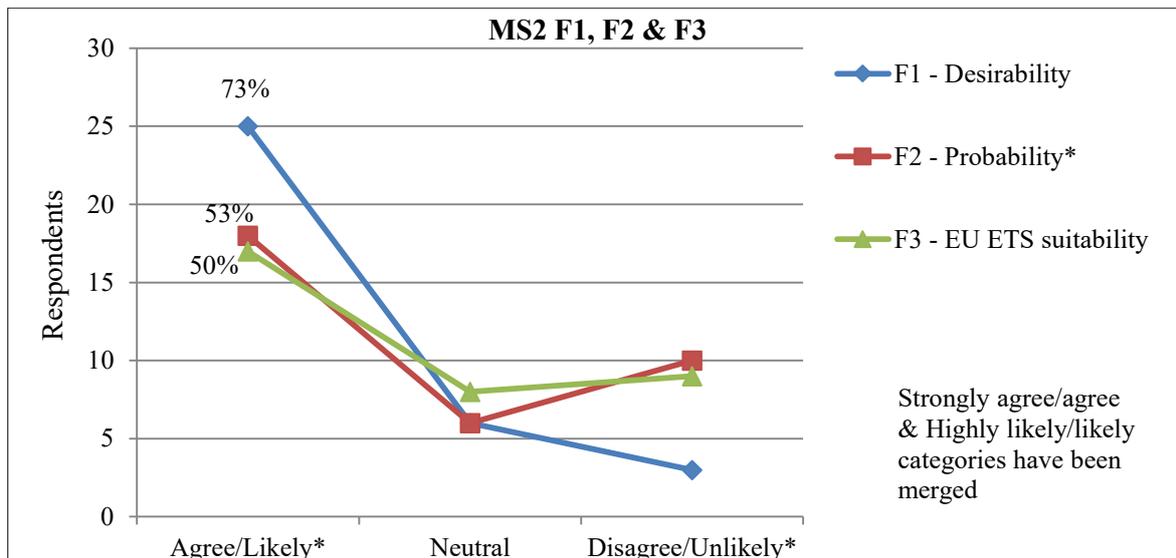
Statistics	F1	F2	F3
Mean	3.85	3.32	3.29
Median	4	4	3.5
Mode	4	4	4
Standard Deviation	1.05	1.01	1.03
Sample Variance	1.09	1.01	1.06
Kurtosis	1.61	-1.25	-0.75
Skewness	-1.20	-0.15	-0.29
Range	4	3	4
Minimum	1	2	1
Maximum	5	5	5
Sum	131	113	112
Count	34	34	34

Figure 6.13   F1, F2 & F3: The airline industry and climate change

It is not surprising that a topical issue garners support for action, but that when specific action is either rated according to its likelihood, or its suitability (feasibility), it then attracts less support, and usually also greater neutrality. People often agree that something needs to be done, but are divided and unsure over which solution is the most appropriate. That experts generally rated the chances for a successful industry response to curbing emissions as not that much greater than the suitability of the specific EU ETS model indicates that industry action on climate change, according to many experts, is unlikely to be extensive in the future. This is also reflected in the fact that Forecast 1 achieved 26 percent for strongly agree, while Forecast 2 and Forecast 3 each received only nine percent (highly likely/strongly agree).

Experts with Europe as a region of best industry knowledge achieved strong consensus agreement for Forecast 1 (83%), reflected in a significant t-test result (T-value was 1.925. P-value was 0.032). Therefore, experts in this Europe group were more inclined to think that the

industry must develop a response to climate change. Since calls for action have been loudest in Europe of late, this result is not unexpected (Havel & Sanchez, 2012). Academics and non-academics returned a strong t-test result deemed significant (T-value was 2.264. The p-value was 0.015). Academics achieved 82 percent consensus agreement for Forecast 1 (non-academics only managed 58% agreement). Given events and debates in Europe and throughout academia (Havel & Sanchez, 2012; Manzini & Masutti, 2012), it is not surprising that these two groups achieved consensus agreement for Forecast 1.

Both the US and Canada, and emerging markets, regions of best industry knowledge were less inclined to agree in Forecast 3 that the EU ETS is a likely future global model of how to effectively deal with the industry's emissions. The EU ETS has not been positively received throughout the global airline industry, least of which in the US where opposition to the concept has been very vocal (Rosenfeld, 2013). This is evident in the views on the topic expressed by *Interviewee 5* who argued that "you can't just add a tax; I mean that violates a couple of articles in most air service agreements that I have seen". Many emerging markets have also loudly opposed such moves (Havel & Sanchez, 2012). In this sense, the strongest results being achieved here is by no means unexpected. Even so, it must be remembered that agreement for Forecast 3 only managed 50 percent overall; thus, the perceived merits of the EU's ETS are less than compelling across the entire expert cohort anyway.

Aviation industry insiders and observers tend to adopt the view that the emissions generated by flying are far less than other industries (Heracleous, Wirtz, & Pangarkar, 2009), and so perhaps capacity for reductions is seen as limited. Added to this, most industry experts would be well aware that projected growth rates globally will see passenger and freight numbers expand dramatically over coming decades, and likewise the global aircraft fleet is forecast to more than double in that time as well (Holloway, 2008; O'Connell & Williams, 2012; Peeters, Higham, Kutzner, Cohen, & Gössling, 2016). More generally, the issue of extraterritoriality and the extent to which nation-states (or in the EU's case regional blocs) can compel other nations to adopt practices outside of safety and technical standards, remains a hotly debated issue in the industry (Havel & Mulligan, 2012; Silversmith, 2013).

The topic of climate change and the airline industry is also a core example of an issue that is readily and intuitively analysed and explored when assessing the industry using the PESTE framework and its category 'Environmental'. In contrast, Porter's five forces of competition model does not explicitly address such environmental factors and influences on an industry.

In using the PESTE framework to analyse the global airline industry, particularly in terms of strategic marketing, Shaw (2007) argues that "the greatest challenge posed to the airline industry by climate change [will be] the battle for hearts and minds" (p. 73). It is true that such realities can be captured by Porter's framework under the bargaining power of customers, as many may potentially avoid flying altogether, or at least reduce their flying (Shaw, 2007). Even so, this is a further example of how explicit and implicit can act to either capture an issue, factor or force, or potentially downplay or ignore it. The industry as a whole might be struggling to develop a global response to climate change, but are major players more broadly on a sustainable trajectory? The chapter now looks at their longevity.

6.3.3   Status quo longevity

A core theme to emerge at the Workshop, and then in subsequent stages of this study, in relation to both the North Atlantic and Europe, and overall in connection with liberalisation and protectionism, was that of status quo longevity. This key theme revolves around the survivability and future prospects for both the big three global airline alliances, and for major flag carriers (particularly those in Europe). The Workshop, which heavily focused on the global alliances and major airlines, especially flag carriers, then formed the foundation for questions and forecasts across the two main surveys utilised. It should be noted that the Interviews did not specifically contain a structured question on the big three alliances; nevertheless, data was collected during the Interviews that strengthened this main theme.

The longevity of the big three global alliances was also queried on MCQ 12 (single response), which aimed to assess their future prospects by asking: *Are the big three global airline alliances – Star, SkyTeam & oneworld – a permanent feature of the industry? How would you characterise their future prospects?*
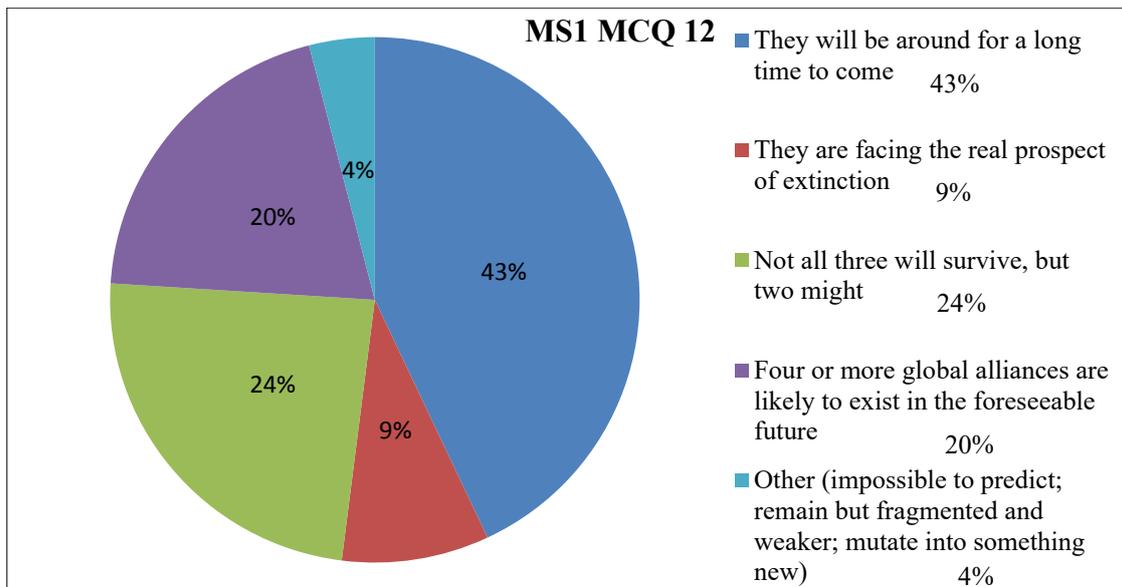
Figure 6.14   MCQ 12: The future prospects for the big three global alliances

The first point to make is that only nine percent of experts thought the global alliances "are facing the real prospect of extinction". It is true that almost a quarter (24%) felt that "not all three will survive", but it is also the case that 63 percent believed that they will either "be around for a long time to come" (43%), or morph into "four or more global alliances" in future (20%). Experts with emerging markets as a region of best industry knowledge were nearly three times as likely to select "four or more global alliances are likely in future" (36%) compared to the group 'other' (13%). This emerging markets/'other' binary grouping returned a significant chi-square test result (the chi-square statistic was 10.704. P-value was 0.013); the only grouping to do so here.

Only one expert (5%) in this emerging markets group selected "not all three would survive, but two might", versus 17 in the 'other' group (37%). The remaining options were closer. Given that a lot of non-global alliance based partnering activity has been taking place of late, much of it within secondary and emerging markets, notably by Etihad Airways (Fan & Lingblad, 2016); it is not surprising that this group here would produce significantly different responses to other geographical groups, along with the overall cohort. Emerging market experts tended to envisage more alliances, not less over time. Etihad's attempts to form a global alliance of its own, although debatable in terms of its global reach and network depth, aligns well with this finding (Kingsley-Jones, 2013a, 2013b).

Taken together with Forecast 19, on the future for major European flag carriers, where 73 percent of experts thought that these airlines would remain the dominant long-haul airlines in Europe; the future for the core elements in the industry's contemporary architecture – major legacy/flag carriers and three big alliances – seems reasonably solid heading forward (Iatrou & Oretti, 2007; Karp, 2012). Even so, the fate of the big three alliances does, according to the experts, seem less certain than the relatively firmer position for major European flag carriers; relative in that experts still failed to achieve a consensus opinion on their likely future, with 73 percent agreement.

Forecast 14 aimed to gauge the extent to which experts thought that international liberalisation (including lack thereof) might impact the future development of the big three global alliances. Forecast 14 contended that: *Greater or limited future international liberalisation will not substantially impact the future development of the major global alliances*. Results for this forecast were divided.

	F14
Mean	3.118
Median	3
Mode	4
Standard Deviation	0.913
Sample Variance	0.834
Kurtosis	-1.809
Skewness	-0.244
Range	2
Minimum	2
Maximum	4
Sum	106
Count	34

Forecast 14 chart: Strongly agree 0%, Agree 47%, Neutral 18%, Disagree 35%, Strongly disagree 0%. LEVEL OF AGREEMENT: 47% (DISAGREEMENT: 35%)
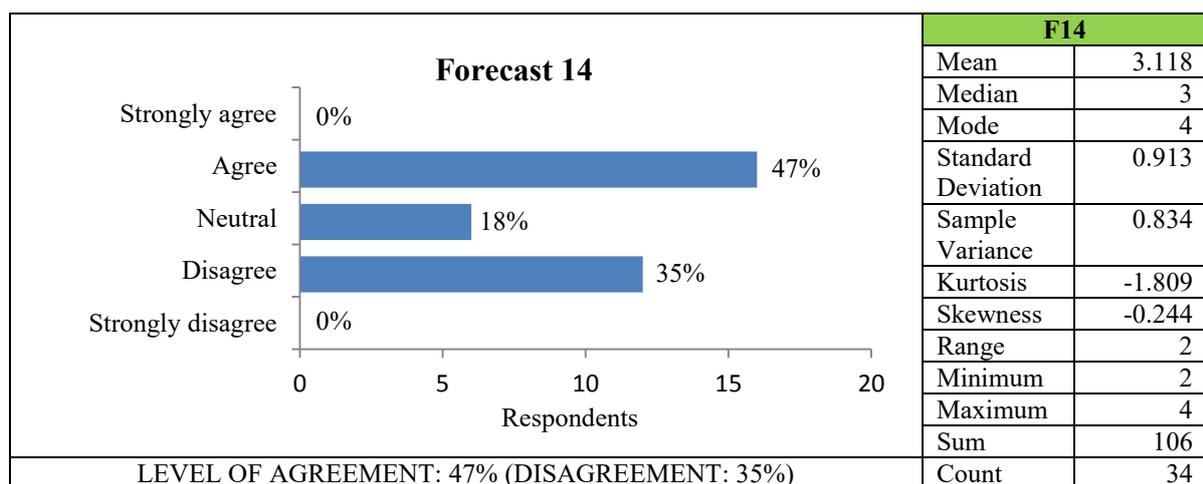
Figure 6.15   F14: International liberalisation and the global alliances

The initial point to make is that agreement and disagreement were fairly evenly divided, with no strongly selected for either. The challenge with a forecast like this is that if, for instance, disagreement was strong (say consensus level) then one still would not know if this was based on greater or limited future liberalisation (or a combination of both). This forecast sought to gauge whether or not experts thought that the future fortunes of the global alliances are intrinsically linked with the likely future direction and scope of liberalisation. The result suggests that linking the big three global alliances to liberalisation might not be applicable, while the similarly split result for the inevitability of liberalisation in Forecast 13 also

demonstrates that experts were less than sure of the future trajectory of liberalisation anyway. No significant statistical results were achieved for Forecast 14.

On the whole, the results for Forecast 14 suggest that the global alliances are not clearly and obviously linked to the future fortunes of international liberalisation, a reality and interpretation detailed in the results for MCQ 13 (multiple response), where overcoming regulatory barriers was not viewed by most experts as the primary reason such alliances exist. MCQ 13 asked: *How would you best describe the main rationale for the global airline alliances?*
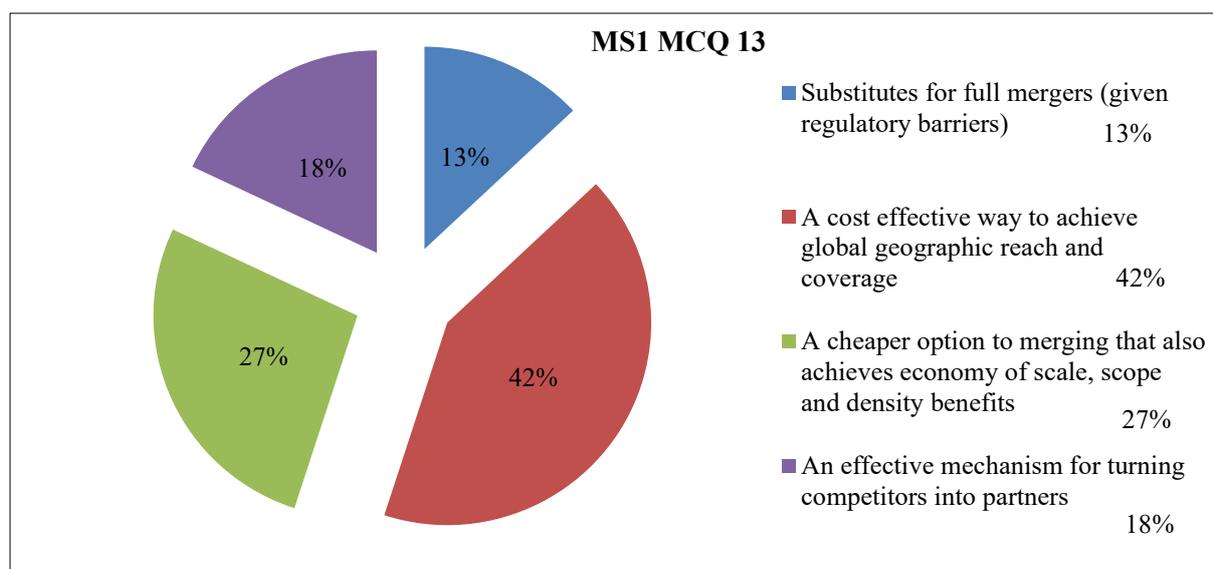
Figure 6.16   MCQ13: The main rationale for the global alliances

This question resulted in an unexpected and intriguing outcome; the lowest ranked category "substitutes for full mergers (given regulatory barriers)" (13%) challenges a view widely reported throughout the literature (Goh & Uncles, 2003). It is quite common to find the expression "poor man's merger" when researching the literature on airline alliances (Garcia-Arboleda, 2012, p. 100; Lykotrafiti, 2015, p. 93; Macara, 2009, p. 16). The results for MCQ 13 can be put in several different and perceptive ways that challenge this notion.

When results are tallied according to experts, and not total selections as above, 66 percent of experts chose "a cost effective way to achieve global geographic reach and coverage"; a proposition raised by some in the alliance literature (Gudmundsson & Lechner, 2006). Meanwhile, 21 percent of experts opted for the "substitutes for full mergers" option. However, 87 percent of total selections made were not concerned with full mergers, while 79

percent of experts avoided the "substitutes for full mergers" option (admittedly the question was not directly about mergers). Other research has found that airlines adopt the view that expanding "the geographic scope of their networks so as to achieve global scale" primarily motivates them to form and/or join alliances (Iatrou & Oretti, 2007, p. 195).

Of the 15 experts (21%) who selected the substitutes option, only one did so on its own (i.e. no other option chosen); while 11 of these 15 experts (73%) also chose the global geographic reach option. While all experts surveyed selected 1.6 items each on average, 38 (or 54% of experts) decided to only choose one option above. This cohort was divided into one for "substitutes" (3% of cohort), 22 for "global geographic reach" (58%), 12 for "cheaper option to merging" (32%) and three for "competitors into partners" (8%). Thus, cost effectively achieving global geographic reach and coverage comes out decidedly robust and prominent across an array of cohorts. The results here align well with some experts in this field who maintain that "the alliances to mergers logic is by no means a natural process" (Gudmundsson & Lechner, 2012, p. 181).

Building on the overall status quo longevity theme, Forecast 17 attempted to establish the strategic position of each alliance vis-à-vis each other; it asked: *How would you characterise the likely future strategic position of each of the three big global alliances in 10 years or so from now?*
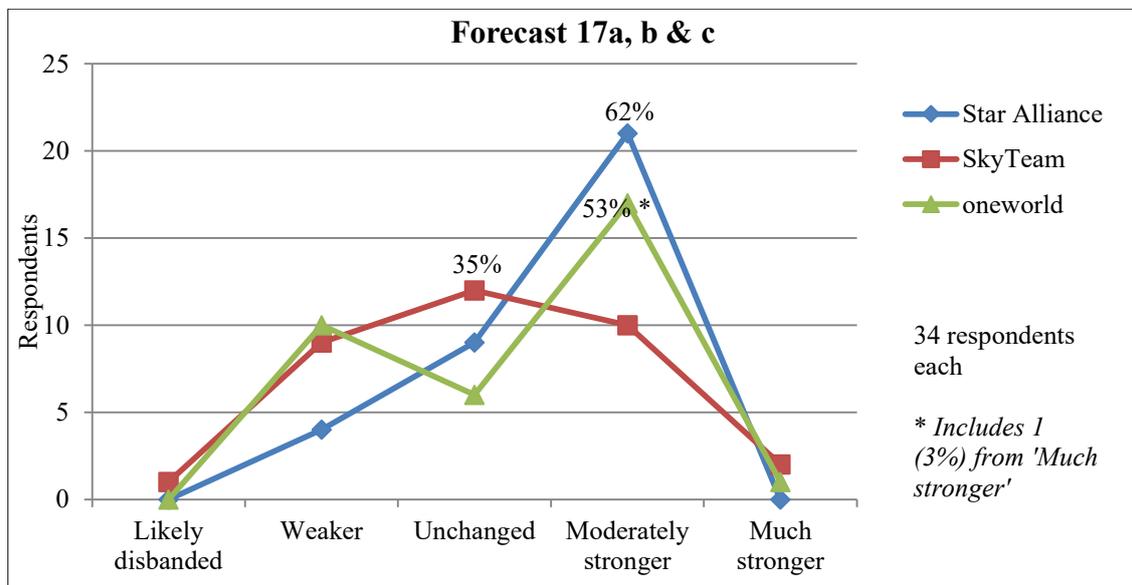

Figure 6.17   F17: The future strategic position of Star Alliance, SkyTeam and oneworld

The results for Forecast 17 indicate that experts were least confident of SkyTeam's strategic future, although only marginally so compared to oneworld. In contrast, Star Alliance was clearly viewed as being in the strongest strategic position of the three, with 62 percent of experts choosing "moderately stronger", and a further 26 percent opting for "unchanged". This meant that 88 percent of experts thought that Star Alliance is not likely to strategically weaken in the foreseeable future. At first glance, oneworld does seem to have trumped SkyTeam on this forecast; however, closer inspection reveals that they are fairly evenly matched. SkyTeam's ratings of "unchanged" (35%), "moderately stronger" (29%) and "much stronger" (6%); totalling 70 percent, are not much different to oneworld's respective scores (18%, 50% & 3%) and total of 71 percent.

What is arguably the most intriguing with this result is that oneworld seems to have exited its strategic malaise of recent years (CAPA, 2012c), likely due in large part to its recent inclusion of Qatar Airways as a member, and of LATAM Group's formation; in consequence, poaching TAM airlines of Brazil from Star Alliance membership (CAPA, 2012b; Dunn, 2013; Flottau, Schofield, & Perrett, 2012; Garcia-Arboleda, 2012). This is evidenced by *Interviewee 4* who was clearly impressed with these recent successes for oneworld, noting that "oneworld has in a way been a little bit more selective in terms of airlines that they have taken on" lately. No significant Mann Whitney U tests were discovered here for all three elements of Forecast 17.

Two additional points should be made here. Only one expert across all three alliance forecasts in Forecast 17 selected "likely disbanded" (for SkyTeam); this represented about one percent of the forecast selections (i.e. out of the 102 items selected in total). Global alliance disbandment is not a serious issue according to virtually all experts surveyed in this study. Even so, over a quarter of experts did think that a weaker strategic position was likely for both SkyTeam (30%) and oneworld (29%); Star Alliance received 12 percent. It is fair to conclude from these results that experts, on the whole, think that the big three global alliances will endure.

The most salient finding from this section on the big three global alliances and their likely futures is that extending geographic reach, predicated on overcoming the geographical constraints imposed by home base requirements, but also reinforced and solidified by hubbing, is the core aim implicit in these airline groupings. Thus, their forecasted longevity runs parallel with earlier findings covering the continuation of the bilateral system more

generally, which enshrines the notion of airline citizenship into the industry, and in consequence, creates nation bound airlines (Mifsud, 2011). Neither liberalisation, nor the rise of the major Gulf carriers (discussed later in this chapter), or any other major external factor, are viewed as threating the existence of the big three global alliances into the foreseeable future. Evidently, major airlines develop a symbiotic relationship with their geographical location, as airport hubs become positions of strategic strength, and global alliance membership becomes a viable means to add breadth (scope) to that depth (hub power).

Porter's five forces framework is very good at explaining and interpreting alliances between firms within an industry, particularly when it comes to their role as a response to the threat of entry (C. F. Goetz & Shapiro, 2012). The big three global alliances represent formidable barriers to market entry, a prime case in point being the North Atlantic air market where few new entrants have attempted to start services over the past several decades (Horan, 2010). However, the core success here of Porter's framework actually acts to undermine its ability to identify global geographic reach (i.e. market scope) as a key driver for airline international expansion. Airlines are not so much concerned with dissuading new entrants – after all the bilateral system takes care of that concern on their behalf, for the most part – but they are concerned about servicing a global market place in a cost effective and efficient manner (Iatrou & Oretti, 2007).

The PESTE framework, as on other occasions, provides overly broad categories that do not easily lead to geographic reach as a core motivating factor for airline alliance membership. 'Economics' is dominant in this regard for PESTE, but it can lead to the cost benefits of accessing partner networks, in combination with the 'Political' restrictions that reinforce the bilateral system that makes starting an international air route contingent on citizenship. Again, geographical location is left to surface in this approach and framework, rather than being clearly visible and available to assess at the outset.

The future for major European flag carriers

The industry longevity of the big three global alliances invariably and directly leads to questions surrounding the likely future for alliance anchor members in Europe; that is, major European flag carriers. The future for flag carriers, particularly those in Europe, was another emergent sub-theme that anchored to the Main Survey 1 (MCQ 6), and the Main Survey 2 as a specific forecast (F19) covering Europe.

The strategic strength, or otherwise, of major European flag carriers represents an important gauge of the future prospects for the North Atlantic. As US legacy carriers have merged to create three big airlines, and European flag carriers have clustered around three airline groups composed of partial airline mergers, the future for the latter becomes a chief consideration. Most Main Survey 2 participants did not seem too concerned that major European flag carriers face any imminent threat of industry exit. However, Main Survey 1 experts were more divided on flag carriers generally. Forecast 19 contended that: *EU flag carriers, particularly Air France, British Airways and Lufthansa, will still be the dominant European airlines for long-haul flights 10 years or so from now*.

	F19
Mean	3.824
Median	4
Mode	4
Standard Deviation	0.904
Sample Variance	0.816
Kurtosis	-0.023
Skewness	-0.679
Range	3
Minimum	2
Maximum	5
Sum	130
Count	34

Forecast 19

Strongly agree 20%
Agree 53%
Neutral 15%
Disagree 12%
Strongly disagree 0%

Respondents

LEVEL OF AGREEMENT: 73%
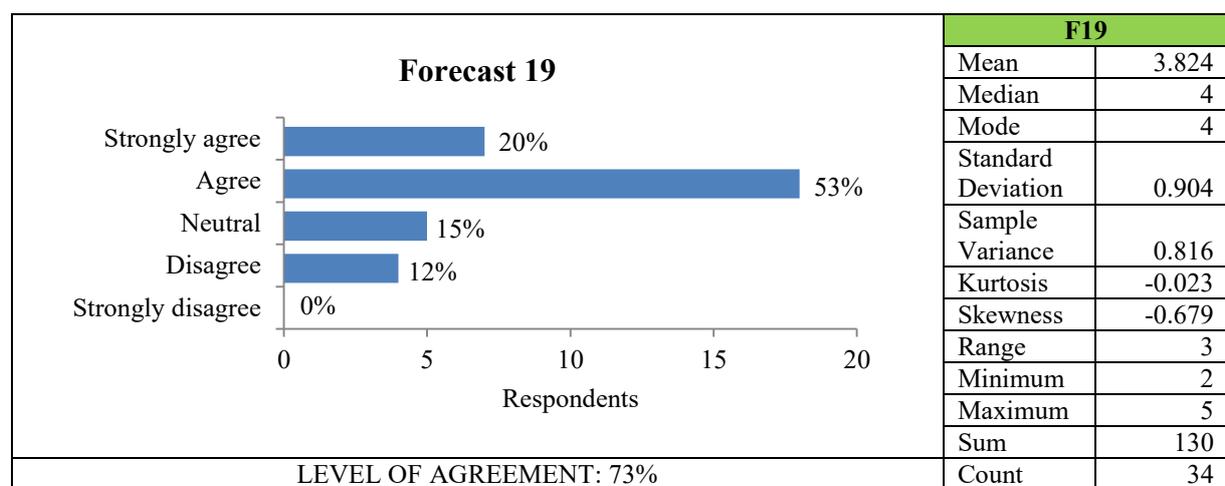
Figure 6.18   F19: The future for major EU flag carriers

This forecast almost achieved consensus, with 73 percent of experts in agreement (20% strongly). Disagreement was the least selected option at 12 percent (and none strongly), while 15 percent of experts remained neutral. One significant t-test result was recorded for Forecast 19; those with best geographical industry knowledge in Europe achieved 89 percent agreement here (T-value was 2.063. P-value was 0.024). Given the consolidation that has occurred in Europe in recent years, and the fact that major flag carriers have not disappeared, but rather strengthened in many respects (Nemeth & Niemeier, 2012), this result for those with best knowledge in Europe is understandable.

Outside of Europe, many experts were probably less sure about European flag carriers and their future based on the low cost competitive landscape internally, and the competitive pressures from the Gulf carriers externally (Alderighi, Cento, Nijkamp, & Rietveld, 2012; O'Connell, 2012). Both factors have garnered considerable media attention, helping to paint a less optimistic picture of events and issues faced by the major European flag carriers of late

(Petroff, 2017; Strickland, 2010; The Economist, 2010b). In addition, *Interviewee 9* noted that "especially in Europe [LCCs] have moved towards the quality standards and product standards of flag carriers", while the latter "are moving towards the low cost carrier model by establishing…subsidiaries". Such machinations in Europe would not be as obvious to those with best geographical industry knowledge outside of Europe. Even so, most interviewees were upbeat about the future prospects for the major European flag carriers.

Experts were more divided when questioned about flag carriers generally. Main Survey 1, MCQ 6 (single response) asked: *Are national flag carriers increasingly becoming a part of history, or are they here to stay?*

MS1 MCQ 6

- Definitely disappearing
- Most will survive
- Most will disappear
- Other

70 respondents in total

6%
11%
43%
40%
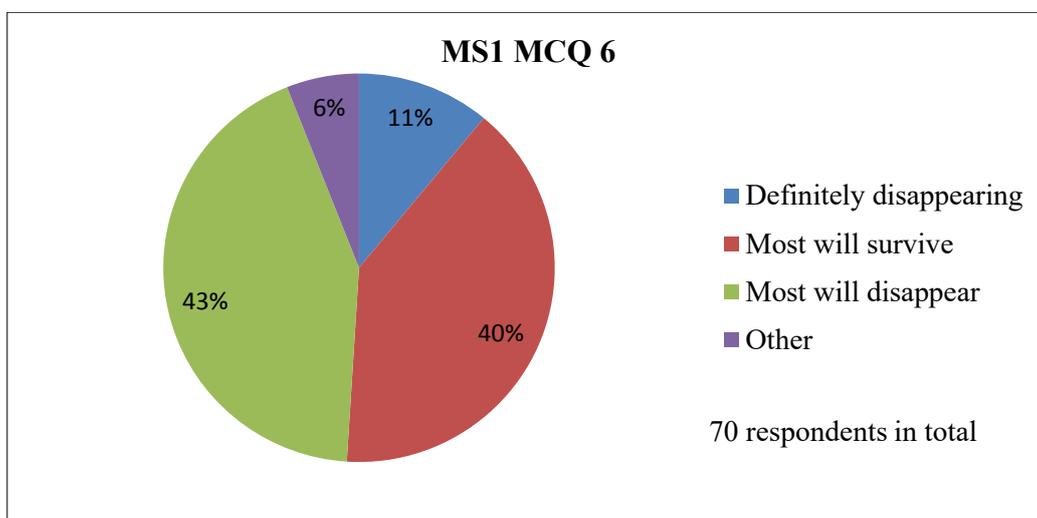
Figure 6.19   MCQ 6: The future for national flag carriers

This relatively even split indicates that experts could not forecast with any confidence, certainly nowhere near consensus, what the future holds for flag carriers around the world. In contrast, they were fairly confident, to the point of almost reaching consensus for Forecast 19 that the major European flag carriers will be around into the foreseeable future. Evidently, not all flag carriers are viewed by experts and non-experts alike as being candidates for a place on an endangered species list of world airlines (Petroff, 2017). Although the future of major European flag carriers seems assured according to most study experts, competitive challenges remain, most notably emanating from the major Gulf carriers (G. Thomas, 2010). It is to these three carriers that the chapter now turns.

6.4 The three major Gulf carriers: Emerging major industry players?

This section seeks to discover what geographical location and international relations realities underpin Emirates Airline, Etihad Airways and Qatar Airways and their rise to industry prominence and power. It is structured around three key themes; global impact, equivalence and global cooperation. Furthermore, this section also aims to apply a better understanding of these three major carriers to a wider global industry context to see what their experiences and strategies reveal about the airline industry worldwide, particularly its likely future (RQ3).

6.4.1 Global impact

A key theme to emerge in this study's data concerning the three major Gulf carriers was their global impact. This theme first surfaced at the Workshop where participants held a range of views on their industry impact and significance. *WS Participant 4* was unimpressed with their anti-union rhetoric and policies, although equally sure they illustrate that successful carriers require active government involvement (noting Singapore Airlines in this latter group as well). *WS Participant 2* was sceptical of their financials, and viewed much of their apparent "success" as governments simply "shovelling in money and playing games". Both *WS Participants 1 and 3* were keen to draw parallels with Asian carriers, pointing out how the industry is bigger than one region, including these three specific airlines.

On MCQ 5 (multiple response) 55 percent of experts thought that "the continued rise of the major Gulf carriers*"* would *likely be [a] big news stories for the global airline industry over the coming decade and beyond*. This response was ranked third highest. Amongst this list of potential industry news stories were two other geographic air markets; "the rise of the Chinese airline industry" which ranked equal fifth alongside "oil price" (41%), and "India's airline industry" ranked last (8%). Thus, a majority of study participants held the view that the major Gulf carriers would certainly maintain a high industry news profile into the foreseeable future.

There is widespread agreement throughout the aviation world and beyond that the three major Gulf carriers represent a significant contemporary industry news story (Fan & Lingblad, 2016). Headline grabbing aircraft orders and rapid growth rates are just part of their stories, with an ever growing body of academic analysis beginning to assess their industry significance and impact (Burghouwt, 2012; Derudder, Bassens, & Witlox, 2013; Krane, 2014; O'Connell, 2011).

Clearly the "meteoric" rise of the Gulf carriers over the past decade or so, indicates that their industry presence is unlikely to be reversed any time soon (Fan & Lingblad, 2016, p. 121). *Interviewee 4* cautioned that talk of global domination by the Gulf carriers is overstated given that airline "competition is just simply too extreme, and the world is just simply too big". Most expert participants felt that the Gulf carriers are significant global players, as demonstrated with MCQ 21 (single response) when asked: *How significant do you think the three major Gulf carriers (Emirates, Etihad & Qatar) are to the global airline industry?*

Experts overall opted mostly for "significant, but just one of a number of key industry stories now and into the foreseeable future" (61%). One expert grouping out of those canvassed returned a significant chi-square test result for MCQ 21; twice as many experts with Europe as a best region of industry knowledge, compared to the group 'other', thought the major Gulf carriers are "the most significant players in the global airline industry today, and growing more so" (40% versus 16%). Added to this, twice as many of the Europe group experts opted for the option "not as significant as they would have the industry believe" (13% and 6% respectively); admittedly the numbers in each group were quite low here though (5 and 2 respondents each). The chi-square statistic was 6.962. The P-value was 0.031.

The Europe group was also in more agreement than experts overall that the Gulf carriers are the most significant airlines at present; 40 percent versus 29 percent. These results for MCQ 21 are not all that surprising considering that the competitive impacts of the major Gulf carriers have been most acutely felt in Europe to date (Flint, 2011; Walker, 2015b), and the fact that the US had not yet felt commensurate impacts at the time of the Main Survey 1 in mid-2014 (Dresner, Eroglu, Hofer, Mendez, & Tan, 2015). Quantifying in what ways the major Gulf carriers are significant to the global airline industry and its likely future trajectory then becomes the next step. It is to this progression that the chapter now moves.

Location of the Gulf carriers: Centre of the world?

The geographical location advantages of the major Gulf carriers was another significant sub-theme that emerged in this study. This was particularly evident during the Workshop and In-Depth Interviews. There is no doubt that geography is a very important consideration in better understanding the ongoing development and impact of the major Gulf carriers (Alkaabi, 2014). Many industry analysts have highlighted how the Gulf carriers are located at "the geographic centre of the world" (Nancarrow, 2013, para. 4).

Interviewee 10 maintained that in their opinion it is not "the business smarts of the Gulf carriers that have made them an influence on the global scene", nor it is about money; "I think it's their geographical location…they just happen to be lucky they're the centre of the universe as it were for aviation". The Gulf carriers are also showing that Singapore Airlines, according to *WS Participant 2*, is geographically positioned a little too far south. Others in the literature concur, arguing that "Singapore is geographically situated too far west (and south) on [Asia's] periphery" (Tan, 2014, p. 263).

Interviewee 2 agreed with these sentiments, pointing out that "there's a fair bit of traffic where the Middle East guys are, [and they're] pretty well positioned". Locational advantages trump domestic population sizes. Emirates Airline, for example, has developed "a well balanced global geographical distribution of sales" that roughly achieves similar percentages of passenger traffic from each major continent (O'Connell, 2011, p. 341). The Gulf carriers are in effect "super-connectors", as the media and literature have dubbed them (Anwar, 2015; The Economist, 2010c). This results in an hour-glass shaped network that requires a balancing of connections either side of each central Gulf hub (de Wit, 2014). It must be remembered that Europe has long been considered by geographers (and others) to be positioned in a central geographical location "with good proximity to North America, Africa, and Asia" (Bowen, 2002, p. 430). However, these geographical advantages are being progressively eroded by the major Gulf carriers (Redondi, et al., 2011).

The sub-theme of geographical location and the Gulf carriers also included concerns raised about disadvantages in this regard as well. For instance, not all interviewees thought that the Gulf carriers would necessarily continue to be lucky when it comes to geographical location. Geography can constrain future growth opportunities, even if at first it generates them (Charlton, 2017). In this respect, *Interviewee 7* viewed geography as a potential issue for the Gulf carriers heading forward, arguing that: "I can't see them growing at the same rates because it's simply not sustainable – because of geographical location simply more than anything else". He questioned where future "market share can come from?" In this same context, *Interviewee 2* stated that although "on aggregate I'm sort of bullish" about the Gulf, "I wonder whether all places can grow to the same extent; whether some are going to go up, and some of them go down".

Two interviewees (15%) raised the issue of disadvantageous geographical location and the Gulf carriers in environmental and regional security terms. *Interviewee 3* questioned the

environmental efficiency of indirect routes such as through hubs in places like Dubai, maintaining that "if you really want to have the airline sector as efficient as possible, then we need to establish direct connections". Meanwhile, *Interviewee 10* observed that the major Gulf carriers are "perilously close to major upheavals in terms of that region [and] so that's a real threat to the Gulf carriers because they would just get swamped by it". Evidently, geographical location brings with it a range of pros and cons, including actual and potential (Charlton, 2017; Henderson, 2014).

6.4.2 Equivalence

Another key theme surrounding the major Gulf carriers to emerge in both the Workshop and In-Depth Interviews, and to form the basis of two forecasts on the Main Survey 2, was that of international equivalence. How similar or different are the three major Gulf carriers to other major airlines around the world? This theme moves beyond their global significance and impact, to attempt to discover their standing and strategic relevance amongst their peers. This main equivalence theme included debate during the Workshop, and differing views expressed during the In-Depth Interviews, over the extent to which governments should be involved in the industry. This overall theme saw two related sub-themes develop; national priorities and restricting access.

National priorities

The sub-theme of national priorities invariably links to issues and controversies surrounding government support for airlines, and notions of what constitutes protectionism and liberalisation. The major Gulf carriers are currently being criticised by competitors around the allegation of unfair subsidisation (Tretheway & Andriulaitis, 2015). At the first stage Workshop government backing was viewed by *WS Participant 4* as a core asset for the Gulf carriers, largely for him explaining their industry success, while for *WS Participant 2* such national investment in the airline sector was a central reason why the global industry was struggling with overcapacity and low profitability.

Protectionism, including direct and active government industry involvement within emerging markets, is often seen as a protective mechanism that assists in shielding national airlines and markets from more powerful foreign competitors (Lazar, 2011). This is evidenced when *Interviewee 8* argued that:

Especially for developing economies, and weak economies, we need to have government support because what happens with open air policy, or liberal air policy, or multilateral air agreements, all the international airlines with big budgets, more competitive status, you see they might lose one sector, but they might get profit from another, other sectors. In that way they are competing and penetrating into new markets and for these international or national airlines, they don't have that same competitive capacity.

However, government protectionism can surface in a myriad of ways. Not only can it result in substantial financial support for certain airlines, it can also lead to some governments carefully controlling air rights (Duval, 2011). *Interviewee 5* was adamant that for governments to fail to fully consider the international trade implications of air rights negotiations, such as "to trade things away without a serious effort thinking of those consequences" is simply pandering to those who "are absolutely on the bandwagon of increasing liberalisation".

The UAE, and to a lesser extent Qatar, maintain open air market policies, while their airlines have a symbiotic relationship with their host governments and cities (Henderson, 2014). These realities, combined with impressive growth rates for the major Gulf carriers, raise the question covered in Forecast 25 of whether these airlines and their growth trajectories and ambitions are intrinsically linked to international liberalisation? Just over two-thirds of experts (68%) agreed with Forecast 25, which stated: *The three major Gulf carriers will not be able to fully realise their global ambitions without significant further international liberalisation.*

	F25	
Mean		3.588
Median		4
Mode		4
Standard Deviation		0.821
Sample Variance		0.674
Kurtosis		-0.004
Skewness		-0.824
Range		3
Minimum		2
Maximum		5
Sum		122
Count		34

Forecast 25

- Strongly agree: 6%
- Agree: 62%
- Neutral: 17%
- Disagree: 15%
- Strongly disagree: 0%

Respondents
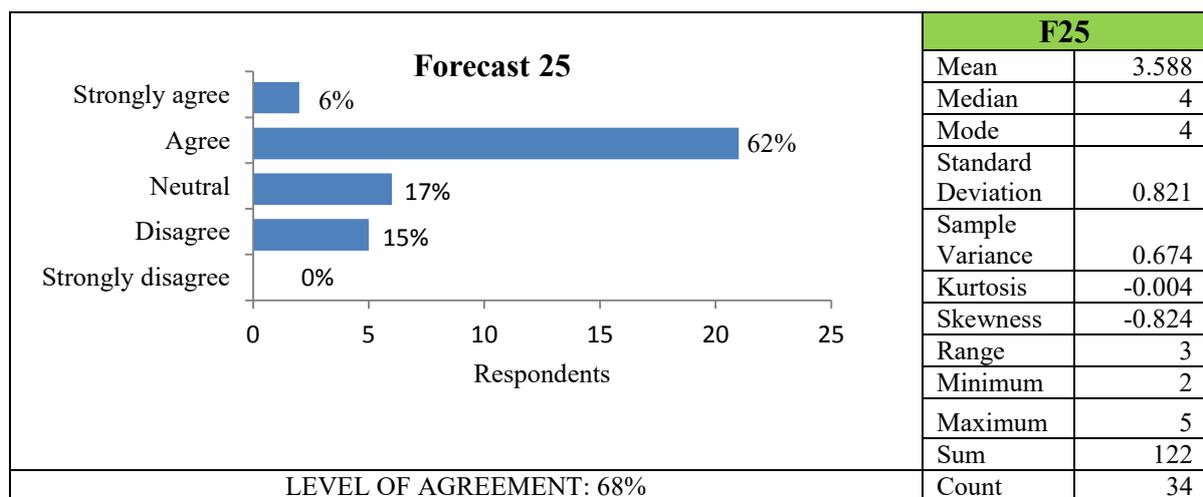
LEVEL OF AGREEMENT: 68%

Figure 6.20   F25: The Gulf carriers and international liberalisation

Despite representing a majority, the level of agreement here did not qualify as consensus (68%). The fact that neutrality attracted more support than disagreement, and none strongly, indicates that the business plans and strategies of the major Gulf carriers may yet be clipped if further global liberalisation does not occur. It should also be noted that only two participants (6%) selected strongly agree here. Irrespective of the strength of this agreement, including its failure to achieve the defined consensus level of 75 percent, this result still indicates that most experts think liberalisation is intrinsically linked with the Gulf carriers' future fortunes and trajectories.

The only key grouping to return a significant t-test result for Forecast 25 was level of industry knowledge; excellent and good (T-value was 2.062. P-value was 0.030). Excellent level experts were unanimous in their agreement to Forecast 25, although only one strongly. Meanwhile, good level experts were more divided and only managed 63 percent agreement to the forecast. Thus, the top experts in this study are convinced, though not strongly, that the major Gulf carriers will need further liberalisation to fully satisfy their future ambitions. Irrespective of whether this liberalisation is bilateral or multilateral, most experts in this study thought it will be required in one form or another if the Gulf carriers are to continue expanding their global networks.

The Gulf carriers have not actually needed multilateral liberalisation; bilateral agreements have delivered their growth to date, including liberalised bilateral agreements such as open skies with the US (Chesen, 2006; de Wit, 2014; Fan & Lingblad, 2016). This reality was highlighted by *Interviewee 13* who pointed out that the major Gulf carriers have utilised "combinations of third and fourth freedom traffic rights, which they're perfectly able to do…they're not even having to go through a liberalisation process to do this". Thus, the Gulf carriers are actually 'playing by the rules' and not distorting the playing field in this view (de Wit, 2014). Some in the literature postulate that "when governments venture into equalising geographic advantages via restrictions", competitive opportunities are replaced with an attempt at "equality of outcome"; a mostly futile task with no clear pathway to implementation (Tretheway & Andriulaitis, 2015, p. 97).

So, although most experts (68%) in this study thought that the Gulf carriers will require future liberalisation to continue growing their networks (F25), the fact that they also convincingly agreed (85%) that the bilateral system will remain strong in future (F9), is by no means inconsistent or contradictory. However, given that experts were divided on the

inevitability of future international liberalisation (F13), the future for the major Gulf carriers could yet be challenging as bilateral agreements reach capacity (where applicable), and re-negotiated agreements potentially become less welcoming and generous. The issue of restricting the Gulf carriers is discussed next.

Restricting access for the Gulf carriers

Forecast 24 below, and a follow-up question during the In-Depth Interviews, saw the development of the sub-theme of restricting Gulf carrier access, as part of the wider equivalence theme. During the final stage Interviews, the question was asked: "Are efforts to restrict access to the Gulf carriers by countries such as Germany and Canada an indication of things to come? Do such restrictions work?" Protectionist calls in Europe, and now similar growing calls in the US, suggest that open or greater access to air markets would simply hand competitive advantages to the Gulf carriers at the expense of national airlines based in those markets (Dresner et al., 2015).

On this question of restricting access to the Gulf carriers, *Interviewee 5* stressed that countries like Canada have "to look out for the net social benefit, and the economic" benefit too, of the country as a whole, not just what might be good for particular consumers. *Interviewee 9* agreed, noting that in their opinion, Lufthansa has less to gain from flying to Dubai, than Emirates has to benefit from tapping into the lucrative German market and feeding this traffic into its global network from Dubai onwards. *Interviewee 5* placed this debate into a wider context, arguing that "sometimes competition can be very bad for consumers" as rivals price others "out of the market pretty quickly at times".

Data from Forecast 24 shows that experts were not particularly confident that restricting access to the Gulf carriers would actually work long-term though. Only a slim majority (53%) of experts agreed with Forecast 24 that: *Within the next 10 years or so, the strategy of attempting to restrict access to the Gulf carriers will have mostly (if not totally) failed*.

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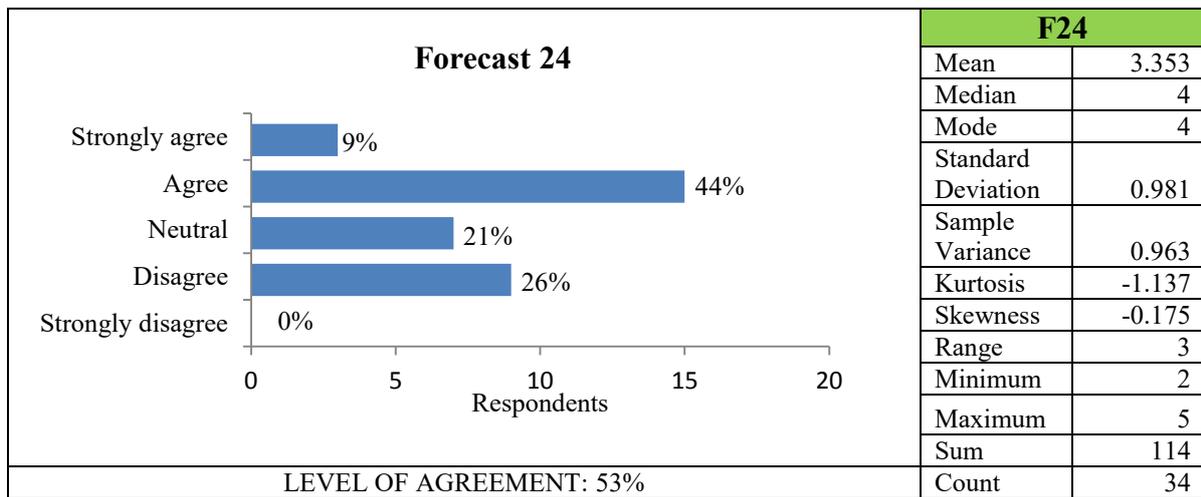|	F24	
Mean		3.353
Median		4
Mode		4
Standard Deviation		0.981
Sample Variance		0.963
Kurtosis		-1.137
Skewness		-0.175
Range		3
Minimum		2
Maximum		5
Sum		114
Count		34

Forecast 24

LEVEL OF AGREEMENT: 53%

Figure 6.21   F24: Restricting Gulf carrier access

Two groupings returned significant t-test results for Forecast 24. Excellent level experts mostly disagreed (57%), although none strongly; while good level experts were in consensus agreement (75%), though only one strongly. Excellent level industry knowledge experts were more convinced than their good level counterparts for Forecast 24 that restricting Gulf access would work; perhaps suggesting that those with a deeper stated knowledge of the global airline industry did not think restricting access is a flawed or unsustainable strategy for countries to adopt.

The other grouping to return a significant result for Forecast 24 was that of the US and Canada best geographical region of industry knowledge, together with 'other'. Those experts with best industry knowledge in the US and Canada responded to Forecast 24 in essentially mirror reverse to the overall cohort (agreement 25%; neutrality 33% and disagreement 42%). The group 'other' here was much more in agreement (68%), and less inclined toward neutral (14%) or disagreement (18%). The US and Canada region of best industry knowledge result is not entirely unexpected given Canada's ongoing policy of restricting access to the major Gulf carriers (Parker, 2012).

The fact that experts with best geographical industry knowledge in Europe did not return a significant t-test result (T-value was 0.223. P-Value was 0.412. The result was *not* significant at p < 0.05), might be explained by a greater diversity of experiences and views throughout Europe, compared to North America. Likewise, a number of European countries have warmly welcomed the Gulf carriers, hoping in the process to stimulate tourism demand and wider trade links (Sambidge, 2014).

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In addition, many experts with European industry best knowledge might view Germany's success at restricting Gulf carrier access as short-term and unlikely to be sustainable over the longer term; a viewed, for instance, espoused by Forsyth (2014). Both Europe and the US have a lot at stake if either becomes too protectionist; Airbus and Boeing orders, trade and investment from the Gulf, and so forth (Levine-Weinberg, 2015); although Europe arguably more so (Tretheway & Andriulaitis, 2015). Not all rivals are focused on restricting the Gulf carriers, a number are actually keen to cooperate (Green, 2012).

6.4.3 Global cooperation

Another key theme to emerge surrounding the Gulf carriers was that of global cooperation; a theme that first appeared at the Workshop. This theme covers the extent to which airlines from elsewhere are deciding to cooperate with them the Gulf carriers, and the level of that cooperation when it occurs (CAPA, 2013b).

Global alliance membership

A sub-theme emanating from the main global cooperation theme, and first raised at the Workshop, and then developed throughout the study, was that of the Gulf carriers and global alliance membership. To date only Qatar Airways has joined one of the big three global airline alliances; in late 2013 it joined the oneworld alliance (Dunn, 2013; Fan & Lingblad, 2016). Emirates remains vocally anti-alliance, while Etihad is forging an alliance of its own (CAPA, 2013b). As Kinglsey-Jones (2013) notes; "each is tackling the next phase of their evolution in a different strategic direction" (para. 1). This was also evident in Forecast 26 which asked experts: *In 10 years or so, which of the following alliance options is most likely to be the case for each of the major Gulf carriers?*
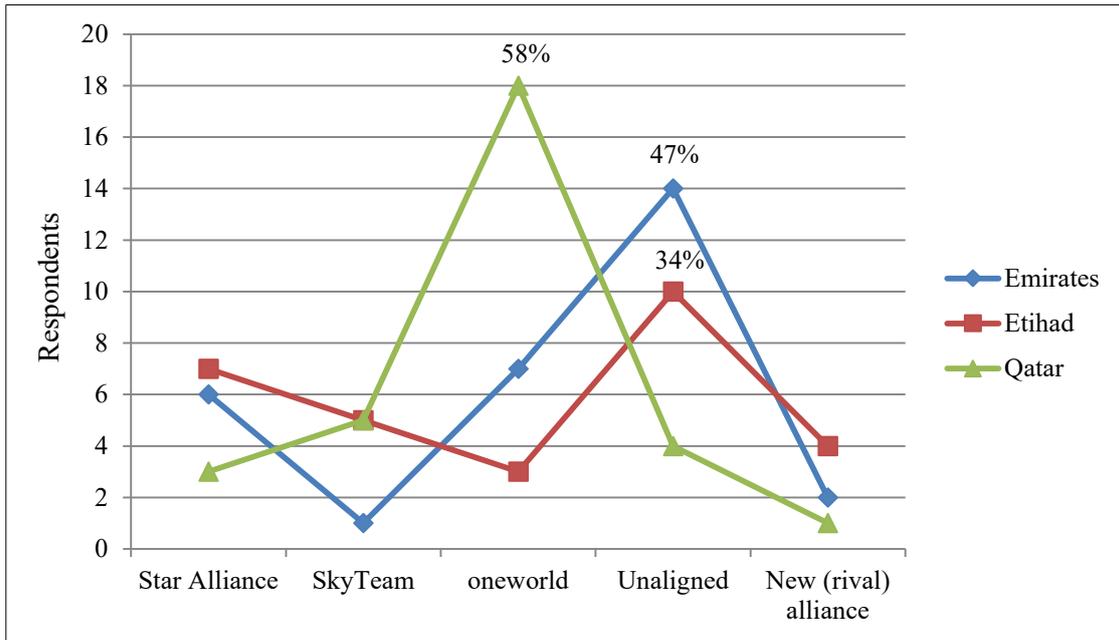
Forecast 26

Figure 6.22   F26: Major Gulf carriers and alliance options

The status quo for each Gulf carrier was most evident, with Qatar receiving the highest total of 58 percent for oneworld membership. At the very least this indicates that most experts do not see Qatar leaving its current global alliance host in the foreseeable future. Emirates' unaligned status seems stronger (47%) compared to that of Etihad (34%), according to the experts. Since this data was collected in mid-2014, Etihad has announced the formation of an international alliance, but whether this qualifies as a truly global alliance is open to debate (Walker, 2015a).

If either Emirates or Etihad were to join one of the big three global alliances, the results for Forecast 26 indicate that Star Alliance would edge out SkyTeam for Etihad, while oneworld would just trump Star Alliance for Emirates. The latter is not that surprising given Emirates' partnership with oneworld member Qantas (and more recently Malaysia Airlines), but SkyTeam losing to Star Alliance for Etihad is more intriguing. Etihad currently has a fairly comprehensive code sharing arrangement with SkyTeam anchor member Air France, and a substantial equity stake in SkyTeam member Alitalia. Admittedly, Etihad also has a sizable equity stake in oneworld member Air Berlin (Fan & Lingblad, 2016; Parker, Hollinger, & Kerr, 2015).

The three major Gulf carriers for Forecast 26 returned one significant Mann Whitney U test result. Almost half (47%) of experts with Oceania as a region of best industry knowledge, compared to zero experts in the group 'other', thought Etihad was likely to join Star Alliance This Oceania preference for Star Alliance membership for Etihad likely reflects events in Australia and New Zealand surrounding Virgin Australia. Major Star Alliance members Singapore Airlines and Air New Zealand both had substantial equity stakes in Virgin Australia at the time of the survey (Bradley, 2016). Etihad has an even arguably closer strategic relationship with Virgin Australia that also includes a substantial equity investment (Kingsley-Jones, 2013a, 2013b). Such entanglements likely explain why experts with best industry knowledge in Oceania thought Etihad was most likely to join Star Alliance within a decade or so.

What is interesting to note for Forecast 26 is that 12 blank responses (i.e. experts opting not to respond to the forecast) were recorded across the three sub-forecasts (Emirates 4; Etihad 5 & Qatar 3). Two other forecasts were also sub-divided into three options; but each only had zero and four blanks respectively. This topic is quite fluid at present, and experts for Forecast 26 who did not leave a response (about 12%), might have felt they would simply be guessing here if they did so. In contrast, equity investments were viewed more positively; these are detailed below.

Equity investments

Another sub-theme to emerge for the Gulf carriers and their global industry cooperation strategies was that of equity investments. Etihad's strategy of taking equity stakes in many of its alliance partners has reignited debate on whether or not such investments actually deliver superior results to simply code-sharing and closer cooperation (Fan & Lingblad, 2016). This debate was initially raised in this study at the Workshop.

Although some maintain that it is hard to argue that Etihad's equity stakes in mostly a list of second tier airlines could deliver substantial global outcomes (Charlton, 2017), experts in this study held a mostly favourable view of airline equity stakes overall. Forecast 15 proposed: *Buying substantial equity stakes (10% or higher) in other airlines is becoming a more effective way for individual airlines to build strong and lasting partnerships than simply*

codesharing, global alliance membership or strategic agreements. Sixty-seven percent of experts agreed with this forecast.

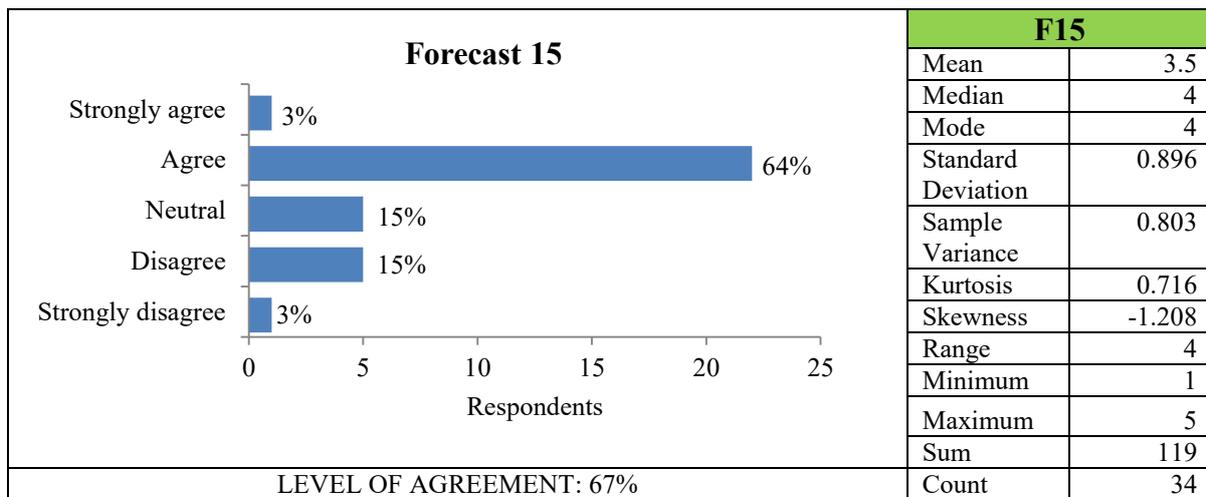|	Forecast 15		F15	
		Mean		3.5
Strongly agree	3%	Median		4
Agree	64%	Mode		4
Neutral	15%	Standard Deviation		0.896
Disagree	15%	Sample Variance		0.803
Strongly disagree	3%	Kurtosis		0.716
		Skewness		-1.208
		Range		4
		Minimum		1
		Maximum		5
		Sum		119
LEVEL OF AGREEMENT: 67%		Count		34

Figure 6.23   F15: Substantial airline equity stakes

Those with best industry knowledge in Oceania returned a significant statistical result for Forecast 15 (T-value was 2.003. P-value was 0.027). Experts with Oceania as a best region of industry knowledge were in consensus agreement for Forecast 15 at 81 percent (although only one expert strongly). Once again, it is reasonable to assume that such Oceania knowledge experts were to a measurable extent influenced by events surrounding Virgin Australia and its widely publicised, and mostly positively promoted, equity stake holders; the most prominent of which is Etihad (Bradley, 2016; Flightglobal, 2016). This demonstrates again that where an expert's regional knowledge is highest tends to influence how they view issues and considerations elsewhere across the global industry.

Bilateral strategic partnerships

Along with equity stakes, bilateral strategic partnerships were also raised during the Workshop, and were covered in the surveys and Interviews. This sub-theme, as part of the key theme global cooperation, reflects contemporary events, particularly the decision by Emirates and Qantas to form a strategic bilateral alliance in late 2012 (Fan & Lingblad, 2016). This partnership turned out to be the first move toward considerably different partnership models for the three major Gulf carriers (Kingsley-Jones, 2013a, 2013b). One year later Qatar joined oneworld, and the following year Etihad announced its Etihad Airways Partners alliance (CAPA, 2013a; Fan & Lingblad, 2016). To further complicate matters, Qatar invested in IAG (Karp, 2016), and all three Gulf carriers continue to partner

and code-share with a wide range of other airlines, including rival global alliance members (CAPA, 2012a; Fan & Lingblad, 2016).

In order to better understand this situation, Forecast 16 asked experts to respond to the claim that: *Strategic partnering outside global alliance structures will become a significant feature of the airline industry over the next 10 years or so*.

	Forecast 16		F16	
			F16	
			Mean	4.061
			Median	4
			Mode	4
			Standard Deviation	0.704
			Sample Variance	0.496
			Kurtosis	1.186
			Skewness	-0.656
			Range	3
			Minimum	2
			Maximum	5
			Sum	134
LEVEL OF AGREEMENT: 85%			Count	33

Forecast 16 chart:
- Strongly agree: 24%
- Agree: 61%
- Neutral: 12%
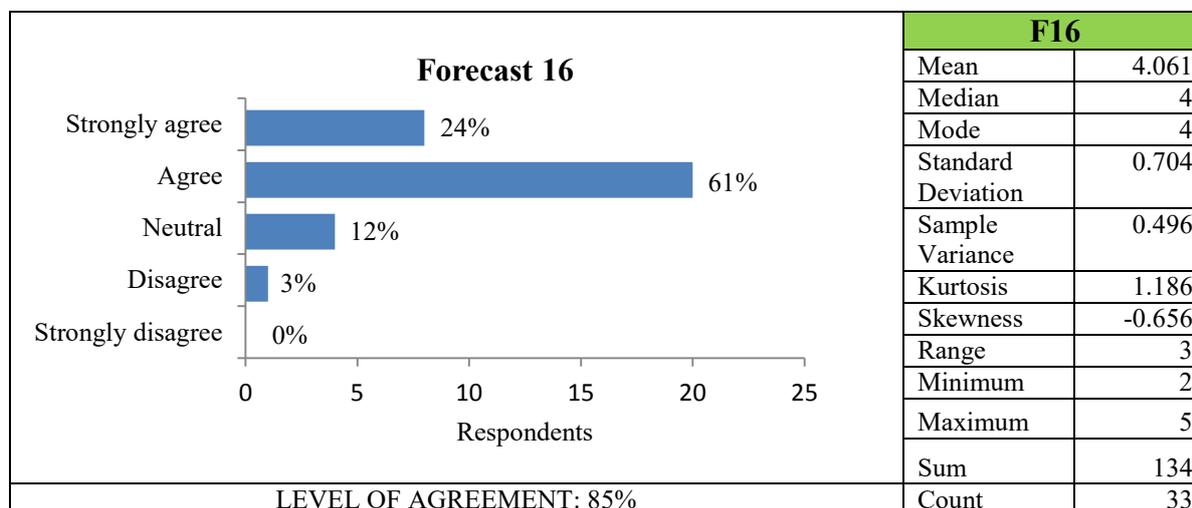- Disagree: 3%
- Strongly disagree: 0%

Figure 6.24   F16: Strategic partnering outside alliance structures

As shown above, this forecast achieved a resounding consensus agreement of 85 percent. Only four forecasts out of 27 in total achieved above 80 percent consensus; with the highest being 88 percent for the longevity of Asia's protectionism (F20). It is true that this topic area of bilateral partnerships enjoyed a particularly high profile at the time the Main Survey 2 was conducted in mid-2014, as the Emirates/Qantas strategic partnership was in its early stages (Fan & Lingblad, 2016).

The impact of such bilateral alliances was covered earlier on MCQ 14 (single response); it asked: *Are bilateral alliances, including agreements between competing alliance members, weakening the major global alliances?* Only 23 percent of experts saw them as definitely weakening the rationale for global alliances.

MS1 MCQ 14

Yes
23%

No
36%

Somewhat
41%

- Yes, they are weakening the very rationale for the global alliances
- No, they are just a reflection of the pragmatic nature of the industry
- Somewhat, depending on the exact bilateral alliance being considered
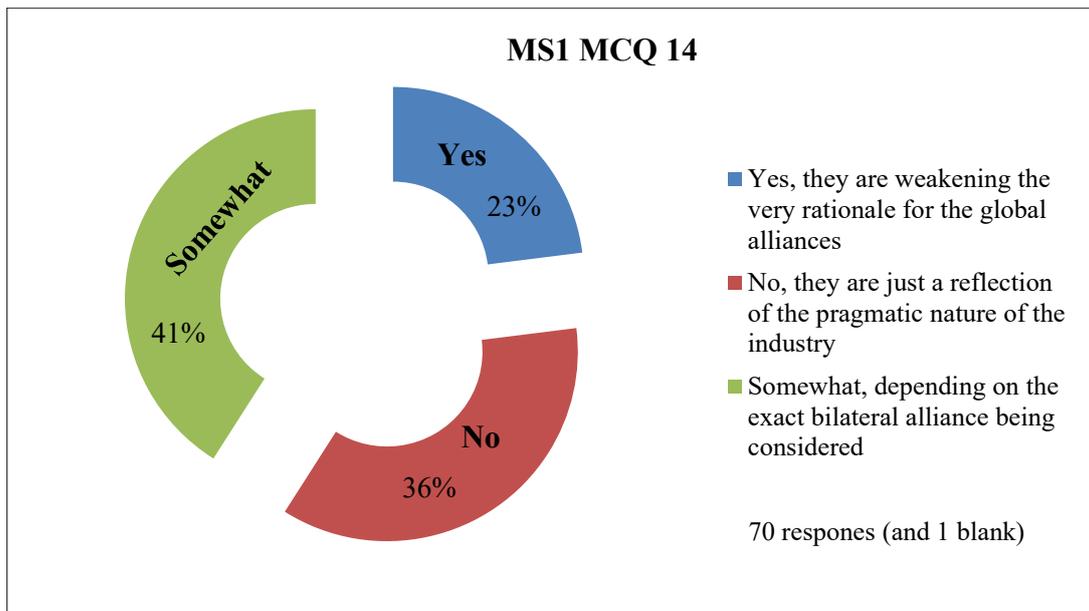
70 respones (and 1 blank)

Figure 6.25   MCQ 14: Are bilateral alliances weakening the global alliances?

This question sought to establish into which category experts were placed; yes, no or somewhat. Interestingly, and to some extent unexpectedly, the lowest cohort here was yes at 23 percent. That left a combined total of 77 percent for both somewhat (41%) and no (36%); each representing a fairly pragmatic option in its own right. As shown above, expert pragmatism was once again on display as a majority of experts were evidently not too concerned that such bilateral alliances are having any significant material impact on the big three global alliances. *WS Participant 2* summarised the situation by stating that: "If you're smart you just go for the best fit".

Porter, PESTE and the major Gulf carriers

The three major Gulf carriers provide a rich array of data that is readily analysed using either Porter's five forces framework, and/or the PESTE framework. For instance, a variant of PEST (in this case PESTLE, a slight adjustment on PESTEL) has been employed to assess the strategies of Emirates (Nataraja & Al-Aali, 2011). What both generic frameworks do not explicitly cover is geographical location, a core driver for the Gulf carriers (Nancarrow, 2013). They also do not intuitively lead to how each of the major Gulf carriers has been able to grow rapidly over the past decade or so due to mostly bilateral liberalisation (Fan & Lingblad, 2016). As highlighted earlier, PESTE is best placed to extract the international relations that underpin air service agreements, but only if one attaches "international" to the 'Political' category.

In contrast, Porter's framework does not include politics/government as Porter views policies and actions by government as "neither inherently good nor bad for industry profitability"; and thus, not a sixth competitive force (Porter, 2008, p. 86). Porter's apparent own admission that he possesses limited knowledge of the airline industry (Bisignani, 2013), combined with his rebuttal of the inclusion of government in his framework (Porter, 2008), suggests that he may not be particularly aware of international relations and its relationship with the airline industry. Rather Porter is, to a substantial extent, influenced by domestic politics, along with the domestic US airline industry; a specific industry context he has commented on several times (Magretta, 2012).

This study is not concerned with individual national government actions and policies per se, but rather with the extent to which national governments interact and trade with each other in the global context, including the bilateral or multilateral basis of that trade; that is, international relations. This chapter now transitions to Asia, a region that highlights many of these industry realities, along with being a major region for air transport now and into the foreseeable future (O'Connor & Fuellhart, 2014).

6.5 Asia and the chances for greater international liberalisation

Asia is a very significant region for future air transport growth and development (O'Connor & Fuellhart, 2014). The three key themes that emerged from this study's data concerning Asia, were; the Asian context, China's global impact and unanticipated results. Each of these key themes then resulted in the emergence of a number of sub-themes. In this respect, the Asian context theme revolves around the sub-themes of the global significance of Asia, followed by regional divisions. Next, China's global impact is addressed via the sub-themes of protectionism and global competitiveness. Lastly, unanticipated results anchor to the sub-themes of ASEAN optimism and India unknowns. China looms large in Asia, and in order to understand the wider region's airline industry's global reach and impact, actual and potential, China's inclusion is vital (Bisignani, 2011; Sainsbury, 2011). Equally true is the reality that without consideration of its regional counterparts (including India), China cannot be more fully understood either (O'Connell et al., 2013). This section links to RQ4.

6.5.1 Asian context

The key theme of Asian context emerged at the Workshop where Asia was employed by all four participants as a global reference point throughout the brainstorming session. Asia is

defined in this chapter as North East Asia, together with the Association of South East Asian Nations (ASEAN) member countries[5]. This is a narrower description than the commonly used Asia Pacific region or Pacific Rim (O'Connor & Fuellhart, 2014). Even so, India is specifically referenced toward the end of this chapter as its potential is often compared and contrasted to China; rarely are these two giants not mentioned together to some degree, and this is particularly the case when the global airline industry is the core focal point (Sanchez, 2011).

Global significance of Asia's airline industry

Asia maintained a substantial presence throughout all five stages of this study. At the first stage Workshop the global significance of Asia's airline industry emerged as a key sub-theme stemming from the overall Asian context theme. All four participants were clearly of the view that Asia was having, and would continue to have, a major impact on the global industry. Much is made of the contention that Asia is on the rise, particularly in the global investment banking and finance communities (Kundnani, 2015). A growing chorus of analysts and regional observers are now referring to the twenty-first century as the Asian century (Rizvi, 2016). Others, particularly in the US, have broadened this to the Pacific century, or alternately the Asia Pacific century (Zakaria, 2011). This is also reflected in predictions and commentary about Asia's airline industry which continues to grow and develop at a faster rate than Europe or North America, though largely driven by China (O'Connor & Fuellhart, 2014).

On MCQ 22 (multiple response) 80 percent of experts thought that China would *"feature more prominently throughout the industry in the coming decade and beyond"* Thus, China was the highest ranked country or region. Asia more generally ranked second (50%), followed by South America (36%), India (34%), Brazil (29%), Indonesia (26%), Africa (17%), and finally the North Atlantic (13%). Given that much is made of emerging air markets and their future potential (CAPA, 2011), the fact that Asia was ranked second highest on MCQ 22 is testament to its likely significant future trajectory. This was clearly evident on MCQ 17 (single response) which asked participants: *What role do you think the*

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[5] The ten ASEAN member countries are: "Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar (Burma), the Philippines, Singapore, Thailand, and Vietnam" (Tan, 2014, p. 267).

Asian region will play in shaping the global airline industry over the next decade and beyond?
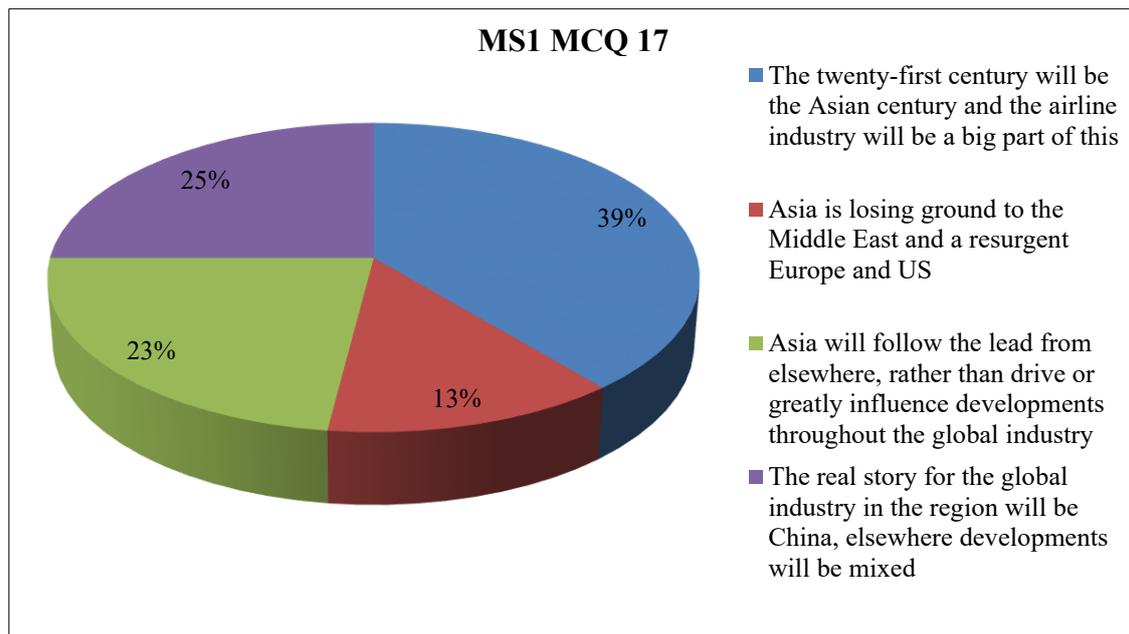

Figure 6.26   MCQ 17: The Asian region and the global airline industry

More experts (39%) thought that the twenty-first century will be the Asian century, with the airline industry a big part of this. Despite clear optimism amongst experts for the Asian region's future prospects (including its airline industry), the results do still quite strongly infer that Asia's future role will be significant, but not necessarily dominant. No significant chi-square test results for MCQ 17 were discovered.

Regional divisions

The results for MCQ 17 reflect the reality that Asia is by no means a homogenous and tranquil region. The 'Asian way' of doing business and conducting domestic and international affairs belies a region awash with territorial disputes and substantial power differentials (Bremmer, 2012; Huntington, 2011). Home to two out of three of the world's largest national economies (China and Japan), the world's most populous country (China), alongside the world's last remaining Stalinist state (North Korea); it also boasts the world's most populous majority Muslim nation (Indonesia), and the widely officially unrecognised "state" of Taiwan (Dibb, 2014, p. 12).

Within this overall context, MCQ 18 (single response) asked: *Will open skies agreements and increasing liberalisation take hold in the Asian region in the foreseeable future?* The results

for MCQ 18 are almost divided into thirds, skewed slightly in favour of smaller intra-regional air markets like that proposed by ASEAN (and discussed later in this section).
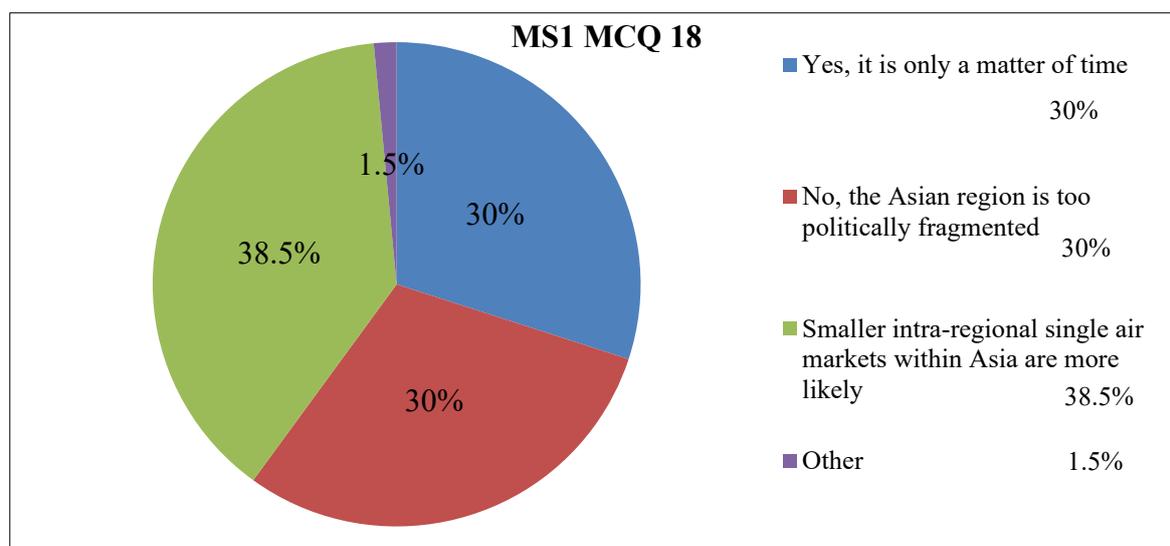

MS1 MCQ 18

- ■ Yes, it is only a matter of time — 30%
- ■ No, the Asian region is too politically fragmented — 30%
- ■ Smaller intra-regional single air markets within Asia are more likely — 38.5%
- ■ Other — 1.5%

Figure 6.27   MCQ 18: Open skies and increasing liberalisation in Asia?

A majority of experts saw positive prospects for liberalisation in Asia generally, although data specifically focused on China (as discussed further below) shows they were less so when presented with this country specific context. Given that "a smaller group such as the ASEAN states" is more likely "to achieve some consensus on airline liberalisation" than a larger regional pact (Tan, 2014, p. 267), the results for MCQ 18 above correlate well with such analysis. When looked at with the results for ASEAN on MCQ 11 (shown in Figure 6.30), both this regional grouping, and smaller intra-regional groups (MCQ 18), essentially attracted 39 percent support in each question.

The only grouping in MCQ 18 to return a significant result were experts with Europe as a region of best knowledge and the group 'other' (chi-square statistic was 6.662. P-value was 0.036). European experts tended to think that the Asian region is too politically fragmented (43%) compared to the group 'other' (16%). Likewise, the Europe group were less inclined to select "yes, it is only a matter of time" (22% versus 41%). The option; "Smaller intra-regional single air markets…" attracted 35 percent (Europe group) and 45 percent ('other' group). Those with expert knowledge of Europe likely appreciate the challenges and barriers to achieving regional cooperation and integration, and in consequence, such experts did not think that Asia shares commensurate motivations to follow Europe's example in this regard.

A number of authors concur that Europe and Asia are on substantially different paths in terms of air market liberalisation (Ballantyne, 2014; Tan, 2012; J. J. Wang & Heinonen, 2015).

6.5.2   China's global impact

Moving from Asia to a more specific focus on China, a key theme to emerge in this context was China's global impact. All four Workshop participants raised and discussed China and its major airlines throughout the brainstorming session. China was clearly a central topic across all data collection instruments in this study. The two most salient sub-themes to emerge from the overarching theme of China's global impact were protectionism and global competitiveness. That is, to what extent will the future of China's airline industry be characterised by protectionism? This includes the global impacts that will occur as a result. And, how internationally competitive will China's three biggest airlines be in future? China entered the twenty-first century on a growth and development trajectory second to none (Heicks, 2010). Included in this, Chinese tourists are travelling internationally in record numbers year on year some numbers would be good here? (Pilarski, 2007; Tan, 2014).

The global impact of China's airline industry

The Chinese airline industry and its global impact was a key theme that permeated all stages of this study. To delve deeper into China's likely future impact on the global airline industry MCQ 19 (single response) asked: *The rise of China is a much discussed and debated contemporary issue. What impact will a bigger and stronger China have on the global airline industry?* Most experts thought China's industry impacts would be either massive (17%) or significant (48.5%). The remaining experts selected either moderate (28.5%) or limited (6%).

These results were further elaborated by interviewees. *Interviewee* 10, felt that "China will just about control what happens in aviation in this part of the world". *Interviewee 8* was of the view that "definitely, no doubt China is going to be one of the major global [air] markets, China alone". Even so, *Interviewee 13* felt that "the Chinese government is making decisions around mainly the domestic market, which actually is hampering the development of the international market for Chinese carriers externally". This latter view is mirrored in the literature (J. J. Wang & Heinonen, 2015). Expert views regarding protectionism and China mirrored these divisions on global impact; the chapter now looks at this below.

Protectionism in China

Protectionism in China was a sub-theme to emerge across all stages of the study. Thus, the global impact and significance of China for the global airline industry, may also be tempered by the fact that it has an increasingly valuable and expanding domestic air market that it is evidently not keen to open to foreign competition any time soon (J. J. Wang & Heinonen, 2015). This contention is revealed in the data for Forecast 20 which postulated: *Asian countries like China, with actual or potential domestic air markets of significant size, are highly unlikely to grant unrestricted (open) market access to foreign airlines into the foreseeable future (and mostly, if not exclusively, on a bilateral basis only).*

	F20
Mean	4.118
Median	4
Mode	4
Standard Deviation	0.769
Sample Variance	0.592
Kurtosis	1.835
Skewness	-1.057
Range	3
Minimum	2
Maximum	5
Sum	140
Count	34

Forecast 20 bar chart: Strongly agree 29%, Agree 59%, Neutral 6%, Disagree 6%, Strongly disagree 0%. LEVEL OF AGREEMENT: 88%
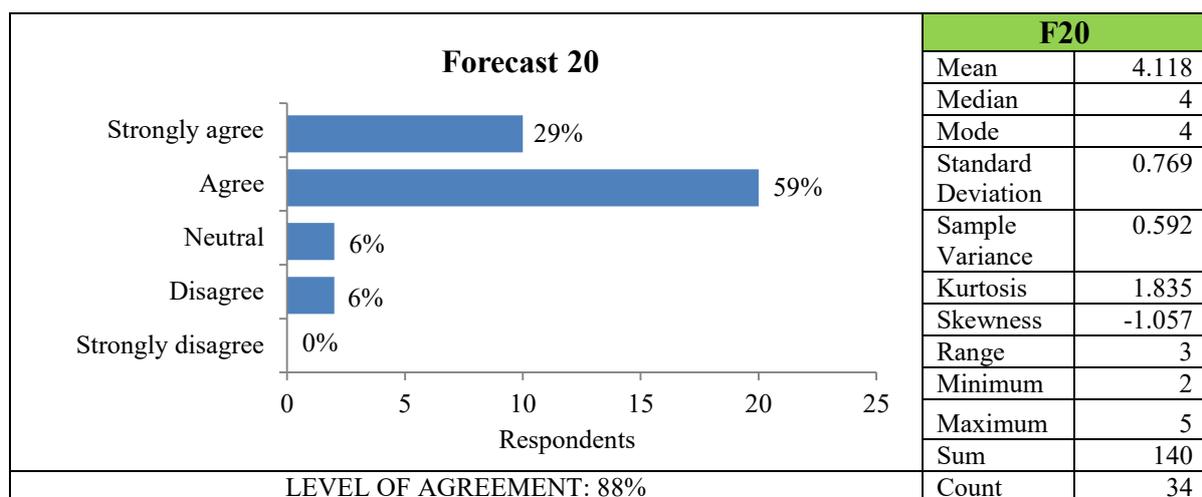
Figure 6.28   F20: Granting foreign access to air markets in Asia

This forecast achieved the highest level of consensus agreement of all 27 forecasts on the Main Survey 2; an impressive 88 percent (29% of which was strongly agree). Not surprisingly, this forecast also achieved the highest mean on the survey (4.12). Only four respondents in total (12%) opted for either neutral or disagree. According to the vast majority of experts, large air markets in Asia (such as China) will not be enthusiastic supporters of liberalisation. This parallels the view of Havel and Sanchez (2011a) who maintain that "rising economic powers such as China and Russia remain leery of high-octane liberalization" (p. 16).

Two groupings returned a significant t-test result for Forecast 20: Emerging markets with 'other' (T-value was 2.549. P-value was 0.008); and 6 to 20 years of industry knowledge with 21 plus years (T-value was 2.067. P-value was 0.023). Emerging markets best region of industry knowledge experts unanimously agreed with Forecast 20 (60% strongly). Meanwhile, experts in the 21 plus years of industry knowledge group came close to

unanimous agreement (93% in total; with 54% strongly); only one such expert opted out of agreement and chose to remain neutral here.

The unanimous nature of the agreement to Forecast 20 amongst experts with best geographical knowledge in emerging markets, together with a similar result for those with 21 plus years of industry knowledge, indicates that a longer term view of emerging air markets suggests that protectionism is almost inevitable in large markets. In this context, large markets support liberalisation, particularly bilateral open skies, when it is perceived to be in their interest to do so, not out of a universal affection for market forces (Rhoades, 2008). The 88 percent overall agreement here, including its strength, provides a powerful statement on the likely longevity of the bilateral system, and of Asia's role in maintaining and strengthening it in future.

Some air transport research has found that jurisdictions with "more democratic, politically open and competitive" structures are more inclined "to have higher levels of air transport liberalisation" (J. J. Wang & Heinonen, 2015). Although on the surface this appears to have intuitive merit, the findings in this study suggest that larger air markets tend to be more protective as they arguably have the most to forfeit if air access is opened further (Havel & Sanchez, 2011a). Meanwhile, states and quasi-states with small to non-existent domestic air markets, such as Singapore and Dubai, sign-up to as many open air service agreements as they can because they have much more to gain than they have to lose from liberalisation (Fan & Lingblad, 2016; Heracleous et al., 2009).

Not all interviewees agreed with the assertion that China is likely to follow a protectionist path in future. In fact, a significant minority of interviewees thought protectionism would not be a hallmark of the future for China's airline industry (38%). *Interviewee 11* felt that China "will have to be more open because the market demands it, and expects it". *Interviewee 1* concurred, highlighting rapid urbanisation, tourism growth, international engagement and regional airline industry competition as just some of the major factors that show China will not return to the closed days of before the 1970s: "It will never happen. China will become more and more liberalised".

Meanwhile, *Interviewee 3* acknowledged China's "quite protective" stance at present, but stated: "I think it will change" in future. These sentiments revolve, in part, around the notion that China has changed enormously to date, and will continue to do so, leading to the obvious

question; why then can it not also change and become more open in terms of its air market? This deduction was not supported by all interviewees though. Thirty-one percent of interviewees thought China would follow a protectionist path, while the same percentage of interviewees was unsure. For example, *Interviewee 10* was clearly not convinced, arguing that: "I don't see them particularly following a liberalisation route. It's just not the nature of the government there; and as a country that has never be use to independence in that sense".

Will China's airline industry rival international counterparts?

The sub-theme of global competitiveness came to the fore on the Main Survey 2 and was discussed during the In-Depth Interviews. China is no doubt developing a significant domestic air market, but will it be widely viewed as being on par with the US and EU in the foreseeable future? Forecast 22 aimed to help answer this question when it put the claim: *China's airline industry will rival those of the US and EU within the next 10 years or so*.

	F22	
Mean		3.618
Median		4
Mode		4
Standard Deviation		0.779
Sample Variance		0.607
Kurtosis		3.200
Skewness		-1.643
Range		4
Minimum		1
Maximum		5
Sum		123
Count		34

Forecast 22 chart: Strongly agree 3%, Agree 68%, Neutral 20%, Disagree 6%, Strongly disagree 3%. LEVEL OF AGREEMENT: 71%
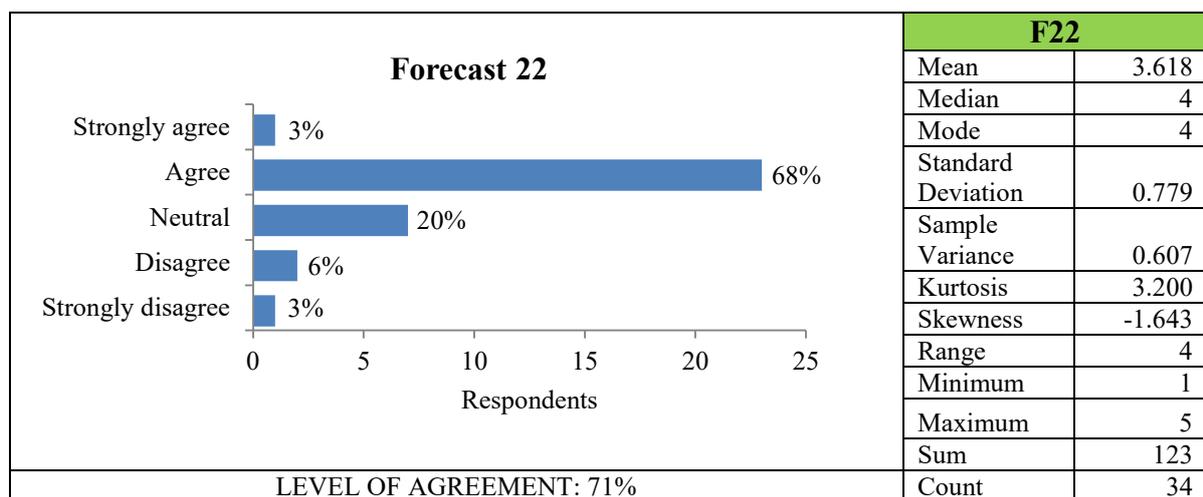
Figure 6.29   F22: Will China's airline industry rival the US and EU?

The result for Forecast 22 at 71 percent, although equalling a clear majority, did not achieve consensus agreement. Given that four forecasts did demonstrate a willingness on the part of experts in this study to convincingly achieve consensus agreement of above 80 percent, and a further three forecasts above 75 percent, the results here have to be considered in this wider context. China's airline industry is somewhat challenging for experts to predict, but its general ascendency is widely agreed by most experts to be headed in a direction of ever growing significance, including in comparison to major rivals elsewhere.

It should be noted that only four experts (12%) nominated 'China (including Hong Kong)' as a region of best industry knowledge on the Main Survey 2. On Forecast 22 one such expert remained neutral, while the other three chose agree. Although a small cohort, the results here at least demonstrate that the pattern of answers above broadly reflected expert views including those with a high knowledge of China. No statistically significant results were found for this forecast. The overall Chinese air market might be considered to be heading toward competitive parity with counterparts in the US and Europe, but what about its three major carriers? It is to this question, raised both on the Main Survey 2, and during the Interviews, that this chapter now turns.

The big three: Air China, China Southern and China Eastern

The sub-theme of China's competitive international equivalence also extended to its three major carriers. Forecast 21 hypothesised that: *The big three Chinese carriers will become global airlines on par with major international competitors within the next 10 years or so*. The fact that experts were more optimistic for the prospects and likelihood of this occurring for national flag carrier Air China (70%), followed by China Southern (61%), and then finally China Eastern (56%), would mirror the present international profile of each outside of China, while also reflecting general perceptions of each airline's relative market strength and position (Zhang, Yang, Wang, & Zhang, 2014).

Two significant t-test results were achieved for Air China, while one t-test result was deemed significant for China Eastern. The results in the case of Air China were the groupings of Europe as a region of best industry knowledge and 'other' (T-value was 1.748. P-value was 0.045); and Oceania with 'other' (precisely the same statistic as above). Although they shared the same overall t-test result, the Europe group rated Air China's chances as higher than 'other' (82% versus 56%), while the Oceania group had a mirror reverse result with 'other', and as such, were less convinced that Air China would achieve global status (56% versus 82%).

Experts with best industry knowledge in Oceania would likely be more aware of the challenges facing the three major Chinese carriers as each arguably has a higher profile in Oceania than elsewhere (CAPA, 2016). This was quite evident in the final stage Interviews for this study. For instance, although *Interviewee 10* contended that these Chinese airlines are "already global players", he did concede that "I think they're behind in the product stakes and

I think it is going to take them quite a while to catch-up". *Interviewee 7* was more direct, and stated that the Chinese "carriers unfortunately don't have, in my opinion, the world's best reputation". *Interviewee 4* agreed, noting that "the perception of Chinese airlines is not that good".

Some scholars maintain that "the Chinese government has attempted to help major airlines grow in size, rather than forcing them to improve and innovate through increased competition and thus achieve global competitiveness" (Fu et al., 2015, p. 73). Others concur, and highlight how China "wishes to create national champions before competing internationally" (J. Wang et al., 2016, p. 12). Added to this, the third position of China Eastern is a fairly expected result given that its flag carrier counterpart Air China, and A380 and 787 operating rival China Southern, both maintain relatively higher profiles globally (Zhang et al., 2014).

Porter, PESTE and China

Much like the US and the EU, China may very well engage in significant internal domestic deregulation, but adopt a more protectionist stance internationally – outside its large domestic air market (J. Wang et al., 2016). China's airline industry reveals once again how both Porter and PESTE bring a range of pros and cons to industry level analysis. Porter more effectively sheds light on China's domestic air market, as its geographical and competitive structures and boundaries are able to be more easily identified and articulated in his framework. When it comes to China's international impact and significance for the global airline industry, PESTE then provides added emphasis on population (demographics) such as international tourist flows ('Social' factors), and more readily captures the political underpinnings of China's desire to protect its large air market and carriers from unfettered competition ('Political' factors).

Neither Porter nor PESTE instinctively tap into the driving forces behind China's airline industry when looked at from a global standpoint. In this context, the three major Gulf carriers reveal a great deal about geographical location, whereas China tends to more comprehensively reveal that international relations, including appreciating balance of power dynamics, are central in understanding its current and future industry impacts. China is, and will continue to be, a big aviation power, matching its growing economic and military clout (J. Wang et al., 2016). Evidence from this study strongly suggests that China's airline industry is likely to favour continuation of the current bilateral system well into the

foreseeable future. Much like the US which has pursued open skies in a manner consistent with its national interests (Rhoades, 2008), so too China is likely to adopt an air market liberalisation agenda predicated on its national interests, and mostly on a bilateral basis.

Moreover, both Porter and PESTE do not readily identify home base advantages and how these deliver balance of power benefits to large air markets, while concurrently delivering geographical location benefits to smaller air markets like Hong Kong on China's southern doorstep (McNeill, 2014). Hong Kong for instance is keen "to retain aerocentrality within the South China region", while the Chinese are keen to encourage a "pro-Beijing" agenda in Hong Kong by allowing more air rights into China (McNeill, 2014, pp. 3005-3007). Again, Porter and PESTE struggle to make clear contributions to international airline competition as they do not instinctively identify the geographical location advantages that some airlines enjoy, nor why aeropowers like China shy away from multilateralism in favour of bilateral air service agreements for the most part (Havel & Sanchez, 2014).

6.5.3   Unanticipated results

A key theme to emerge covering Asia's airline industry was that of unanticipated results. In this context, initial study data indicated ASEAN's attempts at forging a single air market were too challenging to accurately forecast, especially in terms of global impact over the next ten years or so. Meanwhile, it was anticipated that India would be viewed as likely to have a significant impact on the global airline industry over the next decade and beyond; second only to China. However, what emerged from the data in this study was that a significant minority of participants were evidently relatively optimistic about future prospects for ASEAN attempts at a single air market. In contrast, most experts were not particularly optimistic about India's airline industry, but they were much more confident and sure about China's future trajectory. These realities emanating from the unanticipated results theme led to the emergence of the sub-themes of ASEAN optimism, and India unknowns.

ASEAN optimism

A strong sub-theme to emerge during the In-depth Interviews was that of ASEAN's stated plans to develop a single air market. ASEAN set 2015 as the target date to achieve full air market liberalisation; to date, this aspiration has remained elusive (Waldron, 2016). Tom Ballantyne (2014), writing in *Australian Aviation* noted that "no-one should be under any illusions that ASEAN open skies will be a clone of the full liberalisation now in place in

Europe" (p. 22). He went on to add that "a fully liberalised [ASEAN] single aviation market…still looks a long, long way down the track" (p. 22). The grouping's biggest air market and economy is in Indonesia, which possesses nearly half of ASEAN's total population, along with being "the headquarters of the ASEAN Secretariat" (Tan, 2014, p. 268). Despite this, Indonesia is not supportive of comprehensive ASEAN air market liberalisation (Tan, 2014).

Interestingly, many experts on MCQ 11 (multiple response) disagreed with this pessimistic outlook when asked: *Which of the following international regions do you think is most likely to form a regional air bloc (single air market) with full cabotage rights, and no internal restrictions on ownership and control, within the next 10 years or so?* Thirty-nine percent of experts thought ASEAN would create such a regional air market (as shown below).
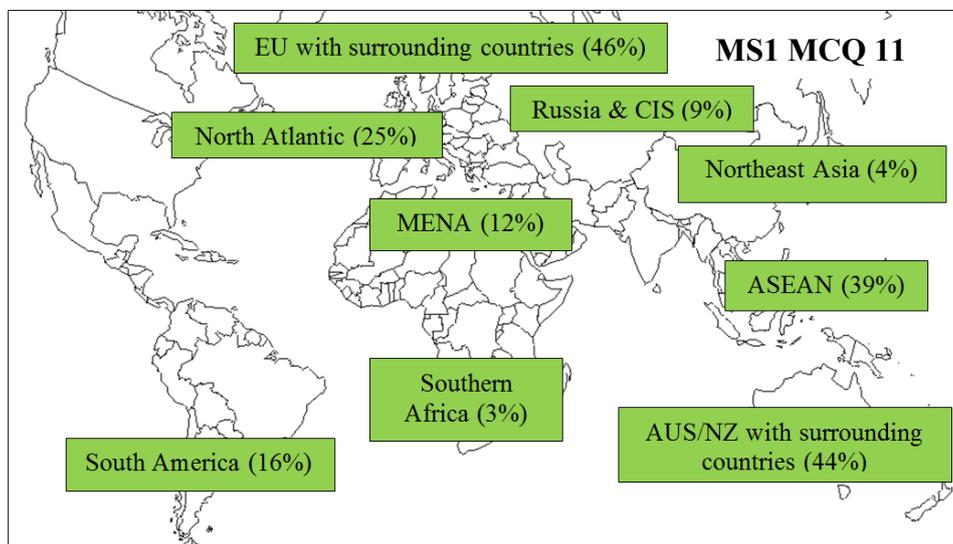
(Source: Printable World Map, 2015)

Figure 6.30   MCQ 11: International regions likely to form a regional SAM within 10 years

The question was deliberately specific in its use of "full cabotage rights and no internal restrictions on ownership and control", as a broader question that simply asked about regional air blocs might not have been interpreted by participants as involving one or both of these factors. No single option was chosen by 50 percent or more of respondents, indicating that most participants were not confident that any region covered in this research could develop such an air bloc that included these parameters any time soon.

As covered in the North Atlantic and Europe section, 62 percent of experts agreed that regional air blocs like the EU would become the dominant market structure for the global

airline industry (F12). Thus, ASEAN was ranked in the top three most likely regions to form a single air market over the next decade or two. The prevailing expert view here is somewhat at odds with the literature and present realities (Ballantyne, 2014; Tan, 2010). ASEAN might prove the sceptics wrong; albeit later than planned, and perhaps not as extensively as hoped (Waldron, 2016). On MCQ 11 above the rank order of ASEAN (third), and the clustering of the top three options well above the fourth option of the North Atlantic at 25 percent, add weight to the contention that ASEAN's single market aspirations and prospects were quite positively viewed by a significant minority of experts in this study.

Interviewee 2 provided strong evidence of this more optimistic reading of the situation for ASEAN during the In-Depth Interviews. He maintained that "they're behind the grand plan, but they're a fair bit further on, surprisingly further on, than I thought". Despite such optimism, *Interviewee 3* was less convinced, arguing that in the "Asia Pacific area there are huge restrictions in terms of movement of people", and to have a single air bloc you need; "free trade, free movement of people and free movement of money".

Interviewee 9 felt that achieving a single air market anywhere in the world, whether Europe, Africa, South America or the Asia Pacific; "it's like everywhere, if you have a dozen different opinions, how do you reach consensus?" *Interviewee 8* claimed that Asia is too culturally, politically, demographically and geographically diverse, and as such "not exactly as easy as Europe did". Experts in the literature agree, and argue that: "It is…wholly unrealistic to compare ASEAN with the EU" (Tan, 2012, p. 41).

ASEAN: Porter & PESTE

Machinations in ASEAN concerning air market liberalisation are more readily identified through a PESTE analysis, than through use of Porter's five forces framework. By specifically drawing attention to 'Political' considerations (albeit more precisely international politics), along with 'Social' factors (chiefly population demographics in the region), the PESTE framework is able to account for differences in aspirations versus realities. Admittedly, Porter's framework is designed for industry analysis that is better suited to individual markets in an airline context, and consequently, struggles to comprehensively cover all key shapers (whether factors or forces) when cross-border trade is at the heart of an industry like the global airline industry. The ASEAN region's airline industry presents serious divisions and competing agendas making industry level analysis all the more

challenging to conduct. Thus, Porter is most effectively used on a country by country, air market by air market, basis.

India: Potential unknowns

The future of India's airline industry emerged as a sub-theme at the Workshop, with *WS Participant 2* arguing that "India's aviation infrastructure is way behind, while China is largely keeping up with what is happening". The other three Workshop participants generally agreed with this assessment. This pessimistic outlook for the Indian airline industry was also captured on MCQ 5 (multiple response) which asked participants to select what they thought *will likely be the big news stories for the global airline industry over the coming decade and beyond?* "India's airline industry" ranked lowest at eight percent of experts selecting it (including 'other' where India was not raised). Two other airline industries were listed here; the Gulf region, with 55 percent of experts and ranked third highest, and China's airline industry (41%) ranked equal fifth alongside the oil price.

However, India did fair better on MCQ 22 (multiple response), which asked: *As you scan the world and the global airline industry, what countries and/or regions do you think will rise to feature more prominently throughout the industry in the coming decade and beyond?* India ranked fourth highest and was selected by 34 percent of experts, with South America a spot higher at 36 percent, and Asia higher again at 50 percent. China topped the list at 80 percent. When looked at together, the results for both MCQ 5 and MCQ 22 suggest that experts felt that India's airline industry might not be a big news story over the coming decade or so, but nevertheless, India itself would still increase in prominence throughout the industry. Thus, Indian airlines might still be struggling for global presence, but the potential of the Indian air market is still likely to be important and substantial in future.

This interpretation of the findings in this study covering India aligns well with the literature where many authors maintain that: "India's commercial aviation sector has a huge potential for growth"; although they also concede that it is a tough air market with high costs and taxation (Saranga & Nagpal, 2016, pp. 165-166). This being the case, the most commonly cited reason for India's future airline growth potential is "its huge population" (Saranga & Nagpal, 2016, p. 175). Even so, population size and airline industry growth potential are not well correlated, whereas GDP per capita and air travel demand are (Itani et al., 2014). In this sense, India's economic growth potential, including a rising middle class, point to a bright

industry future, but not necessarily one that will be developed in large part by Indian airlines (Bowen, 2010; O'Connell et al., 2013; Saranga & Nagpal, 2016).

Future impact of India on the global airline industry

This more optimistic reading of the data above represented about one third of expert respondents, and was likewise demonstrated on MCQ 20 (single response). Even so, most experts were not so bullish about India's prospects. MCQ 20 asked: *What role and impact do you think that India will have on the global airline industry over the next decade or so?*
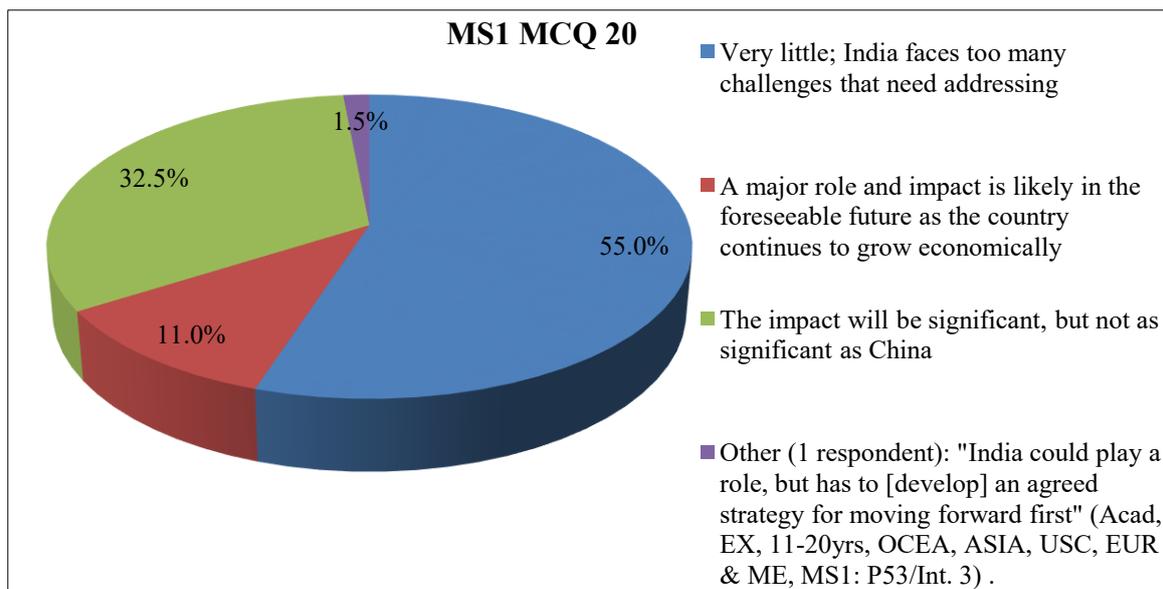
Figure 6.31   MCQ 20: The future role and impact of India

Unexpectedly, "a major role and impact" was only chosen by 11 percent of experts. The overall result here indicates that experts on the whole were not optimistic about the industry role and impact of India over the next decade or so. Two groupings returned a significant chi-square test result for MCQ 20. The US and Canada as a region of best industry knowledge group did not think that India would have a major impact compared to the group 'other' (0% versus 19%); however, they were more inclined to choose the "significant, but not as significant as China" option; 43 percent, compared to 26 percent (chi-square statistic was 6.777. P-value was 0.034).

With many in the US (and North America more generally), heavily focused on the rise of China (Zakaria, 2011), a generally higher level of scepticism toward India's future is by no means unexpected or astonishing within this group. India just does not have the substantial

profile in North America that China currently has. In fact, a strong case can be made that arch rival Pakistan has a much higher profile in the US than India, as the security situation in the former has directly engaged US foreign and military policy for some time (Bremmer, 2012; Zakaria, 2011).

Added to this result, experts with 21 plus years of industry knowledge were also sceptical of India's chances, with only one such participant opting for "a major role and impact", and most (64%) selecting the "very little" impact option. The two groups 6 to 10 years and 21 plus years achieved a significant chi-square result (chi-square statistic was 6.719. P-value was 0.035). Clearly, those with a longer term industry view, based on considerable years of industry knowledge, do not expect India to generate substantial global impacts for quite some time. *Interviewee 8* was clear that India has too much "government bureaucracy", and its airline industry could do with "some sort of internal deregulation", along with greater emphasis on "more commercialisation". *WS Participant 2* agreed that excess bureaucracy in India was slowing development. It is certainly true that India has a very strong international reputation for being highly bureaucratic and resistant to change (Zakaria, 2011).

Predicting India's industry impact

The overall result for MCQ 20 above was used as the basis to develop Forecast 23 which argued that: *It is currently not possible to accurately predict the nature and extent of India's impact on the global airline industry over the next 10 years or so*.

	F23	
Mean		3.727
Median		4
Mode		4
Standard Deviation		1.039
Sample Variance		1.080
Kurtosis		-0.672
Skewness		-0.654
Range		3
Minimum		2
Maximum		5
Sum		123
Count		33

Forecast 23 chart:
- Strongly agree: 21%
- Agree: 52%
- Neutral: 6%
- Disagree: 21%
- Strongly disagree: 0%
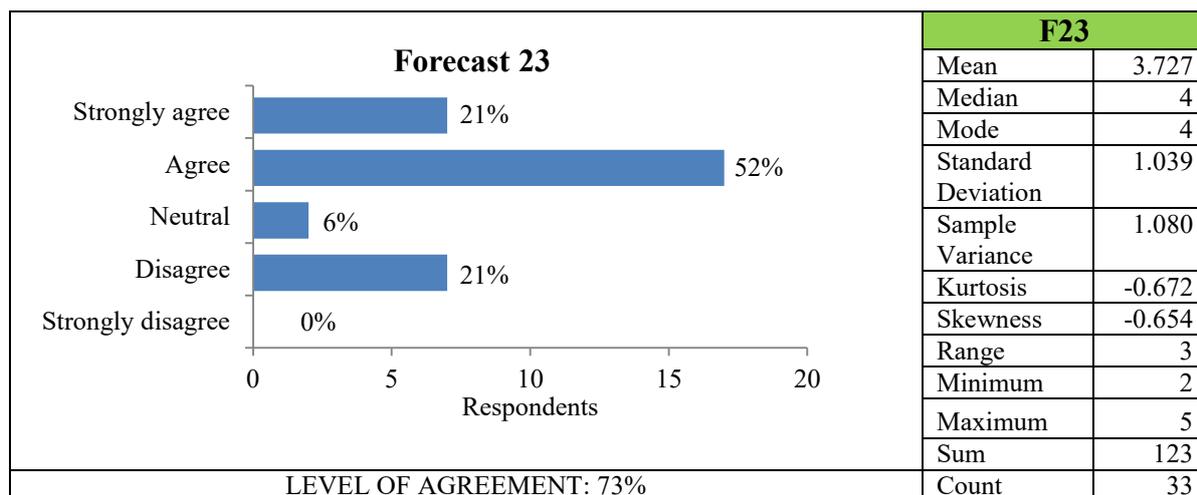
LEVEL OF AGREEMENT: 73%

Figure 6.32   F23: Predicting India's impact on the global airline industry

Consensus agreement was almost achieved here (73%). It is true that just over one fifth (21%) of experts disagreed with this assertion regarding India, while two additional experts (6%) were neutral. However, no experts strongly disagreed with the argument, yet in contrast 21 percent of experts did strongly agree. Only two experts (out of 34) designated 'India (including South Asia)' as a region of best industry knowledge on the Main Survey 2, with both in agreement with Forecast 23 (one strongly).

Hence, industry knowledge of India did not correlate with greater optimism for its future prospects, although the relatively low number of experts with high levels of knowledge of India and surrounds make firm conclusions here impossible. Nevertheless, one thing is clear from the data across this study; India is best placed into the category of further research, as its key industry insights are not as yet readily apparent, and are unlikely to materialise in a substantial manner over the next decade or so. Evidently, China's airline industry has a lot more actual trends and developments to build forecasts on, compared to India which has much more latent potential than demonstrated capacity (Bisignani, 2013).

Interviewee 2 noted that in his opinion "there's going to be enough people for both Indian and Chinese carriers to get a good share of [the] market". In the end, this is in many ways is the key point. But here in also lies the contemporary challenge; to articulate what is likely to actually happen in the foreseeable future, versus the somewhat less complex process of postulating what could transpire. India's potential is simply not as forecastable as China's unfolding future course. India's airline industry presents a forecasting conundrum; one that could not be easily and confidently deciphered in this study.

India's airline industry: Porter & PESTE

India's air transport sector is more fully assessed using PESTE which is clearly more capable of discovering its complexities and nuances than Porter's model is able to do. Porter's five forces framework is much more capable of assessing the domestic Indian airline market. India's favourable geographic position – commensurate with that enjoyed by the major Gulf carriers – is not readily captured by either framework. Likewise, neither framework is able to readily account for the geographical location and international relations realities which indicate that India's industry and air market retain enormous potential; presently, its key competitors, especially those in the Gulf, are the airlines tapping into this potential. A time

horizon well beyond a decade or so from now is likely to result in this situation reversing to a significant extent.

6.6   Conclusion

This chapter discussed and analysed the results of this study. Core findings in this regard centred around the likely future for both liberalisation and protectionism, with participants' conceptualising these in diverse ways. Most participants adopted a pragmatic industry outlook based on situational context, but with varying emphasis depending in large measure of their geographical best industry knowledge. The North Atlantic and Europe were seen as prime examples of likely liberalisation in future, but more as inspiration than prescriptive archetype. Meanwhile, the three major Gulf carriers demonstrate the competitive advantages inherent in advantageous geographical locations, but also the limitations and structural parameters that the bilateral system continues to exert on the global airline industry.

Lastly, the Asian region demonstrates that liberalisation aspirations must be carefully considered alongside protectionist realities, with China specifically revealing that large air markets tend to guard air market access closely. More broadly, India and ASEAN retain latent industry potential, but little tangible evidence of how they each might impact the industry in future. Next, the concluding chapter of this study is provided where each of the four research questions are addressed at a higher level, together with implications for theory, practice and methodology. Lastly, research limitations and areas for future research are detailed.

Chapter 7: Conclusion

7.1   Introduction

This final chapter of the study presents the overarching conclusions surrounding the global airline industry's likely future trajectory over the next decade. The chapter focuses on answering the four research questions from a strategic vantage point, and does so by utilising key research findings. The chapter then covers the study's implications for theory, practice and methodology. Finally, the limitations evident with the current research are presented, followed by proposals for future research.

7.2   Addressing the research questions

Four research questions underpinned this study (see Table 7.1 below), and were first detailed in Chapter 1 (Section 1.4), and then addressed across Chapter 6. This chapter adopts a strategic view of each of these research questions, and as such, provides a macro level discussion and summary of the core findings that link to each.

Research question:	
RQ1	To what extent do international liberalisation and protectionism contribute to the conceptualisation of the future of the global airline industry?
RQ2	To what extent are the North Atlantic and European air markets prime examples of where the global airline industry is headed into the foreseeable future, including the multilateral liberalisation that other regions could follow?
RQ3	What do the experiences and strategies of the three major Gulf carriers reveal about the likely future of both international liberalisation and the airline industry more broadly?
RQ4	What does the Asian region reveal about the chances for greater liberalisation of the airline industry globally?

Table 7.1   The research questions: RQ1 to RQ4

7.3   Research question 1: Conceptualisations of the future of international liberalisation and protectionism

Participants in this study displayed a wide array of conceptualisations regarding the extent to which liberalisation and protectionism will impact and shape the future of the global airline industry. Nonetheless, views clustered around three core groups; those who thought

liberalisation is advancing throughout the industry; those who adopted a stance that saw liberalisation and protectionism as both featuring in the industry's future; and finally, those who saw protectionism as mostly dominating events and trends into the future. This being the case, ideological perspectives and preferences did not influence most participants' opinions throughout this study, whereas situational context based on the perceived merits and particularities of specific regions, countries and air markets did. This evident pragmatism outweighed, on almost all occasions, ideological considerations. Thus, this study found almost no evidence that participants' political/economic ideological perspectives and preferences influenced and shaped their responses across the data collection instruments used.

The most influential factor influencing participants' responses and attitudes across multiple issues, questions and forecasts was their geographical region of best industry knowledge. Where a participant's industry knowledge was highest influenced how they conceptualised other regions of the industry on many occasions. For instance, participants with best industry knowledge in the US and Canada were much more supportive of allowing industry exit for ailing airlines, while Oceania region experts are more pessimistic about the inevitability of future liberalisation. Meanwhile, Asian region experts viewed exogenous constraints as more pressing than others elsewhere in the world. Thus, air markets not only vary considerably around the world, but how they are conceptualised by experts (and others) varies as well depending on the level of industry knowledge, and the geographical location of that knowledge.

Therefore, pragmatism mostly overshadowed ideology in this study, while geography of best industry knowledge, to a significant extent, best explained this pragmatism. Regional air market diversity and participant variations intersect in such a manner that a fuller understanding of the global airline industry's future is not possible without considering this multifaceted and multidirectional landscape. In consequence, this study's findings support an answer to research question 1 which postulates that to a significant extent international liberalisation and protectionism do contribute to the conceptualisation of the future of the global airline industry. However, these core conceptualisations of the industry's future essentially point to coexistence and varying degrees of both liberalisation and protectionism around the world, and not as binary concepts leading to polar opposite future trajectories and prospects. Both liberalisation and protectionism coexist throughout the global airline industry (Debbage, 2014).

This reality acts to reinforce the overarching finding in this study that demonstrates the utility of geographical location and international relations in revealing a competitive industry landscape that is predicated on state power for the most part (Havel & Sanchez, 2011a). Furthermore, some states are positioned in locations better placed to harness the opportunities that result from such competitive locational advantages (Flint, 2006). Thus, understanding the limits and barriers to international liberalisation, and the underlying rationales for protectionism, encourages an expansive and less ideological driven definition and application of each (Dobruszkes & Graham, 2016). This then reveals an industry built on a bilateral system itself founded on geographical diversity, where liberalisation and protectionism are no longer characterised as separate and value-laden end-states, but rather as indivisible and central contributing elements in shaping the industry's future global reach and development.

7.4   Research question 2: The North Atlantic and Europe – prime industry examples?

The probability of the North Atlantic creating a single air market any time soon was not viewed by most participants in this study as particularly likely. Added to this, the transferability of Europe's approach to single air market creation and development was thought by most participants to be as prime example, but not as template or model. Therefore, Europe's airline industry was viewed in the main as an example of what might or could happen, rather than as a prescriptive roadmap or precursor of what will likely happen.

Meanwhile, the longevity of Europe's major flag carriers was seen as assured for the most part, while the three big global alliances they anchor will also persist into the foreseeable future, according to most experts in this study, as they assist in extending global geographic reach for members. No significant cause was evident to question their ongoing industry survivability or relevance. These findings at their core demonstrate that Europe's liberalisation experiences are not going to be replicated elsewhere any time soon, and that international liberalisation is more likely to reflect a bilateral rather than multilateral approach in other global regions in future. This is not to infer to multilateral liberalisation will be of little consequence elsewhere, just that progress will continue to be patchy and uneven at best.

This study's findings encourage a cautious and conservative approach to linking one regional air market's strategic and competitive characteristics and trajectory with that of another,

including potential regional air markets in future. Regional diversity, combined with the sheer size of the global airline industry in totality, make parallels and transferability of key strategic trends and prospects challenging at best. The global airline industry might yet transition to a predominate structure based on regional air markets along the lines of Europe, according to most participants in this study, however, the pathway and timeframe to arrive at this point remain unclear at present. In any case, such a competitive landscape could become more protective not less, although bilateral region to region liberalisation would arguably become more straightforward, than the current state to state bilateral system (Toh, 1998; Havel & Sanchez, 2014).

Thus, this study's findings result in an answer to research question 2 that uncovers a raft of challenges and barriers to multilateral air market liberalisation outside of Europe, demonstrating in the process that the European model will not simply be transplanted elsewhere in future (including to the North Atlantic). The European single air market is of value, but it is not necessarily indicative of things to come. Again, although experts in this study were in majority agreement (though not consensus) that regional air blocs like that in Europe were going to be a dominant part of the industry's future structure, specific data on Europe's power to shape this unfolding process was agreed (almost to consensus) to be limited.

Regional liberalisation, much like the diversity of air markets generally, is likely to follow distinctly different trajectories around the world (Lykotrafiti, 2015). This study found widespread support for the contention that the global airline industry is best characterised as a massive heterogeneous series of air markets, still subject to the underlying forces of the bilateral system, even as individual regions experiment with ideas, and varying attempts at implementation, on a multilateral – including regional – level (Havel and Sanchez, 2014). Added to this, airport congestion and other infrastructure constraints, which are acknowledged in the literature as restraining liberalisation attempts (Knieps, 2014), are also felt by participants in this study to act as limiting forces that in many ways will negate any hoped for wider liberalisation benefits anyway.

7.5   Research question 3: The three major Gulf carriers

The three major Gulf carriers, according to the key findings of this study, are not taking over the global airline industry, but rather, they are extending its frontiers to more corners of the

earth. They are also working within its long established structures, including by following rapid growth paths based almost entirely to date on the bilateral system of air service agreements (Fan & Lingblad, 2016). Each major carrier has shown a willingness to cooperate with rivals elsewhere, though Qatar Airways has thus far done so by pursuing a combination of options predicated on global alliance membership (the only major Gulf airline to do so), and substantial equity stakes (Karp, 2016; Paylor, 2015). Emirates has avoided the former, preferring instead to build strong bilateral relationships, while it has abandoned the latter (Flightglobal, 2012). Meanwhile, Etihad has enthusiastically embraced equity investments, and pushed a little further than Emirates by creating an alliance of its own, though its global reach and scope remains limited at present (Kamel & Weiss, 2017). These realities are mirrored in the results of this study whereby the above status quo was viewed by most experts as likely to persist in the foreseeable future.

The bilateral system certainly favours airlines with advantageous geographical positions, but as with the case of the Gulf carriers, geographical location also retains a range of challenges and obstacles. For instance, restricting Gulf carrier access, as demonstrated in Canada and Germany, might yet slow growth rates and expansion plans (Gubisch, 2011 & Parker, 2012). Study participants were divided over whether such policies actually work, and also on whether the Gulf carriers require further liberalisation to continue their expansion in future. International relations suggest that aircraft purchasing, tourism demand and wider regional strategic considerations (particularly with regards to Iran), mean that the Gulf carriers will not have their fortunes reversed, but they might experience growing and substantial resistance as their networks continue to grow (Dresner et al., 2015).

The Gulf carriers firmly reveal that geographical location and major industry player status are vital for global success in the airline industry, with the extent to which an airline can extend its global reach with its own metal, and via its own hub/s and also entice partners, determined in large measure by this. The Gulf carriers also reveal that the global airline industry is larger than one region or one group of airlines can ever dominate. In this sense, other airlines have been before, and more will appear in future, but none will have precisely the same future trajectories because the diversity evident across the industry includes experiences and strategies which are rarely if ever replicated entirely across national borders.

The Gulf carriers also clearly demonstrate that international liberalisation can occur almost exclusively within the parameters of the bilateral system, with the leveraging of geographical

location advantages a by-product of this established industry structure. Not all states are equal; likewise, not all airlines enjoy the same opportunities; there is no level playing field in global aviation because there is no homogenous "field" to begin with (Hooper, 2014). The major Gulf carriers reveal an international industry future where individual firm success and size relate more to the externalities of the global industry's governing system, even as those airlines located in a similar region or air market vary in both success and size.

Global success, in large part demonstrated by global reach, indicates that airlines located in the northern hemisphere, and at an optimal distance from other global air markets to allow for one-stop hub operations, are best positioned to reap the benefits that the system can provide (Hanlon, 2008; Flint, 2006). Likewise, the globalisation "paradox" which postulates that the airline industry is trapped within national borders while facilitating globalisation for other industries (Macara, 2009), is in part a function of geographical location, and therefore, the value that other airlines bring as partners as a result. Thus, airlines are not all being held back from merging with other international airlines because of ownership restrictions, with the three major Gulf carriers demonstrating how a multitude of strategic options and decisions are at play, with no one option working for all airlines all of the time.

Likewise, large air markets encourage domestic airline strength and development by providing a market reservoir to then support international operations. Thus, large air markets are generally protective (especially of cabotage), while smaller air markets with little to no domestic traffic are usually more open to attract as wider catchment as possible (Derudder & Witlox, 2014). Geographical location and international relations then play their parts in determining where and why some airlines extend their global reach in more substantial ways than others. The three major Gulf carriers reveal these industry realities more than most, while also showing that major global industry players are located at strategic intersections in the northern hemisphere (Hanlon, 2008).

7.6   Research question 4: Asia and the future for global liberalisation

This study found that the Asian region points to a future for the airline industry that will continue to see protectionism founded on the bilateral system occupy a substantial position, while liberalisation will be patchy and uneven in many parts of Asia, and the world more generally. However, the findings of this study also revealed a significant minority of experts (just over one-third) who were fairly optimistic that intra-regional single air markets in Asia,

especially that being pursued by ASEAN (albeit more in rhetoric than practice to date), would be successful in future. Some in the literature concur with this optimism regarding ASEAN, although mostly with a range of caveats, notably that a regional single air market will not be a carbon copy of that in Europe (Ballantyne, 2014; Tan, 2010).

This being the case, China loomed large in the results for this study and its likely future trajectory was widely seen as being protectionist in nature. China has its big three airlines to protect, and one of the largest domestic air markets (and growing) in the world today (Tan, 2014), together with supplying more international tourists each year than any other country (Pilarski, 2007), so most participants in this study were understandably confident about its protectionist future.

China's protectionist tendencies could very well give way to wider bilateral liberalisation in future, but multilateral liberalisation seems an unlikely prospect based on the majority findings of this study. Large air markets in Asia, notably China, but also in places like Indonesia, Japan and India, are not keen advocates of multilateral liberalisation (Mifsud, 2011; Havel & Sanchez, 2014). Participants in this study reaffirmed that Asia's evident diversity also leads to less likelihood that the region will be able to set aside differences and reach consensus on more than a bilateral basis in future. Again, a significant minority of participants, representing just over one-third of experts, were optimistic that intra-regional liberalisation such as that proposed by ASEAN will succeed in future. Nevertheless, majority opinion, and certainly emphatic consensus agreement concerning China's protectionist future, indicate that the bilateral system's future seems fairly secure; a view echoed in the literature (Fu et al., 2015; Havel & Sanchez, 2014).

Along with a higher than anticipated level of agreement that ASEAN would achieve its single market aspirations in future, India also produced the unanticipated result in this study of representing too many unknowns to accurately forecast according to most experts. India was considered by most experts to be on a less clear trajectory than China over the next decade or so, although hints at a longer time horizon suggest that India's potential could be dramatically unleashed in future. India certainly retains a number of core competitive advantages including geographical location, population size and a growing middle class, but also remains mired in bureaucracy and sluggish and uneven economic development (Bowen, 2010; O′Connell et al., 2013; Saranga & Nagpal, 2016). Thus, the Asian region essentially reveals that prospects for greater liberalisation in Asia are most likely to emanate from bilateral and

not multilateral liberalisation. Even so, like other global regions this needs to be qualified with the simultaneous reality that pockets of dispersed multilateral liberalisation will also co-exist within this broader protectionist regional context.

Asia, much like the Gulf carriers covered earlier, demonstrates that bilateral liberalisation is likely to continue to be the international norm into the foreseeable future, with multilateral liberalisation, when it occurs, the exception to this general rule (Fu, et al., 2015; Havel & Sanchez, 2014). Much the same way that the US has employed open skies agreements, mostly on a case by case and bilateral basis, so too will China (and eventually India) allow international access to their large and potentially lucrative domestic air markets on this basis as well. What is best for the consumer does not always neatly align with what is perceived as best for a country, and so the national interest will continue to shape how large air markets in Asia and elsewhere approach traffic rights – as valuable trade assets, not as freely available opportunities open and accessible to all (Duval, 2011).

7.7 Implications for theory, management practice, methodology and public policy

Although the central aim of this study was to gain key industry insights into the global airline industry's likely future trajectory, the findings generated by this study also have wider theoretical, managerial, methodological and public policy implications.

7.7.1 Study implications for theory

There are a range of core implications emanating from this study that would make a valuable contribution to strategic industry level analysis in future, and also contribute to theories of international relations. Firstly, any strategic level industry analysis that investigates an internationally orientated sector or business, including one with substantial international operations and/or aspirations, must pay close attention to geographical location. Geography matters. Strategically based businesses possess competitive advantages, and are able to more effectively tap into trade routes and resources (Matsuyama, 2017). Geopolitics also helps to illuminate the important links between geography and politics, and to ensure that economic industry analyses are conducted within a holistic context that carefully considers all key factors and forces shaping and impacting a business or sector (Debbage, 2014).

In this context, the extraction of key industry insights from a distinct and unique industry like the global airline industry (Havel & Sanchez, 2014; Bartsch, 2013) necessitates the use of two well established and recognised strategic frameworks of analysis to avoid missing important forces and factors. In addition, geographical location (i.e. home base), and international relations predicated on bilateralism and multilateralism, must be included to ensure that these vital considerations are not downplayed or missed. This study did not seek to create a new "onion-style" strategic framework (Grundy, 2006) tailored to the airline industry, nor to recommend three of more frameworks for airline industry analysis. Rather, this study has endeavoured to demonstrate that through the use of two well regarded and established strategic frameworks, together with the explicit inclusion of geographical location and international relations, valuable and important key industry insights can be produced covering the global airline industry.

The ongoing debate over the inclusion of politics in Porter's five forces framework (Porter, 2008a) remains too mired in national/domestic politics, and as such, tends to ignore or downplay international relations. A similar critique of PESTE can also be mounted as the 'P' for politics category often neglects to include the international dimensions at work here. Ultimately, the theoretical expansion of politics into the international arena can only be achieved through the active engagement of scholars from a diverse spectrum of disciplines and fields. For example, there is little doubt that greater cooperation between economic geographers and scholars in "international studies" along with an array of "other disciplines", is needed (Gress, 2011, pp. 102-104). This thesis contributes to that multi-disciplinary expansion by not only engaging with a cross-disciplinary cohort of experts, but also by identifying key locations in the literature where significant gaps exist.

This thesis challenges conventional industry level strategic analysis tools and approaches by demonstrating the unique factors and forces that act to impact and shape the global airline industry, including its future prospects. In this context, international relations and geographical location are shown to be crucial contributors to better understanding international aviation, and the global airline industry more specifically. Commonly utilised strategic frameworks of analysis, such as Porter's five forces of competition and PESTE, tend to intuitively lead into national/domestic politics (or government), while ignoring geographical location altogether. A number of geographers lament that theories of global trade pay "virtually no attention to geographical factors" (Matsuyama, 2017). Meanwhile,

international relations and the airline industry receive some contemporary treatment (Havel & Sanchez, 2014), but much of it remains concentrated in the 1990s (Nayar, 1995; Richards, 1999; Lawton, 1999).

Thus, the most far-reaching contribution to theory from this thesis is in identifying and elevating geography – specifically, geographical location – to a commensurate strategic level as those key factors and forces (aka shapers) put forward by frameworks such as Porter's five forces and PESTE. At the most practical level this translates into a need to clearly delineate the geographical boundaries of an industry before conducting an industry level analysis; a contention actually postulated by Porter himself (2008a), along with other management scholars (Grant, 2005). At an airline industry specific level, it means establishing the geograhical locational advanatges and disadvanatges that pertain to a particular airline, or air market. Although this thesis did not set out to create a new strategic framework, including an airline industry specific model, it does contribute considerably to the conversation around the explicit inclusion of "geograhical factors" into such frameworks (Matsuyama, 2017, p. 1).

This thesis also contributes to ongoing debates surrounding globalisation by investigating a globally orientated industry that remains anchored to the nation-state. The airline industry seems to be a paradox whereby it enables and facilitates globalisation, yet itself is structured on national building blocks (Debbage, 2014; Macara, 2009; Staniland, 1998). Home base requirements, citizenship purity, ownership and control restrictions, along with the bilateral system of air traffic rights, all unite to form an industry that does not have any truly multinational players beyond the internal European single air market (Havel & Sanchez, 2011c; Rhoades, 2008). By helping to unpack this apparent paradox, this thesis demonstrates that businesses function differently across different locations around the world, even if they are considered in the same sector or industry overall (Gress, 2011). There remain practical limits to globalisation, as demonstrated in this thesis, in large measure these can be traced back to geographical realities (Sheppard, 2002). Geography matters, and politics needs to include international dimensions, if strategic level analysis is to more fully investigate the key forces and factors shaping a globally orientated industry.

Added to this, these apparently paradoxical attributes of the global airline industry, especially with regard to facilitating and encouraging the forces of globalisation, yet from within the industry confines of bilateralism (Macara, 2009), require greater discourse and exploration surrounding definitions and experiences of globalisation. In this context, international

relations theories and practices can help to better situate globally orientated industries into their local, national and international environments. Globalisation is by no means a singular and linear process unfolding equally around the world (Burchill, 2005; Fox, 2014; Simmons, 2000). National governments and national sovereignty still matter (Burchill, 2005), and better understanding the theoretical underpinnings of globalisation in its many forms can only help to make industry level analysis sharper and more accurate in future.

7.7.2   Study implications for management practice

A number of implications derive from this study that directly impact management practice. Chief amongst these is that emerging global air markets did not necessarily face the same opportunities and challenges as do the more established air markets in North America and Europe. In this sense, airlines with global network growth aspirations would be well advised to look beyond a western-centric notion of globalisation, and to instead consider how and why specific countries adopt a protective view of their airline sector. Added to this, notions of liberalisation as being inherently positive, and protectionism as being mostly if not wholly negative, act to attribute binary characteristics and values to processes and practices that are rarely solely one or the other (Dobruszkes et al., 2016).

This study found that situational context plays a crucial role in better understanding how and why liberalisation and protectionism occur in varying degrees throughout the global airline industry, and how individual countries perceive and pursue each. Equally, this study also found that experts do not necessarily support one or the other, but rather apply each in different measures to reflect the circumstances in particular countries and locations. In this sense, the thesis contributes to management practice by showing the need to distinguish international market liberalisation rhetoric from reality (Dobruszkes & Graham, 2016). Industry practitioners and decision-makers need to fully appreciate that multilateral liberalisation is neither a naturally unfolding process, nor an inevitable outcome subject only to time (Yeung, 2002; Dobruszkes & Graham, 2016). The practical implications of this realisation are potentially profound and long-term, as hoping or waiting for expected increased future market access is not prudent nor strategic.

The results of this study are also helpful in the formation of airline partnership and equity investment strategies, including in strategic decisions about global alliance membership. Few experts in this study thought that the big three global airline alliances faced any real prospect

of disbandment in future. Furthermore, this research has highlighted that strategic bilateral partnerships outside the alliance structures are often mutually reinforcing to alliance membership, and as such do not necessarily weaken each other. Likewise, lobbying for political changes to international airline merger restrictions is less likely to produce cost effective network growth, than cooperation with other airlines. Extending global reach is much more important for a majority of major global airlines (Hanlon, 2008), than pursuing mergers were they allowed (Gudmundsson & Lechner, 2012).

7.7.3 Study implications for methodology

The global airline industry is a large, complex and dynamic industry composed of a wide array of mostly individual domestic air markets, along with some regional single air markets (Havel & Sanchez, 2014). Such an enormous and diverse international industry cannot be fully understood through use of traditional econometric and quantitative research methods alone. Large swaths of quantitative industry data are not only located in the major air markets of the US and Europe, but this data represents an historical record that says more about the airline industry's development since its beginning over a century ago, than about its likely future heading forward. Many emerging air markets by their very nature have neither the repository of data to match their established counterparts, nor the historical timeframe across which to view this data (Fan & Lingblad, 2016; Itani et al., 2014).

Available data covering emerging air markets is limited (Itani et al., 2014), and what is available must be assessed with a view to the fluidity and uncertainty that characterises most emerging air markets (Fan & Lingblad, 2016). The Delphi method is a reliable and valuable approach, especially in aviation research, that helps in substantial ways to address such data gaps (Linz, 2012). The Delphi approach is widely lauded for its ability to provide accurate forecasting in situations where there is a "lack of appropriate historical/economic/technical data, and thus where some form of human judgmental input is necessary" (Rowe & Wright, 1999, p. 354).

The mixed-method Delphi approach employed in this study assists in reinforcing the value of expanding beyond the "more conventional quantitative studies that have traditionally dominated" fields like air transport geography for instance (Budd, 2014, p. 18). Multidisciplinary air transport research that moves beyond the available quantitative data, into hitherto underexplored areas and issues for the industry that can only be realistically

uncovered with qualitative data collection and analysis, adds to knowledge of the industry. In this manner, quantitative research is not weakened or relegated to a lesser position, but rather is supported and strengthened by more holistic approaches to unearthing key industry insights.

7.7.4   Study implications for public policy

This thesis also has a number of important implications for public policy. Firstly, the study highlights how contemporary air transport needs to be distanced from the binary notion of sovereignty versus freedom that has characterised much of its history (Rhoades, 2008). Likewise, protectionism and bilateralism must expand beyond narrow stereotypes and negative connotations, to focus on more holistic definitions and conceptualisations that acknowledge the important roles they play for the global airline industry. In this context, free market economics applied at the national/domestic level, must be de-linked from public policy discussions surrounding international air markets. Air traffic rights, and the ASAs that form the treaties which distribute them between countries, need to be viewed as tradable services, and not as rights for open access to all. National interests should not be discounted because they are characterised by some proponents of free markets as outdated and parochial. Included in this, once granted air access rights should not be seen as perpetual, but rather as valuable national assets, subject to periodic re-negotiation and appraisal.

Public policy debates and decisions should not be subject to emotive and value-laden definitions of liberalisation and protectionism, as the data in this study demonstrates that each can be used concurrently by industry players to argue for and against allowing air access based on individual market contexts and specific considerations. Likewise, neither is inherently superior to the other, as air markets around the world face different historical, economic, political and geographical realities that shape and impact public policy decision making. The notion of "winners and losers" should not be allowed to substantially influence public policy debates and decisions on air transport (Knibb, 2015a, para. 31), but rather an analysis of key costs and benefits should underpin policy development (Forsyth, 2014). Effective air transport public policy development and implementation is only likely when national governments, ICAO and industry bodies led by IATA, work together to debate, discuss, analyse and detail the costs and benefits of greater multilateralism. Only then can an agreed level of liberalisation based on "a settled international consensus" be achieved (Havel & Sanchez, 2011a, p. 16).

7.8   Study limitations

There is an evident gap in the air transport academic literature covering both geographical location and international relations, and how each shapes and influences global airline industry development, and in large measure assists in determining what regions and carriers will play more prominent roles in the industry's future (Nayar, 1995; Richards, 1999). This gap also presented limitations for this study. Expert knowledge across a wide spectrum of emerging air markets and regions was limited to non-existent. Given that geographical region/s of best industry knowledge generated a plethora of statistically significant results in this study, a lack of expertise in emerging markets without doubt limited a fuller understanding of how and why the global airline industry is diversely conceptualised around the world.

Although five stages of data collection provided ample avenues to add richness and depth to this study, it is also true that they generated a clear tension between quantity and quality at times. In this context, the inclusion of a number of different individual forecasts would have strengthened the study; for instance, a specific forecast covering ASEAN's single market aspirations and realities (Tan, 2014). Added to this, Africa's attempts at forging a single air market, encapsulated in the Yamoussoukro Decision (Njoya, 2016) would have provided additional grounds for deeper and geographically broader discussion and analysis. Moreover, future studies would need to explore the merit of conducting advanced statistical techniques to better understand the core trends and relationships uncovered in this thesis. Time constraints, resource limitations, the sheer size and scope of the global airline industry, together with the emerging nature of this research, almost ensured that the findings would on occasion prove partial and underdeveloped.

Limitations based on the language used in this study (i.e. English), and on a range of cultural constraints, almost certainly impacted this study and acted to skew results towards a western centric view of the global airline industry. Having said this, English is essentially the lingua franca (i.e. commonly accepted language) in international aviation, so the impact of this was not likely that pronounced (Vowles, 2006a). Cultural constraints, closely associated with the limited emerging markets expertise, likely played a more important role here. However, accessing a broader range of expert views in places like India, Africa and Latin America is

challenging as experts are often few and far between. Nevertheless, more non-western and developing world perspectives would have clarified the influence and impact of geographical industry knowledge. To this end, a background survey question on participants' nationality (with allowance for dual citizenship) would have added an additional, and potentially valuable, way to quantify cultural impacts on industry conceptualisations, including when a participant's regional expertise and nationality were not aligned.

7.9   Future research

Any study such as this that sets out to examine the global airline industry, including its likely future, results in arguably more unanswered and partially addressed questions, and incomplete forecasts, than concrete findings and ironclad predictions. The emerging data trail from five stages of data collection and analysis created a retrospective tendency that is subsequently vulnerable to the fallacy of perfection in hindsight. In this sense, the identification of core areas for future research is an expected and valuable outcome that acknowledges a dynamic and ever changing industry landscape. The study here has both revealed and confirmed that the areas for future research into the global airline industry are extensive. The findings in this study have potentially deep implications for more holistically understanding the global airline industry and its future.

Chief amongst these is that airline markets and regions around the world, such as Africa and Latin America, deserve closer scholarly attention, along with Russia, Central Asia and South Asia (Baroux, 2013; Pirie, 2014). Likewise, becoming fixated on developments in China runs the risk of failing to more fully appreciate the growing airline networks in consequence of China's growth in Africa, Latin America and elsewhere. The global airline industry has enormous latent potential for growth and development, and this future trajectory needs to be faced with geographical plurality and depth, not a status quo inspired form of scholarly tunnel vision.

Future research is not only needed in emerging air markets to discover salient industry insights, and encourage capacity building and expertise development, but more research is also required at the nexus between the global airline industry and the tourism industry. The international tourism sector is the largest industry in the world today (Duval, 2007). Growing Chinese tourist numbers around the globe are a large part of this story, but so too those from elsewhere, and the ways that these two massive industries not only economically interact, but

also socio-culturally and socio-geographically intersect and work together, are key areas for continuing and future research. The consequences and research opportunities of these two huge industries, when looked at together, dwarf any single industry analysis.

Finally, air transport research needs to more actively acknowledge the diverse array of professional views and experiences that exist covering the global airline industry, in the same way that it is currently more willingly embracing mixed-method data collection and analysis, and expanding into multidisciplinary fields (Budd, 2014; Vowles, 2006a). Not only does this include closer consideration of non-western views on the industry, but also an acknowledgment that male dominance in the field has acted for too long to marginalise a more gender balanced and inclusive approach (Budd, 2014). Those industry professionals and experts comfortable with the status quo are highly unlikely to question the field's historical research boundaries, nor to challenge dominant research paradigms, or to push for an expansion of research into new and thinly investigated areas. In short, global airline industry expansion is grounds for industry expertise enlargement as well.

7.10   Conclusion

The unique and seemingly contradictory nature of the global airline industry makes investigating it within the parameters of established strategic theories, approaches and frameworks challenging. The 'global' airline industry is unlikely to ever be one single market entity, or completely free global marketplace. State power and influence remains pervasive throughout the industry. Equally apparent is that where airlines are based across this heterogeneous market landscape matters. The northern hemisphere is where all the major global industry players are located. Added to this reality is the fact that multilateralism is still more aspiration and rhetoric than reality, if at times successful on a limited basis. Industry bilateralism predicated on national sovereignty enjoys a long and continuing existence.

Therefore, geographical location and international relations provide key insights into the global airline industry's future, and this is certainly the case when looking over the next decade or so. Each reveals that the industry will not experience multilateral liberalisation beyond what its national building blocks and competitive bilateral structural realities are able to absorb. Even so, a lot can and will happen all the same. Bilateral liberalisation continues to produce structural and competitive changes for the airline industry that generate ever growing globalisation benefits. Meanwhile, the industry continues to expand its geographic scope into

hitherto underserved and emerging air markets. This unfolding and expansive process then encourages arguably the world's greatest enabler of globalisation to slowly become a clear and growing beneficiary as well, helping in the process to dilute its more obvious paradoxical attributes. The industry's future trajectory in this sense is less ambiguous.

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APPENDIX 1: HREC Letter

Human Research Ethics Committee (HREC) approval letter

UNSW AUSTRALIA

**HUMAN RESEARCH ETHICS
COMMITTEE (HREC)**

31-Jul-2013
Mr Ian Douglas
Sydney NSW 2052

Dear Mr Douglas,

HREC Ref: # HC13204
**The global airline alliances, liberalisation and the North Atlantic: A Delphi study into
future industry prospects**

The Human Research Ethics Committee considered the above protocol at its meeting held on 30-Jul-2013 and is pleased to advise it is satisfied that this protocol meets the requirements as set out in the National Statement on Ethical Conduct in Human Research*. Having taken into account the advice of the Committee, the Deputy Vice-Chancellor (Research) has approved the project to proceed.

Would you please note:-

- approval is valid from 30-Jul-2013 to 29-Jul-2018;

- you will be required to provide annual reports on the studys progress to the HREC, as recommended by the National Statement;

- you are required to immediately report to the Ethics Secretariat anything which might warrant review of ethical approval of the protocol (National Statement 3.3.22, 5.5.7: http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf) including:

  - serious or unexpected outcomes experienced by research participants (using the Serious Adverse Event proforma on the University website at http://research.unsw.edu.au/human-ethics-forms-and-proformas ;

  - proposed changes in the protocol; and

  - unforeseen events or new information (eg. from other studies) that might affect continued ethical acceptability of the project or may indicate the need for amendments to the protocol;

- any modifications to the project must have prior written approval and be ratified by any other relevant Human Research Ethics Committee, as appropriate;

- if there are implantable devices, the researcher must establish a system for tracking the

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participants with implantable devices for the lifetime of the device (with consent) and report any device incidents to the TGA;

- if the research project is discontinued before the expected date of completion, the researcher is required to inform the HREC and other relevant institutions (and where possible, research participants), giving reasons. For multi-site research, or where there has been multiple ethical review, the researcher must advise how this will be communicated before the research begins (National Statement 3.3.22, 5.5.7: http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf);

- consent forms are to be retained within the archives of the AVIA - Dept of Aviation [School] and made available to the Committee upon request.

Sincerely,

Michael Grimm
Presiding Member
Human Research Ethics Committee

* http://www.nhmrc.gov.au/

Please note:

From initial HREC approval on 31 July 2013 (which included permission to conduct the first stage Workshop), each survey instrument, and then In-Depth Interviews, were individually submitted and approved via a 'request for modification' before going ahead. The HREC approval letter for each was dated:

- Stage 2 of 3: Pilot Survey – 11 November 2013;
- Stage 3 of 5: Main Survey 1 – 10 December 2013;
- Stage 4 of 5: Main Survey 2 – 09 April 2014; and
- Stage 5 of 5: In-Depth Semi-structured Interviews – 15 July 2014 (approved by the Human Research Ethics Advisory Panel 'H' Science & Engineering: **Reference Number: 08/2014/32**).

The research protocol also received approval to change its title on 10 December 2013 to: **Global geographic reach: A Delphi study into the future of the global airline industry**. Subsequent minor changes to this title, to arrive at the study's final title, were submitted to the Graduate Research School (GRS) for approval.

UNSW

School of Aviation

Approval No: **HC13204**

THE UNIVERSITY OF NEW SOUTH WALES

PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM

(_Main Survey 2 of 2 – The future of the global airline industry_) *

Participant selection and purpose of study

This main survey 2 of 2 is intended for respondents who submitted the main survey 1 of 2 and who had a Good stated level of knowledge (or higher) of the global airline industry, and 6 to 10 years or more of such knowledge. We, Dr Ian Douglas, Mr Darren Ellis and Dr Tay Koo, hope to learn about where the global airline industry is likely headed over the next decade or so from experts with knowledge in the field of study (including, but not limited to, airline management, airline economics and air transport geography).

Description of study and risks

If you decide to participate, we are conducting an online main survey 2 of 2 to capture ideas, concepts, opinions and views on a range of topics and areas related to ascertaining the likely future for the global airline industry, including the likely impact and significance of liberalisation of air markets (or lack thereof).

The main survey 2 of 2 involves a series of mainly structured/closed questions and statements (i.e. forecasts) that allow you to state your views on the global airline industry, including (but not limited to) the global airline alliances, liberalisation of air transport markets, and trends and developments in the Gulf region and Asia (particularly China). Emerging markets more generally are also covered.

You do not need to answer all questions, only those you are able to or want to. Although you are under no obligation whatsoever to participate in the subsequent semi-structured interviews, we would ask you to consider this option – details are provided at the end of this online main survey 2 of 2.

Responses to this online survey are anonymous and confidential.

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We are conducting this main survey 2 of 2 as part of a five stage PhD Delphi Study being conducted by Mr Darren Ellis, a full-time PhD student in the UNSW School of Aviation (Dr Ian Douglas is his principal supervisor, and Dr Tay Koo is his co-supervisor). You are under no obligation or requirement to participate in the final stage (that is, the interviews), and if your consent is given here, it only covers your involvement in this main survey 2 of 2. Three completed stages – a workshop at UNSW Aviation, an online pilot survey and the online main survey 1 of 2 – have been used to help develop this main survey 2 of 2.

There is a limited risk that current or previous employers and/or colleagues may identify your views and opinions expressed on this main survey 2 of 2, however, we will do all that is practical to ensure that confidentiality and anonymity are maintained. The survey responses will be stored in a password protected Google account only accessible to the researchers, while any written discussion and analysis coming from this main survey 2 of 2 will be kept in a locked filing cabinet at the PhD researcher's home office (i.e. Mr Darren Ellis). The data will be kept in the same manner for seven (7) years following the completion of the project, and then destroyed. Only the researchers will have access to the data.

We cannot and do not guarantee or promise that you will receive any benefits from this study.

(*Main Survey 2 of 2 – The future of the global airline industry*)

Please note: Darren Ellis owns shares in Qantas Airways (QAN).

Confidentiality and disclosure of information

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, except as required by law. If you give us your permission by completing and submitting this online main survey 2 of 2, we plan to both discuss and publish the results at conferences, in journal articles, other media and industry publications and in Darren's PhD thesis. In any publication, information will be provided in such a way that you cannot be identified.

Recompense to participants

Complaints may be directed to the Ethics Secretariat, The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone 9385 4234, fax 9385 6648, email ethics.gmo@unsw.edu.au). Any complaint you make will be investigated promptly and you will be informed of the outcome.

Feedback to participants

The progress of this PhD study, including a summary of research findings at completion of this study, are available at the following web link/address:

http://global-airline-industry-delphi-study.unsw.wikispaces.net/Home

Your consent

Your decision whether or not to participate will not prejudice your future relations with the University of New South Wales. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions, please feel free to ask us. If you have any additional questions later, Mr Darren Ellis, *Mobile Telephone:* +61 ███████████ or *Email*: d.ellis@student.unsw.edu.au, will be happy to answer them.

Please print and/or save a copy of this form for your records.

THE UNIVERSITY OF NEW SOUTH WALES

PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM (continued)

(*Main Survey 2 of 2 – The future of the global airline industry*)

You are making a decision whether or not to participate. Your participation in, and submission of this online main survey 2 of 2 indicates that, having read the information provided above, you have decided to participate.

REVOCATION OF CONSENT

(*Main Survey 2 of 2 – The future of the global airline industry*)

Given the anonymous nature of this main survey 2 of 2, it may not be possible to delete your survey response once you press submit. Even so, it may be possible to remove specific paragraph style responses from the data set if you provide details of the response you would like to have deleted.

Please note that no information that could clearly identify you will be used in the discussion, analysis or publication of the study's results.

Please contact Darren Ellis, *Mobile Telephone:* +61 ███████████ or *Email*: d.ellis@student.unsw.edu.au, if you would like to discuss the possibility of having information removed from your submitted survey response.

* *PLEASE NOTE*: The Workshop, Pilot Survey, Main Survey 1, Main Survey 2, and In-Depth Interviews each had an individually tailored Participant Information Statement and Consent (PISC) form, although the core details remained essentially the same as the example provided here.

Global Airline Alliances & Liberalisation: A Delphi Study to Investigate Future Prospects – Stage 1 of 5

Darren Ellis

Supervisors: Dr Ian Douglas & Dr Tay Koo

UNSW Aviation

Overview

- Participant Information & Consent Form

- Introductions

- Research Outline

- Workshop Questions & Topic Areas

  60 to 90 minutes (no later than 1.30pm)

2

Participant Information & Consent Form

- Please read and sign

- You are under no obligation or pressure to participate in future stages of the research – however, your continuing participation would be appreciated

- Feedback – a summary email and/or a Wiki to detail ongoing research progress and completion

3

Introductions

- Could you please introduce yourself?

  – In what capacity are you participating in today's workshop? (e.g. academic, airline manager, etc.)

  – How many years of knowledge and/or experience of the airline industry do you have?

4

Brainstorming Session

- Please feel free to:

  – Give your opinions
  – Share ideas
  – Detail your experiences in/knowledge of aviation

- There are no right answers or correct ideas

5

Inverted Triangle
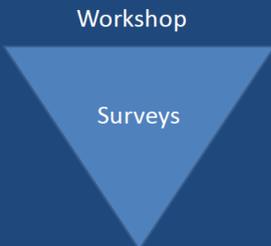
Workshop

Surveys

Interviews

6

Delphi Method

- Forecasting technique

- Expert cohort (20 to 30+)

- Iterative (2 or 3 main stages/rounds)

- Embedded/Controlled Feedback

- Consensus (75% alignment of views)

- Online Surveys/Questionnaires (eDelphi)

7

Delphi in an Aviation Context

Linz (2012). Scenarios for the aviation industry: A Delphi-based analysis for 2025. *Journal of Air Transport Management*, 22, pp. 28-35

Mason & Alamdari (2007). EU network carriers, low cost carriers and consumer behaviour: A Delphi study of future trends. *Journal of Air Transport Management*, 13, pp. 299-310

Linz, Ziegler & Lang (2011). The European business aviation industry – status quo and future projections. *Aeronautica*, 2, pp. 6-32

The International Air Transport Association (IATA) used Delphi until 1986; it now employs a simpler process, but still essentially Delphi*

* See: Doganis (2010). *Flying off course: Airline economics and marketing* (4th ed.), pp. 206-207

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Delphi Research Stages

1. **Workshop** – UNSW Aviation (August 2013)

2. **Pilot Survey** – online (September 2013)

3. **Main Survey 1 of 2** – online and mostly open-ended questions (November 2013)

4. **Main Survey 2 of 2** – online and mostly structured/closed questions and statements (January/February 2014)

5. **Semi-structured Interviews** – Via Telephone, Skype or Face-to-Face (first half of 2014)

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Research Questions

- Will greater international air transport liberalisation strengthen or weaken the global airline alliances?

- Will further airline consolidation in North America and Europe see bilateral and trilateral strategic relationships between the largest carriers supplant the global airline alliances?

- Will major US legacy carriers merge with major European flag carriers if and when foreign ownership restrictions are eased or lifted? Will the North Atlantic ever become a common aviation market place?

10

Research Hypotheses

H1   Greater global air transport market liberalisation will strengthen core anchor relationships within the global airline alliances, and will see network economies of scope and density concentrate further around fortress hubs and pipeline routes between key alliance dominated hubs. Opportunities will also grow for strategic partnerships of convenience outside alliance structures and networks as a result.

H2   Airline consolidation in North America and Europe will see bilateral and trilateral relationships between the largest carriers achieve strategic strength and significance above that of each global alliance grouping and brand, but not replace them.

H3   Major US and European carriers will fully merge to form single airline brands and corporate entities. Furthermore, the North Atlantic will become a common aviation market free from foreign ownership restrictions and cabotage barriers.

11

Literature Review

- *Alliances:* 'poor man's merger' or 'close substitute for mergers'.

- *Airline industry:* 'most regulated deregulated industry in the world'

- *National Sovereignty:*
  – foreign ownership and control restrictions
  – air service agreements (nationality clauses, etc)
  – national security and pride

12

Literature Review…

- *1978 deregulation in the US* – once the global role model and chief promoter

- *1990s liberalisation in Europe* – champion of opening up the international skies (to some extent)

- *Emerging markets* (e.g. the Gulf) adding weight to greater liberalisation (yet face significant resistance) – 'level playing field' arguments (national ownership/development and investment)

13

Global Airline Industry

- What are (or are likely to be) the industry's greatest **challenges** in the coming decade or so?

- **Opportunities**?

- **Achievements**?

14

Metal Neutral/Alliance Logo

15

Global Alliances: dying or thriving?

The global alliances are like "gang warfare" threatening competition. They are akin to wearing a "strategic straightjacket". Emirates will never join a global alliance.

Tim Clark

"Alliances are playing an increasingly important role in the airline industry – and that will continue long into the future"

Akbar Al Baker

16

Strategic Partnerships

- The *Centre for Asia Pacific Aviation* (CAPA) argues that promiscuous partnerships that take place between airlines from different alliances, or outside the alliance structures, are likely to become more commonplace throughout the global industry.

- Likewise, CAPA argues that the three Gulf carriers "will establish themselves at the core of the new global world order. It is difficult to imagine a more dramatic shift in the balance of power as is occurring now"

17

Rising Above

- If overcoming regulatory barriers explains, to a significant extent, the rise of the global airline alliances, is it therefore reasonable to assume that greater liberalisation will challenge their continuing existence?

18

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Global Alliances

- Will the mega alliances exist in a decade or so from now?
  - If yes, will they be stronger or weaker?
  - If no, what factors would have contributed the most to their demise?
  - Is one (or more) alliance at higher risk of disbanding?

19

Liberalisation

- Aeropolitics – is regulation a bad word?

- Aspirational versus reality (we can all describe what a free air market would look like, but what is the probability of that being achieved, particularly in the context of sovereignty)?

20

US & EU Markets

Will the North Atlantic (US & EU) become a single aviation market in the foreseeable future? What are the key obstacles?

21

China & India

What impact will China and/or India have on the global airline industry over the next decade and beyond? Other emerging markets?

22

Final Thoughts

- Do you have any final thoughts or observations or comments?

- Please leave an email address for workshop summary feedback (and future Wiki link)

- If interested, please leave an email address for future survey participation.

23

Contact Details

Darren Ellis

Email: d.ellis@student.unsw.edu.au or

Skype:

Mobile:

Thank You!!!

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APPENDIX 4: Pilot Survey

Pilot Survey - The future of the global airline industry

This Pilot Survey forms the basis of an upcoming Main Survey 1 of 2 (mainly open questions), with additional material also informing the subsequent Main Survey 2 of 2 (mainly closed questions and statements).

This Pilot Survey is likely to take about 40 to 60 minutes to complete (if you are happy to participate in the upcoming Main Survey 1 of 2 the 'edit response' function has been enabled for future use).

This Pilot Survey will likely close in late December 2013.

Could you please do the following two key things?:

1. Respond to each question to the best of your ability; and

2. Give feedback, comments and/or observations covering each question/section in the space provided (e.g. clarity of question, suggested improvements, value or otherwise of the question, recommendations, additional question/s, and so forth).

This PhD study seeks to forecast the strategic future of the global airline industry using the Delphi method.

This Pilot Survey is chiefly intended for participants who have a good to higher knowledge of the airline industry and who also have experience in completing and/or developing surveys. Even so, proficiency in just one core area is fine.

Not all questions need to be answered (including the provision of feedback); any information you can provide on this Pilot Survey is much appreciated and likely to be of value in finalising the development of the two main surveys to come.

The following wiki contains additional information about the research, including its overall progress: http://global-airline-industry-delphi-study.unsw.wikispaces.net/Home

Thank you for your time and effort!!!

Darren Ellis
PhD Candidate
UNSW Aviation
Email: d.ellis@student.unsw.edu.au

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Pilot Survey - The future of the global airline industry

Participant Information and Consent Form

If you click 'Submit' on the final page of this Pilot Survey you are confirming that you have read, understood and agree to the information detailed in the PDF below (this PDF link is duplicated at the end of the survey).

Link to a PDF of the form: http://global-airline-industry-delphi-study.unsw.wikispaces.net/file/view/Pilot%20Survey%20-%20Participant%20Information%20and%20Consent%20Form.pdf/456342968/Pilot%20Survey%20-%20Participant%20Information%20and%20Consent%20Form.pdf

[« Back] [Continue »]

22% completed

Pilot Survey - The future of the global airline industry

*Required

Participant Background Information

1. Which of the following categories best describes the capacity in which you are responding? *

○ Academic
○ Airline Management
○ Airport Management
○ Tourism Management
○ Journalist
○ Postgraduate Student
○ Business Traveller
○ Aviation Analyst
○ Aviation Consultant
○ Other: [ ]

2. How would you rate your overall knowledge and/or experience of the global airline industry? *

	Limited	Average	Good	Very Good	Excellent
	○	○	○	○	○

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3. How many years of knowledge and/or experience do you have of the global airline industry? *

- ○ 1 to 2
- ○ 3 to 5
- ○ 6 to 10
- ○ 11 to 20
- ○ 21 to 30
- ○ 30+

4. Which geographical region/s of the world are you most familiar with in terms of the global airline industry? *
You can select more than one.

- ☐ US and Canada
- ☐ Europe (except Russia)
- ☐ Middle East and North Africa
- ☐ Asia (China, Northeast Asia & ASEAN)
- ☐ Latin America (Mexico, Central & South)
- ☐ Sub-Saharan Africa
- ☐ Russia & CIS
- ☐ Oceania (Australia, NZ & Pacific Islands)
- ☐ India (including South Asia)
- ☐ Other: [   ]

Background Information - Feedback
Please provide any feedback, comments or suggestions on the section above.

[text box]

« Back   Continue »

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Pilot Survey - The future of the global airline industry

Where is the global airline industry headed?

5. Do you agree that the day of the large alliance carriers has passed, and that in the foreseeable future power will shift to long-haul low cost carriers (LCCs) and Gulf state mega carriers? In this context, are flag carriers increasingly becoming a part of history, or are they here to stay?

6. What will likely be the big news stories for the global airline industry over the coming decade and beyond?

7. In your view, why is the airline industry such an apparently fragmented, protected, restrictive and nationally-based industry, when it does so much to promote and facilitate the growth of globalisation? Does this apparent dichotomy even matter?

8. National sovereignty continues to have a significant impact on the growth and development of the global airline industry. Ownership and control restrictions, together with restrictive bilateral agreements and only partially "open" skies agreements seem to strengthen this apparent reality. Do you think the industry will always have to deal with considerable restrictions based around national sovereignty, or do you think such restrictions are losing power and influence in an ever more liberalised world?

9. In 1978 the US airline industry deregulated, while the EU single air market began to significantly liberalise throughout the 1990s. To what extent (if any) do you think the US and/or EU air markets are templates for what is, will or should happen elsewhere around the world? Are the US and/or EU experiences readily transferable to other regions?

10. How accurate do you think the following statement is? 'All but a few global airlines will struggle to get anywhere near profitability in the foreseeable future, and will only survive due to government protection and the lack of any serious competition'.

Section Feedback
Please provide any feedback, comments or suggestions on this section.

« Back   Continue »

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Pilot Survey - The future of the global airline industry

The big three global airline alliances - Star, SkyTeam & oneworld

11. Are the big three global airline alliances - Star, SkyTeam & oneworld - a permanent feature of the industry? How would you characterise their future prospects?

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12. Debate still surrounds whether the major global alliances are simply continuing a long industry history of collusive and anti-competitive behaviour, or whether they have brought a measure of economic rationality and marketplace stability. What do you think is the case, and why?

13. The global alliances are not without their critics, with Emirates Airline being particularly vocal in its opposition to what its views as archaic, bureaucratic and strategically rigid entities reflecting the industry's past and not its future. Emirates views 'strategic partnerships' such as the one it recently entered with Qantas Airways as the way of the future. In contrast, Emirates' neighbour Qatar Airways has joined oneworld and views the global alliances as here to stay. Who is right? What side of the debate do you align most with? Is partnering outside alliance structures a big deal?

14. What is your response to the following assertion? 'Without the global airline alliances to protect them, most full service carriers (FSCs) around the world today would not survive long as low cost carriers (LCCs) would soon wipe them out'.

Section Feedback
Please provide any feedback, comments or suggestions on this section.

« Back   Continue »

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Pilot Survey - The future of the global airline industry

The North Atlantic and Asian regions

The North Atlantic is defined here as principally the US and the EU. More broadly it also encompasses Canada, the UK, Norway and Switzerland.

Asia is defined as China, Northeast Asia (Japan, Korean peninsula & Taiwan) together with ASEAN countries.

15. Currently the US is the world's largest air market followed by the EU in second place. Given that the global airline alliances have key anchor members from both regions, and that these two regions also have a relatively long history of open skies agreements, how likely do you think it is that the US and EU will create a single air market in the foreseeable future? What would be the most significant consequences of such a single marketplace?

16. The Asian region is home to a growing and increasingly significant airline industry. Even so, the region is widely considered to be fragmented politically and unlikely to progress towards a single aviation market any time soon. National sovereignty concerns and a history of national governments protecting flag carriers seem to strengthen these views. What role do you think the Asian region will play in shaping the global airline industry (including alliances) over the next decade and beyond? Will open skies agreements and increasing liberalisation take hold in the region in the foreseeable future?

17. The rise of China is a much discussed and debated contemporary issue. What impact will a bigger and stronger China have on the global airline industry?

18. 'The US and EU are likely to become more fragmented politically and economically (including with respect to air transport) over the next decade or so, not more integrated. Just look at the EU it is in a mess currently, with the US not that far behind'. How fair is this statement in your view?

Pilot Survey - The future of the global airline industry

Emerging Markets: India, the Middle East, Brazil and Africa

The Middle East here includes North Africa (the MENA region), although the big contemporary airline events and stories in MENA are mostly associated with the Gulf states (the UAE & Qatar).

19. India has been a big story in aviation in recent years, although some of the promise and potential of this large market has experienced serious growing pains lately. Even so, the rise of India including its airline industry is a story unlikely to disappear in the coming years. What role and impact do you think that India will have on the global airline industry and big three alliances over the next decade or so?

20. The three major Gulf based carriers have dominated global aviation headlines for some time now with record breaking orders and considerable growth rates. Emirates has risen since its beginnings in the 1980s to become a global powerhouse, while Qatar and Etihad have also managed to forge considerable inroads into the global industry. How significant do you think these three Gulf carriers are? Will they (as some claim) reshape and reorder the global industry including the major global alliances over the coming years? Will Emirates/Qantas; Qatar/oneworld; or Etihad/equity alliances forge the way forward for the industry?

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21. As you scan the world and the global airline industry, what countries and/or regions do you think will rise to feature more prominently throughout the industry (including global alliances) in the coming decade and beyond? Will Brazil´s role and influence increase? Will Latin America more generally be a big story? Will Africa rise? Is Indonesia on the move?

22. 'Geography strongly encourages a significant degree of international diversity and plurality. Without this, the global airline industry would be less inclined to innovate and to change with the times. If anything, geography and national considerations actually foster a more robust and adaptable industry than would otherwise be the case'. Do you think this is the case? Why or why not?

Section Feedback
Please provide any feedback, comments or suggestions on this section.

« Back   Continue »

77% completed

Pilot Survey - The future of the global airline industry

Do you agree or disagree?

This section pilots a number of closed statements that are intended to be indicative of what will be on the Main Survey 2 of 2. As the Main Survey 2 of 2 will be based in large part on data from the Main Survey 1 of 2, it is not possible to necessarily achieve a high degree of precision in statement development at this time.

Even so, your responses and feedback/comments in this section will help to inform both main surveys and to gauge what issues and/or topics are likely to generate expert consensus.

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To what extent do you agree or disagree with each of the following statements?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
23. The major global alliances are more about collusion and avoiding competition than airline cooperation and growth.	○	○	○	○	○
24. Strategic partnering outside alliance structures will come to dominant the airline industry over the next 10 years or so.	○	○	○	○	○
25. US ownership and control restrictions will not be lifted or eased any time soon.	○	○	○	○	○
26. Even if liberalisation increases around the world, indirect regulations like airport congestion and other infrastructure constraints, together with a degree of re-regulation, will moderate or limit any potential benefits.	○	○	○	○	○
27. Emirates Airline will end its opposition to global alliance membership and join an alliance within the next 10 years or so.	○	○	○	○	○
28. The North Atlantic (US & EU) will be a single air market within a decade or so.	○	○	○	○	○
29. The Asian region airline industry will follow the US and EU examples and become more liberalised in the foreseeable future.	○	○	○	○	○

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30. National sovereignty and its considerable impact on the global airline industry is not likely to change much over the next 10 years or so.	○	○	○	○	○
31. Liberalisation of international air markets will gather pace over the next decade.	○	○	○	○	○
32. The global airline alliance brands - Star, SkyTeam & oneworld - will supercede most member airline brands within a decade or so.	○	○	○	○	○
33. The 'global' airline industry has a lot more global yet to come in terms of more regions and countries being drawn into its architecture.	○	○	○	○	○
34. US ownership and control restrictions represent very serious barriers to global airline consolidation.	○	○	○	○	○

35. Do you have a question, statement, scenario or forecast about the global airline industry that you think would be valuable to get the views of experts on using the same 5-point Likert scale above?

Section Feedback
Please provide any feedback, comments or suggestions on this section.

« Back   Continue »

88% completed

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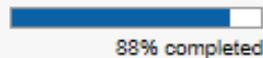
APPENDIX 5: Main Survey 1

The future of the global airline industry: A PhD study

This PhD study seeks to forecast the strategic future of the global airline industry using the Delphi method, with a central focus on international liberalisation, including the major global alliances, the European Union (EU), Asia and emerging markets more generally.

This survey is part of a two-stage Delphi process (that is, two main surveys several months apart; the option to participate in the next survey is provided at the end). A final optional stage - interviews - will be detailed at the end of the next survey.

This Main Survey 1 of 2 is likely to take 15 to 20 minutes to complete. It contains four (4) participant background questions and 18 main questions; all are based on a multiple choice format, with the option of providing extended answers at the end of each section. It will likely close for responses in early March 2014.

Although participation across all stages is greatly appreciated (particularly both surveys) you are under no obligation to participate.

Not all questions need to be answered; however, any information you can provide on this survey is much appreciated.

The following wiki contains additional information about the research, including its overall progress:
http://global-airline-industry-delphi-study.unsw.wikispaces.net/Home

Thank you for your time and effort!!!

Darren Ellis
PhD Candidate
UNSW Aviation
Email: d.ellis@student.unsw.edu.au

Continue »

12% completed

The future of the global airline industry: A PhD study

*Required

Participant Information and Consent Form
Link to a PDF of the form:

http://global-airline-industry-delphi-study.unsw.wikispaces.net/file/view/Main%20Survey%201%20of%202%20-%20Participant%20Information%20and%20Consent%20Form.pdf/481227690/Main%20Survey%201%20of%202%20-%20Participant%20Information%20and%20Consent%20Form.pdf

Please select the option below before proceeding. *

○ I have read, understood and agree to the Participant Information and Consent Form detailed above.

« Back   Continue »

25% completed

The future of the global airline industry: A PhD study

Participant Background Information

1. Which of the following categories best describes the capacity in which you are responding? *

○ Academic

○ Airline Management

○ Airport Management

○ Tourism Management

○ Journalist

○ Postgraduate Student

○ Business Traveller

○ Aviation Analyst

○ Aviation Consultant

○ Union Member/Representative (aviation related industry)

○ Other: [＿＿＿＿＿＿＿＿＿]

2. How would you rate your overall knowledge of the global airline industry? *

	Limited	Average	Good	Very Good	Excellent
	○	○	○	○	○

3. How many years of knowledge do you have of the global airline industry? *

[＿＿＿＿ ∨]

4. Which geographical region/s of the global airline industry are you most knowledgeable about? *
You can select more than one box below.

☐ Oceania (Australia, New Zealand & Pacific Islands)

☐ Southeast Asia

☐ Japan, South Korea and Taiwan

☐ China (including Hong Kong)

☐ US and Canada

☐ Europe (except Russia)

☐ Russia & Commonwealth of Independent States (CIS)

☐ Middle East

☐ Latin America (Mexico, Central & South)

☐ Africa

☐ India (and South Asia)

☐ Other: [＿＿＿＿＿＿＿＿＿]

[« Back] [Continue »]

37% completed

301

The future of the global airline industry: A PhD study

Where is the global airline industry headed?

5. What will likely be the big news stories for the global airline industry over the coming decade and beyond?
You can select more than one box below. Further details can also be provided in the extended answer section at the end of the section.

☐ Infrastructure constraints

☐ Airport congestion (including slot allocation)

☐ Environmental concerns/issues

☐ The continued rise of the major Gulf carriers

☐ Greater international liberalisation

☐ Low cost long-haul

☐ The rise of the Chinese airline industry

☐ India's airline industry

☐ Airline bankruptcies

☐ Government bailouts

☐ The 787 and A350

☐ The A380

☐ Privatisation

☐ Bio fuels

☐ Oil price

☐ Other: [＿＿＿＿＿＿＿＿＿]

6. Are national flag carriers increasingly becoming a part of history, or are they here to stay?

○ They are definitely disappearing from the global industry

○ Most of them are here to stay

○ Some of them will survive, but most will likely disappear in the next 10 years or so

○ Other: [＿＿＿＿＿＿＿＿＿]

7. Which of the following political/economic positions best captures your overall view of the global airline industry and its IDEAL regulatory future?
The assumption in each option below is that safety continues to be closely regulated.

○ Significant regulation is required because most governments need to closely regulate the airline industry as it is crucial to national economic development and growth

○ Some regulation of air markets will always be needed, however, this reality can (and should) coexist with varying levels of liberalisation heading forward

○ The industry is imperfect and always will be. It is how it is. Likewise, change will almost always be slow and incremental, with significant international liberalisation only occurring on a limited basis (with the exception of the EU)

○ The free market should be the basis for most (if not all) air markets around the world, with little to no national interference

○ Other: [＿＿＿＿＿＿＿＿＿]

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8. Globally, at what rate is international air market liberalisation currently progressing at?

	Too slow	About right	Too fast	No opinion
	○	○	○	○

9. Will national sovereignty have less impact on the development of the global airline industry in the foreseeable future?

○ Unlikely, as the nationality-based bilateral system of air service agreements (ASAs), along with national restrictions on ownership and control, will continue to remain strong

○ Likely, as multilateral ASAs and open skies agreements are progressively taking hold around much of the world

○ Its impact will vary and developments will be mixed

○ Other: [_____]

10. Is the European Union (EU) single air market a prime example of the international liberalisation that will happen elsewhere around the world in the foreseeable future?

○ Definitely an example of what is coming for the global airline industry

○ A prime example, but with slow, patchy and uneven progress around the world

○ The EU has followed a mostly unique path to liberalisation, and is unlikely to provide meaningful insights into the future of the industry elsewhere

○ The EU single air market is now actually more a reflection of the US domestic market, than a prime example applicable for other countries and/or regions

○ Other: [_____]

11. Which of the following international regions do you think is most likely to form a regional air bloc (single air market) with full cabotage rights, and no internal restrictions on ownership and control, within the next 10 years or so?
Cabotage = the right to operate domestic services within another country. You can select more than one box below (not all countries within a region must necessarily participate).

☐ North Atlantic (US & EU)

☐ EU with surrounding countries

☐ Russia and CIS

☐ South America

☐ ASEAN countries

☐ Northeast Asia

☐ Australia/New Zealand with surrounding countries

☐ Middle East & North Africa (MENA)

☐ Southern Africa

☐ Current examples aside (e.g. EU & Aus/NZ), future regional air blocs are unlikely in the foreseeable future

☐ Other: [_____]

Extended Answer Section [optional]
Please indicate in your answer/comments here the question/s above you are responding to.

[text area]

[« Back] [Continue »]

50% completed

The future of the global airline industry: A PhD study

The big three global airline alliances - Star, SkyTeam & oneworld

12. Are the big three global airline alliances - Star, SkyTeam & oneworld - a permanent feature of the industry? How would you characterise their future prospects?

○ They will be around for a long time to come

○ They are facing the real prospect of extinction

○ Not all three will survive, but two might

○ Four or more big global alliances are likely to exist in the foreseeable future

○ Other: [_____]

13. How would you best describe the main rationale for the global airline alliances?
You can select more than one box below.

☐ Substitutes for full mergers (given regulatory barriers)

☐ A cost effective way to achieve global geographic reach and coverage

☐ A cheaper option to merging that also achieves economies of scale, scope and density benefits

☐ An effective mechanism for turning competitors into partners

☐ Other: [_____]

14. Are bilateral alliances, including agreements between competing alliance members, weakening the major global alliances?

○ Yes, they are weakening the very rationale for the global alliances

○ No, they are just a reflection of the pragmatic nature of the industry

○ Somewhat, depending on the exact bilateral alliance being considered

○ Other: [_____]

Extended Answer Section [optional]
Please indicate in your answer/comments here the question/s above you are responding to.

[text area]

[« Back] [Continue »]

62% completed

The future of the global airline industry: A PhD study

The North Atlantic and Asian regions

The North Atlantic is defined here as principally the US and the EU. More broadly it also encompasses Canada, the UK, Norway and Switzerland.

Asia is defined as China, Northeast Asia (Japan, South Korea & Taiwan) together with the ASEAN countries.

15. How likely do you think it is that the US and EU will create a single North Atlantic air market in the foreseeable future?

	zero chance	unlikely	50/50	likely	almost certain
	○	○	○	○	○

16. What would be the most significant consequences of such a single North Atlantic marketplace?
You can select more than one box below.

☐ Flag carriers would soon disappear

☐ Major US carriers would merge with major EU flag carriers

☐ US airlines would develop a significant presence within the EU

☐ EU airlines would operate a substantial number of services within the US

☐ Single North Atlantic airline brands would replace national brands

☐ Other: [_____]

17. What role do you think the Asian region will play in shaping the global airline industry over the next decade and beyond?

○ The twenty-first century will be the Asian century and the airline industry will be a big part of this

○ Asia is losing ground to the Middle East and a resurgent Europe and US

○ Asia will follow the lead from elsewhere, rather than drive or greatly influence developments throughout the global industry

○ The real story for the global industry in the region is China, elsewhere developments will be mixed

○ Other: [_____]

18. Will open skies agreements and increasing liberalisation take hold in the Asian region in the foreseeable future?

○ No, the Asian region is too politically fragmented

○ Yes, it is only a matter of time

○ Smaller intra-regional single air markets within Asia are more likely

○ Other: [_____]

19. The rise of China is a much discussed and debated contemporary issue. What impact will a bigger and stronger China have on the global airline industry?

○ Massive and far-reaching

○ The growth story will be significant, but profits will be as elusive as ever

○ Moderate, but mostly a domestic story with less international impacts being felt

○ Limited, as China is likely to play catch-up to other major global regions and industry players for some time to come

○ Other: [_____]

Extended Answer Section [optional]
Please indicate in your answer/comments here the question/s above you are responding to.

[   ]

[« Back]   [Continue »]

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The future of the global airline industry: A PhD study

Emerging Markets

20. What role and impact do you think that India will have on the global airline industry over the next decade or so?

○ Very little; India faces too many challenges that need addressing

○ A major role and impact is likely in the foreseeable future as the country continues to grow economically

○ The impact will be significant, but not as significant as China

○ Other: [_____]

21. How significant do you think the three major Gulf carriers (Emirates, Etihad & Qatar) are to the global airline industry?

○ The most significant players in the global airline industry today, and growing more so

○ Significant, but just one of a number of key industry stories now and into the foreseeable future

○ Not as significant as they would have the industry believe

○ Other: [_____]

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22. As you scan the world and the global airline industry, what countries and/or regions do you think will rise to feature more prominently throughout the industry in the coming decade and beyond?
You can select more than one box below.

☐ Indonesia

☐ Brazil

☐ Africa

☐ South America

☐ India

☐ China

☐ Asia

☐ North Atlantic

☐ Other: [_____]

Extended Answer Section [optional]
Please indicate in your answer/comments here the question/s above you are responding to.

[text area]

23. Do you have any final thoughts, comments or observations about the global airline industry's future that you would like to add?

[text area]

[« Back] [Continue »]

87% completed

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The future of the global airline industry: A PhD study

Future participation & Submit survey

The upcoming Main Survey 2 of 2 is likely to also take 15 to 20 minutes to complete.

This final survey will contain a series of forecasts with an answer scale for each. Summary feedback from the survey being completed now (Main Survey 1 of 2) will be included throughout the next survey to assist participants.

You do not need to complete the upcoming survey. Providing your email below simply indicates that you are willing to receive the survey link.

24. If you are happy to be emailed the Main Survey 2 of 2 in a few months time, please provide your email address below.
YOUR EMAIL ADDRESS:

Thank you very much for your time and effort!!!

If you have any feedback, comments or questions you would like to share directly with the researcher, please feel free to contact Darren Ellis at:

Email: d.ellis@student.unsw.edu.au

« Back   Submit

100%: You made it.

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The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

This Main Survey 2 of 2 is intended for participants who completed the Main Survey 1 of 2 in February or March 2014, and who are defined experts; that is, they have:

1. Good, Very Good or Excellent levels of knowledge of the global airline industry; and

2. 6 to 10 years or more of such knowledge (i.e. 6 to 10, 11 to 20, 21 to 30 or 30+ years).

If you do not currently meet these parameters, thank you for your interest, however, your participation is not required for this survey (even so, previous data from the first main survey have proved invaluable so thank you very much for participating).

This PhD study seeks to forecast the strategic future of the global airline industry using the Delphi method, with a central focus on international liberalisation, including the major global alliances, the European Union (EU), the major Gulf carriers, Asia and emerging markets more generally.

This survey is part of a two-stage Delphi process (that is, two main surveys several months apart; the Main Survey 1 of 2 closed for responses in early March 2014). A final optional stage - interviews - will be detailed at the end of this survey.

This Main Survey 2 of 2 is likely to take about 15 to 20 minutes to complete. It contains five (5) participant background questions and 27 forecasts (F1 to F27). It will likely close for responses in late May 2014.

Although your participation is greatly appreciated, you are under no obligation to do so.

Not all questions need to be answered; however, any information you can provide on this survey is much appreciated.

PLEASE NOTE: This survey "feels" longer than it actually is as a result of summary feedback being provided at key points throughout. I hope you will find that the 27 forecasts are relatively quick to respond to.

The following wiki contains additional information about the research, including its overall progress:
http://global-airline-industry-delphi-study.unsw.wikispaces.net/Home

Thank you for your time and effort!!!

Darren Ellis
PhD Candidate
UNSW Aviation
Email: d.ellis@student.unsw.edu.au

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The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Participant Information and Consent Form
Link to a PDF of the form:

http://global-airline-industry-delphi-study.unsw.wikispaces.net/file/view/Main%20Survey%202%20of%202%20-%20Participant%20Information%20and%20Consent%20Form.pdf/499963178/Main%20Survey%202%20of%202%20-%20Participant%20Information%20and%20Consent%20Form.pdf

Please select the option below before proceeding. *

○ I have read, understood and agree to the Participant Information and Consent Form detailed above.

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The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Participant Background Information

Questions 2 to 5 are mostly duplicated here from the Main Survey 1 of 2 (Questions 1 to 4) so as to encourage data consistency as well as anonymity.

If your circumstances have changed since the last survey, or you cannot precisely remember your previous responses, please simply answer each question according to your current context.

1. Did you submit the Main Survey 1 of 2 in February/March 2014? *

○ Yes

○ No (not all of your data provided in this survey will necessarily be utilised)

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2. Which of the following categories best describes the capacity in which you are responding?
*

○ Academic

○ Postgraduate Student

○ Tourism Management

○ Aviation Consultant

○ Airline Management

○ Journalist

○ Other: [_____]

3. How would you rate your overall knowledge of the global airline industry? *
Limited and Average levels have now been removed (please only proceed if one of these expert options is applicable to you).

	Good	Very Good	Excellent
	○	○	○

4. How many years of knowledge do you have of the global airline industry? *
1 to 2 and 3 to 5 year options have now been removed (as per above).

[_____ ▼]

5. Which geographical region/s of the global airline industry are you most knowledgeable about? *
You can select more than one box below.

☐ Oceania (Australia, New Zealand & Pacific Islands)

☐ Southeast Asia

☐ Japan, South Korea and Taiwan

☐ China (including Hong Kong)

☐ US and Canada

☐ Europe (except Russia)

☐ Russia & Commonwealth of Independent States (CIS)

☐ Middle East

☐ Latin America (Mexico, Central & South)

☐ Africa

☐ India (and South Asia)

☐ Other: [_____]

[« Back] [Continue »]

25% completed

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The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Where is the global airline industry headed?

Summary feedback from previous survey:

123 useable responses were received, of which 71 were from defined experts (Good, Very Good or Excellent levels of knowledge AND 6 to 10 years or more of such knowledge); the remaining 52 responses were from what is hereafter referred to as non-experts. Unless otherwise stated, the summary feedback below is from experts.

Environmental concerns/issues were rated highest by respondents (66%) in terms of likely future big news stories for the global airline industry (multiple options could be chosen), followed by a cluster of three factors:

2. airport congestion (58%);
3. the continued rise of the major Gulf carriers (55%); and
4. infrastructure constraints (52%).

41% of experts selected the rise of the Chinese airline industry and the oil price, placing them in equal fifth place.

The least selected item was India's airline industry (9%).

Current survey (forecasts):

If you have no opinion, or you do not feel qualified to make a particular forecast, please either select 'Neutral' or simply leave blank and continue to the next forecast.

* 'Foreseeable future' refers to over the next 10 years or so.

F1: It is vitally important that the global airline industry develop a comprehensive response to climate change in the foreseeable future.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

F2: The global airline industry will develop a comprehensive response to climate change and as a result substantially reduce its carbon emissions within the next 10 years or so.

Highly unlikely	Unlikely	Neutral	Likely	Highly likely
○	○	○	○	○

F3: Recent attempts by the EU to include aviation in its emissions trading scheme (ETS), although unpopular with many airlines, is a likely future model of how to effectively deal with global airline industry emissions.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

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F4: Even if liberalisation increases around the world over the next decade, indirect regulations like airport congestion and other infrastructure constraints will moderate or limit any potential benefits.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F5: Re-regulation is likely to slow efforts towards greater liberalisation for much of the global airline industry over the next decade or so.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F6: Most international airlines have not responded effectively to historically and persistently high oil prices, and are unlikely to do so in the foreseeable future.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F7: The global airline industry would have higher levels of overall future profitability if more consistently underperforming and loss making airlines were allowed to fail and exit the industry.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F8: Profitability will be a key measure of global airline industry progress and development over the next 10 years or so.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

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33% completed

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The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Where is the global airline industry headed? (Continued...)

Summary feedback from previous survey:

39% of experts thought that the progress of international liberalisation is currently too slow, while 46% said it was about right. Only 9% thought it is progressing too fast, while a further 6% had no opinion. (When non-experts are added, 16% had no opinion, while only 28% viewed progress as too slow; about right and too fast were similar to the experts).

Most experts seemed to feel that sovereignty would have less impact on the future development of the industry; 39% pointing to the growth of multilateral ASAs and open skies around the world, while a further 42% adopted the pragmatic stance of stating that its impacts will vary and developments will be mixed. Only 19% felt that the impact of sovereignty would remain strong in the future.

F9: Bilateralism will still be a significant force and influence for the global airline industry into the foreseeable future.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F10: The global airline industry is not well suited to free market principles now, or into the future.

51% of experts thought that some regulation of air markets will always be needed (safety aside); however, only 10% felt significant regulation is required (rising to 18% when non-experts are included). 15% of experts saw the industry as always being imperfect, with international liberalisation only occurring on a limited basis. 21% of experts felt that the free market should be the basis for air markets (falling to 14% when non-experts are added).

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F11: In a massive and highly complex system like the global airline industry, the EU can provide interesting insights into its likely future, but beyond that, its power and influence to shape the industry's future development is limited.

57% of experts saw the EU as a prime example of likely future international liberalisation (albeit patchy and uneven), while 3% said it was definitely an example. Even so, 17% saw the EU experiences as mostly unique, and therefore, unlikely to provide meaningful insights elsewhere. A further 21% saw the EU as now more like the US domestic market than a prime international example.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

The big three global airline alliances - Star, SkyTeam & oneworld

Summary feedback from previous survey:

42% of experts thought that the big three global airline alliances will be around for a long time to come, while only 7% felt that they are facing the real prospect of extinction. This being the case, 25% still felt that not all three will survive (but two might), and a further 20% thought that four or more big global alliances are likely to exist in the foreseeable future. Thus, at least 62% viewed them as all here to stay (even if three become four), with at least 87% thinking two might still be around well into the future.

Most experts (66%) stated that the global alliances represent an effective way to achieve global geographic reach and coverage (i.e. "extend their networks" as one expert put it); while 44% also thought they were a cheaper option to merging. 28% saw them as an effective mechanism for turning competitors into partners, while only 21% viewed them as substitutes for mergers (given regulatory barriers). [Tick boxes format meant that multiple options could be selected here].

F14: Greater or limited future international liberalisation will not substantially impact the future development of the major global alliances.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F12: Regional air blocs (single air markets) similar to that currently represented by the EU, will become the dominant market structure for the global airline industry in the next 10 years or so.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F13: Full (or close to it) international air market liberalisation is inevitable; the only area of real debate concerns how long it will take to achieve.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

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41% completed

315

F15: Buying substantial equity stakes (10% or higher) in other airlines is becoming a more effective way for individual airlines to build strong and lasting partnerships than simply codesharing, global alliance membership or strategic agreements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F16: Strategic partnering outside global alliance structures will become a significant feature of the airline industry over the next 10 years or so.
Partnering outside global alliance structures was mostly viewed pragmatically by experts; 41% thought that such partnering is somewhat weakening the alliances (depending on the exact bilateral alliance considered), while a further 36% simply saw such partnering as a reflection of the pragmatic nature of the industry. Still, almost a quarter of experts (23%) said that bilateral partnering was weakening the very rationale for the global alliances.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F17: How would you characterise the likely future strategic position of each of the three big global alliances in 10 years or so from now?

	Likely disbanded	Weaker	Unchanged	Moderately stronger	Much Stronger
a. Star Alliance	○	○	○	○	○
b. SkyTeam	○	○	○	○	○
c. oneworld	○	○	○	○	○

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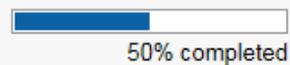
50% completed

316

F18: US foreign airline ownership and control restrictions will not be lifted or eased any time soon.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F19: EU flag carriers, particularly Air France, British Airways and Lufthansa, will still be the dominant European airlines for long-haul flights 10 years or so from now.

Most experts were not overly optimistic about the future for flag carriers. Even though only 12% said that they are definitely disappearing from the global industry, a further 43% thought that most are likely to disappear in the next 10 years or so. However, 41% did state that they are here to stay.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F20: Asian countries like China, with actual or potential domestic air markets of significant size, are highly unlikely to grant unrestricted (open) market access to foreign airlines into the foreseeable future (and mostly, if not exclusively, on a bilateral basis only).

30% of experts felt that Asia is too politically fragmented for liberalisation to take hold in the region anytime soon, but 30% of experts disagreed and said that liberalisation in Asia was only a matter of time. A further 38% thought intra-regional air markets were more likely in future. 40% of experts thought that the twenty-first century will be the Asian century, with the airline industry being a big part of this; 34% were less convinced (either because of Asia losing ground to the Middle East, EU and/or US, or as a result of Asia following the lead from elsewhere); a further 21% thought China was likely to be the real regional story.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F21: The big three Chinese carriers will become global airlines on par with major international competitors within the next 10 years or so.

	Highly unlikely	Unlikely	Neutral	Likely	Highly likely
a. Air China	○	○	○	○	○
b. China Southern	○	○	○	○	○
c. China Eastern	○	○	○	○	○

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The North Atlantic and Asian regions
Summary feedback from previous survey:

Most experts (44%) thought that the US and EU are unlikely to create a single air market in the foreseeable future, together with a further 6% who thought that there was zero chance. 34% of experts were 50/50 on the idea, while 13% saw it as likely and only 3% said it was almost certain.

If such a North Atlantic single market was to occur, most experts did not think that flag carriers would soon disappear, or that single North Atlantic airline brands would replace national brands.

Emerging Markets - India
Summary feedback from previous survey:

In terms of likely future big news stories, India was rated lowest with only 9% of experts selecting it (10% chose the A380 for example). Most experts (60%) felt that India's role and impact on the global airline industry, over the next 10 years or so, will be very little, although a further 33% did see its role and impact as significant, but not as significant as China. Only 11% of experts thought it would have a major role and impact. It should be noted that only 9% of experts nominated 'India (and South Asia)' as a region that they were most knowledgeable about in terms of the global airline industry (16% in the case of China).

F23: It is currently not possible to accurately predict the nature and extent of India's impact on the global airline industry over the next 10 years or so.

|	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

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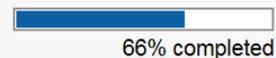
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F22: China's airline industry will rival those of the US and EU within the next 10 years or so.
17% of experts thought China's impact on the global airline industry will be massive and far-reaching, while a further 42% thought it will be significant, but profits will be as elusive as ever. 29% thought the impact will be moderate and mostly domestic, while 10% thought China will have a limited impact for some time to come.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○
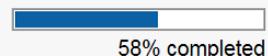
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The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Emerging Markets – The three major Gulf carriers

Summary feedback from previous survey:

Most experts (58%) took a fairly pragmatic view of the three major Gulf carriers, viewing their significance to the global airline industry as just one of a number of key industry stories now and into the foreseeable future. Even so, 28% did think that they are the most significant players in the industry today, and growing more so. Only 10% of experts thought they are not as significant as they would have the industry believe (rising to 15% when all survey respondents are included; i.e. when non-experts are added).

23% of experts indicated that they were most knowledgeable about the Middle East, while the continued rise of the Gulf carriers did achieve third place in a list of 16 (including Other) likely big future news stories for the industry (selected by 55% of experts).

F24: Within the next 10 years or so, the strategy of attempting to restrict access to the major Gulf carriers will have mostly (if not totally) failed.

For example, both Canada and Germany are currently placing restrictions on Gulf carrier access to their markets.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F25: The three major Gulf carriers will not be able to fully realise their global ambitions without significant further international liberalisation.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

F26: In 10 years or so, which of the following alliance options is most likely to be the case for each of the major Gulf carriers?

Please note: Qatar Airways is currently a oneworld member, while Emirates and Etihad remain unaligned (i.e. they have not joined one of the big three alliances, nor have they developed a new global alliance to rival the big three).

	Star Alliance member	SkyTeam member	oneworld member	Unaligned	New (rival) global alliance member
a. Emirates Airline	○	○	○	○	○
b. Etihad Airways	○	○	○	○	○
c. Qatar Airways	○	○	○	○	○

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75% completed

The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Last forecast & final thoughts...

F27: The global airline industry has a lot more 'global' yet to come in terms of more regions and countries being drawn into its architecture.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	○	○	○	○	○

28. Do you have any final thoughts, comments or observations about the global airline industry's future that you would like to add?

[text box]

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83% completed

The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Semi-structured Interviews - Skype, telephone or face-to-face [optional]

If you would prefer NOT to participate, please select 'Continue' and then on the next page 'Submit survey'. Thank you for your time and effort.

If you would like to participate in the final stage of this PhD study - a 30 to 45 minute interview - please complete the following section.

Please note: It may not be possible to interview all willing participants; time constraints, availability and geography, amongst other factors, will influence interview decisions.

1. Which of the following modes of interview do you prefer?
You can select more than one box below. Precise contact details will be exchanged via email with the researcher at a later date (if applicable).

☐ Skype

☐ Telephone

☐ Face-to-Face; in Australia (and possibly New Zealand) in June through August 2014

2. Please feel free to provide any further details...
You might like to include: Your name, aviation knowledge and interests, etc.

3. Please provide your email address for further contact.
YOUR EMAIL ADDRESS:
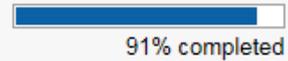
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91% completed

The future of the global airline industry: A PhD study (Main Survey 2 of 2: forecasts)

Submit survey

Thank you very much for your time and effort!!!

If you have any feedback, comments or questions you would like to share directly with the researcher, please feel free to contact Darren Ellis at:

Email: d.ellis@student.unsw.edu.au

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100%: You made it.

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APPENDIX 7: Semi-Structured In-Depth Interviews

Interview questions:

- **Primary questions**
- *Potential follow-up questions*

1.   **Do you think that governments generally play an important role in the global airline industry, or do you think they interfere too much?**
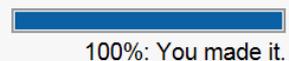
   a.   Are governments decreasing, increasing (or otherwise) their influence, power and/or control over the global airline industry?

   b.   Is the bilateral system of traffic rights and air market access getting weaker, stronger or likely to remain basically unchanged into the foreseeable future?

   c.   Are multi-lateral air services agreements (ASAs) and open skies agreements becoming the dominant air service agreements throughout the world? Are they likely to increase or decrease in future?

   d.   Is liberalisation of international air markets a positive step forward, or a process best limited or avoided?

   e.   What market structure do you think works best (or would work best) for the global airline industry? [e.g. free market?]

2.   **Are the three major Gulf carriers – Emirates, Etihad & Qatar – changing the global airline industry in a big way? If so, how?**

   a.   Do the major Gulf carriers suggest that world airlines are a distinct possibility in future? Why or why not?

   b.   Will Gulf airline growth rates reduce or indeed possibly decline in the foreseeable future?

   c.   What do the Gulf carriers indicate about the airline industry's future?

   d.   Are efforts to restrict access to the Gulf carriers by countries such as Germany and Canada an indication of things to come? Do such restrictions work?

3. **Is China likely to adopt a fairly open approach to liberalisation over the next 10 years or so, or is protectionism more likely to occur?**

    a.   Will the China over the next 10 years or so be more about the domestic airline market, rather than the international aspects?

    b.   Are any Chinese carriers on the path to become global carriers on par with the likes of Emirates, BA or United?

    c.   Will China play catch-up to the US, EU and other mature air markets within the next decade?

4. **Is the EU a good example of the likely international liberalisation that might take place elsewhere?**

    a. Will the EU experiences be replicated (at least in part) elsewhere?

    b.   Are we headed towards a global airline industry composed of regional single air markets?

5. **How useful and insightful is profitability as a metric of global airline industry health and development, given the industry has struggled historically to achieve consistent or high levels of profit?**

    a.   What other key metrics might also help to better understand the industry, including its likely future development?

6. **Any final comments or observations?**

APPENDIX 8: Thematic Data Analysis Plan

Research Questions	Themes	Sub-Themes	Definition	Indicators	Examples	Link with Chapters	Link to WS and PS[6]	Link to MS1 and MS2	Link to Interviews
RQ1 *To what extent do international liberalisation and protectionism contribute to the contextualisation of the future of the global airline industry?*	Situational context	Ideological perspectives	Free market principles, along with rate and inevitability of liberalisation, and the power of state sovereignty and bilateralism.	Participants' level of agreement with free market principles, liberalisation's progress and its perceived inevitability.	"...these mad economists who convinced us of the benefit of deregulation and free markets" (Int. 2).	Ch. 2: Literature Review	PS Q31 (Forecast 9) WS Q7	MCQ 7 Forecast 10 MCQ 8 Forecast 13 MCQ 9 Forecast 9	Question 1
		Progression of liberalisation							
		State power							
	Sustainable air markets	Profitability	Airline industry profit margins, underperformance, airline failure and airport congestion and infrastructure constraints.	Participants' views on the importance of profitability as a metric, and of allowing industry exit, and significance of airport congestion and infrastructure constraints.	"We don't seem to have the mechanism globally to allow successful airlines to get stronger profits, and unsuccessful airlines to go out of business" (Int. 13).	Ch. 3: Industry Background and Context **Ch. 5: Results** **Ch. 6: Discussion of Results**	PS Q10 WS Q1 PS Q26 (Forecast 4)	Forecast 8 Forecast 7 MCQ 5 Forecast 4 Forecast 5	Question 5
		Industry exit							
		Exogenous constraints							
	Geographical expertise	Knowledge dispersion	Geographical spread of best industry knowledge, and regional variations of this expertise in imagining the industry's future.	Geographical variations in participant expertise, and how these lead to differing views on the industry's future.	Gulf carriers: "I can't see them growing at the same rates because it's simply not sustainable – because of geographical location simply more than anything else" (Int. 7)		PS Q21 PS Q33 (Forecast 11) WS Q1 BGQ 4 PS Q22 WS Q1 WS Q10	Forecast 27 MCQ 22 BGQ 4	Question 6
		Geographical conceptualisations							

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[6] *Please note*: The Pilot Survey (PS) also contained 12 forecasts utilising a Likert scale (grid pattern); Question 23 (Forecast 1) through Question 34 (Forecast 12).

RQs	Themes	Sub-Themes	Definition	Indicators	Examples	Chapter links	WS & PS	MS1 & MS2	Interviews
RQ2 *To what extent are the North Atlantic and European air markets prime examples of where the global airline industry is headed into the foreseeable future, including the international liberalisation that other regions could follow?*	Probability	Ownership restrictions	The likelihood that airline ownership and control restrictions will be eased (or removed) in future, together with prospects for a single air market across the North Atlantic, including key consequences.	Participants' views on the likelihood of a single air market across the North Atlantic, including whether or not US ownership restrictions are likely to change, and the key consequences of such a SAM.	The US has encouraged liberalisation since the mid-1940s, but always "as and when it suits and benefits US carriers" (Int.6)	Ch. 2: Literature Review	PS Q25 (Forecast 3) PS Q15 WS Q8 PS Q34 (Forecast 12) PS Q18 WS Q2 PS Q28 (Forecast 6)	Forecast 18 MCQ 11 MCQ 15 MCQ 6	Question 1 Question 4
		Likelihood of North Atlantic SAM							
		Consequences of North Atlantic SAM							
	Transferability	EU power	The extent to which the EU represents a global model for future industry change, chiefly regional air blocs elsewhere, and the power to shape future industry trends.	Participants' opinions on the power of the EU to drive global industry development, including external powers, and regional air blocs of a similar nature.	"Is it a model? I don't think it is to be honest. It hasn't really changed a huge amount with respect to international" considerations (Int. 5).	Ch. 3: Industry Background and Context **Ch. 5: Results** **Ch. 6: Discussion of Results**	PS Q9 WS Q7 MCQ 5	MCQ 10 Forecast 11 Forecast 12 Forecasts 1, 2 & 3	Question 6
		Regionalism							
		Extraterritoriality							
	Status Quo Longevity	Global alliances	The survivability of the big three global alliances, together with major flag carriers (especially in Europe).	Participants' views on the future strategic strength of the global alliances and major flag carriers.	"Some of the major [European] airlines are doing frankly quite well" (Int. 4).		PS Q32 (Forecast 10) WS Q3 & Q4 WS Q6 WS Q9 PS Q11 PS Q12 PS Q13 PS Q14 PS Q5 PS Q23 (Forecast 1)	MCQ 12 Forecast 14 MCQ 13 Forecast 17 Forecast 19 MCQ 6	
		Flag carriers							

RQs	Themes	Sub-Themes	Definition	Indicators	Examples	Chapter links	WS & PS	MS1 & MS2	Interviews
RQ3 *What do the experiences and strategies of the three major Gulf carriers reveal about the likely future of both international liberalisation and the airline industry more broadly?*	Global impact	Significance	The extent to which the three major Gulf carriers are impacting the industry, including their leadership. Also, their geographical location advantages and realities.	Participants' opinions on the industry significance of the Gulf carriers, including their leadership and geographic location competitive advantages.	"The Gulf carriers are not taking over the world, what they're doing is raising the bar [and] setting a standard of what an airline can be" (Int. 4)	Ch. 2: Literature Review	PS Q5 PS Q20 WS Q1	MCQ 5 MCQ 21	Question 2
		Leadership							
		Location							
	Equivalence	National priorities	How and why the Gulf carriers demonstrate what is possible elsewhere, and whether their growth ambitions can be curbed by key competitors.	The extent to which participants are either supportive or critical of the Gulf carriers and their strategies and claims.	States have to consider the wider benefits "of the country as a whole, not just what might be good for particular consumers" (Int. 5)	Ch. 3: Industry Background and Context	PS Q7 PS Q8 PS Q20 PS Q30 (Forecast 8)	MCQ 9 Forecast 7 Forecast 24 Forecast 25	Question 1
		Restricting access							
	Global cooperation	Alliance membership	The scope for greater international airline cooperation, particularly between the Gulf carriers and others outside the region. And, what these machinations reveal about such cooperative strategies heading forward.	The extent to which participants think the Gulf carriers cooperate with airlines elsewhere, and how this will help to shape the industry's future.	The Gulf carriers have weakened "the value and strength of the traditional alliances" (Int. 10) The Gulf carriers have "been more strategic" of late in terms of alliances and partnerships, and they are currently "playing a quick catch-up game" (Int. 11)	**Ch. 5: Results** **Ch. 6: Discussion of Results**	WS Q3 PS Q27 (Forecast 5) PS Q20 PS Q24 (Forecast 2) WS Q4	Forecast 26 Forecast 15 Forecast 16 MCQ 14	Question 6
		Equity investments							
		Strategic partnerships							

RQs	Themes	Sub-Themes	Definition	Indicators	Examples	Chapter links	WS & PS	MS1 & MS2	Interviews
RQ4 *What does the Asian region reveal about the chances for greater liberalisation of the airline industry globally?*	Asian context	Global significance	The significance of the Asian airline industry globally, and its regional cohesiveness	Participants' conceptions regarding Asia's airline industry and its global significance.	In the "Asia Pacific area there are huge restrictions in terms of movement of people" (Int. 3)	Ch. 2: Literature Review	WS Q1 PS Q16 PS Q29 (Forecast 7)	MCQ 17 MCQ 18 MCQ 22	Question 6
		Regional divisions							
	China's global impact	Protectionism	The extent to which China will seek to protect its airline industry into the future, and how competitive China's big three airlines will become internationally.	How participants view China's attitudes toward liberalisation, and how competitive they think China's airlines will be in future.	"Definitely, no doubt China is going to be one of the major global [air] markets, China alone" (Int. 8)	Ch. 3: Industry Background and Context	WS Q9 PS Q16 PS Q17 WS Q10	MCQ 5 MCQ 19 Forecast 20 Forecast 22 Forecast 21	Question 3
		Global competitiveness							
	Unanticipated results	ASEAN optimism	The likely key industry insights to come from both ASEAN's stated single air market ambitions, and India's airline industry in future.	Participants' views on ASEAN's single air market aspirations, and India's airline industry and its likely future global impact.	ASEAN are "behind the grand plan, but they're a fair bit further on, surprisingly further on, than I thought" (Int. 2) India has too much "government bureaucracy", and its airline industry could do with "some sort of internal deregulation", along with greater emphasis on "more commercialisation" (Int. 8)	**Ch. 5: Results** **Ch. 6: Discussion of Results**	PS Q16 PS Q19 WS Q9 WS Q10	MCQ 11 MCQ 20 Forecast 23	Question 1
		India unknowns							