CHAPTER FOUR

The regression model

The first section of this chapter contains a restatement of the hypotheses. This is followed by a discussion of multiple regression and the terms used in the analysis. The next section contains the data from the regression analysis and the results of the hypothesis testing. A test of the adequacy of the regression model then follows. This chapter concludes with a summary of the results.

4.1 Restating the hypotheses

The hypotheses developed in Chapter Two are restated in a form that also uses the variable terms. For formal testing procedures, the alternative hypothesis is stated first, followed by the null hypothesis.

4.1.1 The funding method (HOSFND)

H_a: There is a positive linear relationship between the type of funding method (HOSFND) and the perceived effectiveness of a public hospital's management control system (PEMCS).

$H_{0:}$ There is no positive linear relationship between the type of funding method (HOSFND) and the perceived effectiveness of a public hospital's management control system (PEMCS).

4.1.2 The service diversity of a hospital (HOSDIV)

$H_{a:}$ There is a positive linear relationship between the service diversity of a public hospital (HOSDIV) and the perceived effectiveness of a public hospital's management control system (PEMCS).

$H_{0:}$ There is no positive linear relationship between the service diversity of a public hospital (HOSDIV) and the perceived effectiveness of a public hospital's management control system (PEMCS).

4.1.3 The professional orientation of the hospital's chief executive officer (CEOPROF)

H_a: There is a negative linear relationship between the professional orientation of a public hospital's chief executive officer (CEOPROF) and the perceived effectiveness of a public hospital's management control system (PEMCS).

H_o: There is no negative linear relationship between the professional orientation of a public hospital's chief executive officer (CEOPROF) and the perceived effectiveness of a public hospital's management control system (PEMCS).

4.1.4 The management orientation of the hospital's chief executive officer (CEOMGT)

H_a: There is a positive linear relationship between the management orientation of a public hospital's chief executive officer (CEOMGT) and the perceived effectiveness of a public hospital's management control system (PEMCS).

H_0: There is no positive linear relationship between the management orientation of a public hospital's chief executive officer (CEOMGT) and the perceived effectiveness of a public hospital's management control system (PEMCS).

4.2 Statistical significance

Statistical significance is used to determine whether the results of the analysis meet predetermined criterion. It is the probability of rejecting the null hypothesis. Rubinson and Neutens (1987, 224) state that:

> ... acceptance or rejection of a hypothesis is based upon a level of significance (alpha level, α) which corresponds to the area in the critical region. Many research efforts in the health sciences establish the level of significance at the 5 per cent (.05) alpha level.

However Kerlinger (1986, 157) states that the .10 level may sometimes be used. For the purposes of this study a normal level of significance was recognised at the .10 level. This figure was chosen in this study because the study was considered exploratory research.

4.3 The multiple regression model

Multiple regression is a statistical method which analyses the influences of two or more independent variables on a dependent variable (Kerlinger 1986, 138). The terms used for the independent variables in this study were HOSFND, HOSDIV, CEOPROF and CEOMGT. The dependent variable, the perceived effectiveness of a public hospital's management control system was termed PEMCS.

Multiple regression is used to analyse the data in this study. This method indicates the maximum linear relationship between the dependent variable and the independent variables. De Vaus (1992, 216) suggests that where the independent variables are measured using different scales the standardised method of multiple regression must be used. Norusis (1993, 18) states that the standardised method of regression analysis uses beta coefficients. These coefficients are comparable because all variables are calculated in a standardised form. Because this study uses different scales of measurement it uses the standardised method. The model and terms used to test the relationship are shown at Model 4.1.

$$PEMCS = \beta 1\ HOSFND + \beta 2\ HOSDIV + \beta 3\ CEOPROF + \beta 4\ CEOMGT + \varepsilon. \qquad \textbf{Model 4.1}$$

In the equation in Model 4.1 β represents the partial regression coefficient. This coefficient shows the marginal effect of one unit increase in the independent variable on the value of the dependent variable. The symbol ε represents a

disturbance term that takes into account any unexplained factors that affect the dependent variable (Menzefricke 1995, 448).

Table 4.1 Regression Analysis Results

$$PEMCS = \beta 1\ HOSFND + \beta 2\ HOSDIV + \beta 3\ CEOPROF + \beta 4\ CEOMGT + \varepsilon$$

Variable name	Variable	Beta	T	Sig. *T*
HOSFND	β1	.1526	1.708	.0925
HOSDIV	β1	-.1429	-1.565	.1226
CEOPROF	β3	-.0609	-.2833	.5320
CEOMGT	β4	.7102	7.882	.000
Adjusted R^2 = .4699	**F= 16.069**	**Sig F = .0000**	***R^2 = .5011***	

4.4 Goodness of fit

Goodness of fit refers to the total variation in the dependent variable accounted for in the model by the independent variables. The coefficient of determination (R^2) is commonly used as a measure of the goodness of fit. However Menzefricke (1995, 460) states that it:

> ... measures the proportion of the variation in [the dependent variable] that is accounted for by the [independent] variables used in the regression model.

However Norusis (1993, 318) states that R^2 is an optimistic estimate of the goodness of fit. The adjusted R^2 is a better reflection of the goodness of fit. It

takes account of the size of the sample and the number of regressors. In this study the adjusted R^2 is therefore used to measure the goodness of fit. Table 4.1 shows the adjusted R^2 is .4699. This measure suggests that the model accounts for 46.99% of the variation in the perceived effectiveness of the public hospital management control system.

4.5 Testing the hypotheses

4.5.1 The relationship between the funding method (HOSFND) and the perceived effectiveness of the management control system (PEMCS)

The first hypothesis in this study is :

H_a: There is a positive linear relationship between HOSFND and PEMCS.

H_0: There is no positive linear relationship between HOSFND and PEMCS.

It is examined by determining if the coefficient β_1 was significant and signed in a positive direction. The expectation in this paper was that it would be statistically significant and positively signed. Based on the theory developed in this study the type of funding system was expected to influence the perceived effectiveness of the hospital's MCS. As the component of casemix increases in the hospital's funding method then the perceived effectiveness of the hospital's MCS increases.

Table 4.1 presents the results from examining hypothesis one in the regression model. Inspection of this table shows that the coefficient β_1 of .1526 is within the chosen level of significance of .10 with sig t at .0925. The null hypothesis is therefore rejected. It is concluded that the type of hospital funding method does have an influence on PEMCS.

4.5.2 The relationship between the service diversity of a hospital (HOSDIV) and the perceived effectiveness of the management control system (PEMCS)

The second hypothesis in this study is :

H_a: There is a positive linear relationship between HOSDIV and PEMCS.

H_0: There is no positive linear relationship between HOSDIV and PEMCS.

It is examined by determining if the coefficient β_2 was significant and signed in a positive direction. Based on the theory developed in Chapter Two HOSDIV was expected to influence PEMCS in a positive direction.

Table 4.1 presents the results from testing hypothesis two with the regression analysis model. A surprising result is the negative direction of β_2. However, this table also shows that the coefficient β_2 is not significant at the .10 level. Therefore the null hypothesis cannot be rejected.

4.5.3 The relationship between the professional orientation of the hospital's chief executive officer (CEOPROF) and the perceived effectiveness of the management control system (PEMCS)

The third hypothesis in this study is:

H_a: There is a negative linear relationship between CEOPROF and PEMCS.

H_o: There is no negative linear relationship between CEOPROF and PEMCS.

It is examined by determining if the coefficient β_3 was significant and signed in a negative direction. Based on the theory developed in this study, it was expected that CEOPROF influences PEMCS in a negative direction.

Table 4.1 presents the results from testing hypothesis three with the regression model. The results show that β_3 is negatively signed. However, this table shows that the coefficient β_3 is not significant at the .10 level with sig t = .5320. Hence the null hypothesis cannot be rejected.

4.5.4 The relationship between the management orientation of the hospital's chief executive officer (CEOMGT) and the perceived effectiveness of the management control system (PEMCS)

The fourth hypothesis in this study is:

H_a: There is a positive linear relationship between the CEOMGT and PEMCS.

H_o: There is no positive linear relationship between CEOMGT and PEMCS.

This was examined by determining if the coefficient β_4 was significant and signed in a positive direction. The expectation in this paper was that β_4 would be statistically significant in a positive direction. Based on the theory developed in this study, it was expected that CEOMGT influences PEMCS in a positive direction.

Table 4.1 presents the results from testing hypothesis four with the regression analysis model. The coefficient β_4 is .7102 and is significant with sig t at less than .001. Hence, the null hypothesis can be rejected. The result suggests that CEOMGT does influence PEMCS in a positive direction.

4.6 Adequacy of the model and analysis of residuals

Diagnostic checks were carried out on the model to see whether the assumptions underlying the results of the multiple regression model were justified. Norusis (1993, 324) states that:

> You usually don't know in advance whether a model such as linear regression is appropriate. Therefore, it is necessary to conduct a search focused on residuals to look for evidence that the necessary assumptions are violated.

Cohen and Cohen (1991, 125) also state that:

> ... a model is not adequate simply because R^2 is high nor inadequate because R^2 is low. It is inadequate rather when it can be substantially improved within the conditions set by the data.

The residuals (or errors) of the estimated values of the regression form the basis for assessing the adequacy of the model. The assumptions are that the residuals are normally distributed with a mean of 0 and a constant variance. Menzefricke (1995, 387) states that this analysis involves testing the following assumptions:

1. The assumption of normality.
2. The assumption of linearity.
3. The assumption of the equality of variance (or homoscedasticity).
4. The absence of outliers.

The results of the analysis of the residuals are now presented. Possible breaches of each of these assumptions is considered.

4.6.1 Test for normality

Multiple regression analysis assumes that the residuals are normally distributed around the mean. Figure 4.1 is a histogram of the residuals with a normal curve

superimposed on the graph. The histogram is examined to ascertain whether the observed residuals are normally distributed (Norusis 1993, 329). Figure 4.1 shows that the observed residuals are normally distributed with only a small amount of sampling variation. Another method to examine this assumption is to plot the two cumulative plots against each other. The assumption can be examined by observing the scatter about the expected straight line. Figure 4.2 is a plot of the standardised residuals. It also shows that the normality of the data can be assumed.

Figure 4.1 Histogram of standardised residuals

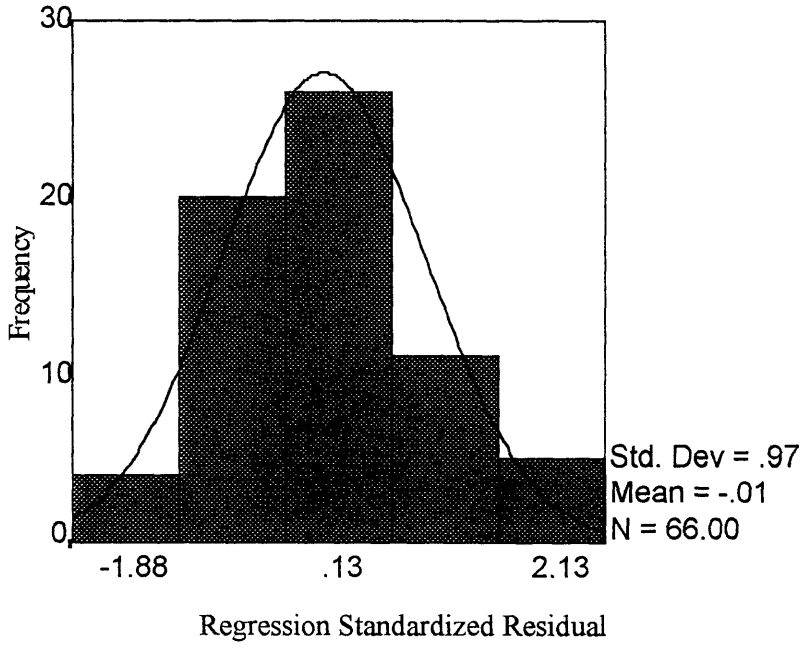
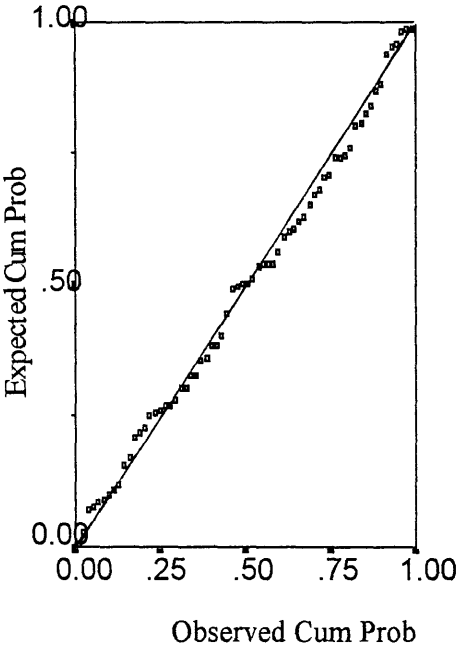


Figure 4.2 Normal probability (P-P) Plot of standardised residuals



4.6.2 Test for linearity

Multiple regression analysis assumes that for any given value of the predictor or independent variable, the residual ε is a constant and does not depend on the value of an independent variable. This is termed the assumption of linearity (Anderson Sweeney Williams Harrison & Rickard 1992, 538). Norusis (1993, 351) states that the calculation of partial residual plots :

> ... is obtained by calculating the residuals for the dependent variable when it is predicted from all the independent variables excluding the *j*th independent variable and by

calculating the residuals for *j*th independent variable when it is predicted from all of the other independent variables.

Systematic patterns between the predicted values and the residuals suggest possible violation of the linearity assumption. This assumption is examined by testing whether the regression equation passes through the centre of the scatter plot of partial residual plots (Menzefricke 1995, 387). The assumption is met if the partial residuals are randomly distributed. The results are shown at Figures 4.3.1 (HOSDIV), 4.3.2 (HOSFND), 4.3.3 (CEOPROF) and 4.3.4 (CEOMGT). In these figures a horizontal line has been drawn to show the position of the regression equation. In Figures 4.3.2 and 4.3.3 the points about the regression line suggest that there is no systematic relationship between the standardised residuals and the fitted values for independent variables. In Figure 4.3.1 and 4.3.4, the assumption of linearity shows some violation. However because this violation is considered to be negligible, the assumption of linearity is assumed to exist for all residuals.

Figure 4. 3. 1 The tests of linearity and homoscedasticity- HOSDIV

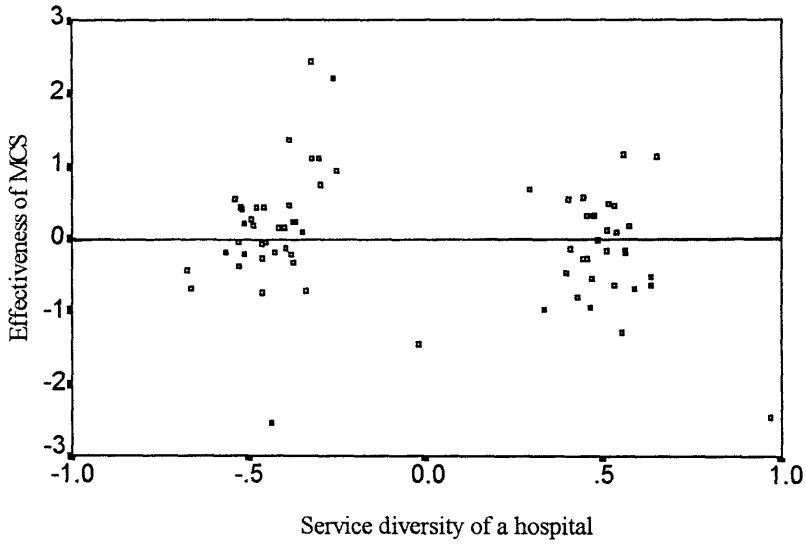


Figure 4.3.2 The tests of linearity and homoscedasticity - HOSFND

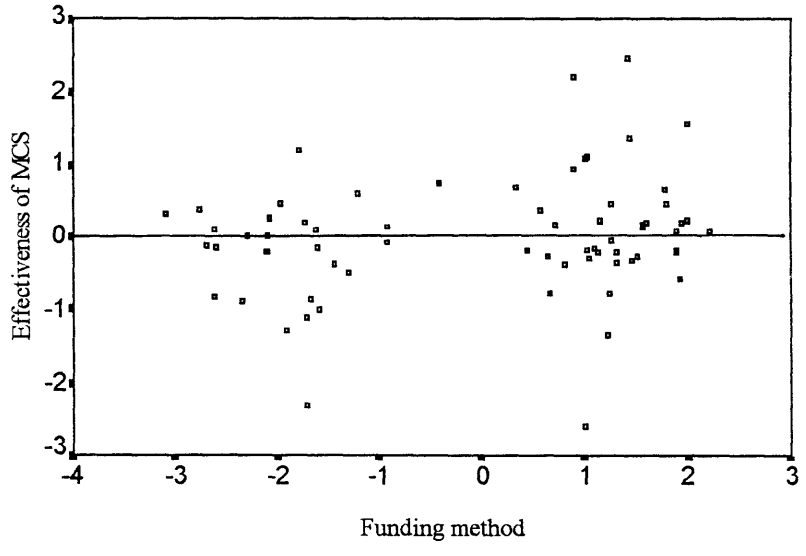


Figure 4.3.3 The tests of linearity and homoscedasticity - CEOPROF

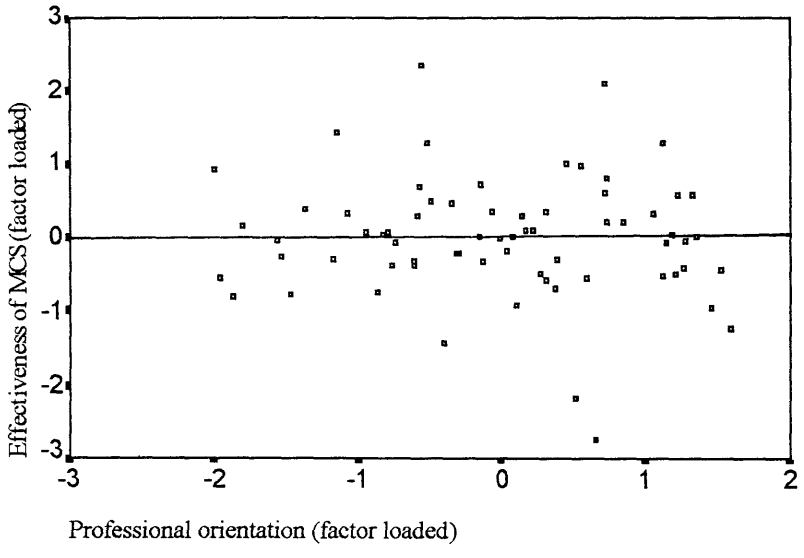
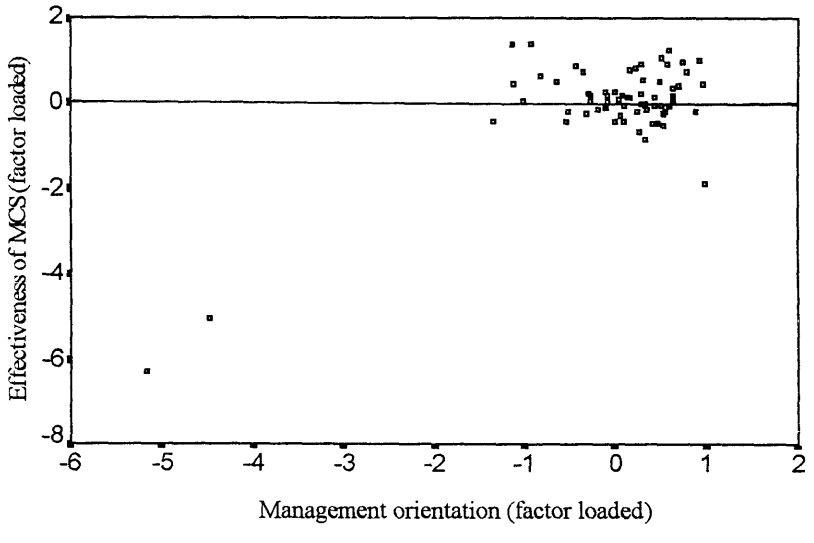


Figure 4.3.4 The tests of linearity and homoscedasticity - CEOMGT



4.6.3 Test for equality of variance (or homoscedasticity)

Regression analysis assumes that the spread of the residuals does not increase or decrease with the values of the predicted amounts. If the spread of residuals increase or decrease with the predicted values, the assumption of equality of variance may be violated. Equality of variance is said to exist when for any given value of the independent variable, the standard deviation of the residual ε is σ, a constant that does not depend upon the value of the independent variable (Menzefricke 1995, 400). Norusis (1993, 327) states:

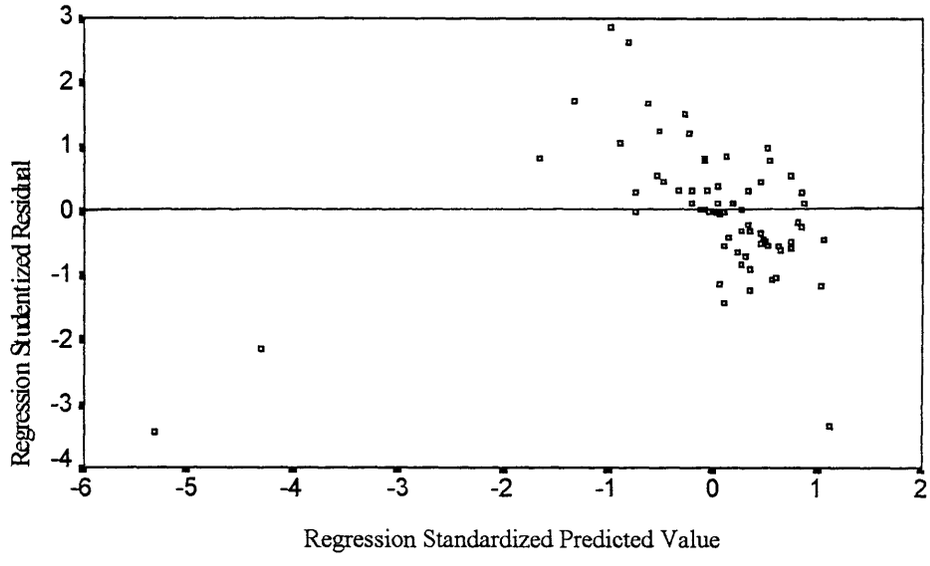
> If the spread of the residuals increase or decrease with values of the independent variables ... you should question the assumption of constant variance of Y for all values of X.

This test for the equality of variance uses Figures 4.3.1 (HOSDIV), 4.3.2 (HOSFND), 4.3.3 (CEOPROF) and 4.3.4 (CEOMGT).

A horizontal line has been drawn to show the position of the regression equation. The assumption is violated if the residuals are not evenly spread along this line. Figures 4.3.1 and 4.3.4 show some violation of this assumption. Figures 4.3.2 and 4.3.3 show no violation of the assumption. Norusis (1993, 325) states that another test for the assumption of the equality of variance is to plot the studentized residuals with the standardised residuals. The studentized residuals are defined as the residuals divided by the point standard deviation calculated from the actual and

predicted value of the independent variables. Figure 4.4 shows the spread of these residuals. Observation of this plot suggests that the assumption shows some variation in this study. However, given the effect of the outliers, the degree of violation is not considered to warrant attention.

Figure 4.4 The plot of the studentized residuals with the standardised predicted values



4.6.4 Test for outliers

An outlier is an extreme value (Cohen & Cohen 1983, 128). When residuals are standardised, a residual that is greater than three standard deviations from the mean is normally termed an outlier (Nourusis 330). An outlier is not an error but an observation that is different in size from the rest of the observations (Churchill

1987, 573). Outliers (or extreme residuals) can have a disproportionate effect on the variance. However, Cohen and Cohen (1983, 128) suggest that :

> ... where outliers are few, they are best left alone.

SPSS for Windows Release 6.0 (Norusis & SPSS Inc. 1993) reports on outliers. These points are shown in Figure 4.4. Investigation revealed there were extreme responses for survey forms from number fourteen and number sixteen responders. Outliers were less than 2% of the responses. Cohen and Cohen (1983, 128) states that where the percentage of outliers is small no action should be taken on them. No further action was taken on the outliers in this study.

4.7 Summary

Model 4.1 represented the hypothesised linear relationship between the perceived effectiveness of a hospital's management control system and the four independent variables, HOSDIV, HOSFND, CEOPROF and CEOMGT. These hypothesised relationships were developed in Chapter Two. The regression equation provided a basis for testing the four hypotheses. Table 4.1 provides the results when multiple regression was used to test these hypotheses. Analysis of the residuals found that the assumptions regarding normality, linearity, homoscedasticity were not violated. No significant outliers were detected in the analysis.

Hypothesis One is supported by the results shown at Table 4.1. The funding method has a beta of .1526 with a t-value of 1.708 and is significant at .10 level. It

is concluded that there is a relationship between the type of funding method and the perceived effectiveness of a hospital's management control system.

Hypothesis Two is not supported by the results shown at Table 4.1. The service diversity of a hospital has a beta of -.1429 with a t-value of -1.565 and sig t value of .1226. Therefore it is concluded, at a .10 level of significance, there is not a relationship between the service diversity of a hospital and the perceived effectiveness of a hospital's management control system.

Hypothesis Three is not supported by the results shown in Table 4.1. The professional orientation of the CEO has a beta of -.0609 with a t-value of -.2833 and a sig t value of .5320. Therefore it is concluded that, at a .10 level of significance, there is not a relationship between the professional orientation of the hospital's chief executive officer and the perceived effectiveness of a hospital's management control system.

Hypothesis Four is supported by the results shown in Table 4.1. The management orientation of the hospital's chief executive officer has a beta of .7102 with a t-value of 7.882 and a sig t value of less than .001. Therefore, it is concluded that, at a .10 level of significance, there is a relationship between the management orientation of a hospital's chief executive officer and the perceived effectiveness of a hospital's management control system..

CHAPTER FIVE

Conclusion

This chapter begins with an overview of the dissertation. This is followed by a discussion of the results of the analysis. Then the limitations and implications of the study are considered. The chapter concludes by identifying areas arising out of this study that may provide the basis for future research.

5.1 Overview and results of the dissertation

Numerous authors have stressed the importance of management control systems (MCS) matching their organisational context (Flamholtz 1983; Chenhall & Morris 1986; Kim 1988). The purpose of this research was to investigate whether specific contingent and institutional factors influence the perceived effectiveness of a public hospital's MCS. Chapter Two detailed how past research on each of the factors had been advanced. This literature suggested that the type of funding method, the service diversity of a hospital and the management orientation of a hospital's chief executive officer (CEO) have a positive influence on the perceived effectiveness of a hospital's MCS. It also suggested that the professional orientation of the hospital's CEO has a negative influence on the perceived effectiveness of the MCS. Hypotheses based on these propositions were developed. Chapter Three detailed the use of the mailed survey, the questionnaire, the scale validity test and the summary statistics. Chapter Four presented the regression model and the results of

the regression analysis. These results suggest that the type of funding method and the management orientation of the hospital's CEO influence the perceived effectiveness of a public hospital's MCS. No support was found for the influence of professional orientation or the service diversity of the hospital.

5.1.1 The funding method

One aim of this dissertation was to demonstrate the importance of institutional factors on the perceived effectiveness of a public hospital's management control system. Specifically, the institutional or external factor used in this study was the type of funding method of a public hospital. The proportion of funds received by way of casemix was used as the measurement scale. The study hypothesised that an external inducement such as the type of funding method influences the perceived effectiveness of a public hospital's MCS. The study concludes that there is a positive linear relationship between this factor and the perceived effectiveness of a public hospital's MCS. It suggests that as the funding method increases its component of casemix, the perceived effectiveness of its MCS increases. The implication of this finding is that governments should view casemix as a variable that can influence, in a positive direction, the CEO's perception of the effectiveness of a public hospital's MCS.

5.1.2 Diversity of service

Another objective of this study was to demonstrate the influence of certain contingent factors on the perceived effectiveness of a public hospital's MCS. The

service diversity of a public hospital was one contingent factor examined in the study. No support was found for this hypothesis. This result was surprising given that prior research had suggested that diversity has an influence on the perceived effectiveness of a management control system. Merchant (1984, 305) had suggested that there was a significant relationship between size and functional differentiation on the budgeting activity in the electronics industry. However, Merchant did conclude that his result may be particular to that industry. An examination of Merchant's study with the result in this study suggests that the variable, service diversity, may require more attention. Firstly, there may be a better measure for service diversity of a hospital than maintained bed numbers. The development of other measures using patient data should be explored. Secondly, strong government control over public hospitals may be negating the influence of increased diversity of service on the perceived effectiveness of the MCS.

5.1.3 Professional orientation

Another contingent factor examined in this study was the professional orientation of the public hospital's chief executive officer (CEO). The hypothesis developed in Chapter Three suggested that this factor would have an influence in a negative direction on the perceived effectiveness of the MCS. However, the conclusion reached from the regression analysis was that the degree of professional orientation of a CEO does not have an influence on the perceived effectiveness of a public hospital's MCS. The hypothesis developed in the study was therefore rejected.

This result may be due to the professional oriented CEOs in public hospitals not participating in management decision making. Professional orientated CEOs may be making decisions regarding the allocation of resources at the patient care level but taking no part in the management activities of a hospital. This result has an implication for further research. There may be other factors that are influencing the perceived effectiveness of the MCS that were not accounted for in this study.

5.1.4 Management orientation

Another contingent factor examined in this study was the influence of the management orientation of the CEO on the perceived effectiveness of the MCS. The conclusion reached in this study was that the management orientation of a public hospital's CEO has a strong positive influence on the perceived effectiveness of a public hospital's MCS. This implies that as the degree of management orientation of the public hospital's chief executive officer increases, it influences in a positive direction the perceived effectiveness of the MCS. This result opens up certain options for governments. The perceived effectiveness of a hospital's MCS may be influenced in a positive direction by increasing the management orientation of a hospital's CEO. This implies that management training programmes should be developed for hospital CEOs so that management values become part of their environment. Other forms of encouragement should also be given to hospital CEOs to accept the values and norms which underlie a management control system.

5.2 The limitations of the study

This study examined the influence of specific organisational factors on the management control system in public hospitals from all Australian states. A cross-sectional instrument was used because of a time constraint and the view that it was exploratory work. With any study that uses a cross-sectional survey and bivariate interaction analysis, the results do not provide proof of a causal relationship. All that is shown is that the results are consistent with the theory developed in the study (Otley 1980, 424). A longitudinal survey, at some later date, would provide more reliable information to substantiate the conclusions drawn in this dissertation.

Another limitation is also suggested by Otley (1980, 414). This is the specificity of the dependent variable, the MCS. Otley (1980, 422) suggested that examining only the MCS excludes the interrelationship between the other control systems in the accounting information system. The effectiveness of the management control system might be more appropriately characterised as a loosely connected process that is only a part of the accounting information system. The management control system should be further studied as part of this overall control package. This would give recognition to the interrelationship between different types of organisational controls within and outside the accounting information system.

Another limitation of this study occurred because the data was collected using a mail questionnaire. This type of survey instrument does not give the respondents the opportunity to respond to any problems they may have had in answering the

closed answer type questions. However, the pilot survey did suggest that closed questions were the most acceptable type of question to use in this study.

The collection of data from only the chief executive officers of public hospitals is also a limitation of the research. It introduced a sample bias. Otley (1980, 424) suggested that:

> ... different organisations will be effective in different ways and also effectiveness will be perceived differently by various interest groups connected with them.

The chief executive officer was considered to have primary control over the activities of the public hospital but surveying other tiers of public hospital management would allow a broader view of the MCS. Time and resources did not allow a further study on other public hospital staff to be carried out in this dissertation.

5.3 Implications of the study

Despite these limitations, the study does provide some evidence to improve our understanding of the factors that influence the perceived effectiveness of the MCS in a public hospital.

This dissertation has made a contribution in the area of contingency and institutional theory. It did this by extending the theory, in several respects, on MCS design and its use. It provided a further base on which to build the theory

concerning the factors which influence the perception of a public hospital's MCS. It extended the understanding of the relationship between the perceived effectiveness of a public hospital's MCS and certain contextual variables. It also provided further insight into organisational and accounting changes that are taking place in Australian public hospitals. Greater understanding of the effect of these changes, particularly with the introduction of casemix, has potential implications on the theoretical development of the contingency and institutional theory frameworks.

5.4 Implications for future research

This study suggested that there are certain factors that influence the CEO's perception of the effectiveness of the MCS in a public hospital.

The practical implication that can be drawn from the result of this study is the impact of casemix and managerial orientation on this perception. The study served to highlight the positive influence that is derived from the relationship between these variables and the perceived effectiveness of a public hospital's MCS. However, these relationships require more empirical evidence because the findings in this study do not offer a clear answer. This area of research requires much more investigation using other measuring instruments. The measurement of service diversity and the productivity assessment of a hospital are two areas that need to be further explored As well, further research into the effect of casemix on the effectiveness of a hospital's MCS is also required. The influence of casemix on other hospital information systems is another important area for future research.

Other areas that should be examined are the influence of regional agencies on a hospital's MCS, alternative methods of measuring a public hospital's output and the longitudinal effects of casemix on future resource allocation procedures. The aim of this dissertation was to provide a small step in this direction.

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Appendix A Cover letter sent to the CEOs in Australian public hospitals

4 May, 1995

«CEO_Title»,
«HOSPITAL_NAME»,
«Address»,
«City»
«State» «Postcode»

Dear Sir or Madam,

We are conducting independent research into the effects of funding and other organisational conditions on your hospital's management control system. The attached survey form is designed to identify these factors.

You have been selected through a random process to participate in this survey and we would like to stress that your responses will remain strictly confidential. We do not require your name or the name of your hospital on the survey form. The code on the survey form is for statistical reporting purposes only. Our report will only be based on a summary of the aggregate data.

To ensure the survey results are representative, it is important that we receive your response. We urge you to complete and return your survey form to us in the enclosed stamped addressed envelope as soon as possible.

If you would like a copy of the results, please write your name and address on the back of the reply envelope. A copy of it will be sent to you as soon as it becomes available.

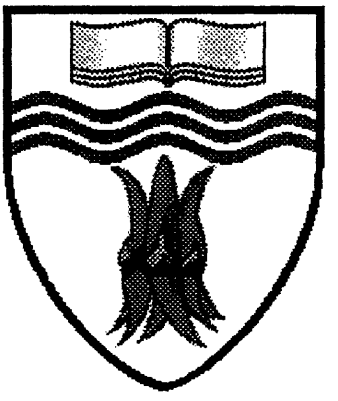
Thanking you for your cooperation,

Peter Vaughan
Project Officer

Telephone : (060) 418 883 Work
(060) 215 336 Home
Fax: (060) 412 950

Appendix B Survey form sent to CEOs in Australian public hospitals

CHARLES STURT
U N I V E R S I T Y



SURVEY FORM

This survey form is divided into four sections.

SECTION A: asks about your hospital.

SECTION B: asks about how your hospital receives the majority of its funds.

SECTION C: asks about the importance to you of various hospital activities.

SECTION D: asks about your perception of the importance of certain kinds of hospital information.

SECTION E: asks about your perception of the usefulness of certain types of hospital information.

The survey form is designed to be completed in around ten (10) minutes to ensue that not too much of your time is taken. Nevertheless, the information you provide is important in assessing the role of various factors in the design of a hospital information system and we therefore ask that you give the survey your careful consideration.

SECTION A: About your hospital

1. Approximately how many maintained beds does your hospital presently have?

[ ] maintained beds

2. In what Australian state is your hospital situated?

[ ]

3. What is your hospital's present case weight (if applicable)?

[ ]

SECTION B: About your hospital's funding

Would you please circle the ***most appropriate*** responses by placing a circle around one of the five numbers for each question. The possible responses are graded from "strongly disagree "or [1] on the left side to "strongly agree " or [5] on the right side.

1. The amount of funds received by my hospital is predominantly determined by a casemix measure.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

2. State the estimated proportion of funds received by a casemix formula?

	%

==========

SECTION C: The importance of various hospital activities

Would you please circle the ***most appropriate*** responses by placing a circle around one of the five numbers for each question. The possible responses are graded from "strongly agree "or [1] on the left side to "strongly disagree " or [5] on the right side.

a. Ensuring that my hospital operates within budget is very important to me.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

b. Implementing cost reduction programs is important to me.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

c. Ensuring that my hospital is managed efficiently is important to me.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

d. I think it is important for me to promote and develop the loyalty of my staff to the hospital, rather than only to their profession or union.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

e. It is important to increase or maintain the prestige or image of the hospital.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

f. It is important to me that I am able to pursue and carry out my own research ideas.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

g. In the near future, I would like to further my professional career.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

h. It is important to me that I be able to publish the results of my work in professional journals.

Strongly agree [1] [2] [3] [4] [5] **Strongly disagree**

==========

SECTION D: The importance of certain activities in the daily operation of your hospital

We would like you to tell us what activities are **important** TO YOU in the day to day operation of your hospital. Would you please circle the ***most appropriate*** responses by placing a circle around one of the five numbers for each question. The possible responses are graded from "not at all important" or [1] on the left side to "extremely important" or [5] on right hand side.

IMPORTANCE OF CERTAIN ACTIVITIES

a. The regular evaluation of the performance of each unit and their managers.

not important [1] [2] [3] [4] [5] **extremely important**

b. Deciding on costs to be allocated to each medical condition.

not important [1] [2] [3] [4] [5] **extremely important**

c. Controlling administrative costs

not important [1] [2] [3] [4] [5] **extremely important**

d. Identifying how medical costs are incurred

not important [1] [2] [3] [4] [5] **extremely important**

e. Deciding on the most efficient allocation of resources.

not important [1] [2] [3] [4] [5] **extremely important**

SECTION E: The usefulness of your hospital's information system

We would like you to tell us how useful you believe your hospital's information system is in respect of supporting the following activities/decisions. Would you please circle the most appropriate responses by placing a circle around one of the five numbers for each question.
The possible responses are graded from "not at all useful" or [1] on the left side to "extremely useful "or [5] on the right hand side.

The present usefulness of my hospital's information system when :

a. Deciding on the performance of each unit and their managers.

not at all useful [1] [2] [3] [4] [5] **extremely useful**

b. Deciding on the costs to be allocated to each medical condition.

not at all useful [1] [2] [3] [4] [5] **extremely useful**

c. Controlling administrative costs.

not at all useful [1] [2] [3] [4] [5] **extremely useful**

d. Identifying how medical costs are incurred.

not at all useful [1] [2] [3] [4] [5] **extremely useful**

e. Deciding on the most efficient allocation of hospital resources.

not at all useful [1] [2] [3] [4] [5] **extremely useful**

Thank for completing this survey. Please mail it in the stamped addressed envelope enclosed.