

## CHAPTER 10

### SUMMARY AND CONCLUSIONS

#### 10.1 Summary of the empirical evidence

In the thesis, the empirical evidence pertaining to the macroeconomic effects of aid is mainly found in chapter 6. However, chapter 5 can be regarded as providing additional evidence, as it seeks to ascertain the validity of the MIRAB hypothesis, and of the role it assigns to development assistance. It is desirable, therefore, to go from the general to the particular, by looking back, initially, on the significance of the MIRAB hypothesis, and on the nature of the evidence for and against it.

The MIRAB hypothesis represents a wide-ranging and systemic analysis of the type of economy found in Kiribati, Tuvalu, the Cook Islands, Niue and Tokelau, articulated around the concepts of 'rentier economies' and 'transnational corporations of kin'. Regarding foreign aid, the hypothesis rejects the accepted wisdom that long term economic welfare is conditional upon the procurement of additional investible resources, equating it instead with the preservation of an 'aid entitlement' and the securing of a continued flow of rent income. Accordingly, proponents of the hypothesis contend that the economic interests of these microstates would be better served by dispensing with the pretence of development through capital accumulation, and by the explicit recognition of their rent-dependent status. However, they also acknowledge that such reorientation in policy is unlikely given aid donors' aversion for 'handouts'. They ultimately adopt the pragmatic view that island governments should nurture their ability to extract rent, while continuing to provide the 'window-dressing' of development plans required by aid agencies.

Following the update of Bertram and Watters' (1985) original data, a strong case may be made for the continued usefulness of the MIRAB hypothesis, albeit not an incontrovertible one. The residual uncertainty arises from the fact that, while most recent statistics are broadly supportive of the hypothesis, some trends were detected that contradict its predictions. Undoubtedly, the most significant of these trends is the steady decline in the relative importance of rent income in the

Cook Islands throughout the 1980s. This trend is reflected in the decreasing economic weight of foreign aid, compared with GDP and merchandise imports. This finding must, however, be qualified by the fact that no significant decrease in real aid flows to this country was apparent, whether in absolute or in per capita terms. Thus, the declining importance of rent income is due to the rapid growth in domestic sources of income, such as tourism and off-shore finance. Should these activities experience a downturn in future, foreign aid and other forms of rent could easily regain a central role.

A second contra-MIRAB result to emerge from the updated data is the partial closure of the gap between total government spending and domestic revenue, in per capita terms, in all countries except Tokelau and Niue. In Kiribati, Tuvalu, and the Cook Islands, the shortfall in domestic revenue was able to be decreased both in absolute and relative terms. The most improvement in this area was recorded by Kiribati, which was able to almost halve the gap between revenue and spending.

A third result running somewhat counter to expectations based on the MIRAB hypothesis, is the fall in the number of I-Kiribati and Tuvaluans living overseas. While never reaching the proportions of the other MIRAB countries, overseas employment nevertheless exerted a significant economic influence in Kiribati and Tuvalu in the past. The fact that, with the closure of mining operations in Nauru, overseas labour outlets are becoming fewer, raises some doubt about the appropriateness of the MIRAB acronym being applied to these two countries, unless 'migration' is taken to include internal migration.

However, despite the existence of the trends just mentioned, and of marked inter-country differences, a detailed study of the various elements of the MIRAB process showed that most of its symptoms had generally endured—and in some cases worsened—in the period following Bertram and Watters' (1985) observations. Most significantly, high levels of foreign aid continued to provide the mainstay of the formal economy in all countries, allowing the public sector to maintain its prominent economic role, as producer of goods and services, and as wage employer. This is not to say that the characteristics of both aid and the public sector did not undergo transformation during that period. One significant change has been the decline in the importance of budgetary aid in the second half of the 1980s. In Tuvalu and Kiribati, this form of assistance was simply terminated, while, in the Cook Islands, it began to be phased-out.

These developments prompted some governments to seek ways to cap—and even reduce—the size of the public sector. However, the broader implications of the change in the composition of aid for the MIRAB hypothesis are not entirely clear. In principle, the termination of budgetary aid should have diminished the role of aid as an outright income and consumption supplement, and hence raised its overall effectiveness as a factor of growth. To the extent that this occurred, the changing nature of aid could be interpreted as signalling a weakening of the MIRAB process. This somewhat ‘optimistic’ interpretation is, however, disputed by Bertram, who argues that ‘the effect of [the termination of budgetary aid in Kiribati] was negligible from the point of view of macroeconomic impact or the allocation of overall government expenditure’ (1993, p. 249). This lack of effect may be partly due to the increasing importance of trust fund income in the budget of both Kiribati and Tuvalu. The increasing availability of this source of finance may have enabled these countries’ governments to maintain existing patterns of expenditure in spite of the termination of budgetary aid. While these alternative sources of public finance carry different implications for economic self-reliance, they nevertheless both represent forms of rent income. In this sense, therefore, a switch between the two does not detract from the ‘rentier’ analysis of these economies.

It is apparent, in the end, that a number of country-specific developments have taken place, in the course of the 1980s, which do not conform totally with the MIRAB hypothesis. However, these developments may be regarded as exogenous rather than endogenous, in the sense that they are the product of political decisions (e.g. the termination of budgetary aid), external shocks (e.g. the progressive closure of Nauru’s mining industry), or the exploitation of a legal loophole (e.g. the tax-haven ‘boom’ in the Cook Islands). It is doubtful, therefore, whether the existence of these developments constitutes sufficient grounds for the rejection of an hypothesis which, by the admission of its authors (e.g. Bertram 1993, p. 249), is based on stylised facts. This is especially so when the broad thrust of the evidence presented points to the persistence, from the early 1980s to the early 1990s, of the MIRAB symptoms described by Bertram and Watters (1985). On the weight of this evidence, the usefulness of the MIRAB framework for the investigation of the effects of aid was accepted. Accordingly, in chapter 6, the insights provided by this framework were used in conjunction with those obtained from the international literature on aid to investigate more fully aspects of the contribution of aid to the growth process.

No uniform pattern was discernible regarding the impact of aid on economic growth in the economies for which data were available. While MIRAB countries received relatively more aid than other independent South Pacific countries, their growth performance also exhibited more variation, both within and between countries. Growth rates achieved during the 1980s ranged from negative to double-digit positive figures, showing, perhaps unexpectedly, that some MIRAB countries had the ability to grow sufficiently fast to raise their GDP per capita. In cases of poor economic growth, the reason appeared to lie more with factors other than the failure of aid. Conversely, there was evidence to suggest that, in instances of rapid growth, overseas assistance was a contributing factor.

The possibility of aid hindering economic growth through the displacement of domestic saving was investigated next. In the low-saving environment of the South Pacific, MIRAB economies may be among the lowest-saving countries, if gross domestic saving is used as an indicator. In Kiribati, the only country for which sufficient data existed, the gross domestic saving-to-GDP ratio was consistently negative during the 1980s. It did not appear, however, that this phenomenon could be attributed to aid, in a behavioural sense. Instead, a variety of factors were noted, which have almost certainly contributed to this saving outcome. Chief among those is the large proportion of consumption expenditure financed by unrequited transfers (e.g. remittances, trust fund income): this particularity of MIRAB countries means that calculating domestic saving as a residual of consumption and GDP will inevitably yield very low or negative results. However, if consumption is subtracted from gross national disposable income instead, the saving performance of Kiribati appears satisfactory. This performance notwithstanding, it is likely that factors such as a low degree of monetisation, financial under-development, and extreme capital mobility, have adversely affected the mobilisation of domestic resources in MIRAB countries.

There was a similar lack of clear-cut evidence to support the view, expressed in the so-called 'fiscal response' literature, that the availability of aid creates disincentives to save in the public sector. In no country did there appear to be any correlation between the provision of ODA and the level of public consumption. However, the lesser degree of reliance on taxation in MIRAB countries, compared with other South Pacific countries, combined with the granting of often generous public sector subsidies, may be interpreted as an indication that the level of public saving had been adversely affected by the

availability of aid, especially of the budgetary variety. The phasing-out of this type of overseas assistance has seen taxation rise and subsidies decline in Kiribati and the Cook Islands, which suggests that the saving effort of the governments concerned is now on a rising trend. This did not appear to be the case in Niue and Tuvalu, where tax revenue as a percentage of GDP was falling during the 1980s.

The existence of economic distortions associated with the Dutch Disease, frequently mentioned in relation to the MIRAB transformation of an economy, is typically reflected in such indicators as the share of tradable output within GDP, and the real exchange rate. Examination of these indicators in the context of the MIRAB economies, did not allow a definite conclusion to be reached regarding the existence or strength of the disease. At a time when the tradables sector of most non-MIRAB South Pacific countries was contracting, only Kiribati appeared to have followed that trend. In Tuvalu, this sector's share was found to have increased threefold in eight years while, in the Cook Islands, a relative expansion was judged to have been extremely likely, given the growth in tourism and off-shore financial services. However, when measured against international norms for countries in similar stages of development, the three MIRAB countries mentioned above all had smaller than expected agricultural and manufacturing sectors. No relevant information was available for Niue and Tokelau.

Regarding the real exchange rate (RER), it was found that relative price movements in Kiribati and the Cook Islands were consistent with expectations of its appreciation, based on Dutch Disease theory. However, while the price of non-tradables was observed to have risen faster, in these two countries, than that of tradables, it was not possible to detect statistically the hypothesised negative relationship between proportional changes in the level of aid and in the RER. Moreover, in Niue and Tuvalu, the RER was found to have depreciated, at times, during the 1980s.

Finally, in the area of factor prices, no incontrovertible evidence of Dutch Disease distortions was uncovered. In particular, interest rates appeared to be governed by factors other than the magnitude of aid-financed public sector investment. Thus, the hypothesis that a foreign aid 'boom' leads to the price of that input being bid upward was not verified. Regarding wages, their sensitivity to inflows of foreign aid was difficult to ascertain, because of a dearth of available data. Since most available information in that area pertains to public service

salaries only, it was usually impossible for the economy-wide impact of aid to be considered. In the only instance when economy-wide figures were available (the Cook Islands), a positive and significant relationship between wage and aid level variation was discernible; however, it was unlikely to be causal, reflecting instead the influence of a third variable, such as inflation.

It is difficult, given the fragmented and often circumstantial nature of the evidence summarised above, to ascertain the applicability of Dutch Disease theory to the entire MIRAB group of countries. Of the four countries for which relevant data exist, Kiribati appears the most likely to have experienced the kind of change in economic structure predicted by this theory. The data do not lend unqualified support to the existence of a similar change in Tuvalu, Niue, or the Cook Islands. While relative price movements in that last country are clearly compatible with the existence of the disease, the expected fall in the tradables sector's share of output does not seem to have eventuated. It remains possible, however, that existing Dutch Disease effects have been obscured by stronger economic phenomena.

Overall, the empirical evidence presented in the course of chapters 5 and 6 serves to underline the diversity of recent economic experiences in the five MIRAB countries. This diversity, in turn, suggests that the macroeconomic impact of aid is likely to have differed from one country to the next. In this respect, the present findings mirror those of the international literature on aid, in which the lack of any 'hard and fast' rule governing the impact of aid has been repeatedly emphasised in recent times. Beyond these inter-country differences, however, it seems possible to accept that the role of aid in the five microstates has been mostly as envisaged by MIRAB proponents. This is particularly true where the dominance of the cash economy by the public sector is concerned. It appears almost certain that, without aid, the 'state capitalism' regime found in these countries would not have emerged or endured. The contention that foreign aid cannot but have an at-best marginally positive impact on economic growth seems less defensible, however. The examples of Tuvalu and the Cook Islands show that the contribution of aid to growth can be a positive one, as well as one largely devoid of major detrimental effects, such as decreased saving or a pronounced Dutch Disease transformation.

## 10.2 Summary of the analytical findings

The analytical findings of the thesis are contained in chapters 7 to 9. They are in the form of general comparative static results (chs 7 & 8) and quantitative results (ch. 9). The former were obtained from models incorporating some of the MIRAB economies' most important characteristics, such as the smallness and openness of its labour market. The latter were based on some of the general results, for which parametric values were obtained. Broadly speaking, the investigative approach adopted for each model consisted of its initial formulation, the derivation of its implications for the impact of aid, and the examination of plausible variations.

Using a one-sector model of the MIRAB economy, the impact of aid was shown to be almost entirely determined by the combination of an exogenous real wage rate and external labour mobility. Thus, in the original formulation of the model, the completely unrestricted migration of workers to and from the MIRAB economy ensured full employment at the real wage rate dictated by the metropolitan labour market. In the short run, the existence of full employment implied that the increase in absorption which foreign aid allowed was unable to influence the level of output. In the long run, it was assumed that aid translated into an addition to the net capital stock of the nation. As they faced a pre-determined real wage rate, cost-minimising domestic firms always sought to maintain their initial capital-labour ratio. Given this imperative, the impact of aid-financed investment was to raise capital stock, employment and output levels in identical proportions, but to leave *average* labour productivity unchanged. This meant that average income per worker could not be raised by aid. Whether an increase in income per capita was recorded could not be predicted from the model, as it depended on assumptions made regarding the change in overall population.

Following this initial analysis, two variants of the original model were examined, in an attempt to simulate more closely the conditions found in some MIRAB countries. From these variants, it was shown that aid could yield greater economic benefits in situations where return migration was ruled out, or when no emigration was allowed in the first place. In each instance, the impact of aid went beyond the expansion of domestic employment, to include an increase in average income per worker. This last result was regarded as particularly significant, as it implied the ability of aid to promote self-sustaining economic growth through increased domestic saving.

Overall, irrespective of the characteristics assigned to emigration in the one-sector model, aid was found to provide at least two categories of benefits to the MIRAB economy. In the short run (i.e. before the transformation of aid into an addition to the capital stock), it allowed the recipient to achieve levels of absorption in excess of those permitted by domestic productive capacity alone. Moreover, increased absorption could be assumed to translate, under certain conditions, into improved welfare for the country's inhabitants. In the long run, aid enabled domestic employment to expand. Both these short and long run benefits of aid are clearly consistent with those envisaged by proponents of the MIRAB hypothesis, as expressed by Bertram:

The true value of the aid flows lay in the maintenance of the government's capacity to operate as the economy's dominant cash employer of local labour, and thus to sustain (via a simple multiplier process) the level of cash consumption expenditure by ... households. (1993, p. 249);

[MIRAB economies are] economies in which strong social and political motives exist for providing cash employment for potentially footloose local labour, and in which the multiplier effects from cash wage income play a crucial role in reproducing the social framework. (ibid., p. 253)

According to this view, therefore, aid should not be expected to deliver much more than the means of ensuring a relatively satisfactory—by modern standards—way of life for islanders, through the direct and indirect subsidisation of their consumption levels. From donors' point of view, this is a worthwhile result if some strategic, economic, or environmental 'existence' value is attached to the preservation of island societies and cultures.

The two variants of the one-sector model have shown, however, that the above may constitute an unnecessarily restricted objective. In these variants, aid is found to be able to fulfil its traditional expectations as a 'primer' of a self-sustaining growth process. The prerequisite for such a process, the rise in the domestic saving ratio, can be met provided that aid is able to raise average labour productivity. This, in turn, requires that the real wage link between the domestic and overseas labour markets be non-existent (zero mobility variant), or that it become severed following emigration (asymmetrical mobility variant).

Next, a two-sector general equilibrium model of a MIRAB economy (ch. 8) was constructed with a view to gauging the likelihood of a Dutch Disease process occurring following an injection of aid. To this end, two broad economic sectors were distinguished, tradables and non-tradables. Furthermore, alternative versions of the model (restricted and unrestricted) were specified, in order to

reflect existing differences in workers' ease of access to overseas labour markets. In the model with restricted access, a Harris-Todaro internal migration process was hypothesised.

General comparative static results derived for both models clearly showed the possibility of the Dutch Disease occurring, defined as a contraction in the tradables sector's share of output and/or employment. In the short run, the only requirement for this outcome was an increase in the price of non-tradables (that of tradables remaining constant by assumption). From this result, it was concluded that the Dutch Disease was indeed likely, given that normal consumer preferences would see part of the short run aid-financed increase in absorption directed at non-tradables, without a commensurate increase in their production. Moreover, it was shown that the intensity of the contraction in the tradables sector was positively influenced by the magnitude of the price increase. This was due to the fact that, given the nominal wage indexation procedure postulated, the own-product real wage faced by the tradables sector was adversely affected by such an increase. Relatedly, the contraction was found to be more severe, the more labour-intensive the production process in that sector.

In the long run, aid-financed additions to sectoral capital stocks meant that changes in relative sector sizes were not only dependent on potential price effects, as described above, but also on the magnitude of those additions. As a result, a decline of the tradables sector became inherently unpredictable; for instance, any contraction induced by a rise in its own-product real wage could, in principle, be negated if its capital stock was increased sufficiently by aid. Furthermore, it was not possible to predict, on the basis of the general results alone, the direction of change in the price of non-tradables, given that the supply of that commodity would inevitably be increased by aid-financed investment. Thus, the benefits of the long run versions of the two models resided not in the ability to predict the likelihood of the Dutch Disease, but in the understanding of the factors which would precipitate its onset.

The main difference observed in the operation of the restricted and unrestricted models was due to their specific labour market characteristics. In the unrestricted model, external labour mobility meant that labour supply was not a constraint, implying that either sector could expand without the other sector having to contract as a result. In that model, the only interaction between sectors occurred via the price indexation of the economy-wide nominal wage. The restricted model, on the other hand, embodied a greater degree of sectoral

interdependence, given that a perfectly inelastic total supply of labour was assumed. As a result, a competitive (Harris-Todaro) labour market equilibrium was required, which implied that the size of the tradables sector was a function, *inter alia*, of the size of its non-tradables counterpart (see e.g. figure 8.8). However, this interdependence did not alter the qualitative results of the analysis.

Numerical results were then sought, based on the comparative statics of the two-sector models. In the light of the uncertainty surrounding the occurrence of the Dutch Disease in the long run, the significance assumed by this quantitative analysis went beyond the simple measurement of the impact of aid on selected economic variables. Only by estimating parametric values for both models and calculating exact proportional changes in their endogenous variables, did it become possible to predict the nature of the transformation of the economy's structure. Due to data constraints, this segment of the analysis was carried out for two countries only, the Cook Islands and Kiribati, representing the unrestricted and restricted models, respectively.

Quantitative results for both models/countries indicated that a Dutch Disease-like transformation of the economy could be expected, following a one-off injection of aid. In the short run, the price of non-tradables rose as predicted, which led to the contraction of the tradables sector, as a result of an increase in its own-product real wage. Moreover, the contraction experienced by this sector in both models, occurred in absolute as well as relative terms. The extent of the absolute contraction was especially large in the unrestricted model: output fell by a third and employment almost by half when an aid inflow equivalent to 10 per cent of GDP was simulated. Corresponding figures for the restricted model were lower (see table 9.15), due to the fact that the increase in the equilibrium price of non-tradables was less than half that observed in the restricted model.

In the long run, the contraction of the tradables sector was found to occur mainly in relative terms only. This meant that aid-financed additions to this sector's capital stock were generally sufficient to overcome any adverse movements in its unit labour costs, but not sufficient to help it outweigh the growth of the non-tradables sector. Even when relative price movements favoured the tradables sector, as in the long run restricted model, it experienced a relative decline. This was due to the fact that, in that model, the growth of the non-tradables sector impacted negatively upon that of the tradables sector,

through a rise in the latter's own-product real wage. This resulted, also, in the only instance of long run *negative* growth, in the tradables sector's employment level.

Through the use of long run numerical simulations, it was possible to show the occurrence of the Dutch Disease to be a fairly robust qualitative result. Specifically, it was calculated that only the provision of sufficient additional aid to the tradables sector, or a significant reapportioning of existing aid in its favour, would allow its relative decline to be avoided. Moreover, the simulation exercises revealed that this result could only be achieved with respect to output—not employment—levels, given the real wage elasticities assumed in the calculations. From these results, it was concluded that the degree of feasibility of the aid/investment policies required to negate the Dutch Disease was almost certainly low.

The contraction of the tradables sector notwithstanding, the positive impact of aid on overall domestic employment levels was revealed by the numerical analysis. The strength of this effect was invariably stronger in the short run, because of the greater price and real wage movements experienced in that period (see table 9.15). For instance, it was found that, in the short run, an aid inflow equivalent to 10 per cent of GDP would increase domestic employment by 16 per cent in the Cook Islands, and reduce unemployment by 61 per cent in Kiribati. Corresponding long run changes were 11 per cent and 56 per cent respectively, if 10 per cent increases in sectoral capital stocks were assumed. Thus, MIRAB proponents' view of aid as an effective instrument for combating unemployment and/or excessive emigration appears well-founded. In a departure from these authors' predictions, however, the growth-promoting role of aid also emerged as a strong one from the analysis. In the short run, the expenditure of aid monies was sufficient to generate a significant 'demand-pull' growth in real GDP. In the long run, the additions to the nation's capital stock which aid permitted were similarly conducive to real GDP growth. Since, in both time periods, this growth occurred simultaneously with a Dutch Disease process, it appeared that the latter was not an insurmountable impediment to the existence of the former.

Finally, the numerical results were able to shed some light on some of the issues associated with internal migration. Because the rural sector was identified with the tradables sector, an absolute decline in the number of workers employed in the latter was required for internal migration to the urban/non-tradables sector to take place. The analysis showed that, in the long run, such migration

only occurred in the restricted model. In that model, the number of rural workers fell, albeit by a small amount (see table 9.13), and the real wage of remaining rural workers, measured in terms of its purchasing power, rose. No such increase in purchasing power was possible in the unrestricted model, since the purchasing power of the economy-wide real wage was, by assumption, maintained at all times.

### **10.3 Implications and limitations of the research**

In recent times, the long-standing debate on the economic future of island microstates has been increasingly focussed on the appropriateness of the conventional development policies in place in these countries (e.g. Connell 1988; Tisdell 1990; Bertram 1993). To a large extent, the reappraisal of these policies is motivated by their perceived inability to promote economic independence and self-sustaining growth in the type of countries concerned. As home to a large number of island microstates, the South Pacific region has not escaped the scrutiny of economists and geographers in that area. Indeed, the apparent failure of conventional solutions to the problem of development is, arguably, nowhere more in evidence than in some of the smallest and the poorest countries in this region, about which the MIRAB hypothesis was formulated. This hypothesis marked a radical change in thinking about the development process in very small islands, and about the ways foreign aid could be expected to contribute to it.

Since the role of aid is subsumed in the hypothesis, the first question which had to be answered by the present research concerned the validity of the hypothesis as a representation of the economies under consideration. In that respect, the findings presented in the thesis, both empirical and analytical, appear to support the general thrust of the MIRAB representation. Thus, in future, this representation should continue to provide economists and planners with a guide to the understanding of aid-related issues in the five economies concerned, as well as in MIRAB-like small island economies. That is to say, for instance, that aid policy design should be based upon a clear knowledge of the nexus of aid, bureaucracy, emigration and remittances. Aid donors, in particular, should take care to consider all the repercussions of the provision of development assistance, such as increased internal migration and urbanisation, declining tradable output levels, and decreased international competitiveness. In economies such as those of the MIRAB group, which have become articulated around the provision of aid

and other forms of rent income, it should no longer be acceptable to treat development assistance as a marginal and necessarily positive economic influence.

However, neither should the acceptance of the MIRAB framework unquestioningly extend to the adoption of its somewhat jaundiced view of aid effectiveness. While it seems clear that overseas assistance can bring with it some unintended and unwanted consequences such as the Dutch Disease, the present research also shows that it has the capacity to raise domestically generated income per worker, and hence to promote a greater degree of self-reliance. On the basis of this result, it seems that the pessimism—and indeed cynicism—expressed in much recent literature is not entirely justified. More correctly, it cannot be justified on the basis of the models developed in this thesis. Having made explicit the assumptions and simplifications used in these models, the present research allows some of its premises to be challenged constructively in future. It also allows the models to be modified for use in relation to small island economies which may possess some, but not all, of the characteristics of MIRAB countries.

The main conclusion reached in this study, that overseas assistance can provide real benefits in terms of self-sustaining growth and long term economic independence, should in itself prove sufficient incentive for further investigation of the impact of this type of capital inflow. The predicted continuation of sizeable amounts of aid to the MIRAB countries in the foreseeable future should not lead to complacency in pursuing a better understanding of its effects. Only through such advances can aid be put to its best possible use. The present research must be seen as but a small contribution to this understanding. It is, of necessity, an imperfect contribution, many of its shortcomings stemming from the inadequacy of the available data. The greatest problem, in this area, lay with the scarcity of data pertaining to Niue and Tokelau. On more than one occasion in the thesis, this had the unfortunate effect of limiting the discussion to only three of the five MIRAB economies. Even with respect to Kiribati, Tuvalu and the Cook Islands, problems were regularly encountered, due to the shortness, fragmentation, and even total absence of relevant time-series. These constraints often led to difficulties in carrying out meaningful inter-country comparisons, which could be attempted only through guess-work and extrapolation. These constraints also meant that what econometric work was carried out was only rudimentary, which inevitably detracted from its usefulness. It is hoped that, with the passage of time,

improvements in statistics will permit future studies to better avail themselves of econometric techniques. Two research avenues, in particular, should benefit from the greater availability of data. One, commonly found in the international literature on aid, is the use of simultaneous equations models to evaluate empirically the existence of the aid-growth relationship. The second, the use of computable general equilibrium techniques, has already been applied to both small island nations (e.g. Woldekidan 1992, on Mauritius) and foreign aid (e.g. Weisman 1990, on PNG).

Stylised models and restrictive assumptions place another significant limit on the usefulness of the present research. To a large extent, their adoption was motivated by the data problems already mentioned. As chapter 9 demonstrated, even a pared-down approach ran into considerable numerical estimation difficulties. However, a second deciding factor was the desire to abstract from country peculiarities, in order to highlight the main economic traits shared by all MIRAB countries. Even in doing so, it was necessary to distinguish between two groups of countries: to have attempted a more realistic description of individual countries would have been to run the risk of having to specify five separate models. Unavoidably, therefore, the application of the analytical results to individual cases must be approached with great caution.

Ultimately, economic analysis can only be used to identify some of the development constraints faced by a country, because development is not a purely economic process. The limitations of economics are felt particularly acutely in dealing with MIRAB countries where critical phenomena such as urbanisation, emigration, and internationalisation have major sociological dimensions. In this context, the quest for development, defined as the 'development of every man and woman—of the whole man and woman—not just the growth of things, which are merely means' (Hope 1986, p. 5), is one that must proceed along several fronts, economic, social, and environmental. To forsake any of these could only bring a hollow victory indeed.