

## BUDGETARY SLACK IN IRELAND: AN INVESTIGATION

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### ABSTRACT

*This paper examines the relationship between managers' participation in budgeting, organisational budgetary emphasis, and the task interdependency of managers, on the one hand, and budgetary slack on the other. Inconclusive survey results followed up by a series of interviews suggest a complex contingent relationship between participation and slack. Interviews also provided evidence that both the finance department's power and its business operational understanding are powerful indicators of the amount of slack in an organisation's budget. It appears that despite motivation and opportunity, managers will be less likely to insert slack where it is probable that the finance department would discover the slack and possibly invoke ridicule or other sanction.*

### INTRODUCTION

Many theorists believe dysfunctional or non-congruent behaviour has increased commensurate with the growth of multinationals and the related remote-control by numbers. Johnson (1992, p.10) claims that this trend has encouraged lower-level managers 'to manipulate (or tamper with) processes in order to achieve accounting cost and revenue targets dictated by "top-down" command and control information'.

This study examines budgetary participation by managers, organisations' degree of budgetary emphasis, and the task interdependency of managers as predictors of budgetary padding or slack. The methodology involved surveying all managers in four large Irish organisations, followed by interviews with a subset of those managers.

The literature review in the next section explains the development of research on budgetary slack, and this is followed by a statement of the objectives of this study. The paper continues with a methodology section, results, discussion and conclusion.

## LITERATURE REVIEW

### *Budgetary Slack and Participation by Managers*

Studies on participation by unit managers in the setting of their own budgets, from Hofstede (1968) to Magner, Welker and Campbell (1996), show many benefits of “bottom-up” budget preparation. Kano-dia (1993) supported participation as a cause of improved co-ordination throughout the organisation where there was an information deficit. Magner, Welker and Johnson (1993) found managers’ budget attitude improved with participation even when they had the opportunity only to voice their opinion. Studies by Kenis (1979) and Mia (1988) found that management participation in budget setting was positively related to achievement of the budget.

Despite agreement that in most circumstances participation will lead to positive motivation, improved organisational co-ordination and achievement of the budget, there is still one major concern. This is that managers could ensure they meet their budget simply by inserting budgetary slack. Lukka’s study (1988) showed this propensity, while Brownell and McInnes (1986) suggest that participation not only gives managers the opportunity to insert slack, but in effect reminds them of how they are measured and rewarded. This reminder can be an additional incentive to introduce slack.

The research, however, has been anything but clear-cut, as contingent moderating and antecedent factors became apparent (Brownell, 1982a; Shields and Shields, 1998). For example, Onsi (1973) found a negative relationship between participation and slack, but Collins (1978) could not duplicate this. Leavins, Omer and Vilutis (1995) also could find no significant relationship, while Merchant (1985) and Lal, Dunk and Smith (1996) found a negative relationship between slack and participation in certain circumstances. This important relationship and its contingent variables deserve further research.

### *Budgetary Slack and Organisational Budget Emphasis*

The contingency theorists (Bruns and Waterhouse, 1975; Gordon and Miller, 1976; Otley 1980; Brownell, 1982a; Lyne, 1992; Nouri, 1994; Dunk and Lysons, 1997) indicate a multitude of variables for consideration in any behavioural study, but there are a couple of potential slack predictors (as well as participation) which merit detailed consideration. Budgetary pressure in an organisation has often been considered to have a positive relationship with manipulative behaviour by managers. Brownell (1982b) found that high budgetary emphasis in conjunction with high budgetary participation enhanced managerial performance. Lau and Tan (1998) also found budget emphasis had a positive impact on performance. Hopwood (1972) found more job-related tension among unit managers where there was a high use of variances for control. It may be that budgetary pressure increases job-related tension and is positively related to manipulative behaviour to relieve the tension and meet performance measures.

Increased budget emphasis is often linked with management by exception (MBE) systems where variances from budget get most management focus. Brownell (1983) found that adverse variances were more than five times as likely to get attention as favourable variances. As managers are unlikely to welcome this attention (or “interference”), it seems that managers in an MBE environment might be particularly well motivated to use budgetary slack as a method of avoiding negative variances.

Merchant (1985, p. 207) found evidence that propensities to create slack ‘do appear to increase if a tight budget requires managers to make frequent tactical responses so as not to incur budget overruns’. Leavins et al. (1995, p. 52) found that budgetary pressure revealed ‘a moderately positive relationship with slack’.

### *Budgetary Slack and Task Interdependency*

Where managers are fearful of their performance appearing poor due to dependency on others, there may be more of a tendency to enter into manipulative behaviour to ensure a budget is met. A study by Hirst (1981) showed a positive relationship between budgetary control and job-related tension where there was high task uncertainty. The research

showed a negative relationship in low task uncertainty situations, however, and thus provided evidence of the importance of this contingent variable on job-related tension. The question remained as to whether tension was positively related with non-congruent behaviour. Govindarajan (1986) found a negative relationship between slack and participation but only where task uncertainty was high. The reason was thought to be that where the uncertainty was understood by superiors (through the participatory budget meetings), managers would feel less of a need to insert slack. Thus task interdependency must be an important consideration in any study of budgetary slack.

### *Budgetary Behaviour and National Culture*

Studies such as those by Perera (1989), Hofstede (1983), and Frucot and Shearon (1991) indicate that national culture should be a factor in the design of an accounting information system, as reactive behaviour from the same stimuli can vary across nations.

Most research relating to the first hypothesis presented in the next section (relating slack to participation, budget emphasis and task interdependency) has been conducted in North America. Elsewhere, neither Lyne (1992) in a UK study nor Chow, Kato and Merchant (1996) in a Japanese study could find the same effect that American researchers had found from predictors of budget-related behaviour. Parker, Ferris and Otley (1989) have suggested that non-American operating managers do not consider the budget as important as Americans do, and thus do not have the same motivation to corrupt controls, but this is by no means certain.

Hofstede's (1983) study of fifty countries showed that acceptance of hierarchical order (power distance) in the Republic of Ireland was somewhat less than that in Great Britain, America and the large continental European countries. O'Connor (1995) found that "power distance" moderates managers' reactions to participating in budgeting and thus emphasised the importance of this element in any study of budgetary slack.



### *Budgetary Behaviour and the Public Sector*

Concern over public-sector inefficiencies, lack of or inappropriate performance measures, and organisational cultural issues have been well documented, e.g. Hyndman and Anderson (1997), Preston, Cooper and Coombs (1992), and Goddard (1997). Although a recent study by Shaoul (1998) suggests that public sector inefficiencies are not inevitable, it seems there may be behavioural differences between sectors (Dunk and Lysons, 1997).

## **RESEARCH OBJECTIVES AND HYPOTHESIS**

The research objective was to enhance understanding of the causes of budgetary slack. From an improved understanding, it is hoped that accounting information system design and management incentive schemes could be improved.

Specific variables examined in this study were participation, organisational budget emphasis, and task interdependency. Participation was split into two types, as in Magner et al. (1993). The two types were “influential participation” where managers had real budget-setting power and “voiced participation” where managers’ participation might be limited to voicing an opinion on a proposed budget.

### **Hypothesis One:**

Slack is positively related with influential and voiced participation, organisational budget emphasis and task interdependency.

Within the limitations of the solely Irish location for this study, the effects of differences in national culture were also considered. This research compared the extent and differences in slack between indigenous and foreign-owned companies and between private- and public-sector companies. As shown in the literature review, various researchers have found managers’ behavioural reactions to a constant stimulus varying across nations.

With much privatisation still to come in Ireland and minimal local research undertaken, budget comparisons between an Irish semi-state utility provider and private-sector companies were also considered as part of the study.

This research examined these and other differences looking for the contingent impact on the expected causative elements of budgetary slack. The expectation was that while the positive relationship listed in hypothesis one was anticipated, additional moderating contingent factors would also be uncovered.

### **Hypothesis Two:**

There is a significant difference in the extent and causes of slack in the Irish public sector versus the private sector, and between indigenous and foreign-owned companies.

## **RESEARCH METHODS**

Most recent researchers agree with Otley (1980, p. 424) that it is 'unrealistic to expect purely statistical methods of analysis to unravel a complex pattern of interaction'. Given the soft variables and self-reporting aspect of this research, an interview approach was incorporated along with a questionnaire. Four companies in the western part of Ireland provided the research data. The companies selected were of Irish and American origin (Table 1).

**Table 1: Questionnaire Response Levels and Number of Interviews**

	North American 1	North American 2	Irish Plc	Irish Public Sector*	Total
<b>Type of industry</b>	Telecom.	Software	Agri- business	Utility	
No. of unit managers	30	17	22	22	91
No. of valid responses	26	15	15	18	74
No. of interviews	6	6	7	6	25

**Note:** \* One region only of the public sector organisation was used in the research

An initial interview took place with either the financial controller or the budget manager in each company to ensure the organisation structure and control system were understood. All unit managers in the four

companies were then asked to co-operate with the anonymous survey, and advised that sensitive results would be kept from top management. Once the survey data was analysed, at least four unit managers in each company were selected for in-depth interviews. The financial controllers and budget managers or their equivalents were also re-interviewed.

It was decided to conduct multiple regression tests on the data, for both types of participation (voiced participation and influential participation), organisational budget emphasis, and task interdependency, all as predictors of budgetary slack.

The form of the model for hypothesis one was:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + e$$

where             $y$  = Slack  
 and               $x_1$  = Voiced participation  
                      $x_2$  = Influential participation  
                      $x_3$  = Organisational budget emphasis  
                      $x_4$  = Task interdependency  
                      $b_1, b_2$  etc. = coefficients  
                      $e$  = error term

A six point Likert scale was used to measure responses to questionnaire statements relating to slack, and its hypothesised predictors. The response options ranged from strongly disagreeing with to strongly agreeing with the statements.

**Slack** was measured using statements previously used by Dunk (1993) and developed from Chow (1983) and Waller and Chow (1985), an example of which is (p. 408):

Budgets set for my area of responsibility are safely attainable.

**Participation** was divided into two sub-types. Magner et al. (1993) distinguished between influential participation and a wider definition of participation which included where the unit manger could only “voice” an opinion on a suggested budget. Both definitions of participation were

measured separately using Magner et al.'s statements (1993, p.106), examples of which are shown below:

My company . . . has procedures which provide a forum for me to have my say about budget matters.

If I am assigned an unfair budget, I have an opportunity to change that budget.

**Organisational budget emphasis** was measured as in Brownell (1983, p.464). An example is given below:

My superiors discuss budget items with me when variances occur.

**Task interdependency** was measured by using Osborne, Hunt and Hunt's questionnaire (1980, p.194):

Actions of other units restrict the activities of my unit.

## RESULTS

The questionnaire had an 81 per cent valid response rate. All companies reported a high level of management participation in budgeting, budget emphasis and task interdependencies. Statements implying that colleagues inserted slack in their budgets met with an 84 per cent level of agreement. This compares with Onsi's (1973) findings that 80 per cent of managers bargained for slack. Questions asked directly about the managers' own cost centre showed a lesser slack level and perhaps a less honest response. The slack measures and distribution by company are shown in **Tables 2 and 3**.



**Table 2: Managers' Overall Assessment of Organisational Slack**

Responses to questionnaire statements implying slack in overall organisation budget (scores from 1 = none to 6 = high)			
	<i>Mean</i>	<i>Variance</i>	<i>Count</i>
North American 1	3.295	1.219	26
Public-sector	2.910	1.371	18
North American 2	2.800	0.550	15
Irish Plc	2.534	1.186	15

**Note:** An unpaired t test for significant difference on the highest and lowest scoring companies' data gave a t value of 2.136 where  $.01 < p \leq .025$

**Table 3: Managers' Assessment of Slack in Their Own Cost Centres**

Slack Distribution: Questionnaire statements implied there was slack in the managers' own cost centre					
<i>Percentage Responses</i>					
<i>Score</i>	<i>Responses</i>	<i>North Amer. 1</i>	<i>Public Sector</i>	<i>North Amer. 2</i>	<i>Irish Plc</i>
$x \leq 1.5$	Strongly Disagree	-	11.11	-	13.33
$1.5 > x \leq 2.5$	Moderately Disagree	23.08	33.34	33.33	33.34
$2.5 > x \leq 3.5$	Mildly Disagree	42.31	22.22	53.34	40.00
$3.5 > x \leq 4.5$	Mildly Agree	15.38	22.22	13.33	13.33
$4.5 > x \leq 5.5$	Moderately Agree	19.23	11.11	-	-
$x > 5.5$	Strongly Agree	-	-	-	-
Total %		100%	100%	100%	100%

### *Hypothesis One and Regression Tests*

As shown in **Appendix 1** there was no support for this hypothesis which anticipated a positive relationship between participation, organisational budget emphasis and task interdependency, on the one hand, and budgetary slack on the other. On the aggregated data none of the predictors showed a significant relationship with slack at the 5 per cent

level of significance. The coefficient of determination ( $r^2$ ) for voiced participation and slack on the aggregate data actually rounded to 0.0 (**Appendix 2** shows  $r$ ). The lack of even a small element of correlation was surprising, despite the anticipation that Irish management behaviour would not precisely mirror that of America. However, although the regression tests explained little, the interviews were more fruitful.

### *Hypothesis One and Interviews*

#### *Participation*

The lack of evidence to support a positive relationship between participation and slack was striking. In fact the two companies with the highest levels of management participative influence also reported the lowest slack levels, suggesting that additional environmental factors were at play.

The Irish public-sector company had a relatively high level of slack, and a correlation coefficient ( $r$ ) of .5 between voiced participation and slack, which was significant at the 5 per cent level. This was not mirrored by the other companies, however, indicating that contingent factors appear extremely important.

Managers from the second North American corporation had the second lowest level of slack. When discussing the results individually, managers repeatedly gave the same explanation for the lack of a positive relationship between participation and slack. This was the threat of benchmarking, and of outsourcing goods and services. These newer control methods (Elnathan, Lin, and Young, 1996; Cooper, 1998) are moderating factors in the relationship between participation and slack. One manager explained that:

Some products could be outsourced, the outside price is monitored constantly . . . you are participating but you can't propose a standard that is higher than that outside.

The second North American company's data actually gave a (weak) indication of a negative relationship between participation and slack. It was understood from the interview process that top management in this loss-making company were continually "making cuts". Managers felt that their superiors gained operational information during the participa-

tive budget process which enabled them to press for cuts in specific areas. The participative budget-setting process in this company was thus (as with Govindarajan, 1986) non-conducive to the insertion of budgetary slack.

The managers of the Irish multi-national which had the lowest level of slack also gave useful explanations during the individual interviews. The accounting operations manager was not surprised at the lack of a positive relationship between participation and slack claiming that there is only an opportunity for unit managers to insert slack

. . . if there is something new which we don't fully understand yet.

Numerous cost centre managers concurred with this view saying the tight control and understanding of the finance department limited budget padding opportunities, regardless of the participatory budgetary approach of the company. For example, one manager said:

Finance understand my budget completely. There is no slack or opportunity for slack.

The differing results by company and the interview feedback lend support to the contingency theorists' view that the effect of participation is dependent on the company's environment. The extent to which top management know and understand the detail of the cost drivers at unit level appeared to be an important moderator, i.e. the reduction in information asymmetry. Unit managers, even those with participatory influence, were loath to propose a budget which could be ridiculed by senior management for containing significant slack.

#### *Organisational Budget Emphasis*

The vast majority of respondents in all companies claimed their senior management emphasise the budget to a great extent. In the Irish multi-national which recorded the least slack, managers gave 100 per cent agreement to the statements with less than 7 per cent only mildly agreeing.

As stated above, there appeared to be strong disincentives to insert a material element of slack in the better-controlled companies. Discussions with managers about the lack of correlation between budget em-

phasis and slack produced many comments about sanity checks in budget formulation. The Irish Plc's managers, for example, outlined the multiple pre-approval validations of the budget:

The budget is not just compared to last year's but also to any other comparable method of evaluation.

Costs have to be realistic for the volume. We have three businesses. There is clear responsibility and understanding of the businesses.

Some managers felt that with additional budget emphasis in a tightly-controlled environment the incentive was actually to *reduce* rather than increase slack. A unit manager in the second North American company stated that:

. . . with more budget emphasis now you look a Wally if you come in say 20 per cent under budget on cost, so there is much more realism in setting the budget.

The use of multiple control measures clearly limited unit managers' scope for budgetary manipulation. This concurs with claims for the balanced scorecard (Kaplan and Norton, 1992), and other new control techniques (Johnson 1992; Otley, 1994). One manager explained that:

Productivity is looked at in man-days, and if you insert slack and then go slow seeing as you have plenty of cost in the budget, it will only show up as low productivity making you look bad.

A final word on this issue goes to the Irish Plc that reported a marginally positive relationship between budget emphasis and slack (although statistically significant only at the 10 per cent level). This company had the highest mean level of budgetary emphasis yet the level of slack was the lowest of the four companies studied. It seems that despite the higher tendency to insert slack where there was more budget emphasis, the company was able to minimise the dysfunctionality in all units by its strong review mechanism.



### *Interdependence*

Another manager in the same tightly controlled Irish company advised that interdependencies did not worry him or motivate him to introduce slack. The reason given was that interdependencies were understood and recognised by senior management. The manager said "I can explain why I am over budget and who caused it". This concurs with Govindarajan's (1986) findings.

It thus appears that the effect of the variables examined (participation, organisational budget emphasis and task interdependency) on budgetary slack may be predicted only if considered along with information asymmetry and other contingent variables. This is further dealt with in the discussion section below.

### *Hypothesis Two*

This hypothesis anticipated differing levels of slack and its influences between the public sector and the private sector, and between indigenous and foreign-owned companies. Slack levels and distribution are shown in **Table 2** and **Table 3**.

The figures in **Tables 2** and **3** provide no clear support for the hypothesis, but the interview element of the research gave additional information which did provide some support. Although the questionnaire used to measure slack was the same as that used by Dunk (1993) and others, it became clear that environmental issues can corrupt the measure. The level of slack recorded in the public-sector company was lower than that of one of the three multi-national corporations (the first North American). The interviews provided evidence however that slack in the public-sector company was much higher than recorded.

The first North American company's top management insisted that each plant *always* meet or beat its cost budget, no matter what unforeseen circumstance occurred. The diktat is passed down to cost centre managers who claimed that some slack was thus "essential". Although the high level of slack is a serious concern, at least managers could not spend the slack frivolously as it might later be needed. This situation replicates that found by Dunk (1995).

*Public Sector*

The utility company's management consisted almost exclusively of lifetime public-sector employees. Those few managers who had previously worked in the private sector suggested that although many colleagues *felt* they had a tight budget (minimal slack) it was reasonably easy to achieve relative to private-sector budgets. Comments from one of the managers who had previously worked in American private industry are given below:

. . . there is a bit more hassle about it now than before, and they (other managers) think they are under pressure, but no-one is going to lose their job over it so it is no big deal.

The budget is completely controllable. You will get the budget for labour based on the amount of people you have. Whatever jobs you have in your plan, you will get the material budget for. If you have to do some additional work because something came up, then you just drop something less urgent.

From the information suggested above, further questions were put to managers who had previously claimed to have a tight budget.

Manager A            "I don't put in slack!"

Interviewer        "Do you drop projects at the end of the year if it looks like to do them would put you over budget?"

Manager A            "I suppose."

Interviewer        "Do you get hassle if you have variances?"

Manager B            "Well you would have to have a good reason."

Interviewer        "How about if you did not get everything done that was in the business plan?"

Manager B            “No, not really, the only time you get hurt is when there is pressure coming from customers, say ringing up to complain.”

Thus while the public-sector company recorded the second-highest rather than the highest level of slack, the interviews clearly indicated that the recorded figures materially under-estimated the real level of slack. This was true particularly with regard to the option of postponing jobs for which cost had been budgeted. While the survey data did not prove there was significant additional slack in the public relative to the private sector, the interview data supports concerns about the level of budgetary slack in the Irish public sector.

There were no clear divisions between the two Irish companies on the one hand and the two North American companies on the other.

## DISCUSSION

The lack of a significant positive relationship between participation, budget emphasis, and task interdependency, on the one hand, and slack on the other was not predicted. It would be entirely inappropriate to extrapolate from these four companies to the Irish population, but the evidence does suggest that we should not rashly assume that all US research findings will be replicated in Ireland.

The existence of many additional contingent or environmental factors is clearly of great importance with regard to the propensity for the introduction of slack. New management techniques (e.g. the balanced scorecard, activity based budgeting, benchmarking and the threat of outsourcing) also appear to be making it more difficult for management to manipulate controls by the simple use of slack. The two issues detailed below (information deficit and the power of the controllers) appeared particularly relevant in the companies studied.

Information deficit is a concern when top management do not have enough knowledge to query a unit manager on a budget which contains slack (Magee, 1980; Penno, 1990; Dunk 1993). It was clear from the interview element of the study that the budget executives from the Irish private-sector company and the second North American corporation

understood the detail of the units' budgets. There was a much greater information deficit within the other two companies whose budgets contained the greater amount of slack (**Table 2**).

While in some organisations unit managers were clearly able to ensure that they would almost always meet the budget, in others neither the budget nor the actual expenditure could be manipulated to any significant extent. In the latter situation, cost centre managers felt that the finance department understood their resource needs, and that any manipulation would be clearly apparent.

From the interview element of the research, it appears that by limiting the information deficit between a cost centre manager and both his superior and the finance department, an opportunity to minimise slack can arise. Of course this information must be gained without demotivating unit managers, otherwise in solving one problem another would be caused. The study thus supports Lal, Dunk, and Smith's (1996) work, following from Merchant (1985), and may explain findings by Hirst and Yetton (1999).

The second issue which appears relevant is the power of the controllers. From the research interviews it became apparent that lowering the information deficit was not in itself enough to guarantee that slack would be minimised. The finance department, with their stewardship responsibilities, can act as an agent of senior management, but may be ineffective unless top management have given the process due weight with appropriate sanctions.

It appears essential that appropriate resources and top management support are given to expense and revenue understanding, planning, and control. If this is not done dysfunctional behaviour may well be increased. It seems hardly a coincidence that the Irish company where a cost centre manager said "The factory manager will want to know about every (material) variance" was the company which showed the least non-congruent behaviour in this study. In fact the Irish Plc reported the lowest level of slack, despite having the second highest level of participation, the highest organisational budget emphasis and the highest level of task interdependency.



The evidence suggests that company or factory loyalty, coupled with tight budgetary control and understanding by top management, can lead to managers being unwilling to insert slack even when opportunity and sectional motivations are present.

The second hypothesis anticipated material differences in slack between public- and private-sector companies. On balance the evidence supports the hypothesis. In this study the public-sector company's managers based their cost budget on planned work. If they were facing the prospect of an adverse variance, however, the work could simply be postponed and no adverse variances would be disclosed. The finance department claimed that lack of technical knowledge made it difficult for them to notice budgetary slack, but this seems to be an information deficit which other companies in the study had overcome.

Another problem in the public-sector company was the limited power of the budget department where top management appeared to give little sanction to those who (measured financially) were not performing efficiently. Unit managers commented on the sanctions that accompanied lack of quality but had little concern over adverse variances, which they knew could be manipulated or explained away.

## CONCLUSION

The reader is cautioned about extrapolating from a limited four company study in western Ireland. The questionnaire was self-reported and the important issues of information deficit and the power of the controllers were part of the interview stage rather than the questionnaire. Despite corroborative evidence in this study, there is always a concern about possible bias with interviews. Finally, three of the companies had a declining financial position at the time of the study and were more heavily concentrating on cost control than would appear to be the norm.

Despite these warnings the study should alert managers to the dangers of assuming direct replication of American budgetary slack findings in companies based in Ireland. In addition, the study should underline the importance of environmental factors in influencing management response to budgetary temptations.

It appears that non-congruent actions by managers can be materially limited despite unit managers' motivations to the contrary. This seems to occur where an organisation's top management is dedicated to a control process, has delegated powers to the finance department and is seen to *strongly* support the financial department's control process. Crucially this may not necessarily involve a use of heavy sanctions, as once unit managers become aware that non-congruent behaviour will be apparent, the temptation to act in a manner negative to the corporation may lessen. Research suggests that the human desire to corrupt organisational information systems is strong; however, the evidence from this study indicates that corruption can be minimised.

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### Appendix 1: Multiple Regression

*Dependent variable:* Slack  
*Predictors:* Voiced Participation ( $x_1$ ),  
 Influential Participation ( $x_2$ ),  
 Organisational Budget Emphasis ( $x_3$ )  
 Task Interdependency ( $x_4$ ).

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + e$$

	a	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	b <sub>4</sub>	R <sup>2</sup>	F Val.	P
N. American 1	3.058	-.436	+.388	+0.065	+.093	.06	0.326	>.25
N. American 2	5.176	-.259	-.177	-0.046	-.022	.23	0.747	>.25
Irish Plc	-5.830	+.783	-.095	+1.136	-.266	.33	1.233	>.25
Public Sector	2.451	+.593	+.169	-0.557	-.159	.44	2.530	*
Aggregate	3.375	+.016	+.063	-0.170	-.005	.03	0.522	>.25
t value (Agg.)	3.612	+.081	+.329	-1.404	-.041			
Significance of coefficient	N.A.	p>.20	p>.20	p<.20	p>.20			

**Note:** \* .05< p ≤ .10

### Appendix 2: Correlation Matrix

#### Correlation coefficient $r$ with aggregated data

	Slack (y)	( $x_1$ )	( $x_2$ )	( $x_3$ )	( $x_4$ )
Slack (y)					
Voiced Participation ( $x_1$ )	-.004				
Influential Participation ( $x_2$ )	.015	.716			
Organisational Budget Emphasis ( $x_3$ )	-.159	.326	.287		
Task Interdependency ( $x_4$ )	-.030	-.093	-.054	.117	

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