

**OWNERSHIP, EMPOWERMENT AND EMPLOYEES'
PARTICIPATION ON BUDGETARY SLACK: AN INVESTIGATION OF
MALAYSIAN PUBLIC SECTOR**

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**FACULTY OF BUSINESS AND ACCOUNTANCY
UNIVERSITY OF MALAYA
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INVESTIGATION OF MALAYSIAN PUBLIC SECTOR**

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Field of Study: Management Accounting

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ABSTRACT

The New Public Management (NPM) sought to promote market-oriented administration and result-based management of public sector organisations in Malaysia. However, the National Audit Department found that public sector organisations experienced glitches in expenditure management; particularly in the availability of resources and budget estimation, which were highlighted in the Auditor's General Report, 2011. This concern highlights the existence of budgetary slack in Malaysian public sector organisations. It appears that employees through their participation in budget-setting, create budgetary slack in the participative budgeting system, which permeates throughout the organisations.

The budgetary slack creation concern has encouraged numerous researchers to examine the determinants of budgetary slack. However, they have focused their examination efforts at an organisational level in private sector organisations, therefore, a new research is required to investigate the determinants of budgetary slack at an individual level in public sector organisations. The main objective of this study is to empirically examine how budgetary slack is influenced by employees' psychological ownership and empowerment (i.e., structural and psychological), and participation in budget making.

The research was designed and performed in five phases to collect data from individual participants (i.e., budget makers). In the first phase, the researcher performed (expert) interviews with professional and management accountants to examine the determinants of budgetary slack in the research model. Later, a pilot test was performed to validate the original budgetary slack (OBS) instrument attributed to Onsi (1973). In the third phase, the researcher developed a new budgetary slack instrument, after acknowledging the deficiency of OBS instrument. In phase four, a pilot test was conducted to validate the

determinants of budgetary slack. Lastly, a field study was performed to collect data using a questionnaire survey; which was then used for empirical analysis in the final stage.

This study analysed the data using component-based Structural Equation Modelling (PLS-SEM). After evaluating the requirements of measurement and structural models, the study developed an empirical model, about the effect of psychological ownership, empowerment (structural and psychological) and participation on budgetary slack.

The results highlight that empowerment (structural and psychological) was an important determinant of the creation of budgetary slack among budget makers in public sector organisations in Malaysia. Besides, employees' participation was a predictor of budget makers' behaviour in participative budgeting in public sector organisations. This study also highlighted another two interesting findings. The first one is that employees' psychological state of ownership did not result in the creation of budgetary slack among budget makers in public sector organisations, when structural empowerment was taken into consideration. The other one is that formal ownership was not present in public sector organisations.

In conclusion, this study examined the determinants of budgetary slack among budget makers in public sector organisations beyond the traditional perspective. It highlights the importance of recognising empowerment as a key determinant of slack creation in budgeting. Hence, public sector organisations might have to centralise the budgeting practice within their hierarchical structure to avoid the creation of budgetary slack.

ABSTRAK

Pengurusan Awam Baharu (NPM) sedang cuba untuk mempromosi pentadbiran berasaskan pasaran dan pengurusan berasaskan hasil bagi organisasi-organisasi sektor awam di Malaysia. Namun, Jabatan Audit Negara mendapati organisasi sektor awam mengalami kecacatan dalam pengurusan perbelanjaan; terutamanya dalam ketersediaan sumber dan anggaran bajet, yang dibangkitkan dalam Laporan Ketua Audit Negara, 2011. Kebimbangan ini menunjukkan wujudnya kekenduran dalam pengurusan bajet organisasi sektor awam Malaysia. Laporan tersebut menunjukkan penglibatan pekerja dalam penyediaan bajet menyebabkan kekenduran bajet dalam sistem bajet penyertaan yang merebak ke seluruh organisasi.

Kebimbangan terhadap kewujudan bajet kendur ini menggalakkan ramai penyelidik mengkaji penentu-penentu kepada kekenduran bajet ini. Namun, kajian mereka banyak tertumpu pada peringkat organisasi di organisasi sektor swasta, maka, suatu kajian baharu diperlukan bagi menyelidik penentu kekenduran bajet di peringkat individu dalam organisasi sektor awam. Objektif utama kajian ini adalah untuk mengkaji secara empirikal bagaimana bejat kendur dipengaruhi oleh pemilikan dan pemeraksanaan psikologi pekerja (iaitu secara struktur dan psikologi), dan penyertaan dalam penghasilan bajet.

Kajian ini direka bentuk dan dijalankan dalam lima fasa pengumpulan data daripada peserta individu (iaitu pembuat bajet). Dalam fasa pertama, penyelidik menjalankan temu bual (pakar) ke atas akauntan profesional dan pengurusan bagi mengkaji penentu kekenduran bajet bagi model kajian ini. Kemudian, satu ujian perintis dijalankan bagi menentusahkan instrumen kekenduran bajet (OBS) berasaskan instrumen asal oleh Onsi (1973). Dalam fasa ketiga, penyelidik membangunkan sebuah instrumen bajet kendur yang baharu, setelah mengambil kira kekurangan pada instrumen OBS. Dalam fasa

keempat, ujian perintis dijalankan untuk menentukan penentu-penentu kekenduran bajet. Akhir sekali, satu kajian lapangan dijalankan untuk pengumpulan data dengan menggunakan kajian soalan selidik yang kemudiannya digunakan untuk analisa empirikal di peringkat terakhir kajian.

Kajian ini menganalisa data menggunakan Pemodelan Persamaan Struktur berasaskan komponen (PLS-SEM). Setelah mengkaji keperluan model pengukuran dan struktur, kajian ini membangunkan sebuah model empirikal, berkaitan kesan pemilikan psikologi, pemeraksanaan (secara struktur dan psikologi) dan penyertaan terhadap kekenduran bajet.

Hasil kajian menonjolkan pemeraksanaan (secara struktur dan psikologi) adalah penentu penting bagi kewujudan bajet kendur di kalangan pembuat bajet dalam organisasi sektor awam di Malaysia. Selain itu, penglibatan pekerja merupakan peramal kepada kelakuan pembuat bajet dalam bajet penyertaan di dalam organisasi sektor awam. Kajian ini juga menonjolkan dua penemuan yang menarik. Penemuan pertama ialah keadaan pemilikan psikologi pekerja tidak menyebabkan kekenduran bajet di kalangan pembuat bajet di dalam organisasi sektor awam, apabila pemeraksanaan secara berstruktur di ambil kira. Satu penemuan lagi ialah pemilikan formal tidak berlaku dalam organisasi sektor awam.

Kesimpulannya, kajian ini mengkaji penentu-penentu kepada kekenduran bajet di kalangan pembuat bajet di dalam organisasi sektor awam melampaui perspektif tradisional. Ia mengetengahkan kepentingan mengenal pasti pemeraksanaan sebagai penentu utama kepada kekenduran dalam bajet. Maka, organisasi sektor awam mungkin perlu memusatkan amalan bajet dalam struktur hierarki mereka bagi mengelakkan kewujudan bajet kendur.

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- Cheok, M.Y., Wong, S.K. & Kamisah Ismail & Klobas, J. (2015). *Examining psychological ownership measurements in government agencies of Malaysia: Methodology, analysis and comparative results*. Proceeding of the 6th Annual International Conference of Accounting and Finance (pp. 70-74). Singapore.
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CHAPTER 1

OVERVIEW OF RESEARCH

1.0 Introduction

The concept of New Public Management (NPM) has played a dominant role in the public sector administration reform in Malaysia since 1983. It has an implication for the accounting practice in government institutions. They are urged to improve their effectiveness in managing public administration. However, despite much effort, employees from government institutions have yet to demonstrate their ability to achieve satisfactory performance in budgetary control. Hence, this study seeks to assess employee-related determinants of budgetary slack in public sector organisations.

This chapter consists of seven sections. Section One provides insight into the background of study; Section Two describes the problem statement. Section Three highlights the significance of performing the study. Section Four explains the research questions. Section Five discusses the main research objective of the study. Section Six briefly outlines the thesis and Section Seven concludes this chapter with a closing remark.

1.1 Background of study

1.1.1 The public administration reform: a global perspective

Public sector administration reform is a global phenomenon. This concept has assumed a dominant role in restructuring public services as it stresses on decentralisation and corporatisation (Helden, 2005). It changes the old-style

organisational structure, operational process and principles of public administration. It applies market-based administration and result-oriented management (Boden, Gummett, Cox & Barker, 1998). To be precise, it brings private sector values and principles into public administration so that it is able to improve efficiency, effectiveness and general performance. Therefore, it emphasises outcome, result and cost-cutting, among others (Lapsley, 1999). In other words, it aims to build a new culture in the public sector that encourages competition, empowers employees and measures performance. In that sense, public sector administration moves from traditional rule-based and process-oriented administration into flexible and result-based management (Seal, Cullen, Dunlop, Berry & Ahmed, 1999). Hence, it engenders a new trend in public administration in developing countries (Siddiquee, 2010). It is applied widely especially in the development of hospitals and schools (Boden, Gummett, Cox & Barker, 1998).

New Zealand and the Scandinavian countries have undergone reform programs in public sector administration, although there may be variations in the implementation approach (Spackman, 2002). However, the ultimate objective of this exercise is to foster performance-based culture and accountability for results (Pallo, 1999). It hopes to resolve pitfalls of the traditional control-oriented administration and transform public services into those characterised by flexible and purpose-driven management (Xavier, 1998).

The government is required to design, construct, maintain and operate public infrastructure services (Yunos, Ismail & Smith, 2012). This kind of initiation usually involves substantial capital and long-term service commitment whereby the government has to regularly make a series of payments similar to lease payments (Malone, 2005). By doing so the government is able to manage

its finances and assets efficiently for timely delivery of new public infrastructure. Standards should be maintained as per the specifications agreed by the public-private initiative (Xavier, 1998).

However, some researchers like Khadaroo (2008) disputed the effectiveness of this approach in controlling the outcome of public infrastructure. They argued that it does not offer value for money as the capital investment involved is greater than that for traditional procurement. Furthermore, the government has to manage the financial risk that is brought forth by the initiation of public sector development. It has to take into consideration all aspects of risks, in terms of design and construction, finance, operating, and legislative and government policy risk (Broadbent, Gill & Laughlin, 2008). In addition, raising finance from public sector organisations is relatively cheaper as the government has the capability to levy tax for repaying the borrowing (Kuppusamy, 2010). However, the government may have to take over the development of public sector infrastructure when there is a cash flow problem experienced in public-private initiative (English, 2004). Yet, this kind of agreement is attractive to the government as it does not have to sell its assets to private sectors (Ahmad, 1996).

The effectiveness of public administration in achieving the desired outcome for the benefit of social welfare is questionable. OECD (2008) has revealed the deficiency of financial management in public sector infrastructure in the long run. Hence, this kind of reform demands researchers and practitioners to comprehensively investigate the factors that shape the behaviour of public sector employees in budgeting (Lapsley, 2008; Power, 1997) for managing expenditure control.

1.1.2 The public administration reform: Malaysian context

Malaysia has introduced public management reform that increasingly stresses on result and performance in managerial practices, formulation and implementation of public expenditure programs (Siddiquee, 2010). Similar reform effort has been introduced to replace traditional public bureaucracy and its management, such as restructuring public agencies, privatising public entities and revising personnel and financial management systems (Pollitt, 1990). These reform aims to enhance efficiency and performance of public sectors and to transform the culture of public bureaucracy, and these are broadly consistent with the policies and principles of new public management (Hood, 1991). However, it is worth noting that this effort has been initiated since the early 1980s under the political leadership of Tun Dr Mahathir Mohamad who sought administrative innovation and subsequently promoted radical change in policy making (Siddiquee, 2010). In order to promote rapid socio-economic development, the traditional state-led approach was replaced with a market ideology that stressed on market-oriented administration and result-based management in public agencies (Nur Nasiha, Mohd Nadzri & Muhammad Najib, 2013). Public administration reform requires a mandatory approach so that public agencies are able to perform their roles and responsibilities effectively. The introduction of the New National Development Policy and Vision 2020 (i.e. transforming Malaysia into a fully developed nation by year 2020) further promoted the implementation of new public administration management (Kuppusamy, 2010).

In order to strengthen national competitiveness in international trade, the leadership of the country realised the importance of implanting values such as productivity and performance for results in the management of public administration. Some notable initiatives include performance management and

modified budgeting system (MBS) (Wan Zahari & Wong, 2013). Public sector organisations at all levels have to formulate and implement performance indicators to measure their performance in terms of efficiency and effectiveness. All these efforts demonstrate the government's keen interest in fostering a market-oriented administration and a result-based management.

1.1.3 Performance review in Auditor's General Report 2011

Based on the discussion in section 1.1.2, public sector organisations in Malaysia account for a greater role in managing public infrastructure in terms of expenditure control. They are socially responsible to the public welfare in spite of the reform in public administration (Kuppusamy, 2010). These institutions inevitably face challenges of meeting the rising demand for better services with limited revenue resources (Kolderie, 1984). This new approach to public sector management therefore necessitates evaluation after a few years of implementation in order to ensure the success of project implementation at the local government level (Batley, 1996; Sundquist, 1984).

The government of Malaysia also experienced occasional setbacks in expenditure management particularly in the allocation of resources as reported by the National Audit Department in Malaysia. These issues included expenditure delivery problems and availability, and a string of financial management issues involving expenditure estimation in public operations (Auditor General's Report, 2011). The issue of mismanagement of expenditure was further highlighted in the Malaysian Auditor's General Report, 2011. Besides, the Auditor General of Malaysia commented that employees with authority are lacking of accountability to implement their roles and responsibilities effectively in budgeting. The possession of budgetary resources

is also not utilised to the benefit of organisations. Employees reserve their valuable input despite their keen involvement in discussions regarding budgeting.

Based on a report (Auditor General's Report, 2011), auditors made this argument on three assumptions. Firstly, employees in government sector organisations have the right to possess valuable resources; employees have authority to perform their budgetary tasks; lastly, employees participate in discussions to influence budgetary decisions. Reflecting on these comments, public sector organisations are greatly concerned with the availability of budgetary slack at the employee levels. The report thus implied that employees' creation of budgetary slack may result from ownership (i.e. the possession of resource), empowerment (i.e. the utilisation of authority) and participation in government sector organisations. Hence, examining the determinants of budgetary slack in public sector organisations is important to both practitioners and academics.

1.1.4 Practical background of the study

The management of public infrastructure development has given rise to challenges in financial management issues, such as resource allocation, and it has further increased administrative cost (Grimsey & Lewis, 2004). Public sector organisations are unable to prioritise the allocation of resources and effectively manage employee authority in order to improve financial and management practice (Abdul Wahab, Allah Pitchay & Ali, 2015). Employees also neglect their span of control over these expenditure (Ahmad, Mansor & Ahmad, 2003). They are not able to manage the budget estimation by limiting the spending or preventing over-spending in the allocation of scarce resources (Tamam, Hassan & Said, 1996). Hence, the accuracy of budgets is important for

public sector organisations to allow employees to better control the allocation of organisational resources and plan for organisational activities.

Based on the discussion in the previous paragraph, there is a need to consider improving employees' control in expenditure management in public sector organisations. Public sector organisations have to demonstrate their ability to control resource allocation and employee authority appropriately (Lukka, 1988). This is because a lack of coordination in financial control may result in the accumulation of slack resources in these organisations (Bourgeois, 1981). Budgetary slack triggers socio-economic pressures from stakeholders at large (Boden, Gummett, Cox & Barker, 1998). Governments are pressured to allocate adequate resources to potential investment opportunities while aggressively pushing for public welfare satisfaction (Lapsley, 1999). Such pressure triggers bias in building additional resources for contingencies (Lau, 1999). Hence, the amount of slack resources in public sector organisations is more than that in private companies (Yilmaz, Ozer & Gunluk, 2014).

It is also worth noting that employees may create budgetary slack to make the realisation of budget easier (Lukka, 1988). The accumulation of slack resources provides room to adapt or change budgetary planning (Dunk, 1993). It helps to cope with unpredictable external uncertainty and internal financial issues (Rose & Smith, 2012). Such precautionary savings affirm the trustworthiness of public institutions in the stabilisation of financial markets, and thereby improve credit ratings and reduce interest cost (Sciulli, 2009).

In brief, the occurrence of budgetary slack, whether it is created intentionally or unintentionally, has implications for controlling budget estimation. It also influences the effectiveness of managing public infrastructure

development. Thus, budget makers have to understand the determinants of budgetary slack in public sector organisations.

1.1.5 Theoretical background of the study

Budgetary slack has been traditionally viewed as restraining the effectiveness of budget planning (e.g. Fisher, Maines, Pfeffer & Sprinkle, 2002). Previous studies widely discussed its presence as dysfunctional (e.g. Douglas & Wier, 2005) and something which should be eliminated (Fisher, Frederickson & Pfeffer, 2000; Nouri, 1994). From this point of view, slack influences the exertion of employee effort for budget attainability and leads to inefficient utilisation of valuable budgetary resources (Davila & Wouters, 2005).

On the other hand, empirical evidence has demonstrated the positive consequences of budgetary slack (e.g. Lukka, 1988; Merchant, 1985). While attempting to influence slack resources, employees perceive that they are able to utilise these resources for contingencies (Dunk, 1993). The accumulation of slack resources also serves as a buffer against uncertainty (Van der Stede, 2000). It provides a certain degree of flexibility in operational management that may minimise the duration of task performance. It may also reduce the creation of employee budgetary slack in a dysfunctional manner.

Organisations are concerned with the necessary optimum level of budgetary slack, as both surplus and shortage of budgetary slack are detrimental to organisations (Nohria & Gulati, 1997). Put differently, budgetary slack can be beneficial to organisations (Bourgeois, 1981) as long as it is used appropriately (Onsi, 1973). In such an instance, employees are able to utilise the slack resources in a manner that benefits the organisation (Dunk, 1995), although they

may be self-interest oriented in the creation of budgetary slack (Dunk & Nouri, 1998).

The investigation of budgetary slack has been reviewed at organisational and individual levels. Specifically, organisational factors that influence the creation of slack resources include decentralisation (Merchant, 1981), uncertainty in environment (Govindarajan, 1986), information asymmetry (Dunk, 1993; Onsi, 1973), the adoption of budget-based incentives and truth-inducing and slack-inducing pay schemes (Waller, 1988). However, a few empirical studies have examined individual level factors in the creation of budgetary slack. These studies have considered factors such as risk preference (Young, 1985), social pressure (Young, 1985) and employee attitude towards goal attainability (Dunk, 1993).

One of the ways in which employees from public sector organisations create slack in budgeting is that they deliberately overestimate expenditure, since there is no income aspect of a budget (Yilmaz, Ozer & Gunluk, 2014). Alternatively, they may pre-allocate resources for contingencies. These two ways of budgetary slack creation are less observable by the management of public sector organisations (Rose & Smith, 2012). Therefore, employees may take these opportunities to create slack into the budget proposal for legitimate purposes, even though their behaviour may seem to be dysfunctional (Dunk & Nouri, 1998).

Besides that, employees from public institutions understand that they utilise valuable resources as long as they are recognised as organisational members (Pierce, O'Driscoll & Coghlan, 2004). They are expected to economically and efficiently manage these resources. However, their personal

interests and goals may influence how they utilise these resources (Pratt & Dutton, 2000). Hence, they realise that they need to protect resources to adapt, process and create budgetary planning, which is demonstrated as a sense of protecting valuable resources (Pierce, Rubenfeld & Morgan, 1991).

In addition, employees make an effort to influence the distribution of resources to have flexibility in work performance. They may source their influence from the authority granted to them through their work titles or positions or through structural empowerment (Laschinger, Finegan, Shamian & Wilk, 2001). Such authority give employees the feeling of having the power in task implementation and decisions or give them psychological empowerment (Spreitzer, 1995).

Furthermore, superiors and subordinates are involved in the budgeting process in public institutions (Siddiquee, 2010). Employees from lower- or middle-levels are involved in the bottom-up participative budgeting approach (Wong, Guo & Lui, 2010). Top management usually initiate the budgeting process and offer general guidelines to these groups of employees and at the same time these employees develop budgets for their own departments (Agbejule & Saarikoski, 2006). They normally form a financial planning committee comprising representatives from each unit who are able to offer valuable insights on their units' operational activities (Hartmann & Mass, 2010). Upon completion, each budget is submitted to a higher level of financial committee for further approval (Chong & Chong, 2002). The allocation of resources in the final budget is based on these employees' inputs and therefore their involvement throughout the budgeting process is crucial (Fisher, Maines, Pfeffer & Sprinkle, 2002). This process of undertaking the preparation of budget is called participation (Byrne & Damon, 2008).

Based on the discussion above, previous studies have examined possible organisational and individual factors that may influence budgetary slack. However, there remains a lack of understanding about the determinants of budgetary slack at the employee level. The practice of result-based management further hampers the ability of public institutions to effectively monitor their resource and expenditure management and this has a significant implication for the next budget estimation. Hence, the challenge of effective resource acquisition, employee authority and involvement arouse the interest of research scholars in the investigation of the theoretical inter-relationship of ownership, empowerment, participation and budgetary slack.

1.1.6 Brief explanation of ownership (formal and psychological), empowerment (structural and psychological) and participation

The following sections provide a brief insight into the nature of psychological ownership, empowerment (structural and psychological) and participation.

Firstly, research on ownership has been extensively conducted in the fields of accounting (e.g. Kaarsemaker & Poutsma, 2006; Kuvaas, 2003; Buchko, 1993; French, 1987; Klein & Hall, 1988; Klein, 1987; Long, 1980) and organisational behavioural (OB) (e.g. Sieger, Bernhard & Frey, 2011; Ikavalko, Pihkala & Kraus, 2010; O'Driscoll, Pierce & Coghlan, 2006; Pierce, O'Driscoll & Coghlan, 2004; Pierce, Kostova & Dirks, 2003; Rousseau & Shperling, 2003; Wagner, Parker & Christiansen, 2003). Workers' alienation and organisational effectiveness can be improved through employee's formal ownership which is in the form of equity and stock options (Pierce, Rubenfeld & Morgan, 1991) in private organisations. Presumably, these types of arrangement motivate workers to perform better in their roles and responsibilities in their personal as well as

organisation's interest (Rosen, Klein & Young, 1986). This argument proposed that formal ownership influences employee behaviour.

However, studies show mixed results in employee behaviour even after the use of these forms of external reward (see French & Rosenstein, 1984; Kaarsemaker & Poutsma, 2006; Kuvaas, 2003). The rationale may be explained by Etzioni (1991, p. 466) in the sense that ownership itself is a “dual creation, part attitude, part object, part in the mind, part ‘real’”. In other words, there is a psychological sense of ‘mine’ and the property that is attached to the ownership of objects and resources. Pierce, Rubinfeld & Morgan (1991) referred to this feeling as psychological ownership which is conceptually defined as the state in which individuals feel as though the target of ownership or a piece of that target is theirs (i.e. it is mine!). They further theorised the connection between formal ownership and psychological ownership to psychological ownership theory. They argued that psychological ownership stems from within employees after gaining possession of the organisational resources, including budgetary resources, and claim such possession as theirs. Based on this argument, it is further proposed that psychological ownership has an effect on employee behaviour.

Secondly, empowerment is determined by both work-related practices i.e. structural and intrinsic personality traits i.e. psychological (Spreitzer, 1995; Thomas & Velthouse, 1990). The former comes from the context of organisational structure and practice (Kanter, 1983, 1977). It means that structural empowerment involves the delegation of responsibility down the hierarchy of organisational structure in order to provide employees with authority to make decisions for executing their primary work tasks (Leach, Wall & Jackson, 2003). On the other hand, the latter considers empowerment as a

constellation of experienced psychological states (Spreitzer, 1995; Thomas & Velthouse, 1990). Psychological empowerment focuses on the individual experience of empowerment (Thomas & Velthouse, 1990) and this is what individuals experience or feel rather than any specific structures or management practices that are intended to 'empower' employees for implementation of work roles (Spreitzer, 1996).

The theoretical connection between structural empowerment and psychological empowerment can be traced back to work empowerment theory (Laschinger, Finegan, Shamian & Wilk, 2001) - an extended model derived from Kanter's theory of structural empowerment (Kanter, 1977) and Spreitzer's (1995) theoretical model. According to Spreitzer (1995), psychological empowerment is the logical outcome of Kanter's structural conditions of empowerment (Laschinger, Finegan, Shamian & Wilk, 2001) which have subsequent behavioural consequences (Seibert, Wang & Courtright, 2011). People who are empowered have much more control over their situation and can implement changes needed to perform their work effectively. Their success reinforces the feeling of empowerment and leads to a change in their behaviour.

Empowerment is not an unfamiliar concept to accounting scholars, although it is not widely examined in the field of management accounting (see Hall, 2008; Kaplan & Norton, 1996). For instance, management accountants stress that the implementation of Balanced Scorecard emphasises the importance of empowering employees to increase their motivation, learning and growth (Kaplan & Norton, 1996). Similarly, Hall (2008) also highlighted the role of psychological empowerment in explaining the effect of management accounting systems on managerial performance. They suggested that empowering employees may be an effective way to improve employee motivation in a

participative budget setting. Covaleski, Evans, Luft and Shields (2003) also urged future researchers to study the behaviour of employees in budgeting, instead of relying on the formal system to control their behaviour. This is because there is no linkage found between the establishment of control systems and the behaviour of employees within organisations, which may facilitate the achievement of organisational goals (Chenhall, 2003). Hence, it is argued that empowerment (structural and psychological) has an impact on employee behaviour.

Lastly, previous researchers (e.g. Byrne & Damon, 2008; Libby, 1999) have observed the effect of participation on employee's judgment in budgeting. Employees involved in the decision process are able to influence outcomes that affect them (Leventhal, 1980). This is a recognised part of involvement in the consultative budgeting process (Byrne & Damon, 2008; Libby, 1999) where employees realise that their input will have a significant bearing on their performance evaluation or even possibly affect their achievement of budget targets (Nouri, 1992; Brownell, 1982).

Participation is considered as in-role behaviour (Motowidlo, Borman & Schmit, 1997) that transforms inputs into organisational performance such as making decisions, involvement in strategic planning (Borman & Motowidlo, 1993). It contributes significantly to employees' perceptions of fairness and for instrumental and relational reasons (Colquitt & Greenberg, 2003; Cropanzano, Byrne, Bobocel & Rupp 2001). From the instrumental perspective (Shapiro, 1993; Thibaut & Walker, 1975), allowing participation among employees is important because it provides them with a form of control and potential to influence budgetary outcomes. When they perceive that they are able to participate in budgeting, employees' perceptions of influence over decision-

making in organisations may be improved, and this may affect their behaviour (Wagner, Parker & Christiansen, 2003).

Participation is also valued by employees due to its symbolic relational benefits such as increased feelings of inclusion, standing and respect (Tyler & Lind, 1992). Employees who are given the opportunity to participate in a particular decision process expect their views to be acknowledged (Libby, 1999). They perceive that a high level of presenting their opinion allows them to influence organisational activities (Ford & Fottler, 1995). Consistent with Ford's and Fottler's (1995) argument, employees are able to get involved in discussions provided they exercise their authority (Laschinger & Wong, 1999) and therefore they may influence organisational goals (Van der Stede, 2000). Hence, it is proposed that participation has an effect on employee behaviour when structural empowerment is taken into consideration.

1.2 Problem statement

The existence of budgetary slack is a great concern to administrators from government agencies. Employees from middle-levels create budgetary slack in the system of participative budgeting and it permeates throughout the organisation. Public administrative agencies experience challenges in effectively monitoring their budgets. Previous empirical studies have emphasised organisational level factors in private sector organisations. Hence, new research is needed to examine the determinants of budgetary slack at the individual level in public sector organisations.

1.3 Research questions

Based on the objectives identified above, this section lays out the questions developed in achieving the objectives.

1. What is the role of employee's ownership (formal and psychological) in the creation of budgetary slack?
2. What is the role of employees' empowerment (structural and psychological) in the creation of budgetary slack?
3. What is the role of participation in the creation of budgetary slack when empowerment is taken into account?

1.4 Research objective

The study aims to empirically examine how the creation of budgetary slack is influenced by employee's ownership (formal and psychological), empowerment (structural and psychological), and participation in budgeting.

1.5 Significance of the study

There are several reasons for the examination of ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack. Firstly, there is a lack of understanding about the role of empowerment (structural and psychological) in the creation of budgetary slack (Lukka, 1988) in public sector organisations in Malaysia. Explaining employees' behaviour can be complicated because it is the result of many different factors (Walker and Johnson, 1999) and the range of its factors is expected to be diverse (Dunk & Nouri, 1998). Previous studies of individual effects on budgetary slack placed their emphasis on examining the effect of participation in the budgeting process (e.g. Lukka, 1988); the impact of employee perception of fairness (e.g. Fisher, Frederickson & Pfeffer, 2000; Lau & Tan, 2005) or personality factors (e.g. Hartmann & Mass, 2010; Hobson, Mellon & Stevens, 2011).

Employees gain authorisation structurally from higher authority for task execution. This kind of authorisation encourages employees to perceive that they

possess authority (Spreitzer, 1996) to influence decisional outcome in budgeting. Psychologically, such experiences promote a feeling of worth. Employees can feel encouraged to take up challenging budgetary targets so that they feel empowered in the execution of tasks (Kanter, 1993). This is the kind of perceived reward that employees value in addition to actual rewards (Lau & Tan, 2005). Hence, there is a need to empirically investigate empowerment, both structurally and psychologically, as possible determinants in the creation of budgetary slack.

Secondly, there is insufficient knowledge about the effect of ownership, both formally and psychologically, in budgetary slack among Malaysian employees in public sector organisations. Employees demonstrate a need for control of valuable resources in negotiations (Fisher, Maines, Pfeffer & Sprinkle, 2002), even when they know that the possession of resources is merely symbolic ownership and the resources will be 'returned' to the organisations (Pierce, Kostova & Dirks, 2003). They perceive that they are allowed to control resources resulting in slack creation in budgeting (Fisher, Frederickson & Pfeffer, 2000). B, previous studies (e.g. Fisher, Maines, Pfeffer & Sprinkle, 2002) neglected the fact that even the most perfectly designed organisational mechanism requires joint effort from employees in order to implement it successfully. Instead, they spent a great deal of effort examining organisational level factors that affected the creation of budgetary slack (e.g. Parker & Kyj, 2006). It is therefore important to examine the role of psychological as well as formal ownership in the creation of budgetary slack.

Thirdly, there is insufficient knowledge about the effect of participation in the creation of budgetary slack when structural empowerment is taken into consideration in public sector organisations in Malaysia. Employees often demand opportunities to influence important decisional outcomes in budgeting to improve their work effectiveness (Lind, Kanfer & Earley, 1990). They wish to be involved in the budgeting

process with their superiors. Their actions demonstrate their eagerness in controlling the outcome of decision-making in budgeting (Price, Lavelle, Henley, Cocchiara & Buchanan, 2006) which thereby leads to budgetary slack.

Previous studies recognised the importance of participation in the assessment of behaviour (e.g. Libby, 1999). However, it has never been empirically examined as a form of employee's authority to influence budgetary slack, although its importance has been recognised in the existing literature of empowerment (e.g. Spreitzer, Kizilos & Nason, 1997; Spreitzer, 1996; Spreitzer, 1995). Hence, there is a need to empirically examine how participation influences budgetary slack, when empowerment is taken into consideration.

Fourthly, there is a need to re-examine the measurement of budgetary slack. This is because existing accounting researchers have investigated budgetary slack from the perspective of behaviour and of attitudinal reaction of employees. They considered these two aspects of slack as equivalent to each other and expected that the empirical results generated should also be consistent. However, it is worth noting that there is a clear distinction between behaviour and attitude (Ajzen & Fishbein, 1977). Attitude is where employees evaluate certain attributes positively or negatively. Behaviour is where employees demonstrate their actions in an observable manner (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). In this study, the author argued that the creation of budgetary slack is considered as a form of employee behaviour. The previous empirical studies have presented mixed findings, and at the same time, are evidenced by unsatisfactory scores on the internal consistency of measurement scales which combine attitudes and beliefs (e.g. Lau & Eggleton, 2004; Douglas & Wier, 2000; Van der Stede, 2000; Lau, 1999).

1.6 Organisation of the thesis

This thesis has seven chapters including this introductory chapter. Chapter two reviews the pertaining literature of ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack; followed by chapter three which discusses the research model and hypothesis development; chapter four explains the research process, research design, data measurement and methods of analysis; chapter five reports the results of the validation study and the first pilot study; chapter six then presents the conceptualisation and development of a new budgetary slack instrument; chapter seven presents the findings of the second pilot test and the field study. Lastly, chapter eight discusses the findings and limitations, contributions and directions for future research.

1.7 Conclusion

This chapter offers an overview of the proposed research area. It presents the background of the study, problem statement, research purpose, research objective and questions, the significance of the study, a brief explanation of ownership (formal and psychological), empowerment (structural and psychological) and participation, definition of variables, a brief explanation of the research approach and the organisation of the thesis. The next chapter provides a literature review on budgetary slack, ownership (formal and psychological), empowerment (structural and psychological) and participation with theoretical justifications.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

The increased focus on mitigating budgetary slack has resulted in much debate, not only among academics, but also among budget makers in public sector organisations. This chapter reviews the extant literature of ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack, and identifies the existing research gap.

The discussion is organised as follows: Section One offers an overview of public sector organisations (PSO) in Malaysia. Section Two reviews the reform in budgeting system, Section Three discusses the budgeting behaviour of employees in Malaysia, Section Four reviews the budgetary slack literature, Section Five offers a description and review of ownership (formal and psychological), followed by empowerment (structural and psychological) in Section Six, while Section Seven reviews the participation of employees, Section Eight presents a discussion of the research gaps in the study, and finally, Section Nine provides the conclusion.

2.1 Overview of public sector organisations (PSO) research in Malaysia

Malaysia, as a developing economy, aspires to be a developed country in year 2020. However, it is challenged by mismanagement of expenditure control, as highlighted in the Auditor's General Report of 2011. In this regard, public sector organisations in developing countries, such as Malaysia, have greater need to perform research in public sector organisations (PSO) (Goddard, 2010) to better improve expenditure management.

Furthermore, these countries rely relatively heavily on public sector accountability to promote their economy growth (Goddard, 2010).

In spite of the importance of conducting studies in Malaysia, previous researches on PSO are mostly concentrated in developed countries, such as America, Australia, UK and other European countries. Similar studies performed in developing countries, such as Malaysia, are relatively minimal (Broadbent & Guthrie, 2008). Some notable accounting review done on PSO literature include Goddard (2010), Broadbent & Guthrie (2008), van Helden (2005), Broadbent (1999), Shields (1997), Broadbent & Guthrie (1992). However, these studies limit their interest to specific aspects of public sector administration. For instance, among them, only van Helden (2005) and Shields (1997) study management accounting in public sector administration. Hence, Section 2.2 and 2.3 provided some insights into the literature of the budgeting system of public sector organisations in Malaysia.

2.2 Reform in the budgeting system in Malaysian public sector organisations

As highlighted in Chapter One, public sector organisations are challenged to better manage their scarcity of budgetary resources and budget spending. The risks of mismanagement pave the way to budget reform to better improve the effective, efficiency and accountability in budgeting performance.

Budget reform has become one of the important issues in public administration in the Malaysian context as it involves the allocation and distribution of government funds (Government of Malaysia, 1973). Public agencies are required to increase their effectiveness and rationality in public budgetary management (Xavier, 1998). Hence, they are driven to initiate reform in public sector budgeting to achieve excellent performance and results in operational effectiveness and efficiency (Yahya, Ahmad & Fatima, 2008). Public sector organisations in Malaysia have been subjected to two types

of budgeting systems, namely a program and performance budgeting system (PPBS) and a modified budgeting system (MBS) (Yunos, Ismail & Smith, 2012).

The program and performance budgeting system (PPBS) was implemented to better control and plan expenditure in budgeting in public sector organisations. It enabled employees to better decide the availability of budgetary resources. It also mandated employees from all departments to propose their budgets based on benefit analysis estimation (Din, Ibrahim, Rahman, & Fitri, 2015). In this system, budgeting was considered a mechanism for disbursement of funds. It stressed the measurement of performance and the delegation of authority (Siddiquee, 2010). Departments were expected to specify their goals and objectives, and to develop programs to help attain those objectives. However, employees were granted limited authority to decide on the utilisation of budgetary resources. The implementation of this system was unsatisfactory due to complicated challenges such as the lack of emphasis on performance indicators and limited delegation of authority at the lower levels (Suhaiza, 2013). Dean (1986) also criticised the weakness of this system and demand public sector organisations to urgently reform their budgeting system.

Later, the modified budgeting system (MBS) sought to improve the shortfalls of the PPBS through optimisation of budgetary resources availability and improvement in program performance (Siddiquee, 2010). This kind of outcome-based budgeting emphasises expenditure targets and a generalised approach to expenditure control, among others (Xavier, 1996). Employees are empowered to achieve a general budgetary outcome as cost efficiently as possible to promote program effectiveness. Thus, MBS aims to narrow the link between budgetary resources and outcomes. In this regard, public sector organisations are obliged to submit reports at the end of the year to indicate programs with large gaps between targeted performance and actual performance (Ahmad, Mansor & Ahmad, 2003). Their performance in expenditure management will be included in

Auditor's General Reports annually. The listed organisations will then have to initiate remedial measures in order to prevent similar occurrences in the future.

This kind of system secures departmental accountability for the results as agencies are committed to set performance targets for the proposed level of funding for each activity in the program (Xavier, 1996). In turn, agency managers are delegated authority over the use of funds. They are also authorised to relocate funds to other activities within a particular program without seeking approval from the Treasury (Xavier, 1998). Likewise, upper level managers are empowered to delegate authority to lower level managers within the agency hierarchy to achieve performance targets committed to them. By doing so, they are able to respond to changing circumstances by deploying resources to help them achieve pre-determined targets (Pallo, 1999). In short, these are the important features of the result-based budgeting in the Malaysian public administration (Kuppusamy, 2010).

Indeed, the implementation of result-based budgeting encounter challenges (Suhaiza, 2013) in public sector organisations. However, employees have to have adequate skills and knowledge to undertake such tasks. They have to understand the operations of the budgeting system as departments play a role in the process of deciding the allocation of resources to lower level employees (Wan Zahari & Wong, 2013). Hence, the management encourage employees to demonstrate a sense of enthusiasm for the decentralisation of management systems (Yilmaz, Ozer & Gunluk, 2014).

As opposed to the practice of decentralisation and flexibility in the usage of resources, the Treasury in Australia is often unwilling to discard its centralised control and to cede financial authority and flexibility. As noted by Xavier (1998, p. 113):

"It [Treasury in Australia] was only willing to devolve budget flexibility upon demonstration of responsible management by ministries. This led to a "catch 22"

situation as ministries required more devolution before they could provide such demonstrations. Consequently, as progress in delegation stopped, the behavioural change among line management could not be sustained.”

Hence, such a tendency on the part of the Treasury in Australia further delays the implementation of budget reform in public sector organisations.

2.3 Budgeting behaviour of employees in Malaysian public sector organisations

Public agencies in Malaysia are large and complex mechanistic organisations with a bureaucratic administration structure (Ahmad, Mansor & Ahmad, 2003). Researchers are challenged to investigate the budgetary behaviour in public sector organisations as employees from public agencies may demonstrate a different behaviour compared to employees of private agencies that are profit-making and less bureaucratic in nature. As noted by Williams, Macintosh and Moore (1990, p. 233):

“...[Though] there may be a universal set of [budgeting related behaviour] factors which apply with equal facility to both sectors, but particular combinations dominate depending on the state of other organisational variables. This is a rich foundation for future research.”

Furthermore, the budgeting practices of public agencies in developed countries may be different from those observed in developing countries such as Malaysia. However, a lot of previous literature neglected to investigate the budgeting behaviour of employees (Yahya, Ahmad & Fatimah, 2008). The practice of consultative participative budgeting has been encouraged in the Malaysian civil service to promote an innovative budgeting culture (Triantafillou, 2002). The recent administrative reform for public management have also driven public sectors in Malaysia towards decentralisation to improve efficiency and performance (Yahya, Ahmad & Fatimah, 2008). Employees are encouraged to increase their productivity and achieve high performance. This kind of

approach represents the pre-requisite for establishing an innovative budgetary culture in the Malaysian civil service (Ahmad, 1996).

This approach also enables employees from public sector organisations in Malaysia to be motivated and rewarded when they achieve pre-determined goals in their departments (Zawawi, 2008). They are also allowed to participate in discussion sessions to exchange valuable information with the management (Hussein Amzat & Abdul Rahman, 2012). The management usually adopts the comments and suggestions of employees, but eventually the execution of decisions remains at the discretion of the management (Libby, 1999; Argyris, 1952). This is particularly true in the decentralised administrative structure of public sector organisations in Malaysia (Awio & Northcott, 2001).

Although not a lot of published works have focused on public sector organisations, previous studies by Dick and Metcalfe (2001) and Williams, Macintosh and Moore (1990) offer some valuable insights into the budgetary practices of this sector in general. They ascertained that such innovative practices as decentralised budgetary behaviour influence the performance of employees in public sector organisations. Employees gain greater decision-making autonomy in decentralised organisations to achieve greater goals in budgeting (Gul, Tsui, Fong & Kwok, 1995). They also tend to withhold valuable organisational resources, including budgetary resources. They participate greatly in the budgeting process. All these issues may have strong implications on the appropriateness of budgeting systems (Gordon & Narayanan, 1984).

However, there is limited empirical evidence to support the preference for decentralisation in the Malaysian context (e.g. Othman, Senik, Domil, Abdullah & Hamzah, 2006; Siti Nabiha & Scapens, 2005). Employees are reluctant to observe a performance driven culture in a Malaysian telecommunications company (Othman, Senik,

Domil, Abdullah & Hamzah, 2006). They do not feel accountable for the achievement of the performance indicators that were included in the Balanced Scorecard. They further argued that Malaysian culture and leadership styles conflict with the norms of human relations that are important in implementing the Balanced Scorecard successfully. Malaysian employees are more prone to accept a hierarchical culture that stresses differences in status and prefer a non-participative mode (Kennedy, 2002). Hence, organisations in Malaysia may experience difficulties in implementing a result-oriented management.

Besides, the cultural traits of many Bumiputra Malaysian employees demonstrate a greater level of secrecy in withholding information and conservatism (Abdul Wahab, Allah Pitchay & Ali, 2015). These characteristics result in low compliance with legal requirements and less flexibility and optimism (Gul, 2006; Johnson & Mitton, 2003). They can be highly individualistic in nature (Yunos, Ismail & Smith, 2012), particularly when middle-managerial employees (Tamam, Hassan & Said, 1996) experience certain situations that may be of benefit to themselves (Zawawi, 2008). This evidence is consistent with Mohd Iskandar and Pourjalali's (2000) claim that Malaysia is currently progressing towards modernisation since the introduction of new government policies (Rahman & Ali, 2006). However, it is noted that the previous literature on their individualistic traits reported mixed findings (e.g. Gray, 1988). In that sense, it is difficult to predict the level of conservatism of certain ethnic groups (Yunos, Ismail & Smith, 2012).

Overall, Malaysian managerial employees influence the authorisation of the final budget (Sulaiman, Nik Nazli & Alwi, 2004). They are judged primarily on their ability to achieve budgetary goals (Zawawi, 2008). In addition, Malaysian employees or budget holders perceive that they should not demonstrate a high level of influence in determining their budgetary goals (Yunos, Ismail & Smith, 2012).

2.4 Budgetary slack

This section provides a discussion on budgetary slack in terms of its definition and determinants, the query of its effectiveness and Lukka's (1988) theoretical model.

2.4.1 Definition of budgetary slack

In this study, **budgetary slack** is defined as the purposeful acquisition of budgetary resources by overstating or underestimating productivity levels. The budget request may be intentionally or unintentionally manipulated compared to the actual budget estimate such that it affects the standards against which performance is assessed (Van der Stede, 2000; Dunk & Nouri, 1998; Dunk, 1993; Lukka, 1988; Merchant, 1985; Waller, 1988; Schiff & Lewin, 1970).

2.4.2 Budgetary slack: Behaviour or attitudinal outcome

Previous researchers have studied the behaviour and attitude of employees in the creation of budgetary slack. The behaviour of employees that contributes to the creation of budgetary slack includes the withholding of private information from superiors which, if known, may result in lower budget estimates (Fisher, Frederickson & Pfeffer, 2000); the over-estimation of resource requirements to ensure that budget estimates will be met even in the case of unexpected events (Walker & Johnson, 1999); the under-estimation of productivity to ensure the availability of slack resources (Lau, 1999); and the exploitation of loose cost of control measures to acquire resources that do not contribute to the benefit of organisations (Dermer, 1988).

On the other hand, other studies have argued that employees are motivated to create slack budgeting because there is a financial incentive for employees who meet budget estimates (Waller & Bishop, 1990), and there is a need for employees

to meet imposed budget targets to secure their employment (Maiga & Jacobs, 2007). These motives are considered to be the attitudinal outcome of organisational policies and practices.

However, previous researchers considered these two concepts as being the same or interchangeable, and so they expected consistent results. Yet, their studies resulted in mixed findings. Therefore, this study draws a distinction between attitude, intention and behaviour.

2.4.3 Distinction between attitude, intention and behaviour

Many attempts have been made to predict behaviour from the attitude of employees in budgetary slack (e.g. Lau & Eggleton, 2004; Lau, 1999; Onsi, 1973). It is assumed that people who have a personal interest in budgets are expected to perform personalised favourable actions. However, this notion is apparently oversimplified and deceptive in nature when examining the attitude-behaviour relationship. This is because attitude is merely one of many factors that determine behaviour (Ajzen, 1991). The attitude of employees towards specific objects indeed influences their overall patterns of response toward these actions. However, it may not predict any given action (Ajzen & Fishbein, 1977). Therefore, empirical studies on the attitude-behaviour relationship are of rather limited value in terms of generating consistent empirical results.

The actions of people are systematically related to their attitudes when the predictors of the attitudinal nature and the criteria of behavioural actions are taken into consideration aggregately (Ajzen, 1991). Through aggregation, a more valid measure of the underlying behavioural disposition will be presented. In other words, attitude is merely one of many factors that determine behaviour (Ajzen &

Fishbein, 1977). A single behaviour may be reflected in the influence of various other factors that are specific to a particular occasion, situation and action that is being observed (Ajzen, 1991).

The rationale behind this argument can be explained by the Theory of Planned Behaviour (Ajzen & Fishbein, 1980), which predicts and explains the behavioural actions of people in specific contexts. People are guided by behavioural beliefs, normative beliefs and control beliefs. Behavioural beliefs produce favourable or unfavourable attitudes toward a behaviour; normative beliefs result in perceived social pressure or subjective norms; and control beliefs result in perceived behavioural control. The aggregation of these three factors leads to the formation of a person's intention to perform a given behaviour. Intention not only captures the motivational factors which influence a person's behaviour, but also indicates the degree of willingness to try or plan to perform the behaviour.

Based on this theory, the greater the attitude and subjective norm, and the greater the perceived control, the greater will be the intention of people to engage in a behaviour, and the more likely are they to de-perform the behaviour (Ajzen, 1991). However, it should be noted that a behavioural intention is only expressed in behavioural action provided the people freely decide whether to perform or not to perform the behaviour, i.e., they have volitional control (Ajzen, 2011).

The underlying principle of the Theory of Planned Behaviour draws a clear distinction between attitude, intention and behaviour (Ajzen & Fishbein, 1980) on employees' behaviour. Attitude is a person's positive or negative evaluation of attributes on dimensions such as effective-ineffective. Intention describes an individual's willingness (or propensity) to behave in a certain way.

On the other hand, behaviour is an observable action performed by an individual such as preparing a budget.

2.4.4 Budgetary slack: Dysfunctional or functional behaviour

The empirical work pertaining to the effectiveness of budgetary slack on the performance of employees presented two contradictory views. On the one hand, the existence of slack is assumed to be a dysfunctional (Lukka, 1988) and unethical (Douglas & Wier, 2005) activity that should be restricted (Fisher, Frederickson & Pfeffer, 2000; Dunk, 1995; Nouri, 1994). It is considered to be a form of budgetary bias in budget figures that have been intentionally made easier and attainable by employees as compared to the forecast figures during the budget-setting process, thus resulting in a slack. Budgetary slack not only restrains the motivation of employees with regard to budget achievability, but also ignores their efforts in contributing to the organisation. In turn, employees use budgetary resources ineffectively despite strict organisational controls (Davila & Wouters, 2005). It has been posited that when subordinates perceive that they have less control in deciding the budget targets, they are less satisfied with the budget-setting process, and this affects their performance.

On the other hand, there is a reasonable argument that claims that budgetary slack presents a functional effect that is important to organisational effectiveness (e.g. Otley, 1985). Companies that stress on the implementation of innovation strategy build slack in budgeting so that their employees are able to focus on relevant long-term and short-term objectives, in addition to meeting budgetary targets such as quality and customer service (Van der Stede, 2000). In other words, budgetary slack provides flexibility in terms of operational effectiveness in order to increase the predictability of profitability. At the same

time, it is able to reduce the time spent on controlled tasks. Superiors are given the discretion to pursue multiple goals as external conditions change (Lillis, 2002). The existence of budgetary slack also facilitates the performance of employees when the budgeting is highly emphasised and there is environmental uncertainty (Dunk, 1995). It isolates the risk-averse behaviour of employees from involvement in excessive risk. Job satisfaction can also be achieved when employees are able to use slack building to avoid the possible performance outcomes of missing the achievable targets such as loss of jobs or incentives (Merchant & Manzoni, 1989), and under-achievers are able to avoid experiencing social pressure (Davila & Wouters, 2005).

Most importantly, slack building in budgeting is able to reduce budget emphasis and, at the same time, allows employees to focus on specific goals, such as quality and customer service, when budget achievability becomes harder (Davila & Wouters, 2005). This is because employees have to make a trade-off between financial and non-financial goals, such as cost, efficiency, productivity, quality, customer service and responsiveness (Lillis, 2002). When multiple goals are impossible to attain, employees will have to prioritise their goals (Agbejule & Saarikoski, 2006). This is where employees build slack to pursue specific objectives rather than meet the multiple objectives of budgets, and yet the relevancy of budgetary objectives is not ignored (Davis, DeZoort, & Kopp, 2006). For instance, budgetary slack eases, but does not eliminate, the constraints imposed through budgets. Therefore, employees are able to achieve non-financial goals when production volumes are unexpectedly high (French, 1987).

The intention of organisations in building slack is not to make cost targets always easily achievable (Lukka, 1988). Instead, it is meant to facilitate the achievement of both financial and non-financial goals simultaneously despite the

difficulties. Therefore, organisations deliberately design budgets that are easily achievable in terms of cost targets (Lau, 1999), and this is deemed as slack building.

Regardless of whether the effect of budgetary slack is viewed as functional or dysfunctional, the presence of budgetary slack possibly exists in strategic, functional and operational levels of organisations (Lukka, 1988). In short, even a well-planned and well-executed operational control system is required to consider the behavioural effects of budgets. Many previous empirical scholars have since moved beyond the traditional perspective (Stevens, 2002) to explore possible behavioural factors (e.g., Hobson, Mellon & Stevens, 2011; Hartmann & Mass, 2010; Davis, DeZoort & Kopp, 2006; Lau & Eggleton, 2004) to better understand the relationship between budgetary slack and employees' behaviour.

2.4.5 Budgetary slack: Its determinants

The effect of budgetary slack on employees' performance has long been acknowledged by accounting researchers (e.g. Fisher, Frederickson & Pfeffer, 2000). Employees are driven by self-interest to develop a budget estimate that is within their expectations of actual performance and their perception of an acceptable level of performance in achieving organisational objectives (Otley, 1978). One of the reasons is that they are cautious of protecting themselves against environmental uncertainty (Lowe & Shaw, 1968). On the other hand, organisations monitor and evaluate their performance with tight budget control and yet, the success of such a stringent mechanism is not guaranteed. This kind of so-called game of budget control creates undesirable conflict between superiors and employees (Hofstede, 1967) and consequently, slack activities in budgeting.

Since then, researchers have been attempting to identify the determinants of budgetary slack (see Hobson, Mellon & Stevens, 2011; Hartmann & Mass, 2010; Douglas & Wier, 2005; Dunk & Perera, 1997). However, previous empirical studies have presented mixed results (e.g. Fisher, Maines, Pfeffer & Sprinkle, 2002; Fisher, Frederickson & Pfeffer, 2000). Fisher, Maines, Pfeffer & Sprinkle (2002) argued that employees reduce budgetary slack and improve their efforts and performance when superiors impose tight budget emphases and performance evaluations on employees. Contradictory to the findings of Fisher, Maines, Pfeffer and Sprinkle (2002), Fisher, Frederickson and Pfeffer (2000) concluded that employees create budgetary slack although their performance evaluation may be compromised. They also asserted that employees perceive the pre-imposed budget targets of their superiors as being low in procedural fairness despite the negotiation efforts initiated by the management. These are the two reasons that de-motivate them to excel in their performance (Fisher, Frederickson & Pfeffer, 2000). They rationalised that this kind of behavioural outcome is a form of demonstration of the employees' dissatisfaction with the budgeting process. They also argued that employees are supposed to be driven by self-interest in striving to maximise their personal benefits, thus resulting in an inconsistent pure economic pattern in the budget negotiation process. The contradictory results from the studies by Fisher, Maines, Pfeffer and Sprinkle (2002) and Fisher, Frederickson and Pfeffer (2000) highlight that the management fails to understand the possible determinants that influence the behaviour of employees in the creation of budgetary slack.

This study identified ownership (formal and psychological), empowerment (structural and psychological) and participation as the contributing factors for the creation of budgetary slack in public sector organisations.

Regardless of the nature of the organisation (Merchant, 1985), the possession of resources (Young, 1985), the utilisation of authority (Laschinger & Wong, 1999) and participation (Libby, 1999) are essential tools for employees to perform their budgetary tasks effectively and efficiency. This argument is further supported theoretically by Lukka's (1988) budgetary bias model, which was explained in Section 2.3.6.

Due to the nature of legal ownership, employees are not promised formal equity ownership for maximising the utilisation of budgetary resources in public sector organisations. However, regardless of the nature of organisations, their feeling of ownership is able to exist without the presence of formal ownership, and at the same time, it is demonstrated with similar results as intended by formal ownership (Pierce, Kostova & Dirks, 2003). Therefore, the feeling of ownership of budgetary resources is applicable in the context of an organisational setting where employees have no physical ownership in public sector organisations.

Indeed, the possession of organisational resources, including budgetary resources, is under the control of the employees. Employees gain the possession of budgetary resources through several approaches (Waller & Bishop, 1990; Otley, 1985; Schiff & Lewin, 1970; Lowe & Shaw, 1968). Firstly, employees persuade the management to alter a decision without entailing the transfer of tangible resources to them through various forms of discussion sessions. Alternatively, employees induce the management to change the budgetary decision through the power granted to them officially. Thirdly, employees restrict the utilisation of resources by retaining it for themselves. Regardless of the type of approach, employees are demonstrating the purposefulness of acquiring resources, and this argument coincides with Lukka's (1988) model.

Previous empirical scholars (e.g., Mizutani & Nakamura, 2012; Ruiz-Moreno, Garcia-Morales & Llorens-Montes, 2008; Davila & Wouters, 2005; Fisher, Maines, Pfeffer & Sprinkle, 2002; Van der Stede, 2000; Lau, 1999) ascertained that employees are entrusted with different degrees of discretion and flexibility to control the amount of resources to accommodate internal or external pressure (George, 2005). However, excessive possession of resources by employees may be purposely acquired (Fisher, Maines, Pfeffer & Sprinkle, 2002; Todd & Ramanathan, 1994; Lowe & Shaw, 1968; Cyert & March, 1963). Thus, it influences the planning for innovative programmes (Ruiz-Moreno, Garcia-Morales & Llorens-Montes, 2008) and adjustments in a complex competitive environment (Mizutani & Nakamura, 2012).

In addition to the possession of resources, the utilisation of the employees' authority is another crucial determinant that influences slack behaviour (see Maiga & Jacobs, 2007; Douglas & Wier, 2005; Lau & Eggleton, 2004; Fisher, Frederickson & Pfeffer, 2002; Lukka, 1988; Brownell, 1985; Ronen & Livingstone, 1975) in a budgeting environment. Power is the "informal authority" (Grimes, 1978) that serves as a means of control by the target of control (Etzioni, 1975). There will always be an imbalance of authority among sub-units of organisations, even between superiors and subordinates, as management and employees work in coalition. This is because organisations do not operate as if they are individuals and resolve conflicts merely by using economic incentives to create an ordering of preferences that can be shared by every organisational member.

Particularly, in the light of limited resources, the management or employees will have to exercise their authority in the budgeting negotiation process until a decision is drawn (Davila & Wouters, 2005; Fisher, Frederickson & Pfeffer, 2000; Johnson & Walker, 1999). In the event that an agreement fails to

be reached, employees who perceive that they have less authority in determining their budgets will be less satisfied with the budget-setting process and will be less committed to the budget, and thus, will perform at a lower productivity level (Fisher, Maines, Pfeffer & Sprinkle 2002).

On the other hand, if the management has the final authority in the negotiations, a significantly detrimental effect on the performance of the employees will be noticeable (Fisher, Frederickson & Pfeffer, 2000; 2002) as employees perceive that they have low procedural control during the negotiation process. Having said this, it also implies that there is the possibility of slack occurring among employees as they may intentionally agree on budgets that are lower and more attainable in terms of their targets as compared to those that are unilaterally set by their superiors (Hartmann & Mass, 2010; Maiga & Jacobs, 2007).

In addition to ownership and empowerment, employees who are given the opportunity to participate tend to seek control of their budgetary tasks (Avery & Quinones, 2004). They use participation not only to voice their opinions, but also to seek for explanations that may influence the effectiveness of their work performance (Libby, 1999). They may demand that the management provide sufficient explanation and fair implementation of a new policy when a transition has taken place. They desire to have temporal changes to their existing situation (Liang, Farh & Farh, 2012) that may affect organisational decision-making (Terwel, Harinck, Ellemers & Daamen, 2010). In this case, they may discretely withhold important input from their superiors (LePine & Van Dyne, 2001), thus resulting in slack behaviour.

Hence, it can be concluded that ownership (i.e., possession of organisational resources, including budgetary resources), empowerment (i.e., employees' utilisation of authority) and participation are determinants in creating slack behaviour in the budget-setting process. Previous empirical studies (e.g., Davila & Wouters, 2005; Fisher, Frederickson & Pfeffer, 2000; Lukka, 1988) also ascertained their significant implications on the biased budgetary behaviour of employees. However, as far as is known, very few of the existing accounting empirical studies have examined these two important determinants, namely ownership and empowerment, in relation to budgetary slack. These factors will be discussed in greater detail in Section 2.4 and 2.5 respectively.

Prior to that, however, the means of budgetary slack will be further discussed using Lukka's (1988) theoretical framework of budgetary slack to further strengthen the argument for the adoption of the ownership of budgetary resources, employees' utilisation of organisational authority and participation in influencing budgetary slack behaviour.

2.4.6 Lukka's (1988) theoretical framework of budgetary slack

Although ownership and empowerment have not been examined in detail by accounting researchers, Lukka (1988) has long argued that the possession of budgetary resources, employees' utilisation of organisational authority and participation are important determinants that cause slack in the behaviour of employees in organisations. In this study, the possession of budgetary resources is termed as ownership and the utilisation of authority is referred to as empowerment.

Lukka's (1988) theoretical framework provided a detailed explanation about the possible determinants of budgetary slack. He explained that employees

deliberately create a difference between the actual budgeted estimate and the proposed budgeted estimate. That is why the slack arises even before a final decision is made on the budget estimate. The term 'budget' can be understood as a plan or target that is developed at the aggregate level for a responsible department. The components of a budget, such as revenue and cost, may be biased in opposite directions, although the overall budget is unbiased. His framework was explained at both the individual and organisational levels. For the purpose of this study, the emphasis was on the individual level of budgetary bias. Budgetary slack occurs at the preparation stage of the budget proposal, which is prior to the negotiation phase between superiors and employees, as suggested by Fisher, Frederickson and Pfeffer (2000).

From Lukka's (1988) model, it is argued that employers should rationalise three important determinants of budgetary slack behind employees' behaviour. Firstly, employees aim to possess excessive organisational resources, including budgetary resources. Subsequently, their actions will result in an over-estimation of budgetary estimates as compared to the actual figures, thereby resulting in the creation of slack. Therefore, it is possible that the possession of budgetary resources can be further deduced as ownership.

Secondly, it is argued that the creation of budgetary slack is influenced by the utilisation of authority by employees. Authority allows employees to perform their tasks within their control and without resistance (Lukka, 1988; Weber, 1946). The power of employees to authorise is usually derived from their status in the organisation to control important budgeting processes. The exercise of authority depends greatly on their pre-assessment of relative power and the degree of compatibility of budget proposals to determine the potential for slack. Hence, it is possible that the utilisation of authority can be further deduced as empowerment.

Lastly, it is argued that employees are involved in regular discussions with their superiors or the management to enable them to influence the decisional outcome of budgeting. Employees tend to demand important information through their involvement in the budgeting process according to their interest. They may then use it to negotiate with their superiors or the management, thereby resulting in the creation of budgetary slack. Hence, it is possible that the involvement of employees in the budgeting process can be further deduced as participation. To summarise, these three important determinants of budgetary slack at the individual level are illustrated in Lukka's (1988) model in Figure 2.1.

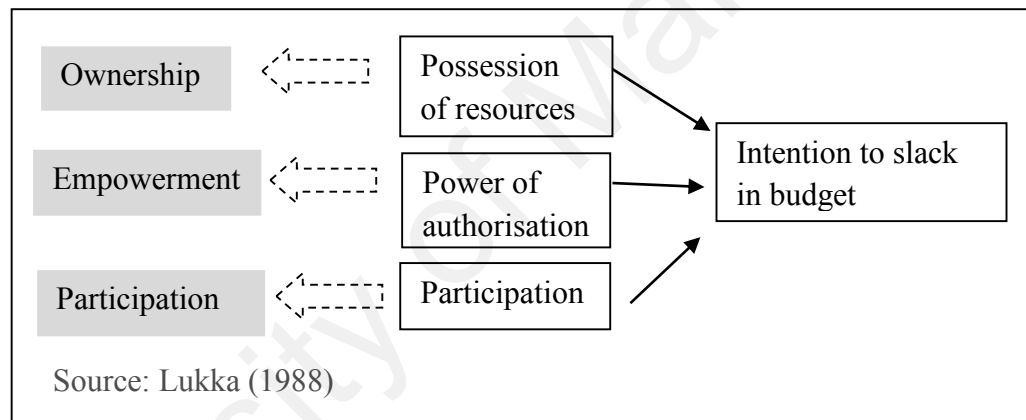


Figure 2.1: Determinants of budgetary slack

2.5 Ownership

The efficacy of an ownership system in influencing employees' behaviour, for example, performance and job satisfaction, has been substantially debated over the past decade. Lukka (1988) highlighted that employees purposefully possess organisational resources, including budgetary resources, to achieve assigned targets in budgeting. However, their behavioural outcome affects the effectiveness of the organisation's performance, particularly when slack is presented in the budgeting.

In order to better understand the behavioural effect of an employee ownership system, a clear distinction should be made between the formal and psychological

phenomena that are experienced (Chi & Han, 2008). Each of these forms has its own role in the ownership-employee behaviour relationship.

Numerous forms of formal arrangements have been observed under the general employee ownership scheme (Pierce, Rubenfeld & Morgan, 1991) in private sector organisations. Some of these ownership systems stress on broad-based employee ownership, whereas others provide ownership to selected employees only. Other forms of the ownership system are subject to factors such as the method of share acquisition and the transfer of stock (Poutsma, De Nijs & Doorewaard, 1999). Although there are different forms of employee ownership, they serve the same purpose of providing a capital ownership stake to employees in private sector organisations (Avey, Avolio, Crossley & Luthans, 2009).

Furthermore, formal ownership is operated through their impact on the employees' perception of ownership, thereby influencing behavioural effects (Pierce, Rubenfeld & Morgan, 1991). The psychological sense of ownership promotes the employees' feeling that they are worthy of attentional investment in the employee-organisation relationship (Pratt & Dutton, 2000). That is why psychological ownership is an essential determinant of organisational effectiveness (Brown, 1989).

Researchers in the field of organisational behaviour (OB) recognise the importance of ownership, both formally and psychologically, in organisational competitiveness (Pierce, Kostova & Dirks, 2001). It offers a divergent perspective on the effect of ownership on employees' behaviour compared to the mainstream theory. Specifically, the psychological ownership theory suggests that ownership influences behavioural outcomes when employees demonstrate their feeling toward their possession of objects (Ikävalko, Pihkala & Kraus, 2010). However, the current accounting literature on this topic is rather underdeveloped.

The psychological possession of organisational objects or resources is deeply rooted in employees (Pierce, Kostova & Dirks, 2001). They experience the psychological connection between self and different forms of possessions regardless of whether they are tangible or intangible objects (Pierce, Kostova & Dirks, 2003). Such possessions play such a dominant role in the promotion of the owners' identity that they become part of the extended self (Dittmar, 1992). The growth of possessions has a positive effect, whereas the fear of losing possession produces negative behavioural effects (Formanek, 1991). Employees demonstrate negative feelings when they sense that there is a foreign invasion of their possession of objects (Avey, Avolio, Crossley & Luthans, 2009).

In summary, the ownership literature suggests that formal ownership influences employees' behaviour by operating through a psychologically experienced form of ownership. The feeling of ownership is a form of behavioural effect on employees' conditions. Employees also promote the feeling of ownership towards different forms of objects that are both material and non-material in nature. Hence, the employees' feeling of ownership has an important implication on their behavioural outcomes.

2.5.1 Ownership: Its definition

In this study, **formal ownership** is defined as the employees' right to act as owners of budgetary resources for budget-making purposes. **Psychological ownership** is defined as the employees' perception that budgetary resources for budgeting, whether material or non-material in nature, belong to them.

Formal ownership refers to real objects that individuals are entitled to possess (Pierce, Rubinfeld & Morgan, 1991), whereas psychological ownership is symbolic in nature in the sense that symbolic objects can be shared by many people (Pierce, Kostova & Dirks, 2001). Employees perceive the targeted objects through ownership, whether it is material or non-material in nature, which belongs

to them (Pierce, Kostova & Dirks, 2001). In other words, individuals feel a sense of possessiveness, whereby they are psychologically attached to the objects. It is considered as an extension of the self - “what is mine becomes (in my feeling) part of me” (Isaacs, 1933). That is why property becomes the employees’ possession psychologically after the property is given to them.

Employees tend to take care and nurture the possession of the budgetary resources that they own. This sense of ownership motivates them to protect and improve the ownership of objects (Avey, Avolio, Crossley & Luthans, 2009). O’Reilly (2002, p. 19) highlighted that “when managers talk about ownership, what they typically want to instil is not financial ownership but psychological ownership – a feeling on the part of the employees that they have a responsibility to make decisions that are in the long-term interest of the company.” In other words, the feeling of ownership is cognitively and affectively constructed in the minds of the employees. Employees experience the state whereby they treat the target of ownership or a piece of that target as though it is theirs (Pierce, Kostova & Dirks, 2003). It is a reflection of the employees’ awareness, thoughts and beliefs with regard to the target of ownership symbolically.

Ownership is the state of being an owner and having the right of possession (Pierce & Rodgers, 2004). When employees have a sense of ownership, they feel that they are connected to the tangible and intangible targets (Dittmar, 1992). The meaning of target is quite broad and it refers to any object of attachment that represents an employee or organisation (Pierce, Kostova & Dirks, 2001). The target may be something that is as small as a preferred seat in the company, or as large as the organisation as a whole. For instance, the target of ownership for a data entry clerk may be a preferred accounting program; a creative designer may feel a sense of ownership towards a particular organisational idea or strategic

mission. The target of ownership may become deeply rooted within the employees' self-identity that they view these targets as an extension of the self (Sieger, Bernhard & Frey, 2011). Employees tend to defend their targeted objects as their personal possession, which is reflected as an extension of themselves (Pierce, Kostova & Dirks, 2003).

In the existing literature of ownership, it is important to highlight that humans have an inherent feeling of ownership. Psychological ownership can take place towards tangible and intangible objects (i.e., targets), and psychological ownership has important emotional, attitudinal and behavioural effects on humans that experience ownership (Pierce, Kostova & Dirks, 2001).

The primary distinguishing element in psychological ownership is its nature of possessiveness (Pierce, O'Driscoll & Coghlan, 2004). It asks the question, "How much do I feel this organisation is mine?" Therefore, it is discriminated from other related concepts such as commitment and satisfaction (Pierce, Kostova & Dirks, 2003), where commitment asks the question, "Should I maintain my membership in this organisation?" and satisfaction asks the question, "What evaluative judgments do I make about my job?"

The next section further discusses the effect of ownership (formal and psychological) on employees' behaviour using Pierce, Rubenfeld and Morgan's (1991) psychological ownership theory.

2.5.2 Pierce, Rubinfeld and Morgan's (1991) psychological ownership theory

Pierce, Rubinfeld & Morgan's (1991) employee ownership model suggests that formal ownership influences psychological ownership, whereby it is converted into ownership experience and so results in behavioural outcomes.

The ownership of objects is real and is experienced psychologically. Psychological ownership is recognised by employees who have feelings about the possession of objects. They manifest the felt rights in association with psychological ownership. Psychological ownership can be present although employees do not have legal possession of the targeted objects.

By understanding the motive of experienced ownership, employees in public sector organisations will be able to experience psychological ownership through the routes of controlling the target of ownership, coming to intimately know the target and investing the self into the target (Pierce, Rubinfeld & Morgan, 1991). Firstly, when employees gain control over their desired possession, they reflect a sense of ownership towards that possession. The greater the amount of control that employees have over the desired possession, the more they feel psychologically attached to the possession, and it becomes a part of them. On the other hand, if the desired possession cannot be controlled or is controlled by other people, the employees will not feel psychologically attached to it and it is not perceived as being a part of them.

Secondly, employees feel they possess the desired objects when they associate themselves with the objects. Such an association of attachment takes place when they gain intimate knowledge or acquire detailed information about the desired objects. The more the information and knowledge that is acquired, the more attached will the relationship be between the individuals and the objects. For

instance, when employees are provided with information about the organisation, they will feel as though they know it better and will eventually develop a psychological sense of ownership towards the organisation. Also, based on their perception, the more interactive they are, the better they will know the organisation and thus, develop a sense of ownership. Thus, employees believe that intimate information and substantial involvement may be made accessible to them.

Thirdly, when employees invest great effort and attention into desired objects, they feel that they become part of the objects and so develop a psychological sense of ownership towards the objects. A vast of opportunity is provided to employees in organisations to invest their time and effort and so they feel ownership towards their roles and responsibilities. They believe that the more complex the nature of their work, the more attention they will have to give to it and therefore, the more they will feel the ownership by being attached to it.

Despite its positive effects, the psychological state of ownership may bring about negative effects on the employees' behaviour (Pierce, Rubenfeld & Morgan, 1991) in public sector organisations. Employees may become too possessive of the target of ownership and therefore, may not be willing to share it with others or may feel the need to retain exclusive control over it. They become pre-occupied with the objects by enhancing their psychological possession and become obsessed with them, although they have no legal ownership rights. In the absence of psychological adjustment over the sense of ownership, employees tend to pursue the control of extrinsic possessions and financial success that result in the diminution of their self-concept.

Psychological ownership may also influence employees to behave in a dysfunctional manner. Employees want to demonstrate a desire for personal

control or present an authoritarian personality to other people in the organisation. They tend to perform tasks that are against social norms as a demonstration of their strong sense of ownership about a particular object, such as the act of sabotage and destruction. Employees may also experience the feeling of ownership such that they are overwhelmed by the burden of responsibility. When employees witness a drastic alteration concerning the possession of the objects, they may feel frustration, stress and personal loss. This is because they lack control over the objects that were once theirs. In summary, Pierce, Rubenfeld and Morgan (1991) provided an illustration of the model of psychological ownership in Figure 2.2:

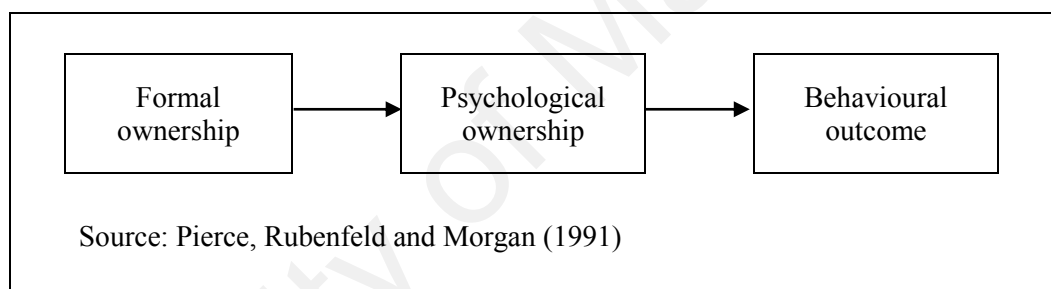


Figure 2.2: Ownership model

2.5.3 Avey, Avolio, Crossley and Luthan's (2009) psychological ownership

In addition to the routes of psychological ownership explained by Pierce, Kostova & Dirk's (2001) psychological ownership theory, employees are able to experience a psychological state of ownership for objects through territoriality and accountability (Avey, Avolio, Crossley & Luthans, 2009) in public sector organisations.

Firstly, employees may behave territorially over any potential possession when performing their tasks (Avey, Avolio, Crossley & Luthans, 2009) in budgeting. They gradually develop a sense of bonding over these objects (Pierce,

Kostova & Dirks, 2001). They then feel that they can exclusively possess these objects in organisations. So, when they perceive their targets of ownership have been infringed, they may demonstrate a feeling of protectiveness over these objects to maintain the bonds of ownership (Pierce, Rubinfeld & Morgan., 1991). However, their performance may be affected when they become too pre-occupied with these possessions (Avey, Avolio, Crossley & Luthans, 2009).

Secondly, employees feel that they have the right to hold other parties as well as themselves accountable for the desired possessions (Pierce, Kostova & Dirks, 2003). They expect themselves or other parties to be accountable for personal actions. They also understand that they are expected to share responsibilities for the sake of other parties.

2.6 Empowerment

Accounting researchers typically consider employee empowerment from a traditional perspective. Organisations engage their employees to perform assigned tasks on their behalf by delegating a certain level of decision making power to them (Greco, Laschinger & Wong, 2006; Jensen & Meckling, 1976). Organisations have to share decision-making power with their employees to improve work performance, particularly in a participative style of management. This kind of involvement by employees in decision-making requires a decentralisation of power throughout the organisation so that employees are able to perform their roles and responsibilities with their own authority (Seibert, Wang & Courtright, 2011).

Employees are authorised with the perceived power to control a department and other parties (Blau & Alba, 1982). Their utilisation of authority is contingent on what other parties have done to them or how others have responded. In other words, empowered employees are expected to take risks and pursue possible opportunities that

benefit their organisations (Cotton, 1996). They usually gain their authority from the structural position that they hold in organisations and their expertise (Mainiero, 1986). When organisations share power with their employees, the employees have the formal authority to control budgetary resources (Kanter, 1993). With authority, employees are more likely to achieve their desired outcomes.

Empowerment can also be conceptualised from a psychological perspective. It stresses on the employees' experience of empowerment (Thomas & Velthouse, 1990) and is better known as psychological empowerment, whereby individuals need to experience for themselves in order to better empower themselves (Spreitzer, 1996). Employees are assumed to have the desire for power of authorisation. Their desire is met when employees perceive that they have authority or when they are able to use it to resolve important budgetary tasks.

2.6.1 Empowerment: Its definition

In this study, **structural empowerment** is defined as employees' authority to implement budgetary tasks. **Psychological empowerment** is conceptually defined as the employees' demonstration of a sense of control in budget decisions.

Tremendous research efforts have been made to examine the empowering management practices in a workplace context (Thomas & Velthouse, 1990) such as delegation of decision making from higher levels of the organisation to the lower ones (Spreitzer, 1995). However, a distinction should be made between structural empowerment and psychological empowerment (Thomas & Velthouse, 1990). Likewise, Conger & Kanungo (1988) argued that structural empowerment is only one of a set of conditions that may or may not empower employees, as the psychological experience of empowerment should be taken into consideration. Empowerment influences the

motivation of employees with regard to the intrinsic performance of tasks as it is manifested in more than one set of cognitions in the employees' work orientation.

The impact of empowerment (structural and psychological) on the behaviour of employees is further discussed using Laschinger, Finegan, Shamian and Wilk's (2001) work empowerment theory in the next section.

2.6.2 Laschinger, Finegan, Shamian and Wilk's (2001) work empowerment theory

The theory of work empowerment (Laschinger, Finegan, Shamian & Wilk, 2001) is considered to be a theoretical extension of the theory of structural empowerment (Kanter, 1993; 1977) and psychological empowerment (Spreitzer, 1995). In structural empowerment, Kanter (1993) argued that employees are provided with the power to accomplish tasks through organisational structures. The power of the employees comes in the form of the influence and authority to mobilise resources to accomplish organisational goals, and so empowerment has a significant influence on the performance of employees (see Smith, Andrusyszyn & Laschinger, 2010; Purdy, Laschinger, Finegan, Kerr & Olivera, 2010; Laschinger, Leiter, Day & Gilin, 2009; Laschinger, Wilk, Cho & Greco, 2009; Lucas, Laschinger & Wong, 2008). Employees, in particular, are provided with the opportunity to grow, to access information, to receive support on having access to the required resources, to have formal power as well as informal power (Laschinger, 1996).

Structural empowerment is an important tool in the delivery of effective organisational outcomes (Finegan & Laschinger, 2001), including budgetary outcomes. Employees are more empowered when they have autonomy, are able to facilitate in participative decision making, and to express self-confidence in their competency (Laschinger, Wong, McMahon & Kaufmann, 1999). That is why organisations are mandated to foster conditions for work effectiveness (Kanter, 1993) so that employees

can experience positive feelings about their roles and responsibilities and become more effective in meeting organisational goals.

On the other hand, psychological empowerment encourages employees to provide meaning to their work goals so that their work requirements may be aligned with their behaviour (Hackman & Oldham, 1980). It also supports employees in mastering the skills and knowledge to achieve their tasks or to perform to the best of their capability (Bandura, 1989; Lawler, 1973). Besides, it allows employees to demonstrate a feeling of control over their tasks (Deci, Connell & Ryan, 1989) by making decisions about the budgeting process. Employees are also able to make decisions over strategic, administrative and operational matters in budgeting (Abramson, Seligman & Teasdale, 1978; Ashforth, 1989).

The outcomes of empowerment are subjected to several assumptions (Laschinger, Finegan, Shamian & Wilk, 2001). Firstly, employees are assumed to have a great autonomy to perform budgetary activities. Employees must have some degree of control over their work to imply that they have a certain level of influence over budgetary matters (Ford & Fottler, 1995). Secondly, empowerment must be examined from the perspective of an employee as it complements more objective, job-oriented characteristics and individual differences (Hackman & Oldham, 1980). In short, Laschinger, Finegan, Shamian and Wilk's (2001) theory of work empowerment can be illustrated using the model of empowerment in Figure 2.3.

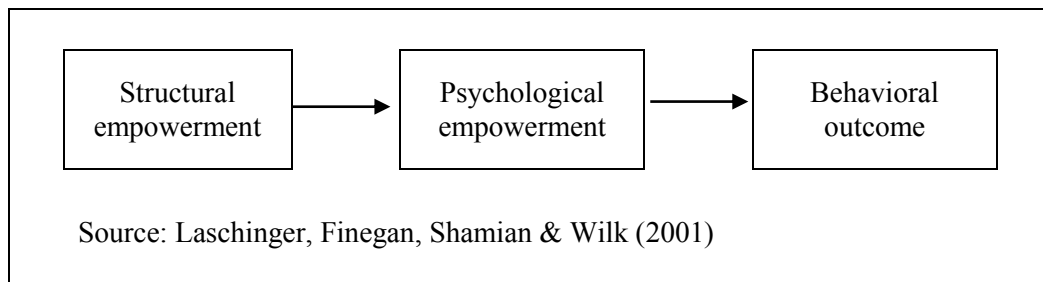


Figure 2.3: Empowerment model

2.7 Participation

This section provides a discussion on participation in terms of its definition, synthesis and Shields and Shields' (1998) nomological network of participative budgeting.

2.7.1 Participation: Its definition

In this study, **participation** is defined as the employees' involvement in the budgeting process to influence the decisional outcome of budgetary targets. Participation provides a means for employees to build budgetary slack into their budgeting process (Young, 1985; Schiff & Lewin, 1970).

2.7.2 Participation: Its synthesis

Previous accounting scholars have extensively studied the significance of the participation of employees in budgeting and its subsequent creation of budgetary slack (e.g. Libby, 1999; Shields & Shields, 1998; Shields & Young, 1993). They highlighted that employees should have the initiative to share valuable information with their superiors (e.g., Conchie, Taylor & Donald, 2012; Ng & Feldman, 2012; Morrison, Wheeler-Smith & Kamdar, 2011; Terwel, Harinck, Ellemers & Daamen, 2010; Avery & Quinones, 2004; Brotheridge, 2003) with the intention of further improving their work roles instead of merely criticizing matters (LePine & Van Dyne, 2001; Brockner, Heuer, Siegel, Wiesenfeld, Martin, Grover & Bjorgvinsson, 1998; Bies & Shapiro, 1988; Tyler, Rasinski & Spodick,

1985). They should make innovative suggestions and recommend the necessary modifications to the existing standard procedures, even though other organisational members may disagree with them (Liang, Farh & Farh, 2012; Morrison & Phelps, 1999).

However, in reality, employees are pressured to set the expected budget targets according to the availability of scarce resources and to make a trade-off to resource allocation (Adler & Reid, 2008). Under this condition, the full participation of employees in the budgeting process to determine the final budget may be impractical (Chong & Chong, 2002). They also realise that their suggestions are usually ignored (Argyris, 1952), although the budgeting process leads employees to believe that they may have some influence on decisional outcomes (Libby, 1999).

Ideally, employees are motivated to participate in the budgeting process because they want to foster an open relationship with their superiors, gain access to budgetary resources and promote the perception of fairness when budgets are used as a performance evaluation mechanism (Kyj & Parker, 2008). They desire to build mutual trust, and gain the respect and support of their superiors as they demonstrate a strong sense of belonging to their organisation (Pierce, Kostova & Dirks, 2001). Therefore, employees favour fostering an open and meaningful discussions with their superiors in organisational decision-making.

Previous literature appraised the use of budget participation to foster a healthy organisational atmosphere of fairness and procedural justice between employees and their superiors (e.g. Colquitt & Greenberg, 2003). Employees have to ensure that the procedural and outcome decisions are fair as their budgetary targets will be affected by these outcomes (Lau & Tan, 2005). Employees have to

actively participate in the contribution of input to their superiors. Their participation makes the process of setting budget targets transparent and they will be more willing to accept those targets (Lau & Buckland, 2001). Magner, Welker and Campbell (1996) summarised that participation provides employees with the opportunity to introduce private information into the targets in order to better estimate future environmental conditions. Besides, the exchange and dissemination of job-relevant information are also the benefits derived from the involvement of employees in the budgeting process as it facilitates decision-making (Chong, Eggleton & Leong, 2005). It assists employees in selecting the appropriate course of action. Encouraging employees to be actively involved in the budgeting process enhances their motivation and job satisfaction (Shields & Shields, 1998).

On the other hand, the research findings presented by Argyris (1952), Cherrington and Cherrington (1973), Hopwood (1972), Lowe and Shaw (1968) and Merchant (1985) showed evidence to support the negative effect of employees' participation on behavioural outcomes. Argyris' (1952) work investigated foremen in manufacturing companies in the USA. They found that employees behave in a dysfunctional manner, such as displaying job tension and demotivation, when they are pressured to achieve budgetary targets, thereby resulting in poor performance. Similarly, Hopwood (1972) asserted that the managerial behaviour of employees is negatively affected when their performance is evaluated using participative budgets. Hopwood (1972) examined 167 heads of cost centres in the USA with regard to the effectiveness of a budget constraint in a participative matter on employees' behaviour. The findings suggested that this style resulted in less innovative behaviour and poor service. Besides, Merchant (1985) examined managers from 19 manufacturing companies in the USA on how

participative budgeting influences their propensity to create budgetary slack. It was ascertained from the results that budgetary slack is greater when employees are demanded to respond to tight budgets frequently in order to avoid budget variance. Cherrington and Cherrington (1973) did a study of undergraduate students with a business major regarding the effect of participative budgeting on budget estimations. They concluded that inappropriate outcomes arise when the rewards for individuals are based on the budget system, whereby they are then deemed to submit unrealistic budgets. In addition, Lowe and Shaw (1968) surveyed the influence of the participation of managers on budgetary slack in the context of sales forecasting. The finding asserted that participative budgeting encourages employees towards biased forecasting figures to suit their personal interests.

In short, previous empirical studies presented mixed and inconsistent results that support the proposition that participation in budgeting improves employees' performance. Hence, it is suggested that accounting researchers (e.g. Wong, Guo & Lui, 2010; Lau & Tan, 2005; Chong, Eggleton & Leong, 2006) adopt Shields & Shields' (1998) nomological network of participative budgeting to investigate the impact of participation on employees' behaviour.

2.7.3 Shields and Shields's (1998) nomological network of participative budgeting

As one of the most researched topics in management accounting, participative budgeting has been investigated with regard to the organisational and behavioural aspects of employees' performance (see Derfuss, 2009). The empirical results pertaining to the effect of participative budgeting on employees' behaviour are inconsistent and contradictory (e.g. Merchant, 1985). Shields and Shields (1998) contributed diverse results due to the lack of a definitive model. There have been

numerous theoretical and empirical models on participative budgeting and the results have varied across studies. Hence, it was suggested that a more complete and reliable theoretical and empirical model should be used, such as Shields and Shields' nomological network model.

In a more recent meta-analysis of participative budgeting (Derfuss, 2009), the attention of the researcher was drawn to further expand the scope of the empirical investigation of participative budgeting to consider psychological variables since the act of participation provokes a sense of control in employees and involves the ego (Shields & Shields, 1998). However, in theory, the psychological-based research primarily studied the consequences of participative budgeting such as motivation, organisational commitment, job satisfaction and managerial performance. Other studies limited their scope of investigation to the antecedent of participative budgeting, to predominantly environmental uncertainty or superior-subordinate information asymmetry. Yet, the specification of the conditions for participative budgeting using psychological mechanisms has been under-studied. The nomological network, in which participation is a mediating variable, is illustrated in Figure 2.4.

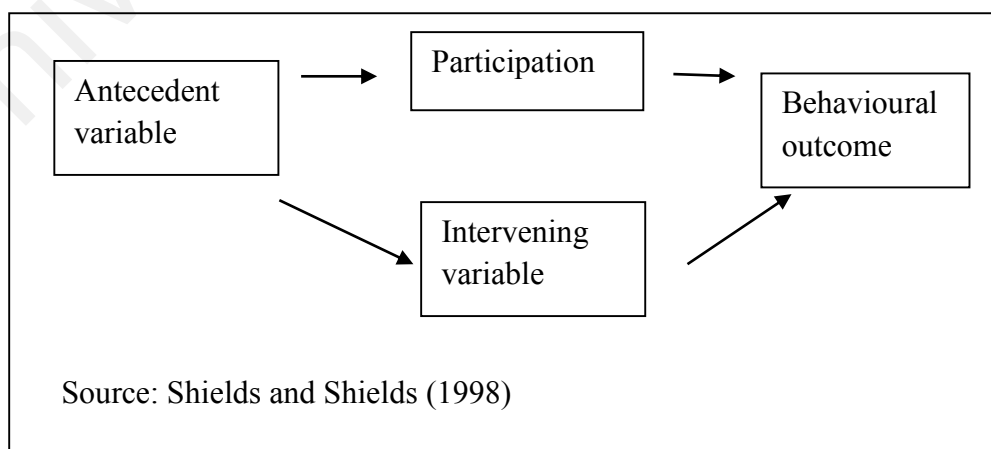


Figure 2.4: Participation model

2.8 Research gaps

Based on an overview of the literature on ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack, this study identified several research gaps that call for empirical insights.

2.8.1 Formal ownership and budgetary slack

The study of formal ownership on the creation of budgetary slack has been greatly lacking in public sector organisations. However, there has been extensive research into organisational ownership plans with formal ownership in private sector organisations (e.g. Kaarsemaker & Poutsma, 2006). Ownership plans, therefore, affect the willingness of employees to perform their roles and responsibilities in budgeting (Rosen & Klein, 1983; Hammer, Stern & Gurdon, 1982; Long, 1980). However, they may not influence the behaviour of employees when they consider themselves as owners of the organisation under the ownership scheme (e.g., French & Rosenstein, 1984; Tannenbaum, Cook & Lohmann, 1984; Conte & Tannenbaum, 1978). So, researchers have failed to prove the influence of ownership on the behaviour of employees.

Unlike private sector organisations, the mechanistic administration of government sector organisations demonstrates different ownership behaviour on the part of employees. Private sector organisations, in particular, emphasise bottom line figures and are less bureaucratic in nature. The intertwining of the employee-owner relationship in public sector organisations between ownership plans and employees' behaviour (Kuvaas, 2003; Buchko, 1993; Klein & Hall, 1988; French, 1987) is questionable. Previous empirical studies have demonstrated a lack of research insight in examining the significance of formal ownership on budgetary slack, although it is considered as the employees' right

to possess budgetary resources (Pierce, Rubenfeld & Morgan, 1991; Lukka, 1988). Therefore, this represents a gap in the literature as insufficient attention has been given to the extent of the relationship between formal ownership and budgetary slack. It contributes to only a partial understanding of the factors that contribute to the creation of budgetary slack, and affects the understanding of whether employees purposefully manipulate budgetary resources to restrain their capabilities.

2.8.2 Structural empowerment and budgetary slack

Structural empowerment allows employees to exercise control over their roles and responsibilities (see Aryee, Walumbwa, Seidu & Otaye, 2012; Wallace, Johnson, Mathe & Paul, 2011) in public sector organisations. Employees are provided with the power to get things done (Kanter, 1993). This means that they are authorised to accomplish their roles and responsibilities in budgeting.

At the same time, however, employees may desire to have greater authority beyond their existing scope of authorisation to perform their budgetary tasks (Foster-Fishman & Keys, 1997; Pierce, Kostova & Dirks, 2001). This will ultimately influence their performance (Seibert, Wang & Courtright, 2011), such as the employees' attitude (organisational commitment, job satisfaction and organisation-based self-esteem) and work behaviour (performance and organisational citizenship) (Kirkman, Mathieu, Cordery, Rosen & Kukenberger, 2011; Liu, Zhang, Wang & Lee, 2011).

In the existing accounting literature, no study has been carried out to examine the significance of structural empowerment in relation to employees' behaviour when they gain authority to control organisational, including budgetary resources. However, previous researchers (e.g., Hartmann & Mass, 2010; Maiga

& Jacobs, 2007; Davis, DeZoort & Kopp, 2006) investigated the behaviour of employees from an ethical standpoint.

For instance, sensitive employees prioritise to satisfy organisational interests over personal interests when they are authorised to access organisational benefits (Maiga & Jacobs, 2007). Similarly, employees who demonstrate positive corporate citizenship tend to take actions that benefit the organisation instead of themselves, although they have the authority to do so (Hartmann & Mass, 2010). Besides, financial incentives may have a moral impact on the involvement of employees in the budget-setting process; however, the employees' value, a belief that is meaningful, determines how they react to the ethical situation when they are placed under a slack-inducing pay scheme (Hobson, Mellon & Stevens, 2011).

Hence, it can be concluded that structural empowerment may have a significant impact on the behaviour of employees when they are empowered within the budgeting context. As long as employees are empowered, they are authorised to influence the decisional outcomes. Therefore, this action may contribute to the creation of budgetary slack since they impose their personal judgment onto the budget-setting process (Fisher, Frederickson & Pfeffer, 2000).

Based on the above review, accounting scholars have inferred that structural empowerment may influence the behaviour of employees. These scholars evaluated the employees' behaviour through moral reasoning (Hartmann & Mass, 2010; Maiga & Jacobs, 2007; Davis, DeZoort & Kopp, 2006) but ignored the effect of authority on the employees' behaviour (see Sieger, Bernhard & Frey, 2011; O'Driscoll, Pierce & Coghlan, 2006; Pierce O'Driscoll & Coghlan, 2004; Pierce & Rodgers, 2004; Wagner, Parker & Christiansen, 2003; Peirce, Kostova & Dirks, 2001; Pierce, Rubenfeld & Morgan, 1991).

However, they provide an incomplete understanding of the issue of budgetary slack in the budget-setting process. As far as is known, the investigation into the significance of structural empowerment in the context of budgetary slack has not been empirically examined. This presents a gap in the literature as little attention has been given to the influence of structural empowerment on budgetary slack. This partial understanding of the factors that contribute to the creation of budgetary slack affects the understanding of whether authorisation is distributed appropriately.

2.8.3 Psychological ownership and budgetary slack

Many researchers have commented that psychological ownership has a greater influence on the behaviour of employees (Sieger, Bernhard & Frey, 2011; O'Driscoll, Pierce & Coghlan, 2006; Pierce & Rodgers, 2004) in public sector organisations. The feeling of psychological ownership influences the employees' feeling of worthiness as to whether to invest their skills and efforts into the organisation or not (Pratt & Dutton, 2000).

When employees initiate the feeling of ownership, this experience is then inculcated within their inner selves (Pierce, Kostova & Dirks, 2001; Pierce, Rubenfeld & Morgan, 1991) and is later expressed through their behavioural outcome (Sieger, Bernhard & Frey, 2011; O'Driscoll, Pierce & Coghlan, 2006; Pierce O'Driscoll & Coghlan, 2004; Pierce & Rodgers, 2004; Wagner, Parker & Christiansen, 2003).

Employees tend to relate their sense of selves with their behaviour by attaching their self-identity and providing meaning to the desired objects so that they feel they are owners of the entities and subsequently, engage in behavioural

outcomes (Vandewalle, Van Dyne & Kostova, 1995) that may be beneficial or detrimental to the effectiveness of the organisation (Pierce & Rodgers, 2004).

Employees who have a high level of psychological ownership are more willing to assume personal risk on behalf of social entities although they are not under an obligation to do so (Van Dyne & Pierce, 2004). They develop a strong sense of responsibility from being attached to the identity of their inner selves. When they have established a sense of self with the social entities, they feel that they have a responsibility to protect and enhance that identity of theirs, and so such an act of responsibility influences the behaviour of the employees (Ikavalko, Pihkala & Kraus, 2010; Druskat & Kubzansky, 1995).

On the other hand, certain conditions influence the psychological ownership of employees to result in dysfunctional behaviour (Pierce, Rubenfeld & Morgan, 1991). When they possess material or non-material objects, they become more having-oriented than being-oriented (Pierce, Kostova & Dirks, 2001). They stress on controlling and satisfying the extrinsic possession that results in psychological ownership but, at the same time, their self-identity fades away. Also, employees are more likely to seek and retain exclusive control over their desired possession, and this may impede co-operation among other individuals and social entities. They may experience frustration or distress when their possession is taken away because they perceive a loss of control over the possession that was once theirs.

Pierce, Rubenfeld and Morgan (1991) stressed on the negative impact of psychological ownership on the behaviour of employees (e.g., Sieger, Bernhard & Frey, 2011; Ikavalko, Pihkala & Kraus, 2010; O'Driscoll, Pierce & Coghlan, 2006). For instance, they highlighted the implications of psychological ownership

on the perception of justice and work attitudes, respectively. Hence, it can be inferred that psychological ownership has an effect on the behaviour of employees when they perceive their possession of budgetary resources as theirs.

In the context of budgetary slack, employees develop a sense of possession towards targeted objects and consider these as belonging to them. The employees' perception of the possession of resources may generate slack activities in budgeting. This is because they evaluate their personal outcome against the organisational reward based on the degree of deviation from their personal reference point (Hobson, Mellon & Stevens, 2011; Maiga & Jacobs, 2007; Douglas & Wier, 2005; Stevens, 2002; Webb, 2002; Kim, 1992) when they impose their personal judgment onto the budget-setting process (Fisher, Frederickson & Pfeffer, 2000).

Based on the above review, many accounting studies have implicitly recognised the psychological influence of ownership on employees' behaviour, particularly when they are allocated adequate budgetary resources. However, as far as is known, the investigation into the significance of psychological ownership in the context of budgetary slack has been neglected and has not been empirically examined. The behaviour of employees has been evaluated in terms of organisational control (Lau, 1999; Simons, 1988; Stroh, Brett, Baumann & Reilly, 1996; Van der Stede, 2000;) but the psychological effects of the behaviour of employees have been ignored (see Sieger, Bernhard & Frey, 2011; O'Driscoll, Pierce & Coghlan, 2006; Pierce O'Driscoll & Coghlan, 2004; Pierce & Rodgers, 2004; Wagner, Parker & Christiansen, 2003; Peirce, Kostova & Dirks, 2001; Pierce, Rubenfeld & Morgan, 1991). Thus, they provide an incomplete understanding of the issue of budgetary slack in the budget-setting process. This presents a gap in the literature as little attention has been given to the

psychological ownership of employees in the possession of budgetary resources in relation to budgetary slack. This partial understanding of the factors that contribute to the creation of budgetary slack affects the understanding of whether it influences the behaviour of employees in budgeting.

2.8.4 Psychological empowerment and budgetary slack

Previous literature has indicated that the behaviour of employees is influenced by the degree of active orientation towards their work roles (see Aryee, Walumbwa, Seidu & Otaye, 2012; Kirkman, Mathieu, Cordery, Rosen & Kukenberger, 2011; Liu, Zhang, Wang & Lee, 2011; Seibert, Wang & Courtright, 2011; Wallace, Johnson, Mathe & Paul, 2011; Boudrias, Brunet, Morin, Savoie, Plunier & Cacciatore, 2010; Butts, Vandenberg, DeJoy, Schaffer & Wilson, 2009; Hall, 2008; Drake, Wong & Salter, 2007). Empowered employees perceive that they have the power to control their work roles (Haugh & Laschinger, 1996). They desire to fulfil the need for autonomy in decision making (Hackman & Oldham, 1980). Thus, they become psychologically encouraged to cultivate a work-related identification within an organisation (Seibert, Wang & Courtright, 2011).

Empowered employees perceive that they are authorised to control organisational outcomes (Laschinger, Gilbert, Smith & Leslie, 2010). They feel that they are able to gain the necessary support to be empowered to perform their roles and responsibilities and therefore, they experience a great sense of control in their work roles that ultimately influences behavioural outcomes (e.g. Laschinger, Grau, Finegan & Wilk, 2010; Laschinger, Leiter, Day & Gilin, 2009; Laschinger & Finegan, 2005; Laschinger, 2004) as well as organisational outcomes (e.g. Purdy, Laschinger, Finegan, Kerr & Olivera, 2010; Sarmiento,

Laschinger & Iwasiw, 2004; Laschinger, Finegan, Shamian & Casier, 2000; Laschinger & Wong, 1999; Laschinger, Wong, McMahon & Kaufmann, 1999).

By empowering themselves psychologically, employees demonstrate a set of behaviours that comes from feeling empowered, such as assuming greater responsibility and taking the initiative, making discrete decisions without being asked, being discrete in their work roles, performing tasks in a self-directed manner, querying unnecessary procedures and replacing them with better initiatives, seeking creative problem-solving approaches, being willing to discuss relevant issues openly and promoting new suggestions at the workplace (Kuokkanen, Leino-Kilpi & Katajisto, 2003; Irvine, Leatt, Evans & Baker, 1999; Johnson & Thurston, 1997; Lashley, 1999, 2000; Mabey & Skinner, 1998).

In other words, empowered employees are considered to be successful provided they are able to manage their work roles while collaborating with their superiors, maintaining their work functions and gaining the appropriate support (Manojlovich & Laschinger, 2002; Laschinger, Finegan, Shamian & Wilk, 2000). This implies that the positive effect of the empowerment that takes place in organisations is related to the nature of the empowerment process (Greco, Laschinger & Wong, 2006). Employees must ensure that the empowering process in organisations enables them to willingly exchange information, experience emotional support, share experiences, gain recognition and help others (Tourangeau, Cranley, Laschinger & Pachis, 2010). Otherwise, negative empowering outcomes may arise, such as being uninformed, lacking confidence in their superiors or employers, being dissatisfied with the current working environment, reduced optimism, increased control and being encouraged to take individual action (DeCicco, Laschinger & Kerr, 2006).

In relation to the existing literature on budgetary slack, when employees perceive that they have less or no power in determining budgets after failed negotiations, they tend to feel that they have not been granted procedural justice, and this will result in poor performance (Fisher, Maines, Pfeffer & Sprinkle, 2002). Employees feel empowered to take charge of the negotiation process even though the outcome may not be favourable to them (Libby, 1999; Pasewark & Welker, 1990). If neglected, this feeling of the loss of authority may affect the efforts and performance of the employees. It is possible that employees highly value a sense of control (Kanter, 1983) in influencing the attainability of the budget, although the authorisation comes from the top management. Thus, the achievability of the results is complemented with the willingness of the employees to influence the budgeting process (Lukka, 1988) such that the employees feel that they have gained influence over the situation (Spreitzer, 1995).

Based on the above review, it is recognised that psychological empowerment has a significant influence on the behaviour of employees. However, as far as is known, the investigation into the significance of psychological empowerment within the context of budgetary slack has been ignored and has not been empirically examined. The outcome on employees through organisational justice has been evaluated (Fisher, Maines, Pfeffer & Sprinkle, 2002) but not the psychological effect on the behaviour of employees (see Aryee, Walumbwa, Seidu & Otaye, 2012; Kirkman, Mathieu, Cordery, Rosen & Kukenberger, 2011; Wallace, Johnson, Mathe & Paul, 2011).

Hence, the existing literature presents an incomplete understanding of the issue of budgetary slack in the budget-setting process. This presents a gap in the literature as very little attention has been given to the impact of the psychological empowerment of employees after seeking authority on budgetary slack. This

partial understanding of the factors that contribute to the creation of budgetary slack affects the understanding of its impact on the behaviour of employees in budgeting.

2.8.5 Participation, structural empowerment and budgetary slack

From an economic perspective, the participative approach is used in budgeting for superiors to gain private information from subordinates in order to design attractive incentive contracts to motivate subordinates to achieve their targets (Fisher, Maines, Pfeffer & Sprinkle, 2002; Shield & Shield, 1998). From a psychological perspective, participative budgeting affects employee satisfaction as they gain self-respect and have the opportunity to express their values (Kyj & Parker, 2008). Also, it allows employees to feel trust, a strong sense of control and the involvement of their ego with the organisation (Hartmann, 2000; Magner, Welker & Campbell, 1996).

Despite the numerous empirical studies that have been carried out to examine the influence of participation on employees' behaviour, the results have been inconclusive. On the one hand, participation reduces the role of managers to one of ambiguity (Parker & Kyj, 2006; Chenhall & Brownell, 1988; Dunk & Nouri, 1998) and allows the exchange of valuable job-relevant information to occur (Subramaniam & Ashkanasy, 2001; Kren, 1992). It also allows clear goals to be established (Yuen, 2004; Kenis, 1979), develops greater trust in superiors (Lau & Buckland, 2001), a higher level of motivation (Wong, Guo & Lui, 2010; Brownell & McInnes, 1986), a positive attitude among employees towards budgets, the organisation as well as their jobs (Adler & Reid, 2008; Murwaningsari, 2008; Milani, 1975), and organisational commitment (Murwaningsari, 2008). Besides, participation enables employees to feel

respected and provides them with the opportunity to make suggestions in order to enhance their job satisfaction (Libby, 1999; Dunk, 1992) and their perception of procedural justice (Lau & Tan, 2005).

On the other hand, the findings on participation showed no significant improvement in employees' outcomes. Participation actually reduces job satisfaction among employees (Hofstede, 1967), increases tension on job-related issues (Swieringa & Moncur, 1972), and leads to declining managerial performance (Lau, Low & Eggleton, 1995).

The participation of employees in decision-making may have an important implication on whether the employees behave favourably or unfavourably towards the interests of the organisation (Nouri & Parker, 1998). For instance, when there is a misrepresentation of information amongst employees, the implementation of a pay-induced scheme as compared to a truth-induced scheme is more likely to encourage slack (Johnson & Walker, 1999; Chow, Copper & Waller, 1988). In other words, the implication is even greater in the context of budgetary slack when employees are expected to share valuable information with their superiors and yet their ownership reward may be uncertain (Fisher, Maines, Pfeffer & Sprinkle, 2002). Therefore, participating in decisional outcomes has a significant implication on the behaviour of employees (Fisher, Maines, Pfeffer & Sprinkle, 2002).

The diverse results of the extant researches on participative budgeting have further motivated researchers to examine possible antecedents and intervening variables. Shields and Shields (1998) suggested that it is better to examine the relationship between employees' participation and their behavioural outcomes. As a result, various antecedents were studied in participative budgeting

such as information asymmetry (Shields and Young, 1993), environmental uncertainty (Kren, 1992) and motivation (Wong, Guo & Lui, 2010). However, there is a lack of empirical investigation into the implication of participation on budgetary slack when structural empowerment is taken into consideration. Employees are able to participate in decision making because they have been empowered to do so (Seibert, Wang & Courtright, 2011). They are expected to contribute their insights into decisional outcomes by using the authority granted to them as employees of the organisation (Kanter, 1993). That is to say, structural empowerment is an important determinant of participative budgeting that influences budgetary slack. However, previous empirical studies neglected and did not empirically examine structural empowerment as a factor in participative budgeting within the context of budgetary slack. Hence, there is a possible research gap in the existing literature since very little attention has been given to the influence of participation on budgetary slack when structural empowerment is taken into consideration.

2.8.6 Summary of research gaps

Based on the overall literature review, there are several research gaps. Firstly, there is insufficient knowledge of the effect of formal ownership and structural empowerment on budgetary slack. Secondly, insufficient attention has been given to the effect of the psychological ownership and psychological state of empowerment of employees on budgetary slack. Lastly, there is inadequate understanding of the role of participation in budgetary slack when empowerment is taken into consideration.

2.9 Conclusion

This chapter discussed the literature pertaining to ownership (formal and psychological), empowerment (structural and psychological) and participation in influencing employees' behaviour. It offered an overview of ownership and introduced the theory of psychological ownership. It also provided an insight into the topic of empowerment and introduced the work empowerment theory. Besides, it discussed the implication of participative budgeting on the behaviour of employees. In addition to that, it presented several research gaps that may deserve greater research insights in accounting literature. The next chapter will propose a research model that examines the effect of ownership (formal and psychological), empowerment (structural and psychological) and participation on budgetary slack and the development of the hypotheses derived from the models.

CHAPTER 3

THEORETICAL MODEL AND HYPOTHESES DEVELOPMENT

3.0 Introduction

This chapter discusses the initial research model and provides a justification for the hypotheses based on literature. The model was developed in accordance with the previous literature on ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack.

The chapter is organised as follows: Section One justifies the theoretical model with theories; Section Two provides a description of the initial theoretical model and the variables within it; Section Three describes the development of the hypotheses and Section Four summarise all the hypotheses; Section Five provides the conclusion for this chapter.

3.1 Theories

The research model in this study integrates the psychological ownership theory (Pierce, Rubenfeld & Morgan, 1991) and the theory of work empowerment (Laschinger, Finegan, Shamian & Wilk, 2001) with Shields and Shields' (1998) nomological network model of participative budgeting.

The psychological ownership theory suggests that ownership (formal and psychological) has a significant effect on the behaviour of employees. Employees tend to seek control of excess resources through the creation of slack, and the creation of such resources may not be economically rational (Lukka, 1988). The work

empowerment theory adopts the notion that structural empowerment influences the behaviour of employees through the psychological state of empowerment. Subsequently, employees perceive that they have a greater sense of authority to influence the outcome of their behaviour (Spreitzer, 1995). The details of these theories and model have already been explained in Chapter Two.

The nomological network of Shields and Shields (1998) proposes that participation should be theorised as a mediating variable based on the theoretical model suggested by them. The details of these theories and model have already been explained in Chapter Two.

3.2 Initial theoretical model

Based on the literature discussed in Chapter Two, no single study has been carried out in the accounting field to examine the combined effects of ownership (formal and psychological), empowerment (structural and psychological) and participation on budgetary slack. The initial research model, as illustrated in Figure 3.1, was developed in this study for the purpose of extending and contributing to the existing literature on budgetary slack.

In this model, the dependent variable is budgetary slack and it is operationalised in terms of the propensity to create budgetary slack, which is used to predict employees' behaviour. Their intentions influence their actions to create slack and demonstrate their willingness to perform budgetary slack.

The two independent variables are formal ownership and psychological ownership. Structural empowerment, psychological empowerment and participation are proposed as the mediating variables in Section 3.3.

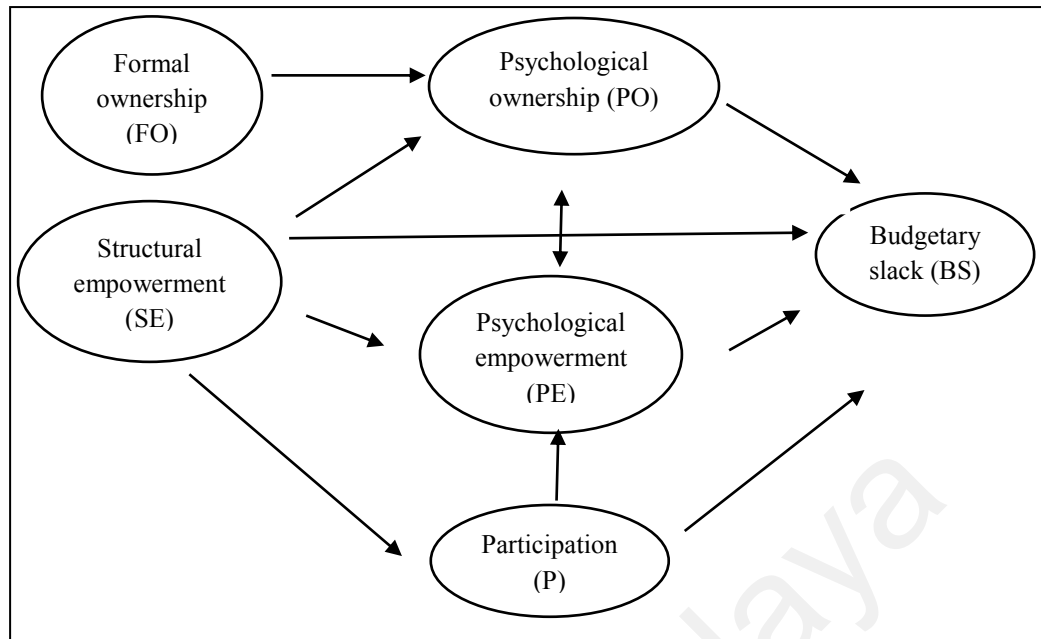


Figure 3.1: Initial research model

3.3 Hypotheses development

This section describes the development of the hypotheses that support the model in Figure 3.1.

3.3.1 Ownership and its related hypotheses

The possession of resources is considered to be one of the determinants of budgetary slack (Lukka, 1988). In this study, the term ownership is used. It is adopted from the psychological ownership theory (Pierce, Rubenfeld & Morgan, 1991). Thus far, no study has been carried out to examine the effects of ownership (formal and psychological) on budgetary slack in public sector organisations. This study is the first to examine the relationship using the theoretical model of psychological ownership (Pierce, Rubenfeld & Morgan, 1991), which was discussed in Chapter Two. The arguments that justify the development of its related hypotheses are explained below.

3.3.1.1 The relationship between formal ownership and budgetary slack

Employees possess the right to own budgetary resources in public sector organisations. They desire that these resources be transferred to their personal possessions. These valuable resources allow employees to make a more accurate prediction of budget estimates.

However, employees tend to act as owners of these resources to negotiate with their superiors for easily attainable budgetary goals. They may not utilise these resources for the benefit of the organisation or share them with other members of the organisation. Based on this argument, it can be inferred that the more possessions they own, the more they suppress the utilisation of budgetary resources, thus resulting in a budget that is less efficient. By doing so, they tend to have a greater intention to create budgetary slack. Therefore, it is hypothesised that:

H1: The greater their right to formal ownership, the more employees create budgetary slack.

3.3.1.2 The relationship between formal ownership, psychological ownership and budgetary slack

Formal ownership operates through the perceptions of employees and not directly on the behaviour of employees in public sector organisations. When resources are allocated to employees, they feel as though these valuable resources are part of their personal possessions. They feel a great sense of ownership to proactively protect their budgetary resources because they desire to co-exist with their possessions. So, they purposefully gain greater control over these resources for slack activities in budgeting. Hence, the following hypotheses are suggested:

- H2: The greater the formal ownership of employees, the greater their psychological ownership;
- H3: The greater the psychological ownership of employees, the more they will create budgetary slack;
- H4: Psychological ownership mediates the effect of formal ownership on the creation of budgetary slack by employees.

3.3.2 Empowerment and its related hypotheses

Lukka (1988) argued that the exercise of power is another determinant of budgetary slack. In this study, the proposed hypotheses are based on Laschinger Finegan, Shamian and Wilk's (2001) work empowerment theory. Thus far, insufficient empirical investigation has been carried out to examine the relationship between empowerment (structural and psychological) and budgetary slack in public sector organisations. The following arguments serve to justify the development of the hypotheses below.

3.3.2.1 The relationship between structural empowerment and budgetary slack

Employees are granted the authority to perform their work roles effectively through public sector organisations. They are empowered to mobilise the necessary support to achieve the budgetary objectives. Indirectly, they have the opportunity to evaluate alternative budgetary inputs and outputs prior to their implementation. During the budgeting process, however, they may take advantage of their authority to manipulate the budget estimates for their personal benefit. In other words, employees may have greater authority to perform budgetary tasks when organisations have a greater willingness to

distribute authority to their employees. This will, therefore, result in the propensity to create budgetary slack. Hence, it is hypothesised that:

H5: The greater their structural empowerment, the more employees tend to create budgetary slack.

3.3.2.2 The relationship between structural empowerment, psychological ownership and budgetary slack

Employees are given the authority to represent budgetary resources due to their formal position in public sector organisations. They perceive that they have greater control over their possession of resources. At the same time, they feel that they have to protect these resources of theirs, and so this action influences their behavioural outcomes. So, it can be inferred that employees perceive a greater ownership over budgetary resources when they are given greater authority in the performance of budgetary tasks, thus resulting in a greater propensity to create budgetary slack. The following hypotheses are presented:

H6: The greater their structural empowerment, the greater the employees' psychological ownership;

H3: The greater their psychological ownership, the more employees create budgetary slack;

H7: Psychological ownership mediates the effect of structural empowerment on employees' creation of budgetary slack.

3.3.2.3 The relationship between structural empowerment, psychological empowerment and budgetary slack

The design of work empowerment enables employees to develop an individual mind-set and behaviour in public sector organisations. Employees are offered organisational support to perform their budgetary tasks effectively. They feel empowered to take control of the necessary organisational support to influence budgetary targets. Therefore, they are likely to purposely develop easily attainable budget estimates, thus resulting in the creation of budgetary slack.

Based on the argument above, it can be inferred that when employees have greater empowerment, they perceive that they have greater authority to influence the budget estimates, thereby resulting in a greater propensity to create budgetary slack. Therefore, the following hypotheses are presented:

H8: The greater their structural empowerment, the greater the employees' psychological state of empowerment;

H9: The greater their psychological empowerment, the more employees create budgetary slack;

H10: Psychological empowerment mediates the effect of structural empowerment on the employees' creation of budgetary slack.

3.3.3 Participation and its related hypotheses

A participative approach enables employees to develop a strong sense of control and ego-involvement in public sector organisations (Hartmann, 2000; Magner, Welker & Campbell, 1996). Employees use this opportunity to express their viewpoints and to influence the decisional outcomes in budgeting. They are able to initiate changes while being involved in the budgeting process. They readily

prepare themselves to make the necessary modifications to existing standard procedures despite the disagreement of the management. Despite its benefits, participative budgeting causes the behaviour of employees to deteriorate, thereby resulting in such things as a reduction in job satisfaction and increased tension with regard to job-related problems.

This study adopted Shields & Shields' (1998) nomological network of participative budgeting to propose its hypotheses. Thus far, no study has been conducted to examine the relationship between structural empowerment, employees' psychological empowerment, participation and budgetary slack in public sector organisations. The following arguments will serve to justify the development of the hypotheses below.

3.3.3.1 The relationship between structural empowerment, participation and budgetary slack

Extensive studies previously (e.g. Kyj & Parker, 2008; Fisher, Maines, Pfeffer & Sprinkle, 2002) acknowledged the impact of participation on the creation of budgetary slack in private sector organisations. However, none of these studies considered structural empowerment as the reason for the existence of participative budgeting in public sector organisations.

Employees are allowed to participate in budgetary discussions because of their authority in public sector organisations. During the participation process, they perceive whether they are authorised to exchange their ideas or not. They realise that they are able to influence the outcomes in budgeting. At the same time, however, they may use this opportunity to create a slack in budgeting.

Based on the argument above, it can be inferred that when employees are granted greater authority, they demonstrate greater participation in influencing

the decisional outcomes in budgeting. Subsequently, employees have a greater propensity to create budgetary slack. The following hypotheses state that:

H11: The greater their structural empowerment, the greater the participation of employees in budgeting;

H12: The greater their participation, the more employees create budgetary slack;

H13: Participation mediates the effect of structural empowerment on employees' creation of budgetary slack.

3.3.3.2 The relationship between structural empowerment, participation and psychological empowerment

Due to the nature of empowerment in public sector organisations, employees are keen to participate in the budgeting process in order to create an impact in their budgetary tasks. In order to achieve this objective, they willingly get involved in discussion sessions by pursuing something different and by being confronted by other organisational members. They perceive that they have a greater authority to influence their budgetary tasks.

Based on the argument above, it can be inferred that when employees have greater authority, they tend to participate more in budgeting to create a more impactful change in budgetary outcomes that is reflected in their psychological state of empowerment. Therefore, it is hypothesised that:

H11: The greater their structural empowerment, the greater the participation of employees in budgeting;

(Same as the proposed hypothesis in Section 3.3.3.1)

H14: The greater the participation of employees, the greater their psychological empowerment;

H15: Participation mediates the effect of structural empowerment on their psychological empowerment.

3.3.3.3 The relationship between participation, psychological empowerment and budgetary slack

Participation in the budgeting process enables employees to perceive that they are authorised to develop new standards or rectify problems in public sector organisations. They consider participation as an effective means of influencing decisional outcomes in budgeting. That is why they value the opportunity of participation to eagerly demonstrate to others that they are in control of these outcomes. Subsequently, they may take this opportunity to create budgetary slack. Therefore, it is possible that when employees participate more in budgetary discussions, they perceive that they have greater authority to influence the decisional outcomes in budgeting, therefore resulting in a greater propensity to create budgetary slack. The following hypotheses, which have already been proposed, are:

H14: The greater the participation of employees, the greater their psychological empowerment;

(Same as the proposed hypothesis in Section 3.3.3.2)

H9: The greater their psychological empowerment, the more employees create budgetary slack;

(Same as the proposed hypothesis in Section 3.3.2.3)

H16: Employees' psychological empowerment mediates the effect of participation on their creation of budgetary slack.

3.4 Summary of research questions and hypotheses

All the research questions and hypotheses developed in this study were summarised in Table 3.1.

Table 3.1: Summary of research questions and hypotheses

RQ1	What is the role of employees' ownership (formal and psychological) in the creation of budgetary slack?
H1	The greater their right to formal ownership, the more employees create budgetary slack.
H2	The greater the formal ownership of employees, the greater their psychological ownership.
H3	The greater the psychological ownership of employees, the more they will create budgetary slack.
H4	Psychological ownership mediates the effect of formal ownership on the creation of budgetary slack by employees.
RQ2	What is the role of employees' empowerment (structural and psychological) in the creation of budgetary slack?
H5	The greater their structural empowerment, the more employees tend to create budgetary slack.
H6	The greater their structural empowerment, the greater the employees' psychological ownership.
H7	Psychological ownership mediates the effect of structural empowerment on employees' creation of budgetary slack.
H8	The greater their structural empowerment, the greater the employees' psychological empowerment.
H9	The greater their psychological empowerment, the more employees create budgetary slack.
H10	Psychological empowerment mediates the effect of structural empowerment on employees' creation of budgetary slack.

Table 3.1, continued

RQ3	What is the role of participation in the creation of budgetary slack when empowerment is taken into account?
H11	The greater their structural empowerment, the greater the participation of employees in budgeting.
H12	The greater their participation, the more employees create budgetary slack.
H13	Participation mediates the effect of structural empowerment on employees' creation of budgetary slack.
H14	The greater the participation of employees, the greater their psychological empowerment.
H15	Participation mediates the effect of structural empowerment on their psychological empowerment.
H16	Employees' psychological empowerment mediates the effect of participation on their creation of budgetary slack.

3.5 Conclusion

This chapter described the development of a theoretical model for ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack. Based on the model, sixteen hypotheses were developed to examine both the direct and indirect effects of structural empowerment on budgetary slack. The relationship between psychological ownership, empowerment (structural and psychological), participation and budgetary slack is summarised in Table 3.1. The research design and methodology will be discussed in the next chapter.

CHAPTER 4

RESEARCH METHODOLOGY

4.0 Introduction

The purpose of this study was to examine how the creation of budgetary slack is influenced by employees' ownership (formal and psychological), empowerment (structural and psychological), and participation in the budgeting process. Therefore, it was important to develop a methodology to achieve this research objective. This chapter describes the research design and the phases of the research that were undertaken in this study. The research was conducted in five phases and this Chapter is arranged according to these phases, namely the validation of the budgetary slack determinants; the pilot test for the budgetary slack instrument; the development of the budgetary slack instrument; the pilot test for the field study; and the field study. This Chapter also explains the research procedure at each phase of the design, such as the sample selection and operationalization of the variables, among others. In addition, the justification for the adoption of a positivist paradigm of accounting research (Chua, 1986) is presented here.

The rest of the chapter is organised as follows: Section One provides an overview of the philosophical and theoretical underpinnings that inform on the research in accounting; Section Two provides an overview of the research design; Section Three discusses the process of validating the budgetary slack determinants; Section Four discusses the procedure for the pilot test for the budgetary slack instrument; Section Five briefly describes the shortcomings of the original budgetary slack (OBS) instrument and the justification for the development of a new instrument, the details and

the results of which are further explained in Chapter Six; Section Six discusses the procedure for the performance of the pilot test for the field study; Section Seven provides an overview of the field study and the procedure for the data analysis; and Section Eight presents the concluding remarks for this chapter.

4.1 Research paradigm

The research approach should be carefully planned and controlled so that the problem is investigated empirically (Sproull, 1995). Chua (1986) further emphasised the need to clarify the research process as different accounting schools of thought apply different perspectives with regard to the epistemology, theoretical position and methodology. Epistemology is concerned with the nature of knowledge, which then drives the theoretical perspective of the research and later determines the selection of the methodology or approaches. These issues were addressed thoroughly to ensure that the knowledge and theoretical assumptions underlying this study were clearly explained and supported by justified research methodology so that the research findings were warranted. In particular, this study adopted a predominantly objectivist epistemology and subsequently, a positivist theoretical perspective was used to select the appropriate research methodology.

4.1.1 Epistemology

The epistemology offers “a philosophical grounding for deciding what kinds of knowledge are possible and we can ensure that they are both adequate and legitimate” (Maynard, 1994, p.21). In other words, it is an approach for understanding how people know what they know. Objectivism is one of the main epistemological approaches that is used in mainstream accounting research (Chua, 1986), instead of constructivism and subjectivism, and it was adopted in this study as well. It posits that the meaningfulness of reality is that it exists

independently such that the world is external and objective (Crotty, 1998). With such an argument, this study adopted an objective-positivist approach to ensure the richness of the information in the quantitative results (Pernice, 1996; Teagarden, Von Glinow, Bowen, Frayne, Nason, Huo, Milliman, Arias, Butler, Geringer, Kim, Scullion, Lowe & Drost, 1995). Hence, the current study was built upon facts, causality, hypotheses formation and statistical testing.

4.1.2 Theoretical perspective

A theoretical perspective explains “the philosophical stance informing the methodology and thus, providing a context for the process and grounding of its logic and criteria” (Crotty, 1998). It also signifies the overall conceptual framework or the “basic belief system or worldview that guides the investigation” (Guba & Lincoln, 1994).

Sarantakos (1993) referred to a theoretical perspective as a paradigm. In this study, positivism was chosen as the theoretical perspective due to its ability to explain real world phenomena. Positivism has a highly objectivist view of a common and single reality. It holds that anything that can be perceived through the senses is real (Sarantakos, 2005), and reality is an externality which exists independently of human thoughts and perceptions. It is founded upon the ontological view that the ‘reality’ of accounting can be discovered by the use of the senses or through sensory experiences (empiricism), that accounting is objective, and that accounting hypotheses can be statistically tested to produce findings that can be generalised (Bisman, 2010). That was why Neuman (1997) viewed accounting as an organised method that integrates the logic of deduction with the empirical observation of individual behaviour in order to investigate

and confirm a set of probable causal laws for the purpose of predicting general patterns of human activity.

Positivism uses quantitative data, surveys and statistics to provide a scientific explanation. It also offers a rigorous and objective approach for the testing of hypotheses (Neuman, 1997). Empirical facts are assumed to exist apart from ideas and to be free from political, religious or personal values, with an aura of disinterestedness and objectivity (Couch, 1987). Such a perspective is widely used within the scientific community (Crotty, 1998). Based on this premise, this study adopted the view of positivism to explain the relationship between ownership, empowerment and the voice of employees in influencing budgetary slack.

4.2 Research design

In order to ensure the reliability and validity of the results, the research model and instruments were validated by field experts and field respondents to offer a systematic and comprehensive analysis (Kober, Ng & Paul, 2007). A total of five phases in the research design were planned in this study since a “good research entails collection of data from multiple sources and through multiple data collection methods” (Sekaran, 2003, p. 256). Interviews and a questionnaire survey were the two main approaches used in the research design for this study. The purpose of performing interviews was to validate the credibility and accuracy of the concepts in the model (Guba & Lincoln, 1994). On the other hand, the purpose of the questionnaire survey was to test the items for the measurement of the concepts.

In the first phase, expert interviews were held with experienced budget makers from public and private sector organisations to validate the determinants of budgetary slack in the research model. In phase two, a pilot test was conducted for the budgetary

slack instrument to validate the original budgetary slack (OBS) instrument attributed to Onsi's (1973) instrument. Based on the analysis of the items, the OBS instrument could not be applied in the field study and so a revised instrument was developed in phase three. The development of this instrument (Diamantopoulos & Winklhofer, 2001) will be further discussed in this chapter. Subsequently, in phase four, a pilot test was performed with budget makers from public and private sector organisations to validate the OBS, empowerment (structural and psychological), psychological ownership and participation instruments. After performing all the validation processes from phase one to phase four, a field study was performed in phase five with experienced budget makers from public sector organisations to test the hypothesised model of the determinants of budgetary slack. The phase for the research design process is summarised in Table 4.1.

Table 4.1: Research design

Phase	Purpose	Approach
The validation of budgetary slack determinants	Validating the proposed determinants in the model	Expert interviews
The pilot test for the original budgetary slack (OBS) instrument	Validating the existing budgetary slack instrument attributed to Onsi (1973)	Questionnaire survey
The development of the budgetary slack instrument	Development of a valid and reliable budgetary slack measure	Expert interviews, previous literature and original budgetary slack instrument (OBS)
The pilot test for the field study	Development of valid and reliable empowerment (structural and psychological), psychological ownership, participation and budgetary slack measures	Questionnaire survey
The field study	Testing of the hypothesised model of the determinants of budgetary slack	Questionnaire survey

4.3 Phase one of the research design: The validation of budgetary slack determinants

This study adopted expert-checking (Creswell, 2008) as the first phase for the validation of the determinants of budgetary slack in the research model. It is a technique that involves an expert, someone outside the project, who possesses special knowledge about the topic (Guba & Lincoln, 1994) of budgeting. The panel of experienced budget makers in public and private sector organisations validated the determinants of budgetary slack in the model. These experts were professional accountants or management accountants in the field. The purpose for the inclusion of both budget makers from public and private sector organisations was to generalise the empirical findings of the determinants of budgetary slack.

During the interviews, the field experts shared deep insights on the determinants of budgetary slack in the Malaysian context. The researchers took this opportunity to gather information on ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack for the phrases or terms that are commonly used by budget-making experts in Malaysia.

4.3.1 Purpose of expert interviews

The purpose of the expert interviews was to gain knowledge about the reasons for the existence of budgetary slack.

4.3.2 Design of expert interviews

Semi-structured interviews were conducted in this study. The interview sessions were conducted on one-to-one and face-to-face basis. Prior to the expert interviews, a local professional accountant was selected as a pilot interviewee to ensure the appropriateness of the interview questions. The interviewee

understood the scope of the interview well and was able to articulate valuable insights with regard to the topics concerned. The design of the final interview questions was based on his feedback and suggestions.

The interview guide was divided into six sections (see Appendix A). Firstly, the interviewees were required to provide brief demographic information relating to their designation, gender, age, nationality, working experience, the nature of their work sector and employment, and their job description.

Section A of the interview discussed the problems encountered in the preparation and execution of budgets. The interview content was based on a case scenario that was narrated to the interviewees. The scenario described the problems experienced by public agencies in the planning and execution of budgets. It was specifically related to the issue of the ineffectiveness of financial control in the areas of revenue and expenditure. It also highlighted the urgency of taking immediate corrective actions so as to improve the performance of the budget makers. Based on the case scenario, the interviewees were then asked questions relating to the specifications of a well-planned budget, the challenges encountered in budgeting and the corrective actions to improve the effectiveness of budget makers in budgeting. The case scenario for the interview is presented in Table 4.2.

Table 4.2: Case scenario for the interview

According to the Auditor General's Report 2011, public agencies experience problems in the planning and execution of budgets. Specifically, these are related to the employees' ineffectiveness in financial control in the areas of revenue & expenditure. These agencies are therefore advised to take corrective actions to improve the effectiveness of employees in budgeting.

Section B explored the topics related to the employees' possession of organisational resources financially. The interviewees offered valuable insights with regard to the types of organisational resources, the frequency and the reasons for possessing additional resources, and the ways for obtaining these resources.

Section C focused on the employees' feeling of possessing organisational resources. To be precise, the interviewees were asked for their perception on the possession of resources and the influence of resources on budgeting, the factors that motivate them to treat organisational resources as theirs, and the outcomes of their behaviour.

Section D explored topics related to the granting of authority to employees when it comes to budgeting, such as the budgeting structure in the interviewees' organisations, the permission to grant authority to interviewees, and the scope of work in which they demonstrate their authority in budgeting.

Section E discussed issues relating to the employees' feeling of the use of authority in budgeting. The interviewees explored their perception of authority to influence the decisional outcomes in budgeting, the scope of work in which they perceive they have the authority to influence these outcomes, and the reasons for inducing them to perceive they have the authority over these outcomes.

Section F discussed topics pertaining to the participation of employees in the budgeting process, such as the availability of opportunities to participate in budget -related discussions, the types of budget-related discussions, the reasons for participating in these discussions, the willingness to contribute their

ideas/comments/suggestions to the discussions, and the application of these in the planning and execution of the budget. A copy of the interview questions is attached in Appendix A.

4.3.3 Selection of interviewees

The targeted interviewees were actual budget makers who are professional accountants. The sampling approach was purposive, as the group of qualified respondents had to possess accountancy qualifications with industrial experience locally (in Malaysia) or internationally.

4.3.4 Interview procedures

The potential interviewees were contacted by electronic mail or telephone to seek their permission to participate and to follow-up as needed. Those who agreed received an invitation letter requesting their participation in the interview. A copy of the invitation letter is attached in Appendix A. They were also allowed to examine the suggested interview questions prior to their confirmation or disconfirmation of the interview. Once they agreed to be interviewed, an appointment was made at the convenience of the respondent's schedule and location. The duration of each interview was about one to two hours. The interview process was conducted over a period of three to four months as the accountants were at the peak of the tax compliance period with the clients of their organisation.

On completion of the interview sessions, the data gathered from the semi-structured interviews were in the form of transcribed texts and handwritten notes. The coding of the common themes from the interviews was derived by manually combining the data under similar categories. Based on the

interview results, the data that shared a common description of the variables being studied were combined under the respective categories, namely ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack.

4.4 Phase two of the research design: The pilot test for the original budgetary slack (OBS) instrument

The purpose of this pilot test for the original budgetary slack (OBS) instrument was to validate the existing budgetary slack instrument. Four items are commonly described in the OBS scale, as shown in Table 4.3, and these are safe budget attainability, double standard budgets, reasonable slack tolerance and unofficial budgetary slack. It was also noted that this pilot test result was not for statistical purposes and this group of respondents was not included in the field study. The results are discussed in Chapter Six.

Table 4.3: Original budgetary slack (OBS) items

Code	Item	Abbreviation
O1	To protect myself, I submit a budget that can be safely attained.	Safe budget attainability
O2	I set two levels of standards: one set is between me and my immediate superior; and another set is between me and my employer, to be safe.	Double standard budgets
O3	In good times, my immediate superior accepts a reasonable level of slack in a budget.	Reasonable slack tolerance
O4	Slack in the budget is good to do things that cannot be officially approved.	Unofficial budgetary slack

4.4.1 Sample

The respondents in the pilot test were selected from among experienced budget makers from both public and private sector organisations using the purposive sampling method as the targeted respondents were accountants or management

accountants. The purpose of inclusion of these groups of budgetary makers was to generalise the empirical findings.

4.5 Phase three of the research design: The development of a new budgetary slack instrument

The original budgetary slack (OBS) instrument was assumed to measure employees' slack activities. However, its four items (Table 4.3) measured the employees' attitude to the creation of budgetary slack and the behaviour of both the supervisor as well as the employees. These items were identified from Onsi's (1973) instrument, which measures a variety of aspects of budgetary slack. They were originally proposed to measure the attitude towards budgetary slack. However, the factor loading for these items failed to load together in Onsi's (1973) study. These items also did not meet the guidelines for the internal consistency of a measurement scale (e.g. Lau & Eggleton, 2004; Lau, 1999). Furthermore, no study has taken into consideration the social desirability responses (SDRs) that might affect the tendency of budget makers to provide a socially acceptable behaviour in questionnaire surveys. Based on these shortcomings, in addition to the poor reliability of the scale in the initial pilot test, it was necessary to develop an improved budgetary slack instrument. The methodology used and the results of the budgetary slack instrument that were developed in this study are presented in Chapter Six.

4.6 Phase four of the research design: The pilot test for the field study

After developing the new budgetary slack instrument in phase three, a pilot test for the field study was performed to examine the appropriateness of the instruments for empowerment (structural and psychological), psychological ownership, participation and budgetary slack. The results of this test are presented in Chapter Seven.

The purpose of the pilot test was to ensure that these items were accurate and appropriate for the respondents (Oppenheim, 2000) in the field study. It also provided an estimation of the time required for the completion of the data collection instrument. It was also noted that the results generated from the pilot testing were not for statistical purposes and that this group of respondents were not to be included in the field study.

Although psychological ownership, empowerment (structural and psychological) and participation and budgetary slack had been utilised and validated by researchers from previous empirical studies, there was still a need to ascertain whether their instruments were suitable for the context of government sector organisations in Malaysia. The pilot test sampled experienced budget makers from public sector organisations in Malaysia to ensure that they clearly understood the research items, were familiar with the structure of the instrument, and felt comfortable with the length of the questionnaire. The comments and suggestions of these members were taken into account so that the questionnaire was further refined to be appropriate for the field respondents at the field study.

4.6.1 Sampling strategy and sample

The respondents were sampled from among employees working in public sector organisations with current or prior experience in budgeting. This study adopted the purposive sampling method as the targeted respondents were accountants or management accountants.

4.6.2 Measurements and scales

Psychological ownership (Van Dyne & Pierce, 2004), structural empowerment (Laschinger, Finegan, Shamian & Wilk, 2001) and psychological empowerment (Spreitzer, 1995) were measured in the pilot test. Participation (Young, 1985;

Milani, 1975; Searfoss & Monczka, 1973) and the improved budgetary slack instrument were included as well.

It should also be noted that the semantic differential scale (Osgood, Suci & Tannenbaum, 1957) was adopted in this study because it effectively minimised the error of acquiescence, that is, the tendency to respond positively to items regardless of the contents of the items (Friborg, Martinussen & Rosenvinge, 2006; Knowles & Condon, 1999; Knowles & Nathan, 1997; Furnham, 1986).

4.6.2.1 Psychological ownership

Psychological ownership measures the extent to which employees possess organisational resources as their personal belongings, regardless of whether they are tangible or intangible in nature. It was measured using a seven-item seven-point Likert-type scale. The psychological ownership (Van Dyne & Pierce, 2004) instrument is presented in Table 4.4.

Table 4.4: Psychological ownership instrument by Van Dyne & Pierce (2004)

Code	Item	Abbreviation
Instruction: Think about a home, boat or cabin that you own with someone, and the experience of feeling associated with the statement “THIS IS MY (OUR) HOUSE.” The following questions deal with the ‘sense of ownership’ that you feel for your work. Indicate the degree to which you personally agree or disagree with the following statements.		
P01	This is MY budget.	My budget
P02	I sense that the budget is for OUR company.	Company’s budget
P03	I feel a very high degree of personal ownership for this budget.	Budget ownership
P04	I sense that this is MY budget.	Sense of having a budget
P05	This is OUR budget.	Our budget
P06	Most of the people that work for this company feel as though they own the budget.	Everyone’s budget
P07	It is hard for me to think about the budget as MINE. (reversed).	Impersonal budget

4.6.2.2 Structural empowerment

Structural empowerment measures the extent to which employees are distributed with authority in budgeting. It was measured by a 21-item seven-point semantic differential scale developed by Laschinger, Finegan, Shamian and Wilk (2001), where it was represented by ‘a lot’ and ‘very little’.

This instrument has been widely used and validated in many existing structural empowerment empirical studies (see Davies, Wong & Laschinger, 2011; Gilbert, Laschinger & Leiter, 2010; Laschinger, Grau, Finegan & Wilk, 2010; Laschinger, Gilbert, Smith & Leslie, 2010; Purdy, Laschinger, Finegan, Kerr & Olivera, 2010; Smith, Andrusyszyn & Laschinger, 2010; Tourangeau, Cranley, Laschinger & Pachis, 2010; Laschinger, Leiter, Day & Gilin, 2009; Laschinger, Wilk, Cho & Greco, 2009; Faulkner & Laschinger, 2008; Lucas, Laschinger & Wong, 2008; Armstrong & Laschinger, 2006; DeCicco, Laschinger & Kerr, 2006; Greco, Laschinger & Wong, 2006). In this study, the items for structural empowerment are as stated in Table 4.5.

Table 4.5: Structural empowerment items

Code	Item	Abbreviation
SE1	The amount of opportunity I have to do a challenging budgetary work in my present job.	Opportunity of challenging budgetary work
SE2	The amount of opportunity I have to gain new skills and knowledge from budgetary work in my present job.	Opportunity on skill & knowledge acquisition
SE3	The amount of opportunity I have to work on budgetary task that uses all of my skills and knowledge in my present job.	Opportunity on skill & knowledge application
SE4	The amount of information I have access to in budgetary work about the current state of organisation through my present job.	Information on company's existing status
SE5	The amount of information I have access to in budgetary work about the value of top management through my present job.	Information on company's value
SE6	The amount of information I have access to in budgetary work on the goals of top management through my present job.	Information on company's goals
SE7	The amount of support I get on specific information about budgetary work that I do well in my present job.	Support on specific information
SE8	The amount of support I get on specific comments about budgetary work that I could improve in my present job.	Support on guidance
SE9	The amount of support I get on helpful hints or problem solving advice on budgetary work in my present job.	Support on problem solving
SE10	The amount of time available to do the necessary paperwork on budgetary work in my present job.	Time allocation
SE11	The amount of time available to accomplish budget matters in my present job.	Time for completion
SE12	The amount of resources available to acquire temporary help when needed to do budgetary work in my present job.	Resource availability
SE13	The amount of rewards for innovation in handling budget matters.	Reward for innovativeness
SE14	The amount of flexibility in handling budget matters.	Flexibility
SE15	The amount of visibility of my budgetary work-related activity within the organisation.	Visibility
SE16	The amount of opportunity I have in budgetary work to collaborate with immediate superior.	Opportunity for collaboration vertically
SE17	The amount of opportunity I have in budgetary work to help co-workers/peers solve problems.	Opportunity for collaboration horizontally
SE18	The amount of opportunity I have in budgetary work to help managers solve problems.	Opportunity for internal expertise
SE19	The amount of opportunity I have to seek ideas from professional accountants other than immediate superiors.	Opportunity for external expertise
SE20	Overall, my current work environment empowers me to accomplish my budgetary work in an effective manner.	Empowered environment
SE21	Overall, I consider my workplace to be an empowering environment for doing budgetary work.	Empowered workplace

4.6.2.3 Psychological empowerment

Psychological empowerment measures the extent to which employees perceive that they have decisional authority in budgeting. It was measured using a twelve-item seven-point semantic differential scale developed by Spreitzer (1995), where it was represented by ‘agree’ and ‘disagree’.

This instrument has been widely used and validated in many existing empirical studies on psychological empowerment (see Aryee, Walumbwa, Seidu & Otaye, 2012; Liu, Zhang, Wang & Lee, 2011; Messersmith, Patel, Lepak & Gould-Williams, 2011; Seibert, Wang & Courtright, 2011; Wallace, Johnson, Mathe & Paul, 2011; Butts, Vandenberg, DeJoy, Schaffer & Wilson, 2009; Hall, 2008; Chen, Kirkman, Kanfer, Allen & Rosen, 2007; Drake, Wong & Salter, 2007; Alge, Ballinger, Tangirala & Oakley, 2006; Kraimer, Seibert & Liden, 1999; Spreitzer, De Janasz & Quinn, 1999; Spreitzer, Kizilos & Nason, 1997). The list of psychological empowerment items is shown in Table 4.6.

Table 4.6: Psychological empowerment items

Code	Item	Abbreviation
PE1	The budgetary work that I do is very important to me.	Importance of work
PE2	My budgetary work is personally meaningful to me.	Personalised meaning
PE3	The budgetary work that I do is meaningful to me.	Meaningful work
PE4	I am confident about my ability to do my budgetary work.	Confidence in ability
PE5	I am self-assured about my capabilities to perform my budgetary work.	Self-assurance in ability
PE6	I have mastered the skills necessary for my budgetary work.	Mastery of skill
PE7	I have significant autonomy in determining how I do my budgetary work.	Significant autonomy
PE8	I can decide on my own how to go about doing my budgetary work.	Personalised decision
PE9	I have considerable opportunity for independence and freedom in how I do my budgetary work.	Independence to work
PE10	My impact on what happens in my budgetary work is large.	Impactful work
PE11	I have a great deal of control over what happens in my budgetary work.	Great control of work
PE12	I have significant influence over what happens in my budgetary work.	Significant budget influence

4.6.2.4 Participation

Participation measures the extent to which employees are involved in the budgeting process to influence decisional outcomes. It was measured using a thirteen-item seven-point semantic differential scale developed by Shields and Young (1993), Milani (1975), and Searfoss and Monczka (1973). Their instruments were modified and extended from Vroom's (1983) index of perceived participation. These indices measured the effect of psychological participation on decision making.

Items one to four were originated by Milani (1975); items five to eleven were developed by Searfoss and Monczka (1973), and the remaining items were designed by Shields and Young (1993). For item one, the respondents were asked to report on their level of involvement in budgeting, where it was represented by 'all of the budget' and 'none of the budget'. In item two, the respondents had to report on the level of frequency to recommend changes in budgeting with self-initiative, where it was represented by 'very frequently' and 'never'. Items three to thirteen used 'agree' and 'disagree'. The items stated in this instrument were directly related to the employees' perception of their involvement in influencing budget decisions, and these are stated in Table 4.7.

Table 4.7: Participation items

Code	Item	Abbreviation
P1	Which category below best describes your activity when your department's budget is being set?	Involvement level in budgets
P2	How often do you state your request, opinions and/or suggestions about the budget to your superior without being asked?	Frequency of initiating advice
P3	My supervisor provides me with good reasons when budget revisions are made.	Explanation from supervisors
P4	My superior frequently seeks for my request, opinions and/or suggestions when the budget is being set.	Seek advice from supervisors
P5	I have been asked by others about any special factor I would like considered in the budgeting being prepared.	Advice on budget input
P6	Special factors I have mentioned during budget preparation have received special treatment in the new budget	Recognition of special factors in budget
P7	Budgets have included changes that I have suggested.	Inclusion of budget suggestion
P8	My superior has listened to my request, opinions or suggestions about budget matters.	Supervisors' receptive of suggestions
P9	I have personally examined the budget difference in my department.	Personal examination of budget difference
P10	Corrective action for budget difference in my department has been under my direction.	Directive of corrective action
P11	I have been given assurance and/or support by my superior in achieving changes in budgeting.	Assurance by supervisors
P12	The budget is not finalised until I am satisfied with it.	Budget finalisation
P13	The budget that includes changes is suggested by me.	Resultant changes in budget

4.6.2.5 The new budgetary slack instrument

The propensity to create budgetary slack measures the extent to which the budget is likely to be purposefully manipulated when employees are given the opportunity to influence the desired outcomes. It was measured using an eight-item seven-point semantic differential scale, where it was represented by 'agree' and 'disagree'.

This variable was selected for this study for several reasons. Firstly, the measurement of actual budgetary slack using an organisational budget is extremely difficult (Nouri & Parker, 1996). Secondly, the behaviour of employees can be predicted with quite a high accuracy from their intentions (Ajzen, 2011; Armitage & Conner, 2001; Conner & Armitage, 1998; Ajzen,

1991; Ajzen & Fishbein, 1977). Thirdly, the items included in this instrument were directly related to the employees' behaviour in producing budgetary slack.

A new slack instrument was developed for this study and its justification will be further explained in Chapter Six. The budgetary slack items are listed in Table 4.8.

Table 4.8: Budgetary slack items

Code	Item	Abbreviation
BS1	I understand that a well-planned budget cannot always be met because of the difference between the organisation's needs and the availability of internal resources.	Resource incompatibility
BS2	I understand that it is difficult to meet actual budget targets.	Non-achievable budget
BS3	I understand that there is a difference between what goes in the budget and actual projected expenditure.	Imbalance budgetary outcome
BS4	I seek more organisational resources than absolutely necessary when preparing a budget.	Excessive resource requisition
BS5	I prepare a budget that is favourable to my employer's request.	Budget favourability
BS6	I try to balance personal estimates with the outcome expected by my employer when I prepare the budget.	Personalised budget adjustment
BS7	To protect myself, I submit a budget that can be safely attained.	Safe budget attainability
BS8	In good times, my immediate superior accepts a reasonable level of slack in a budget.	Reasonable slack tolerance

4.6.2.6 Assessment on potential response bias

Social desirability responses (SDRs) are considered as potentially biased responses in survey researches as respondents tend to answer questions so that their responses appear to be socially acceptable (Arnold, Feldman & Purbhoo, 1985; Ganster, Hennessey & Luthans, 1983; Smith, 1967). Research findings can be affected by the occurrence of social desirability responses that have the potential to produce spurious relationships and to hide (suppress) real and moderating relationships (Ganster, Hennessey & Luthans, 1983).

To address the issue of SDR, the individual propensity for bias was measured using Crowne and Marlowe's (1964) instrument with a five-item seven-point semantic differential scale, which was represented by 'agree' and 'disagree', and these items are listed in Table 4.9.

The correlation between the means and variables of the SDR scales suggested in the research model, namely empowerment (structural and psychological), psychological ownership, participation and budgetary slack, was calculated as suggested by Smith (1967). Then, these variables were adjusted for the SDR using the formula suggested by Anderson, Warner and Spencer (1984) (refer to Table 4.10). They concluded that SDR bias does not affect the proposed relationships among variables in the research model if the adjusted measure of the sample data yields similar findings as when the original measures are used.

Table 4.9: Social desirability response (SDR) instrument

Code	Item	Abbreviation
S1	I have never been irritated when people expressed ideas very different from my own.	Irritated by ideas
S2	I have never intensely disliked anyone.	Intense dislike
S3	I have never deliberately said something that hurts someone's feelings.	Deliberately hurt feelings
S4	When I do not know something, I will readily admit it.	Admit not knowing
S5	No matter who I am talking to, I am always a good listener.	Attentive listener

Table 4.10: Formula for adjusting SDR

Formula	$X_c = X - (r * (S_x/S_y) * SD)$	
Abbreviation	X_c	Corrected score for variable
	X	Original score
	r	Correlation between X and SD
	S_x	Standard deviation of X
	S_y	Standard deviation of SD
	SD	Score on social desirability scale

4.6.3 Questionnaire survey

The survey method was adopted in the pilot test for the field study and in the field study itself. It is a useful approach for an empirical examination of the inter-relationships of sociological characteristics (Roberts, 1999; Veal & Ticehurst, 2005). Not only does it elicit information about the views of a population (Zikmund, 2008), but it also investigates the patterns that may exist among variables of interest (Roberts, 1999). Thus, it offers a means to study the inter-relationships of variables that are rigorously based on the inferences drawn from the population.

On the other hand, the survey method has its own shortcomings. For one, it is susceptible to random sampling errors and non-response errors (Dillman, 2000). A random sampling error refers to the difference between the result of a sample and a census; whereas a non-response error refers to the statistical difference between a survey with only respondents and a survey that includes both respondents and those who did not respond. Besides, the questionnaire itself may contain poorly phrased questions which may result in misleading research findings. It may be biased in the sense that the results may deviate from the true value of the parameter of the population (Zikmund & Babin, 2012). In view of these criticisms, there is a need to perform statistical tests to validate the survey questions appropriately so that the quality of the data can be safeguarded in order to ensure their reliability and validity.

4.6.3.1 Questionnaire design

A structured questionnaire was used as the main tool to collect data. The questionnaire was designed to elicit responses from respondents on their

perception towards employees' ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack.

Avey, Avolio, Crossley & Luthans's (2009) instrument was used to examine psychological ownership in the field study. Empowerment (structural and psychological) and participation had also been used and validated in prior studies. The revised budgetary slack instrument was developed and adopted as well.

For the testing of the hypotheses, close-ended items with either a categorical or seven-point semantic differential or Likert scale were used and adopted for the measurement of the constructs. Close-ended questionnaires enable respondents to respond based on the alternatives provided in the questions, thus increasing the response rate (Malhotra, 2010). It also makes it easier for the administrator to code each question for the subsequent data analysis (Cavana, Delahaye & Sekaran, 2001).

In addition, the order of the response biases was included in the questionnaire, as the order of questions may result in response bias (Alreck & Settle, 1985). To overcome this problem, the items were randomly arranged in different question orders prior to the distribution of the questionnaires.

The questionnaire consisted of a cover page and five sections, with a total of ten pages. The objective of the questionnaire, requirements or suitability of respondents, confidentiality assurance and researcher's information were presented in the cover page. The questions relating to the constructs, such as formal ownership, empowerment (structural and psychological), participation and budgetary slack, were randomly listed using a seven-point semantic differential scale from section A to section C. The rationale for the random

sequence was to avoid response order bias (Alreck & Settle, 1985). Section D consisted of questions relating to the employees' psychological ownership. It was arranged independently in an orderly manner using a seven-point Likert scale, unlike previous sections, in order to strictly follow the instructions of the original instrument design. Lastly, section E was concerned with the respondents' background information, such as their gender and working status. The purpose of placing the demographic information in the last section was to increase the response rate by reducing the sensitivity of information for certain respondents (Cavana, Delahaye & Sekaran, 2001). A copy of the cover letter and the bilingual questionnaire that was adopted in the field study are attached in Appendix B.

4.6.3.2 Questionnaire translation

For the purpose of this study, the questionnaire was presented in two languages (i.e., English and Malay) to improve the response rate (Cavana, Delahaye & Sekaran, 2001). The rationale for translating the questionnaire was to facilitate the respondents' request for the questionnaire to be presented in the language that they were most familiar with.

The forward-backward translation method was adopted to develop the Malay version of the questionnaire. The questions were translated from one language to another, and were then translated back into the original language (Bekes, John, Zyriax, Schaller & Hirsch, 2012). They also suggested that the back translation should be performed by translators who are familiar with both languages. Two translators who were proficient in English and Malay translated the questionnaire items from English to Malay separately (forward translation). These translators were instructed to retain the meaning of these items as closely

to the original as possible. Subsequently, the resulting items were compared to assess the item-by-item similarity across these two translated versions. In the event of disagreement, the translators discussed and revised the items until consensus was reached. When the translation of the Malay version was finalised, the items were then back-translated from Malay to English by two other bilingual translators. They followed the same procedure of comparing and revising these items until agreement was reached.

4.7 Phase five of the research design: The field study

After ascertaining their appropriateness, a field study was performed in phase five to examine the relationship between psychological ownership, empowerment (structural and psychological), participation and budgetary slack. The results are further discussed in Chapter Seven.

4.7.1 Sample size requirement

In considering the sample size requirement suggested by Barclay, Higgins and Thompson (1995), it was recommended that a minimum size be taken that is equal to ten times the largest number of formative indicators used to measure a construct. In this study, the formative indicators of budgetary slack had 8 indicators, which meant that the minimum size should be 80 (i.e., 8 indicators x 10 times = 80 samples). The total sample size for this study fulfilled this requirement. Alternatively, it was suggested that a minimum size be taken that is ten times the largest number of structural paths directed to a construct in the structural model. In this study, the reflective indicators of structural empowerment totalled 21, which indicated that the minimum size of the sample should be 210 (i.e., 21 indicators x 10 times = 210 samples). The total sample

size for this study fulfilled this requirement as well, which is further described in Chapter Seven.

4.7.2 Population and sample

The population of interest consisted of budget makers. The respondents in this study included employees with prior experience in budgeting in public sector organisations. These organisations were chosen because the issue of budgetary slack was implicitly highlighted in the Auditor General's Report 2011, which was published by the National Audit Department of Malaysia. So, the purposive sampling approach was adopted. This study did not require the responses of both the budget makers and their superiors. It also adopted the individual as the unit of analysis.

Many important budget decisions are primarily made by central administrators in Putrajaya, Malaysia. They handle central administrative and financial tasks that are crucial to the country's development. Hence, they were appropriate samples for this study. Besides, the performance of these agencies had been evaluated and scrutinised by appointed government auditors and published in the report. Thus, the results that were generated increased the generalizability of the study.

According to the Information Department (2016), there are 136 public sector organisations (28 ministries and 104 departments) in Malaysia. Out of this total, 67 organisations (25 ministries and 42 departments) were listed in the Auditor General's Report 2011. Out of these 67 organisations, 57 of them (25 ministries and 32 departments) were located in Putrajaya, Malaysia. Out of these 57 organisations, the researcher approached 46 organisations (21 ministries and 25 departments) in Putrajaya. Out of these 46 organisations, a total of 39

organisations (18 ministries and 21 departments) agreed to participate in the field study.

4.7.3 Administration of questionnaire survey

Based on the listing of government agencies in the Auditor General's Report 2011, formal meetings were arranged according to the agreed schedule with the directors or assistant directors of government agencies, during which the purpose of the study, the suitability of the sampled respondents and the possible practical contributions in the context of the government sectors were explained. The request for the inclusion of managerial employees with budgeting experience as respondents was also highlighted. However, they explained that their total number of employees who fit the profile of the sampled respondents, based on their work description, were out-numbered by non-managerial employees. They further added that non-managerial employees also involve in the preparation of budgeting.

From the subsequent meeting, a cover letter was emailed with the attached questionnaire, and it was forwarded through their secretaries for protocol purposes. Once again, the content of the email provided a brief introduction and a general explanation of the purpose of the study. It was stressed, in the cover letter, that the respondents of the study have prior experience in budgeting.

Once the approval was obtained, the questionnaires were physically distributed to the Assistant of the Deputy Director or the secretaries of the relevant government agencies. These were the key liaison officers for the distribution of the questionnaires in the sampled government agencies. This was because the researcher of this study was unable to personally contact the

employees from the government agencies due to the privacy and confidentiality of the matter concerned. In view of this, the liaison officers were specifically informed about the requirements for the respondents of the study, as highlighted in the cover letter, before they distributed the questionnaires to the respective employees. Each respondent was given approximately six weeks to return the questionnaire to the respective liaison officers. Once they were completed, the questionnaires were physically collected from the respective liaison officers.

Based on the meetings with government agencies, a total of 1,500 sets of questionnaires were distributed physically to the relevant key liaison officers starting from December 2014 and ending in March 2015. The majority of the liaison officers requested for a duration of six weeks to reply to the questionnaires due to their tight work schedule and another two weeks for them to collect the questionnaires from the respective employees. Reminders and follow-ups were made through telephone calls and emails two weeks before the due date for the collection of the questionnaires.

The response rate for the questionnaire distribution was relatively encouraging as the employees were requested to fill in the questionnaire on the instruction of the directors. In the questionnaire distribution process, approximately 45% of the questionnaires were collected physically from the liaison officers. Subsequently, numerous reminders were sent and follows-ups were successfully made with the liaison officers to collect the remaining questionnaires. The detailed analysis of the response rate in the field study is discussed in Chapter Seven.

4.7.4 Data analysis

While performing the phases of the research approach, the researcher analysed the data from the pilot test and the field study using the Statistical Package for Social Science (SPSS) 20.0 and the component-based Structural Equation Modelling (PLS-SEM). The latter statistical tool was used to examine the reliability and validity of the measures in the measurement model and to assess the hypothesised relationships in the structural model.

4.7.4.1 Data screening and preparation

The SPSS was used to screen the data, and to examine the missing data, outliers and data normality. It was also used to produce the descriptive statistics, to describe the respondents' profiles and to examine the normality of the data distribution in the field study.

The mean replacement was applied as it was conservative, the mean distribution for the whole sample was not changed and no guessing of missing values was required (Malhotra, 2010).

4.7.4.2 Exploratory descriptive analysis

The normality of the variables was not required for the component-based SEM during the analysis of the data in the field study with the use of the PLS (PLS-SEM) approach (Hair, Hult, Ringle & Sarstedt, 2014). However, the statistical outcome would have been better if all the variables had been normally distributed by examining skewness, kurtosis and histograms (Malhotra, 2010).

Univariate outliers were assessed by boxplots. Mahalanobis distance was also used to assess multivariate outliers by cases. This study also assessed the

data for common method bias (Podsakoff & Organ, 1986) using Harman's (1976) single-factor test.

4.7.4.3 Structural Equation Modelling (PLS-SEM)

Structural Equation Modelling (SEM) is an extension of the general linear model that combines the logic of confirmatory factor analysis, multiple regressions and path analysis (Hair, Hult, Ringle & Sarstedt, 2014; Breckler, 1990). It examines the relationships between multiple dependent and independent variables simultaneously (Hair, Anderson, Tatham & Black, 1998). It is also able to test multiple relationships concurrently, whereby one variable can be rerated as a dependent variable in one relationship and as an independent variable in another relationship within the same model. This is particularly important when the constructs or latent variables cannot be measured directly as they have to be operationalized into measurable and observable variables that are usually referred to as indicators or manifest variables (Smith & Langfield-Smith, 2004). Hence, the SEM provides a comprehensive analysis for examining the full scope of the hypothesised relationship of the model in this study instead of applying multiple statistical tools consecutively.

The component-based SEM (PLS-SEM) was used to assess the relationships in the research model. The complexity of the relationship within the model (Hair, Hult, Ringle & Sarstedt, 2014), rather than the popularity of the SEM, was the main reason for the adoption of the SEM as the statistical tool in this study. The research framework in this study involved mediating and dependence relationships. It also allowed model-testing in a single comprehensive method (Malhotra, 2010). It determined the significance of direct and mediated relationships, measurement models and structural models. Thus,

the research questions were able to be addressed and interpreted comprehensively.

The adoption of the PLS-SEM was appropriate because it fulfilled the characteristics of the research model. Firstly, it worked well for the complex models that consisted of many constructs (i.e., structural empowerment, psychological empowerment, psychological ownership, participation and budgetary slack) and indicators. It also handled both formative (i.e., budgetary slack and participation) and reflective (psychological ownership, structural empowerment and psychological empowerment) measurement models efficiently. The characteristics of the research model are summarized in Table 4.11.

Table 4.11: Characteristics of the research model

Model characteristics		
Numbers of items in each construct in the measurement model	Psychological ownership	7 items
	Structural empowerment	21 items
	Psychological empowerment	12 items
	Budgetary slack	8 items
	Participation	13 items
Relationship between constructs and their indicators	Psychological ownership	Reflective
	Structural empowerment	Reflective
	Psychological ownership	Reflective
Relationship between constructs and their indicators	Budgetary slack	Formative
	Participation	Formative

4.7.4.4 Model evaluation in component-based SEM

The path models of the component-based SEM are comprised of structural models and measurement models. In this study, the former model described the relationship between psychological ownership, structural empowerment and psychological empowerment, while the latter examined the relationships between these constructs and their indicators.

(a) Evaluation of measurement models

There are two types of measurement specifications when developing constructs, namely reflective measurement and formative measurement (Hair, Hult, Ringle & Sarstedt, 2014). The former represents the effect of an underlying construct, and so the causality is from the construct to its measures. The indicators of a reflective construct should be correlated with each other. Individual items can also be left out without changing the meaning of the construct as long as the construct has sufficient reliability. On the other hand, the formative measurement model assumes that the indicators cause the construct. The indicators of formative measures are not inter-changeable as each of them dictates a specific aspect of the construct's domain. They ultimately determine the meaning of the construct, which means that omitting an indicator potentially alters the nature of a construct. Therefore, the domain of the content of the construct is adequately captured (Diamantopoulos & Winklhofer, 2001).

The evaluation process involved the separate assessment of the measurement models followed by the structural models (Hair, Hult, Ringle & Sarstedt, 2014). Initially, the model assessment focused on the measurement models. Specifically, it was required to evaluate the reliability and validity of the construct measures for both the reflective and formative measurement models. Different approaches were also needed for the reflective and formative measurement models.

The assessment of the reflective models included the composite reliability and the average variance extracted (AVE) to evaluate the convergent validity. The Fornell-Larcker criterion, the heterotrait-monotrait ratio of

correlation (HTMT) and cross loadings, were also used to assess the discriminant validity.

The first criterion to be evaluated for the reflective models was the internal consistency reliability. The composite reliability was adopted to measure the level of satisfaction of the internal consistency of the indicators (Chin, 1998). It was different from the commonly used Cronbach's (1951) coefficient alpha, as the latter assumes that all the indicators are equally reliable (Chin, 1998). Cronbach's alpha under-estimates the internal consistency reliability of the latent variable in the model as it is sensitive to the number of items in the scale (Henseler, Ringle & Sinkovics, 2009). On the other hand, composite reliability recognizes that indicators have different loadings and so it offers a closer approximation of reliability. Hence, due to the limitation of Cronbach's alpha, this study applied the composite reliability to measure the internal consistency of the model. Specifically, the composite reliability values between 0.70 and 0.90 can be regarded as satisfactory (Nunnally & Bernstein, 1994).

The second criterion to be evaluated for the reflective models was the convergent validity, which was measured by the average variance extracted (AVE). The convergent validity assesses the extent to which two measures correlate positively with each other in the same construct (Hair, Hult, Ringle & Sarstedt, 2014). The indicators of a construct should share a high proportion of variance. The outer loadings of the indicators and average variance extracted (AVE) were used to establish the convergent validity. The outer loadings of a construct indicate that the associated indicators have much in common, as explained by a construct. As a rule of thumb, the indicator reliability of each construct should be statistically significant, which means the (standardised)

outer loadings should be 0.70 or higher, in order to be representative of the extent of variation in an item that can be explained by a construct. Another approach to assess the convergent validity is by using the average variance extracted (AVE). It is defined as “the grand mean value of the squared loadings of the indicators associated with the construct” (Hair, Hult, Ringle & Sarstedt, 2014, p. 103). It is equivalent to the communality of a construct. At a minimum, an AVE value of 0.50 or higher indicates that, on average, the construct explains more than half of the variance of its indicators.

Potential multi-collinearity problems are assessed in both formative and reflective measurement models. Based on Hair, Ringle & Sarstedt's (2011) suggestions, a variance inflation factor (VIF) of 5 or higher was treated as an indicator of a potential multi-collinearity problem in this study.

The evaluation of formative models includes convergent validity and multi-collinearity among the indicators, and the significance and relevance of outer weights. The general guideline for assessing the convergent validity is that the (standardized) outer loadings should be 0.70 or higher to be representative of the extent of variation in an item that can be explained by a construct (Hair, Hult, Ringle & Sarstedt, 2014). In order to evaluate the formative construct, *t*-tests were also conducted to examine the outer weights of the formative constructs that were estimated by using the bootstrapping procedure in the PLS.

After examining the reflective and formative constructs, a discriminant validity assessment had to be performed to determine the degree to which two constructs were distinctively different (Hair, Hult, Ringle & Sarstedt, 2014). A construct must be unique and be able to capture those concepts that are not represented by another construct. There are three methods for assessing the

discriminant validity of a model, namely cross loadings, the Fornell-Larcker criterion and the heterotrait-monotrait ratio of correlation (HTMT).

The first approach of cross loadings in the discriminant validity assessment examines whether the outer loading of every indicator on the associated construct is greater than all of its loadings on other constructs. However, this criterion is generally considered to be rather liberal in terms of the discriminant validity assessment (Hair, Ringle & Sarstedt, 2011).

Another more conservative approach for assessing the discriminant validity is the Fornell-Larcker criterion. It compares the square root of the AVE values with the latent variable correlations (Hair, Hult, Ringle & Sarstedt, 2014, p. 105). Specifically, the value of the AVE for each construct should be higher than its highest squared correlation with other constructs (Henseler, Ringle & Sinkovics, 2009). Although the Fornell-Larcker criterion is a more conservative approach (Hair, Hult, Ringle & Sarstedt, 2014), it is unable to assess the lack of discriminant validity (Henseler, Ringle & Sarstedt, 2014).

The heterotrait-monotrait ratio of correlation (HTMT), which is a new approach in the discriminant validity assessment, was adopted in this study. Its high sensitivity with regard to the assessment of discriminant validity is recommended as an alternative criterion to that of traditional approaches (Henseler, Ringle & Sarstedt, 2014). The most conservative HTMT criterion is 0.85, and so this criterion was adopted in the field study. The evaluation criteria for the measurement models are displayed in Table 4.12.

Table 4.12: Evaluation criteria for measurement models

Measurement model		
Reflective & formative measurement models		Evaluation criteria
Internal consistency	Composite reliability	Values between 0.70 and 0.90 to be regarded as satisfactory (Nunnally & Bernstein, 1994).
Convergent validity	Outer loadings	Value of ≥ 0.70 or higher
	Average variance extracted (AVE)	Value of ≥ 0.50 or higher
Reflective & formative measurement models		Evaluation criteria
Discriminant validity	Cross loadings	The loading for each indicator should be higher than all of its cross loadings.
	Fornell-Larcker criterion	The value of AVE for each construct should be higher than its highest squared correlation with other constructs.
	Heterotrait-monotrait ratio of correlation (HTMT)	<ul style="list-style-type: none"> • HTMT=.85 is the most conservative criterion. • HTMT=.90 indicated a lower specificity rate in terms of discriminant validity as compared to HTMT=.85. • HTMT interference is the most liberal approach.

(b) Evaluation of structural model

Once the measurement models were confirmed, the next step was to assess the structural model by examining the predictive capability of the model and the relationships between and among the constructs. This was to determine “how well the empirical data support the theory or concept and therefore, to decide whether the theory or concepts had been empirically confirmed” (Hair, Hult, Ringle & Sarstedt, 2014, p. 167). A strong relationship is demonstrated with an estimated path coefficient of +1. However, if the estimated coefficient is closer to 0, it is a weak relationship (Hair, Hult, Ringle & Sarstedt, 2014). The statistical significance of each of the path coefficients was determined by the computation of the t value using the bootstrapping procedure. If the empirical t

value is greater than the critical value, the coefficient is significant. The critical value used in this study was 1.96 (i.e., significance level of 5%). The next step was to evaluate the coefficient of determination (R^2), which ranges from 0 to 1, whereby higher levels indicate a higher level of predictive accuracy. As a rule of thumb, R^2 values of 0.75, 0.50 or 0.25 are considered as substantial, moderate or moderately weak (Hair, Ringle & Sarstedt, 2011), respectively. The evaluation criteria for the measurement and structural models are summarised in Table 4.13.

Table 4.13: Evaluation criteria for structural models

Structural model	
Structural model	Evaluation criteria
Significance of path coefficients	If the empirical t value is greater than the critical value, the coefficient is significant at certain significant level.
Structural model	Evaluation criteria
Coefficient of determination (R^2)	<ul style="list-style-type: none"> • Value = 0.75 (substantial) • Value = 0.50 (moderate) • Value = 0.25 (weak)

4.7.4.5 Mediation

To examine the mediating effects, Preacher and Hayes' (2004; 2008) procedures for bootstrapping the sampling distribution of the indirect effect were followed. In the first step, Preacher and Hayes (2004; 2008) suggested that the direct effect is significant if the mediator is not included in the model using bootstrapping procedures. If this relationship is not significant, there is no mediating effect. On the other hand, if the relationship is significant, it is then advised to include the mediator in the model to assess the significance of the indirect effect. If the indirect effect is insignificant, there is no mediating effect. However, if this indirect relationship is significant, there is a need to assess the variance accounted for (VAF). As a rule of thumb, there is (almost) no mediation if the VAF is less than 20%. On the other hand, if the VAF is greater than 80%, there

is a full mediating effect. Lastly, if the VAF is larger than 20% but less than 80%, there is partial mediation.

4.8 Conclusion

This chapter presented the methodology and discussed the various phases of the research design. It also explained the procedure for the questionnaire survey and the data analysis. The next chapter will describe the validation of the new budgetary slack instrument, particularly the first and second phase of the research and the revision of the research model based on the results obtained.

CHAPTER 5

PRELIMINARY ANALYSIS

5.0 Introduction

This chapter presents the empirical results of the preliminary analysis performed in phase one and two of the research design proposed in the previous chapter. The purpose of the first phase was to validate the proposed budgetary slack determinants in the theoretical model. Through this validation process, the theoretical model was revised to better examine the employee-related determinants of budgetary slack. The purpose of the second phase was to validate the original budgetary slack (OBS) instrument. Phase one of the research design was performed using expert interviews, whereas phase two was conducted using a questionnaire survey.

This chapter is arranged as follows: Section One discusses the results of the validation of the budgetary slack determinants; Section Two presents the research model, as advised, after the validation study; Section Three presents the results of the pilot test to validate the original budgetary slack (OBS) instrument; Section Four discussed the result of the pilot test for the field study and Section Five provides a summary of the chapter.

5.1 Validation results of the budgetary slack determinants

This sub-section discusses the validation results of the budgetary slack determinants proposed in the theoretical model. The validation was performed using expert interviews.

5.1.1 Profiles of the interviewees

Out of the 20 potential interviewees, eight of them agreed to participate in the interview sessions, while the remaining 12 candidates declined to participate due to their busy work schedule and strict company policy. Based on Table 5.1, there were seven Malaysian respondents and one international respondent. All of them were professional accountants with more than five years of working experience. Only one of them was a foreign expatriate working in Kuala Lumpur, Malaysia, while the rest of them were Malaysian. Four of them were self-employed, as they had their own accounting and audit companies, while the remaining four were employees working in the private sector and government agencies. Lastly, three of them were working in government agencies, while the remaining four were professional accountants in private practice. The descriptive profiles of the interviewees are tabulated in Table 5.1.

Table 5.1: Profiles of the interviewees

Interviewee	Nationality	Occupation	Nature of employment	Job sector	Working experience (in years)
1	Local	Professional accountant	Self-employed	Private	10
2	Foreigner	Professional accountant	Self-employed	Private	8
3	Local	Professional accountant	Employed	Government agency	5
4	Local	Professional accountant	Self-employed	Private	7
5	Local	Professional accountant	Employed	Government agency	5
6	Local	Professional accountant	Self-employed	Private	12
7	Local	Professional accountant	Employed	Government agency	6
8	Local	Professional accountant	Employed	Private	5

5.1.2 Interview results

The interviews highlighted several interesting results. Firstly, the employees perceived that the variance between the budget and the expenditure was normal and so they made the adjustment privately. Secondly, they did not legally possess valuable resources because they were not the owners of the organisation. Next, the employees were provided with the privilege of autonomy to facilitate the completion of budgetary tasks. Fourthly, they felt that a sense of control had been granted to them. Besides, the employees felt obliged to protect their possession of resources in budgeting. Lastly, the employees were expected to be actively involved in budgeting, although their valuable inputs might be ignored.

These findings were further summarised into themes, namely, budget variance is normal; no resource possession in law; employees' authority in budgeting; employees' perception of authority; employees' perception of resource possession; and employees' involvement in budgeting discussions. These themes are further discussed in the subsequent sections.

5.1.2.1 Budget variance is normal

The first interview finding was that employees subjectively adjust the difference between the budget estimate and the reported expenditure. That was why the interviewees acknowledged that there would always be the problem of forecasting error. They opined that budgets merely report an estimation that is based on the phenomenon that happens there and then. However, they had to make the necessary adjustments to the budget when there were unforeseen circumstances in the environment. So, they opined that budget makers are

challenged with aligning the necessary resource allocation with employees' productivity. Interviewee 5 opined that:

“It is impossible to have a balanced or accurate budget. There is no sound accounting technique to ensure the accuracy of the budget estimation. That is why there will always be budget variance in the reporting.”

Interviewee 1 also disclosed that there was the issue of subjectivity in preparing a well-planned budget. On the one hand, employees can set an easily attainable budgetary target. On the other hand, companies can set a very high budgetary target for profit maximisation. That is why both parties have difficulty in reaching mutual agreement.

In view of this situation, companies tend to tie the reward system to the budgetary target. Besides, it was revealed that companies plan their budget in accordance with the historical trend as a projection base with an additional future projection depending on market conditions and the intensity of the competition.

Likewise, Interviewee 2 acknowledged that a budget is merely a guideline designed to ensure that an employee implements the necessary action as proposed by the company. However, it is dependent on the availability of resources and the company requirements. A budget is only considered to be well-planned when it meets budgetary targets with company resources. However, this is always not the case as it depends on the availability of resources. Hence, Interviewee 5 ascertained that:

“Companies merely provide a figurative budget estimation to restrain employees from overly wasting the resource allocation.”

Although companies impose tight control mechanisms to monitor the performance of employees, Interviewee 3 stressed that there should be regular budget review meetings between the management and its employees. Through such efforts, Interviewee 4 ascertained that the tabulated budgetary estimation may be representative of the actual achievability of the budgetary goal performed by employees.

5.1.2.2 No resource possession in law

The second important finding was that employees do not legally possess valuable resources because they are not the owners of their organisations. It was further highlighted that they are just employees who are paid a salary to perform their work in budgeting. Interestingly, the self-employed interviewees also considered themselves to be salary earners. That was why Interviewee 6 concluded that:

“The sustainability of my company depends on my employees’ work performance. I see myself no different from them.”

5.1.2.3 Employees’ power of authorisation in budgeting

The third highlight of the interviews was that employees are provided with the privilege of autonomy to facilitate the completion of budgetary tasks. In other words, they have the power to influence decisional outcomes in budgeting. Although there are constraints in exercising power of authorisation, they are permitted to make decisions within their work jurisdiction. Interviewees 1 and 3 disclosed that:

“It is a subjective issue when it comes to whether to give authority to employees or not. It depends greatly on the level of position that employees are in.”

Employees exercise their authority in gathering the necessary information to tabulate a budget. It will then be proposed to the management, and the employees will await the management’s decisional outcome on the budgeting. They play a supporting role in assisting the management to prepare the budget as they have no negotiation authority to revise the budgetary figures unless the management opens the door for negotiation. They merely have to demonstrate their understanding of the subject matter and make the necessary reporting to the management instead of making an outright decision. Therefore, Interviewee 7 concluded that:

“I am given authority but with a limitation of exercising it. For instance, I can approve overtime claims for my subordinates at the departmental level with justifiable reasons. Yet, the final decision lies in the hands of my boss.”

5.1.2.4 Employees’ perception of authority

The next important interview finding revealed that employees feel a sense of control being granted to them, although they recognise the fact that there is a restriction in the exercise of authority. They recognise the fact that they do not possess great physical authority or official authority in the game of budgeting, as the final decision falls within the hands of the management. They merely inherit the so-called authority from their official positions provided by their employers. However, they feel as though they have official authority over budgeting matters

since their job titles grant them such power of authorisation. Interviewee 3 confirmed that:

“When I am assigned with projects, I feel that I have control over the information that may or may not be revealed in the project, although the senior management decides on the final outcome.”

In other words, the employees opined that they are authorised to decide whether to share resources with the management or other colleagues. They believe that they have a choice whether to demonstrate a sense of initiative to make the necessary reporting to the management. They also feel that they can either take a proactive or reactive role in offering their insights into budgeting matters. They also realise that they have to report to the management for any discrepancy in the budgeting and yet they are authorised psychologically not to file in such reporting. With the authority granted to them, employees feel that they are personally taking charge of the execution of assignments. Interviewee 7 disclosed that

“I have to motivate myself. I should know what needs to be done.”

The employees acknowledged that the completion of tasks depended on their personal integrity. They were fully aware that they were perceived to be lacking in self-control and that was why the management imposed control mechanisms to monitor their performance while rewarding them with incentives. When the management allows employees to make important decisions, the employees feel that they have a high level of authority over important budgeting matters. This kind of employees' assumption worries the management. Interviewee 7 further concluded that:

“However, there is still a need to check employees’ work. There is no direct evidence whether employees will demonstrate a sense of control in their work or not.”

Consistent with Interviewee 7’s opinion, Interviewees 2 and 5 highlighted that “employees are principle-guided.” However, the major concern is whether employees should be guided by the organisation’s principles or their personal principles. If employees feel that they should be company-focused, they will be determined to achieve budgetary targets. In other words, employees should not be self-centred when performing budgeting. Interviewee 5 commented that:

“Employees should demonstrate self-discipline and integrity toward their work but it actually depends on whether they want to do it or not.”

Interviewee 2 further added that:

“It depends on the employees’ intrinsic value whether to demonstrate a positive sense of self-control in work or not.”

Interviewee 4 further reasoned that:

“Employees should have the right frame of mind as a form of self-control when they do their work.”

However, the possession of the right frame of mind is a subjective issue. Employees have the ultimate power of authorisation to decide whether to practise work integrity, take the initiative to improve work performance, or be willing to reach for greater heights. Ultimately, it depends on the mental state of the employees, whether they prefer to be proactive or reactive employees.

5.1.2.5 Employees' perception of resource possession

The fifth interview finding was that employees feel that they are obliged to protect the possession of resources in budgeting. They feel that they are entrusted as owners of the resources, although the physical ownership belongs to the company. They perceive that they have to demand accessibility to resources. They request the sharing of resources from the management as they perceive themselves to be the non-physical owners of tasks. Interviewee 6 confirmed that:

“Employees should take ownership of their work and be part of the organisation.”

Interviewee 3 concurred with the comment above and assured that:

“I want to show interest in things that are valuable to me.”

Employees eagerly want to provide creative solutions to employers, although it may not be accepted. Still, they will demand a sense of appreciation for their hard work as they perceive that they have contributed to the achievement of the organisations' goals one way or the other. They expect their employers to offer them a fair evaluation for making a contribution. Interviewee 5 disclosed that:

“Immediate supervisors should play a more active role in showing appreciation for the employees' hard work, such as monetary rewards, positive praises, encouraging them to give new ideas, and to reduce improper working attitudes. Employees may be too aggressive in giving ideas to their bosses but these may not be accepted. However, supervisors should give them a fair evaluation.”

Employees demand to have mutual respect from the management and take corrective actions when there is an issue of discrepancy in the process of performing the assignment. They want to instil a sense of attachment with their organisations' identity so that they feel that they are important to their organisations. Interviewee 3 affirmed that:

“I prepare my accounts. I am given the opportunity to further my studies, and so I have to commit myself to the work and assist my team to prepare the accounts. I feel great because they need me.”

The employees' sense of commitment encourages them to be committed to their work and gradually arouses the feeling of belonging to the identity of the organisation. They recognise that they have to be responsible to their commitment. Interviewee 3 further added that:

“I feel that my role of work is important to my company. I am willing to work from home although I am given medical leave of two weeks.”

Hence, the employees visualised themselves as owners of the budgeting tasks. Interviewee 1 affirmed that:

“They must take up the consequence when something goes wrong.”

5.1.2.6 Employees' involvement in budgeting discussions

The last interview finding was that employees are expected to be actively involved in budgeting although they are fully aware that they are unable to influence the final decisional outcome. They are keen to join in the discussion sessions regularly so that they are able to obtain updated information as well as convey their ideas to the management. They have to report on the progress of

work to their superiors so that they share similar information and so their involvement must be active. Interviewee 1 revealed that:

“The company should motivate and encourage employees such as give detailed explanations, active engagement, regular discussion sessions and active communication. It should provide them with the whole picture of the work and break it down into quarterlies to enable them to achieve small successes. It should let employees see what they can achieve in their work.”

Employees should be engaged in regular discussions with their employers so that they will be able to offer creative suggestions. They should be encouraged to challenge the rationale behind the decisional outcomes that is provided by the management. However, they have to provide justifiable arguments or reasoning. In other words, employees use this kind of active involvement as an approach to obtain clarification or feedback. Interviewee 1 ascertained that:

“Employees merely want to seek for thorough explanations or details about certain matters so that they can have the same level of understanding with their bosses. Employees and their bosses need to discuss and resolve daily or weekly issues. There should be a discussion between them to come up with possible solutions.”

The preparation of the budget is based on requests from the higher level. Both employees and their immediate superiors reach mutual agreement before finalising their work. There should be collaboration among the departments. Each department has to contribute ideas on how to accomplish the task. Meeting a company's objective is an important issue that employees need to take into consideration. Interviewee 3 disclosed that:

“I have to refer to mandatory requirements outlined by the board.”

Interviewee 6 agreed with the statement above and commented that:

“Employees should stand along with their employers.”

On the one hand, employers promote the active involvement of employees by listening to their ideas or suggestions in discussion sessions. They may consider the employees’ ideas, but sometimes they ignore it. A self-employed interviewee disclosed that:

“For the benefit of the company, everyone’s opinion, including that of the employees, should be considered.”

However, another self-employed interviewee revealed that:

“Listening to the staff’s input should depend on the type of job that is assigned to them.”

In other words, employees are allowed to participate in discussion sessions pertaining to job-related issues only to enable them to understand the whole scenario of the tasks and to perform them well. Therefore, after evaluating the employees’ input, the employers expect an alteration in the resources, although they may consider the employees’ options. They weigh the employees’ input, as they are experts in their fields as reflected in their job titles.

5.1.3 Summary of expert interviews

The expert interviews confirmed that budgetary slack might be attributed to the budget makers’ psychological ownership, empowerment (structural and psychological) and participation, with the exception of formal ownership. Formal

ownership is irrelevant to employees because they do not consider themselves as owners. The interview findings are summarised in Table 5.2.

Table 5.2: Summary of interview results

Empirical finding	Theme	Term
Employees perceive that the variance between budget and expenditure is normal and so they make adjustments privately	Budget variance is normal	Budgetary slack
Employees understand that they do not legally possess resources because they are not the owners of the organisations.	No resource possession in law	No formal ownership
Employees are provided with the privilege of autonomy to facilitate the completion of budgetary tasks.	Employees' authority in budgeting	Structural empowerment
Employees feel a sense of control being granted to them, in spite of exerting power.	Employees' perception of authority	Psychological empowerment
Employees felt obliged to protect their resources possession in budgeting.	Employees' perception of resource possession	Psychological ownership
Employees were expected to have active involvement in budgeting, although their valuable inputs may be ignored.	Employees' involvement in budgeting discussion	Participation

5.2 The revised research model

Based on the interviews described in Section 5.1, the employees understood that they did not lawfully possess the resources as they were not the owners of the organisations, regardless of whether they were from the public or private sectors. They considered themselves as mere employees who were paid a salary for the budgetary tasks performed. Thus, formal ownership was removed from the initial conceptual model. The items for formal ownership were not included in the questionnaire for the pilot test of the field study or the actual field study. Hence, the revised research model is revised and presented in Figure 5.1.

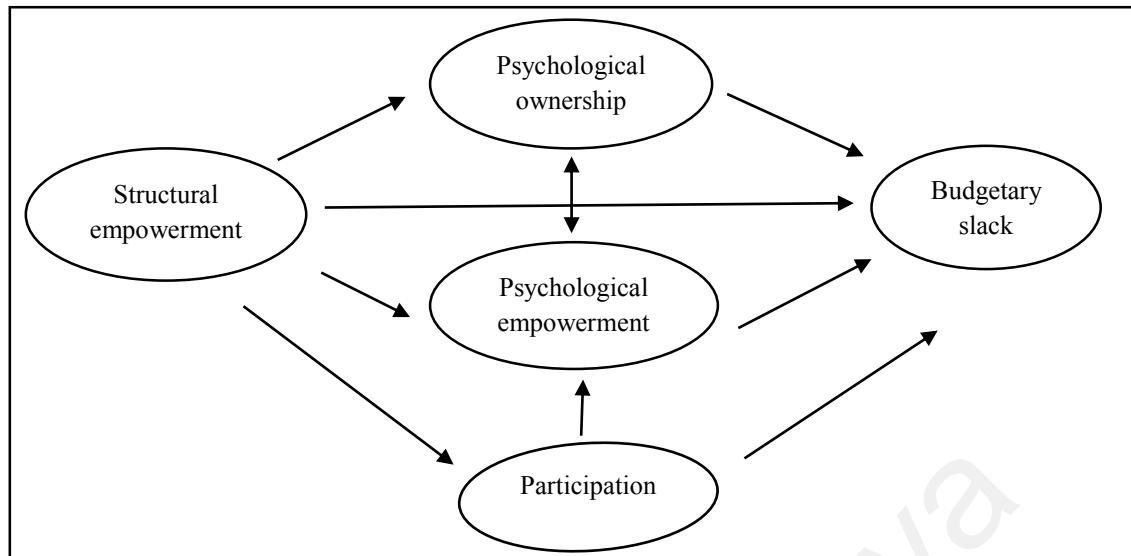


Figure 5.1: Revised research model

5.3 Pilot test result for the original budgetary slack (OBS) instrument

This section presents the validation results of the OBS instrument in a pilot test, which was the second phase of the research design.

5.3.1 Response rate for OBS instrument

100 questionnaires were distributed in the pilot test. A total of 46 questionnaires were returned by unqualified respondents, who were respondents that did not meet the requirement of the sample of population. After the deadline for completion, a total of 42 questionnaires were received, representing a response rate of 78%. None of the questionnaires were dropped and all of them were used for the item analysis. The response rate for the pilot test is illustrated in Table 5.3.

Table 5.3: Response rate for pilot test of OBS instrument

Description	Total	%
Total number of questionnaires supplied, of which:	100	-
Questionnaires returned from unqualified respondents, or not distributed	46	-
Total questionnaires distributed to qualified respondents, of which:	54	100
No response	12	22
Returned by qualified respondents	42	78
Less incomplete	0	0
Number of useable questionnaires	42	78

5.3.2 Item analysis result for OBS instrument

All the items for the original budgetary slack instrument in Table 4.7 demonstrated low item-total correlations. Each of the items had a very weak positive correlation with the sum of the other three items. For instance, the item-total correlation for O1 (safe budget attainability) was .34.

Table 5.4: Item analysis for OBS measurement

Variable	Code	Abbreviation	Item-total correlation
Budgetary slack	O1	Safe budget attainability	.34
	O2	Double standard budgets	.42
	O3	Reasonable slack tolerance	.37
	O4	Unofficial budgetary slack	.44

5.4 Results of the pilot test for the field study

The pilot test for the field study was performed during phase three of the research design and the results are presented below.

5.4.1 Response rate

A total of 250 copies of the questionnaire were distributed in the pilot test. However, there were 131 returned questionnaires due to the unsuitability of the respondents. Upon the deadline for completion, a total of 82 questionnaires were received, representing a response rate of 69%. However, two questionnaires were dropped due to a high level of missing values. Therefore, 80 questionnaires were used for the item analysis. The response rate for the pilot test is illustrated in Table 5.5.

Table 5.5: Response rate for pilot test

Description	Total	%
Total number of questionnaires supplied, of which:	250	-
Questionnaires returned from unqualified respondents, or not distributed	131	-
Total questionnaires distributed to qualified respondents, of which:	119	100
No response	37	32
Returned by qualified respondents	82	69
Less incomplete	2	2
Number of usable questionnaires	80	67

5.4.2 Item analysis for psychological ownership and empowerment (structural and psychological)

All the items for empowerment (structural and psychological) demonstrated high item-total correlations except for psychological ownership. Every psychological ownership item had a very weak positive correlation with the sum of the other six items. For instance, the item-total correlation for PO6 (everyone's budget) was .09. The item analysis for psychological ownership and empowerment (structural and psychological) is shown in Table 5.6.

Table 5.6: Item analysis for psychological ownership and empowerment (structural and psychological) instruments

Variable	Code	Abbreviation	Item-total correlation
Psychological ownership	PO1	My budget	.28
	PO2	Company's budget	.38
	PO3	Budget ownership	.32
	PO4	Sense of having a budget	.29
	PO5	Our budget	.36
	PO6	Everyone's budget	.09
	PO7	Impersonal budget	-.12
Structural empowerment	SE1	Opportunity of challenging budgetary work	.61
	SE2	Opportunity on skills & knowledge acquisition	.55
	SE3	Opportunity on skills & knowledge application	.43
	SE4	Information on company's existing status	.58
	SE5	Information on company's value	.67
	SE6	Information on company's goals	.67
	SE7	Support on specific information	.61
	SE8	Support on guidance	.57
	SE9	Support on problem solving	.77
	SE10	Time allocation	.38
	SE11	Time for completion	.51
	SE12	Resource availability	.56
	SE13	Reward for innovativeness	.50
	SE14	Flexibility	.36
	SE15	Visibility	.58
	SE16	Opportunity for collaboration vertically	.59
	SE17	Opportunity for collaboration horizontally	.65
	SE18	Opportunity for internal expertise	.62
	SE19	Opportunity for external expertise	.51
	SE20	Empowered environment	.70
	SE21	Empowered workplace	.55
Psychological empowerment	PE1	Importance of work	.47
	PE2	Personalised meaning	.68
	PE3	Meaningful work	.68
	PE4	Confidence in ability	.68
	PE5	Self-assurance in ability	.44
	PE6	Mastery of skill	.39
	PE7	Significant autonomy	.54
	PE8	Personalised decision	.51
	PE9	Independence to work	.61
	PE10	Impactful work	.57
	PE11	Great control of work	.64
	PE12	Significant budget influence	.53

5.4.3 Replacement of psychological ownership instrument

The existing psychological ownership instrument demonstrated a low relevance of the items in the context of public sector organisations in Malaysia. Experienced budget makers from these organisations commented that they were confused with the items in the instrument. The scenario provided in the instrument was too abstract and vague. They were unable to relate to the budget as an intangible possession of theirs as compared to tangible objects such as cars and houses, as explained in the instruction, which they also did not own. Thus, it was concluded that the instrument of psychological ownership, as suggested by Van Dyne & Pierce (2004), was inappropriate to be adopted for respondents in government agencies in Malaysia.

5.4.4 Psychological ownership instrument by Avey, Avolio, Crossley & Luthans (2009)

An alternative psychological ownership instrument developed by Avey, Avolio, Crossley & Luthans (2009) was adopted in this study to replace the one by Van Dyne and Pierce (2004), and it was subjected to further pilot testing. This instrument consisted of 15 items, as listed in Table 5.7.

Table 5.7: Psychological ownership items by Avey et al. (2009)

Code	Item	Abbreviation
PO1	I feel I need to protect my budgetary idea from being used by others in my organization.	Protection of idea
PO2	I feel that people I work with in my organisation should not invade my budget matters.	Invasion of matters
PO3	I feel I need to protect my property from being used by others in this organisation.	Protection of property
PO4	I feel I have to tell people in my organisation to ‘back off’ from budgetary projects that are mine.	Telling other to stay out
PO5	I am confident in my ability to contribute to my success in the budgetary work.	Confidence in work contribution
PO6	I am confident I can make a positive difference in this budgetary work.	Confidence in positive difference
PO7	I am confident setting high performance goal in my budgetary work.	Confidence in setting performance goals
PO8	I would challenge anyone in my organisation if I thought something was done wrong in budget matters.	Dare to challenge
PO9	I would not hesitate to tell my organisation if I saw something that was done wrong in budget matters/work.	Dare to report
PO10	I feel I belong in this budgetary team.	Belongingness in team
PO11	This place (i.e., organisation) is home for me to perform budget matters.	Belongingness in company
PO12	I am totally comfortable being in this budgetary team.	Comfortable in team
PO13	I feel this budgetary team’s success is my success.	Personal success
PO14	I feel being a member in this budgetary team helps defines who I am.	Team membership
PO15	I feel the need to defend my budgetary work when it is criticised.	Defensive in work

5.4.5 Item analysis for psychological ownership

Avey, Avolio, Crossley & Luthans’s (2009) psychological ownership instrument was reviewed for relevance by two experienced university professors, who are experts in the fields of psychology and organisational behaviour, and three budget makers in the field. Later, this instrument was tested by a new sample of 241 budget makers from private companies and government agencies. The sample for this test was a convenience sample drawn from part-time MBA students at three Malaysian universities. It was measured by a fifteen-point

Likert-scale, where 1 represented ‘strongly agree’ and 7 represented ‘strongly disagree’. After validating the instrument, the item analysis for the new psychological ownership instrument (Avey, Avolio, Crossley & Luthans, 2009) demonstrated a high item-total correlation. Table 5.8 indicates that the result of the item analysis for psychological ownership.

Table 5.8: Item analysis for psychological ownership instrument

Variable	Code	Abbreviation	Item total correlation
Psychological ownership	PO1	Protection of idea	.41
	PO2	Invasion of matters	.43
	PO3	Protection of property	.39
	PO4	Telling other to stay out	.46
	PO5	Confidence in work contribution	.67
	PO6	Confidence in positive difference	.70
	PO7	Confidence in setting performance goals	.71
	PO8	Dare to challenge	.61
	PO9	Dare to report	.65
	PO10	Belongingness in team	.68
	PO11	Belongingness in company	.73
	PO12	Comfortable in team	.72
	PO13	Personal success	.67
	PO14	Team membership	.73
	PO15	Defensive in work	.69

5.4.6 Additivity of budgetary slack and participation

The eight items in the newly-composed index of budgetary slack met the requirements of Tukey’s test for non-additivity ($F = .13$, $df = 1.17$, $p = .72$). Besides, all the 13 items of participation fulfilled this requirement ($F = .11$, $df = 1.39$, $p = .74$).

5.4.7 Summary of pilot test results

The pilot test for the field study demonstrated that all the scales met the requirements for reliability. Hence, they were adopted in the field study without the omission of items.

5.5 Conclusion

The preliminary analysis in this chapter highlighted two important empirical findings. Firstly, formal ownership is not a determinant of budgetary slack. Hence, it was omitted in the revised theoretical model and its hypotheses were not examined in this study. Secondly, a new budgetary slack instrument was developed to replace the original one in this study. The subsequent chapter discusses the development of the new budgetary slack instrument.

CHAPTER 6

BUDGETARY SLACK INSTRUMENT DEVELOPMENT

6.0 Introduction

This chapter presents the development of a new measure for budgetary slack. It provides an explanation of why existing studies have mixed findings. It also highlights the importance of incorporating social desirability response (SDR) bias into the existing measure of budgetary slack. Lastly, it offers methodological insights into the reliability and validation processes necessary for the instrument design.

The chapter is organised as follows: Section One provides an insight into the overview of budgetary slack literature; Section Two describes examines the original budgetary slack (OBS) instrument; Section Three provides an insight into the examination of budgetary slack as an index (formative) or scale (reflective) measure; Section Four discusses the methodology for developing the new instrument; Section Five explains the process of item development for the instrument; Section Six discusses the development of the instrument. Section seven presents the results of the findings. Section Eight provides a discussion of the instrument development; while the conclusion is given in Section Nine.

6.1 Overview of budgetary slack literature

The mixed results of budgetary slack have urged existing researchers to re-examine its existing measure (see Hobson, Mellon & Stevens 2011; Hartmann and Mass, 2010; Douglas & Wier, 2000; Dunk & Perera, 1997). The original budgetary slack measure has been widely used by current accounting scholars. However, they have been advised not to “automatically confirm themselves to the... classical test model” (Bollen and Lennox, 1991, p. 312). Instead, the connection between budgetary slack and their indicators is made explicitly. Most frequently, these indicators are assumed to be the effect indicators, but the cause indicators are neglected despite their appropriateness. Therefore, the tests and procedures of the original budgetary slack measure are examined in greater detail to better explain the mixed findings and to develop a new measure.

The impact of the propensity to create slack by employees has long been acknowledged by accounting researchers. Employees tend to achieve their budget estimates based on the expected performance level of the organisation and the employees' perceived acceptable performance level (Otley, 1978). One of the reasons is that employees are cautious of protecting themselves against environmental uncertainty (Lowe and Shaw, 1968). On the other hand, organisations monitor and evaluate their performance with tight budget controls and yet, the success of such a stringent mechanism is not guaranteed. This kind of so-called game of budget control creates undesirable conflict between superiors and employees (Hofstede, 1967) and, therefore, increases the creation of slack in budgeting.

6.2 Overview of the original budgetary slack (OBS) instrument

Since budgetary slack is intentionally built, it is crucial to examine the behaviour of employees to facilitate understanding of the nature of slack creation. Existing accounting researchers favour the adoption of the OBS measure derived from Onsi (1973), which measured budgetary slack at the individual level. However, Onsi (1973) classified the original budgetary slack (OBS) items as a form of the employees' attitude in the creation of budgetary slack. Firstly, employees tend to influence the budgetary productivity by understating revenue and overstating costs. The bargaining for slack is then used as an effective tool to either participate in budgetary negotiations or to safeguard their personal economic interests, thereby resulting in the creation of budgetary slack.

Secondly, employees are inclined to increase slack when the company is profitable. They are able to achieve personal benefits that leave the creation of slack untraceable by the top management. They submit aggregated budgets after the compilation from different departments. So, they tend to hold back valuable resources for the creation of slack in budgeting.

Thirdly, employees are pressured to use slack to achieve budgetary targets as it is a criterion in their performance evaluation. Their attitude towards slack creation is a result of pressure to attain the prescribed standards determined by the top management.

6.2.1 The original budgetary slack (OBS) items

The four items of the OBS scale are shown in Table 6.1.

Table 6.1: The original budgetary slack (OBS) items

Item	Abbreviation
To protect myself, I submit a budget that can be safely attained.	Safe budget attainability
I set two levels of standards: one set is between me and my immediate superior; and another set is between me and my employers, to be safe.	Double standard budgets
In good times, my immediate superior accepts a reasonable level of slack in a budget.	Reasonable slack tolerance
Slack in the budget is good to do things that cannot be officially approved.	Unofficial budgetary slack

6.2.2 The application of the original budgetary slack (OBS) measure

The OBS is widely adopted and is usually described as Onsi's (1973) measurement scale for budgetary slack. Among others, accounting researchers such as Merchant (1989), Nouri (1994), Nouri & Parker (1996), Douglas & Wier (2000), Lau & Eggleton (2004), Lau (1999) and have explained their rationale for adopting the OBS.

All of them opined that the OBS instrument is useful in examining employees' attitude towards the creation of budgetary slack. It is also a relatively well-established instrument involving questionnaire surveys. It measures only the propensity to create budgetary slack performed by the employees.

In terms of reliability, Merchant (1989), Nouri (1994), Nouri & Parker (1996) reported satisfactory internal consistency scores of .7, .75 and .75 in their studies respectively. However, Douglas & Wier (2005), Douglas & Wier (2000), Lau & Eggleton (2004), Lau (1999) reported unsatisfactory internal consistency scores of .66, .68, .67 and .62 in their studies respectively.

Due to the inconsistency of the internal scores, there was a need to re-examine the OBS instrument in terms of reliability and validity prior to the pilot test for the field study or even the actual field study. Hence, the re-examination of the OBS instrument was performed in the phase two of the research design.

6.2.3 Strengths of the original budgetary slack (OBS) measure

The OBS is adopted by accounting researchers to highlight several strengths. One of them is that Onsi's (1973) paper was the first management accounting paper that examined the behavioural factors associated with budgetary slack. Onsi (1973) was also one of the very few field researchers to have adopted a survey questionnaire to measure employees' budgetary slack. In his paper, Onsi (1973) performed standardised statistical procedures to validate his measurement items using exploratory factor analysis (EFA), and to examine the internal consistency score using Cronbach's alpha, and the empirical results were satisfactory. On this basis, it is the claim of this research that the OBS offers a comprehensive budget-related behavioural variable related to the attitude towards budget, budget pressure and budgetary slack.

6.2.4 Weaknesses of the original budgetary slack (OBS) measure

The OBS measure also has its weaknesses in terms of unsatisfactory internal consistency, the lack of differentiation in terms of formative and reflective indicators, and the lack of social desirability response (SDR).

6.2.4.1 The unsatisfactory internal consistency of the original budgetary slack (OBS) measure

Researchers who adopted the OBS in their empirical studies found evidence of unsatisfactory internal consistency (e.g. Douglas & Wier, 2000; Douglas & Wier, 2005; Lau & Eggleton, 2004; Lau, 1999) (refer to Table 6.2). This instrument may be sample-specific as the items were self-developed from interview responses. Most of the interviewees were involved in production functions and had insufficient budget experience.

Table 6.2: Reliability scores for previous studies on OBS instrument

Researchers' paper	Cronbach's Alpha score	Result (Nunnally, 1978, p. 245)
Douglas and Wier (2000)	.68	Unsatisfactory
Douglas and Wier (2005)	.66	Unsatisfactory
Lau (1999)	.67	Unsatisfactory
Lau and Eggleton (2004)	.62	Unsatisfactory

6.2.4.2 The lack of differentiation in formative and reflective indicators

The items of the original budgetary slack (OBS) instrument were not differentiated in terms of formative and reflective indicators. One of the reasons was that the scale was developed prior to contemporary considerations of the classification of indicators. Nonetheless, even past researchers consider the items in the scale to be reflective. However, this is not necessarily the case. Any misperception of the indicator types should be rectified as the different types have different methodological implications as well as empirical results (Law & Wong, 1999).

It is also worth highlighting that there are variables that can be considered both as reflective and formative indicators, such as job satisfaction (e.g. Butts, Vandenberg, DeJoy, Schaffer & Wilson, 2009; Aziri, 2011) and job performance (e.g. Drake, Wong & Salter, 2007; Judge, Thorensen, Bono & Patton, 2001). The discussion in Section 6.3 suggests that budgetary slack possesses the characteristics of both reflective and formative indicators, an issue which was neglected in previous studies.

6.2.4.3 The lack of consideration of the social desirability response (SDR)

The original budgetary slack (OBS) instrument did not account for the existence of the social desirability response (SDR). This issue was highlighted in studies by Parker and Kyi (2006) and Webb (2002), which ascertained the presence of socially acceptable behaviour in the feedback of respondents to the survey questions. The respondents tended to provide responses that appeared to be socially acceptable. This form of response bias needs to be treated prior to the analysis of the survey data.

6.2.4.4 The ineffectual OBS instrument

Previous researchers did not perform a thorough investigation on the factorial analysis of the OBS measurement due to the assumption that it was a widely accepted fact and it was real. The author of this research, however, found the instrument to be deficient and improved it by developing a new budgetary slack instrument for this study.

6.3 Budgetary slack as index (formative) or scale (reflective) measure

Budgetary slack has always been assumed to be a reflective measure. However, Onsi (1973) and other researchers who adopted the original budgetary slack (OBS)

instrument, did not follow a comprehensive set of criteria to determine how the construct of budgetary slack might be modelled. The misspecification of the direction of causality may lead to inaccurate empirical results (Law & Wong, 1999). Hence, there is a need to re-examine whether budgetary slack might be modelled as having formative or reflective indicators. The construct of budgetary slack was assessed using the guidelines stipulated by Jarvis, MacKenzie and Podsakoff (2003) in Table 6.3.

The results in Table 6.3 showed that the original construct of budgetary slack had both formative and reflective characteristics. It therefore demanded further investigation on the conceptualisation of budgetary slack. For this study, the construct of budgetary slack was developed as a formative measure. Its justifications are presented below.

Firstly, the indicators of this original scale define the characteristics of the creation of budgetary slack and therefore, it is considered as formative. Secondly, the indicators of this scale share a common theme in a broad sense in the creation of budgetary slack, which might be treated as reflective. However, they do not demonstrate the same or similar content in the creation of budgetary slack, which is another characteristic of a formative indicator.

Thirdly, the change of an indicator on this scale does not necessarily change the rest of the indicators. For instance, indicators of the original scales are not associated with each other. Instead, they describe conditions of slack creation in budgeting, and this is considered as formative.

Lastly, these indicators do not have the same antecedents and consequences. For instance, the original scale predicts both the effects of budgetary slack, such as employees' performance and work commitment, and this is reflective. At the same time,

it is used to examine the antecedents of budgetary slack, such as environment uncertainty and goal clarity, and this is considered as formative.

Table 6.3: Assessment of the original budgetary slack (OBS) instrument

Condition	Budgetary slack	Formative	Reflective
Direction of causality from construct to measure implied by the conceptual definition	OBS indicators define the characteristics of the creation of budgetary slack.	Yes	No
Interchangeability of the indicators	OBS indicators merely share a common theme in broad sense. However, they do not have similar content.	Yes	Yes, in broad sense
Co-variation among indicators	OBS indicators describe a similar condition for slack creation in budgeting.	Yes	No
Nomological net of the construct indicators	Antecedents (i.e., environmental uncertainty and goal clarity) and consequences (i.e., employees' performance and work commitment) of budgetary slack are different.	Yes	No

6.4 Research method

The study adopted a quantitative method to develop a set of survey items that covers the behavioural dimensions of budgetary slack. In the initial phase, new items were developed based on the existing literature, qualitative interviews and the original budgetary slack measurement. In the second phase, a questionnaire survey approach was adopted, and questionnaires were disseminated to professional budget makers in the field.

6.5 Item development

This section describes the process of developing the items (Diamantopoulos & Winklhofer, 2001) for the measurement of budgetary slack. A pool of potential items specifying the content of budgetary slack was identified for later validation.

6.5.1 Items from the accounting literature

In order to comprehensively capture the scope of budgetary slack, all the facets of budgetary slack were considered by reviewing the accounting literature. The main contents of budgetary slack are excessive resource acquisition, budget compliance, budget favourability, safe budget, non-disclosure budget, budget achievability, budget pre-assessment and personalised budget adjustments that specify the budget makers' motives for building slack in budgeting. These items are listed in Table 6.4.

Table 6.4: Items derived from the accounting literature

Code	Item	Abbreviation	Source
B1	I seek more organisational resources than absolutely necessary when preparing a budget.	Excessive resource requisition	Fisher, Maines, Pfeffer & Sprinkle (2002)
B2	I comply fully with my employer's request when I prepare a budget.	Budget compliance	Waller & Bishop (1990)
B3	I prepare a budget that is favourable to my employer's request.	Budget favourability	Schiff & Lewin (1970)
B4	I submit a safe estimate of budgetary expenditure.	Safe budget	Hartmann & Maas (2010)
B5	I keep my personal estimates to myself when preparing estimates for my employer.	Non-disclosure budget	Mizutani & Nakamura (2012)
B6	I should prepare a budget that is achievable.	Budget achievability	Maiga & Jacobs (2007)
B7	I pre-assess the budget I prepare to make sure it is achievable.	Budget pre-assessment	Fisher, Frederickson & Pfeffer (2000)
B8	I try to balance personal estimates with the outcome expected by my employer when I prepare the budget.	Personalised budget adjustment	George (2005)

6.5.2 Items from interviews

The interview questions (refer Appendix A) were designed to gather information for this study from two specific points of view: determinants of slack in budgeting, and suggested ways to reduce or remove budgetary slack. To that end, the interviews covered a range of questions relating to the challenges faced by budget makers in budgeting and their corrective actions. These questions allowed the interviewees to express their understanding on the meaning of a well-planned budget and the reasons for the difficulty of matching revenue and expenditure estimations. In addition, the interviewees were able to offer insights into possible ways to achieve budget objectives and, at the same time, to improve the budget makers' performance. The relevant questions from Appendix A are listed in Table 6.5.

Table 6.5: Interview questions

Question
What are the criteria for a well-planned budget?
What factors cause failure in achieving the objectives of budget planning and execution?
What is your expectation when you are requested to achieve the objectives of budget planning and execution?
What factors cause the mismatch between revenue and expenditure estimations in budgeting?
What would you do if you experience difficulty in reconciling revenue to expenditure estimations?

Prior to the field interviews, a local professional accountant was selected as a pilot interviewee to ensure the appropriateness of the interview questions. The interviewee understood the scope of the interview well and was able to articulate valuable insights with regard to the topics concerned. The design of the interview protocol was refined based on his feedback and suggestions.

The targeted interviewees were actual budget makers who were professional accountants. The sampling approach was purposive as the group of qualified respondents had to possess accountancy qualifications with industrial experience locally (in Malaysia) or internationally. The interview sample was made up of eight professional accountants. There were seven Malaysian respondents and one international respondent. Half of them were self-employed, while the rest were employees.

6.5.3 Data collection

Refer to Section 4.3 in Chapter Four for a further explanation.

6.5.4 Data analysis

The items gathered from the interviews were on resource incompatibility, non-achievable budget, imbalanced budgetary income, budget variance and budget spending deficiency, and these are listed in Table 6.6.

Table 6.6: Items derived from interviews

Code	Item	Abbreviation
A1	I understand that a well-planned budget cannot always be met because of the difference between the organisation's needs and the availability of internal resources.	Resource incompatibility
A2	I understand that it is difficult to meet actual budget targets.	Non-achievable budget
A3	I understand that there is a difference between what goes in the budget and actual projected expenditure.	Imbalance budgetary outcome
A4	I understand that variance between budgeted and actual expenditure should be avoided.	Budget variance
A5	I understand that it is never possible to spend the allocated budget as expected.	Budget spending deficiency

6.6 Instrument development

This section describes the process of developing a new instrument to measure budgetary slack through a questionnaire survey and data analysis, including tests.

6.6.1 Questionnaire survey and its contents

The questionnaire was designed to elicit responses about the propensity to create budgetary slack, which was used in this study as a surrogate for actual slack creation. All the items developed from the accounting literature and interviews were included, in addition to four items from the original budgetary slack (OBS) instrument.

6.6.2 Criterion validity item

In addition, specially designed test items were included for the criterion validity. The budget tolerance was defined as the indicator that measures the concurrent validity of the propensity to create budgetary slack. The respondents were instructed to rank their selection of the budget tolerance. The scores for each of the items were added and the arithmetic mean represented the aggregated measure of the budget tolerance. These items are shown in Table 6.7.

Table 6.7: Budget tolerance items

Instruction: In general, when your personal worksheet estimate is a net expenditure of RM 50,000, what is your budget request likely to be? Rank the following choices from 1 to 5, where 1 = the budget request you are most likely to submit, and 5 = the budget request you are least likely to submit	
Code	Item
BT1	_____ RM 500,000 - 2%
BT2	_____ RM 500,000 exactly
BT3	_____ RM 500,000 + 2%
BT4	_____ RM 500,000 + 5%
BT5	_____ RM 500,000 + 10%

6.6.3 Social desirability response (SDR)

In addition to these items, the social desirability response (SDR) items, derived from Crowne & Marlowe (1964), were included. They were randomly scattered within the main section of the questionnaire (Alreck & Settle, 1985). All the responses were collected on a seven-point semantic differential scale.

The cover page of the questionnaire gave a brief statement on the purpose of the survey, an assurance of confidentiality; the respondents' expected qualifications in budget-making as well as the researcher's correspondence address (refer to Appendix C). In total, there were three sections, and these were the randomly scattered questionnaire items, namely, the social desirability response (SDR), the test items for the criterion validity, and the respondents' personal information. The personal information was placed in the last section of the questionnaire in order to reduce the sensitivity of certain respondents with regard to private and confidential information (Cavana, Delahaye & Sekaran, 2001). The questionnaires were pre-coded with special batch numbers for tracking and follow-up purposes.

6.6.4 Sample and data collection

The respondents were selected from among employees who were professional accountants or management accountants and who had experience in budgeting in either public or private organisations. These participants could come from various disciplines and were not confined solely to the business sector, following the suggestion of Douglas and Wier (2005), who noted the value of engaging employees who are actually involved in planning and budgeting activities, instead of merely in monitoring the planning and budgeting process. This type of respondents coincided with the purpose of this thesis, which was to understand the determinants of budgetary slack that affect the ineffectiveness of employees in budgeting.

This study adopted the purposive and snowball sampling methods. These approaches were appropriate because the respondents were approached to determine whether they fitted the targeted sample before the questionnaires were distributed to them. The questionnaires were distributed both through electronic mail and by hand. During the process of emailing the questionnaires to the qualified respondents, they also referred their friends or colleagues who fitted the targeted sample to the researcher for the questionnaires to be distributed to them as well so that the response rate was improved in the study. In addition to emails, the researcher personally distributed the questionnaires to representatives of government agencies and private organizations to enable them to distribute the questionnaires to their qualified employees. These representatives were able to return their allocation of the distributed questionnaires on time.

A total of 1,000 questionnaires with cover letters were distributed, and the respondents were given six weeks to return them. However, another two

weeks were allowed for completion, after following-up with them periodically. A total of 522 sets of questionnaires were returned as they failed to meet the requirements of the targeted sample. Upon the deadline for completion, a total of 412 questionnaires were received. This represented a response rate of 86%. However, two questionnaires were excluded due to a high percentage of missing data. Hence, 410 questionnaires were usable for proceeding to the next phase of the statistical analysis.

In addition, it is worth noting that the test items for the criterion validity were returned by 331 respondents (69%) who completed the questionnaires, while 17% of the returned questionnaires were incomplete. The number of questionnaires distributed and the response rate are summarized in Table 6.8.

Table 6.8: Response rate for instrument development

Description	Total	%
Total number of questionnaires supplied, of which:	1000	-
Questionnaires returned from unqualified respondents, or not distributed	522	-
Total questionnaires distributed to qualified respondents, of which:	478	100
No response	66	14
Returned by qualified respondents	412	86
Less incomplete	2	.4
Number of usable questionnaires	410	86

6.6.5 Profile of respondents

When assessing the profile of the respondents, there were more male (55.1%) than female respondents, and most of them (55.1%) were aged between 21 and 30 years old. A quarter of the respondents (25.1%) were high income earners (RM 6,000 and above a month), and 20% were low income earners (RM 2,000 or more a month), while the other respondents were quite evenly distributed in the income brackets of between RM 2,000 and RM 6,000. Around 45% of them

were in positions classified as managerial and 26% were in non-managerial positions. Most of them (69.7%) had been working in their current organisations for between 1 and 10 years, but only a minority of the respondents (12%) had been with their organisation for between 16 and 20 years. Refer to Table 6.9 for the respondents' profile for the development of the budgetary slack instrument.

Table 6.9: Respondents' profiles for instrument development

Item	Description	<i>f</i>	%
Gender	Male	226	55.1
	Female	148	44.9
	Total	410	100
Age	Below 21 years old	4	1
	Between 21 and 30 years old	222	55.1
	Between 31 and 40 years old	125	30.5
	Between 41 and 50 years old	32	7.8
	Above 50 years old	27	6.6
	Total	410	100
Monthly income	RM 2,000 or below	86	20.2
	Between RM 2,001 and RM 3,000	87	16.3
	Between RM 3,001 and RM 4,000	76	18.5
	Between RM 4,001 and RM 5,000	46	11.2
	Between RM 5,001 and RM 6,000	35	8.5
	Above RM 6,000	103	25.1
	Total	410	100
Job position	Non-managerial level	106	25.9
	Managerial level	184	44.9
	Others	120	29.3
	Total	410	100
Numbers of years working in your organisation	Less than 1 year	75	18.3
	Between 1 and 5 years	203	49.5
	Between 6 and 10 years	83	20.2
	Between 11 and 15 years	37	9.0
	Between 16 and 20 years	6	1.5
	More than 20 years	6	1.5
	Total	410	100

6.6.6 Adjustment for social desirability response (SDR) bias

Refer to Section 4.6.2.6 in Chapter Four for a further explanation.

6.6.7 Verifying the formative indicators in the new budgetary slack instrument

In this study, numerous efforts were made using structural equation modelling (SEM) for the confirmatory factor analysis to develop a measurement model from both the original budgetary slack items and the 17 candidate items and subsets of items. However, the results were discouraging as all the tests failed to meet the requirements of the measurement model in terms of the model fit and validity. This finding was contradictory to the existing accounting literature that presumes that the budgetary slack indicators are reflective in nature.

In view of this situation, the next appropriate but challenging move in the scale development was to examine the potential to develop an index of budgetary slack from formative indicators. The guidelines for the construction of a new instrument to measure budgetary slack were performed in accordance with the statistical requirements stipulated by Babbie (2010) and, Diamantopoulous and Winklhofer (2001).

6.6.8 Content validity

The contents of budgetary slack might include the acquisition and utilisation of resources; the difficulty in the achievability of a budget; compliance with the request of employers; the balancing of budgeting estimates between employers and employees; the difference between actual and budgeted estimates; the employers' level of acceptance of slack; the willingness to submit an attainable budget; and the difference in expectations between organisational needs and the

availability of internal resources. These contents was further validated using the budget tolerance, which acts as a criterion validity in this study (refer to Section 6.6.2 for a further explanation).

6.6.9 Multi-collinearity

Once the contents domain had been determined, the next action was to reduce the redundant indicators. This was done by examining the collinearity between the indicators. Multi-collinearity in indicators makes it difficult to separate the distinct influence of individual indicators on the latent variable. The test of multi-collinearity for the budgetary slack instrument development can be effectively provided by using the result of Tukey's test of non-additivity. The general guideline is that items should not be significant at .05 to be considered as additive in nature (Malhotra, 2010). The items of the instrument have no multiple replicated interactions among each other.

6.6.10 Criterion validity

Addressing the issue of criterion validity was the last important step in the construction of a measurement instrument. In order to assess the index quality, budget tolerance was used to summarise the essence of the construct of budgetary slack so that what its indicators purported to measure were measured concurrently. Using this approach, the indicators of the propensity to create budgetary slack that showed significant relationships with interested variables were retained (Spector, 1992). Based on this guideline, independent *t*-tests were performed to determine whether each of these indicators was able to distinguish between the respondents who reported creating budgetary slack according to the criterion test variable and those who did not.

6.7 Results

A complete pool of 17 candidate items was derived from the accounting literature, interviews and the OBS items. These items are presented in Table 6.10.

Table 6.10: Candidate items for the new budgetary slack instrument

Code	Item
B1	Excessive resource requisition
B2	Budget compliance
B3	Budget favourability
B4	Safe budget
B5	Non-disclosure budget
B6	Budget achievability
B7	Budget pre-assessment
B8	Personalised budget adjustment
A1	Resource incompatibility
A2	Non-achievable budget
A3	Imbalanced budgetary outcome
A4	Budget variance
A5	Budget spending deficiency
O1	Safe budget attainability
O2	Double standard budgets
O3	Reasonable slack tolerance
O4	Unofficial budgetary slack
Notes:	
B refers to behavioural outcome;	
A refers to attitudinal outcome;	
O refers to original budgetary slack items	

6.7.1 Preliminary items analysis

This section presents the results for the social desirability response (SDR) bias and data distribution.

6.7.1.1 Social desirability response (SDR) bias

Table 6.11 shows that there was a significant difference between budgetary slack (t value = 2.27, $p < .05$) with and without the adjustment for the social desirability response (SDR) bias.

Table 6.11: Test for social desirability response (SDR)

Variable	Mean	Standard deviation	t value	p value	Evidence of SDR
Budgetary slack	.10	.93	2.27	.03	Yes

6.7.1.2 Distribution of data

As shown in Table 6.12, all the items had a sufficiently low skewness and kurtosis and were treated as normally distributed.

Table 6.12: Data distribution for the new budgetary slack instrument

Code	Item	Skewness	Kurtosis
B1	Excessive resource requisition	.840	-.036
B2	Budget compliance	.859	-.045
B3	Budget favourability	.817	.422
B4	Safe budget	.779	-.120
B5	Non-disclosure budget	.329	-.875
B6	Budget achievability	.668	-.050
B7	Budget pre-assessment	.658	-.329
B8	Personalised budget adjustment	.601	-.354
A1	Resource incompatibility	.445	-.397
A2	Non-achievable budget	.417	-.803
A3	Imbalance budgetary outcome	.841	.143
A4	Budget variance	.681	.102
A5	Budget spending deficiency	.851	.637
O1	Safe budget attainability	.673	-.148
O2	Double standard budgets	.330	-.828
O3	Reasonable slack tolerance	.745	-.141
O4	Unofficial budgetary slack	.343	-.640

6.7.2 Item criterion validity

The budgetary slack items with p values above .05 failed to fulfil the requirement of criterion validity and were excluded. A total of eight items fulfilled the requirement, and these items were excessive resource requisition, budget favourability, personalised budget adjustment, resource incompatibility, non-achievable budget, imbalanced budgetary outcome, safe budget attainability and reasonable slack tolerance. The results of the criterion validity test are displayed in Table 6.13.

Table 6.13: Results of item criterion validity tests for new budgetary slack instrument

Code	Item	F	df	p value	Pass or Fail
B1	Excessive resource requisition	.18	406.00	.00	Pass
B2	Budget compliance	2.98	406.00	.18	Fail
B3	Budget favourability	1.53	406.00	.02	Pass
B4	Safe budget	.04	406.00	.18	Fail
B5	Non-disclosure budget	.87	406.00	.20	Fail
B6	Budget achievability	.65	406.00	.30	Fail
B7	Budget pre-assessment	.74	406.00	.16	Fail
B8	Personalised budget adjustment	3.40	400.09	.00	Pass
A1	Resource incompatibility	12.41	399.65	.00	Pass
A2	Non-achievable budget	3.25	406.00	.00	Pass
A3	Imbalanced budgetary outcome	8.90	403.16	.00	Pass
A4	Budget variance	7.43	401.52	.07	Fail
A5	Budget spending deficiency	.22	406.00	.19	Fail
O1	Safe budget attainability	5.72	403.87	.00	Pass
O2	Double standard budgets	.01	406.00	.07	Fail
O3	Reasonable slack tolerance	.78	406.00	.03	Pass
O4	Unofficial budgetary slack	.03	406.00	.09	Fail

6.7.3 Reliability

The Tukey's test of non-additivity showed that the eight retained items were additively ($F = .47$, $df = 1.27$, $p = .49$). Therefore, they were retained as likely composite items for budgetary slack.

6.7.4 Proposed new instrument to measure budgetary slack

The eight new composite items for the budgetary slack instrument are listed in Table 6.14. The composite items of excessive resource requisition, budget favourability and personalized budget adjustment were derived from the literature. There were also three items that were extracted from the interviews, and these were resource incompatibility, non-achievable budget and imbalanced budgetary income. Two of Onsi's (1973) scale items were retained, namely safe budget attainability and reasonable slack tolerance, although existing accounting researchers treated them as reflective indicators.

Table 6.14: Proposed new budgetary slack instrument

Revised code	Original code	Items
BS1	B1	Excessive resource requisition
BS2	B3	Budget favourability
BS3	B8	Personalised budget adjustment
BS4	A1	Resource incompatibility
BS5	A2	Non-achievable budget
BS6	A3	Imbalanced budgetary outcome
BS7	O1	Safe budget attainability
BS8	O3	Reasonable slack tolerance

6.7.5 Comparison between the new and old budgetary slack instruments

The new budgetary slack instrument was then compared with the OBS scale in terms of additivity. As mentioned in Section 6.7.4, the eight items for the new scale were additive in nature and was externally validated.

However, all the items of the OBS scale were non-additive ($F = 9.00$, $df = 1.22$, $p = .03$). Besides, it showed an unsatisfactory internal consistency as its Cronbach's alpha was .63 (Nunnally, 1978, p. 245). Hence, it was concluded that the new budgetary slack instrument was a better measurement.

6.8 Discussion

The original budgetary slack measurement has been widely adopted by accounting researchers in empirical studies. However, researchers were warned by Bollen and Lennox (1991, p. 312) not to “automatically confine themselves to the unidimensional classical test model.” The connection between unmeasured variables and their indicators should be made explicitly (Blalock, 1971, p. 346). In many circumstances, indicators are assumed to be reflective indicators, but causal (formative) indicators are neglected despite their appropriateness. The nature of budgetary slack indicators has not been examined thoroughly until this study, which might be a possible cause of mixed results in previous studies of influences on budgetary slack. Hence, there is a need to improve or to replace the existing scale for use in future similar studies. In favour of Bollen’s (1989) argument, this study identified eight proposed causal indicators for the measure of budgetary slack and these were additive in nature. In view of the result, the new budgetary slack measurement was proposed as an improved instrument for the measurement of the propensity to create budgetary slack.

6.9 Conclusion

This chapter developed a new measurement for budgetary slack in accordance with the statistical guidelines stipulated by Babbie (2010) and, Diamantopoulous and Winklhofer (2001). This new measurement is an index, and is supported by the initial evidence of the construct validity within a sample of budget makers in the fields. The index was further tested in the pilot and field tests that are presented in the next chapter.

CHAPTER 7

RESEARCH FINDINGS

7.0 Introduction

This chapter presents the results of the field study for the research model shown in Chapter Five in relation to the effects of psychological ownership, empowerment (structural and psychological) and participation on budgetary slack. The results are presented according to the phases of the research methodology proposed in the research design in Chapter Four.

This chapter is organised into several sections: Section One presents the descriptive results of the field study; Section Two evaluates the measurement (outer) model using Component-Based Structural Equation Modelling (PLS-SEM); Section Three evaluates the proposed structural (inner) model; Section Four provides an explanation of the mediation results for the model; and finally, the conclusion is given in Section Five.

7.1 Field study

The last phase of the research was to perform a field study. Structural empowerment (Laschinger, Finegan, Shamian & Wilk, 2001), psychological empowerment (Spreitzer, 1995) and participation (Young, 1985; Milani, 1975; Searfoss & Monczka, 1973) and psychological ownership (Avey, Avolio, Crossley & Luthan, 2009) were measured in the field test.

7.1.1 Response rate

Out of the 1,500 copies distributed, a total of 829 questionnaires were returned because the respondents were not qualified for the study. On the pre-determined deadline, 595 sets of questionnaires were received, giving a response rate of 87%. However, only 591 sets could be used for the analysis, while the remaining 4 sets had to be dropped because of many missing values. The response rate for the field study is presented in Table 7.1.

Instead of deleting on a case-by-case basis, the mean replacement was adopted in this study. Since the sample size was small, retaining as much useful information as possible would lead to higher efficiency (Temme, Kreis & Hildebrandt, 2006).

Table 7.1: Response rate for field study

Description	Total	%
Total number of questionnaires supplied, of which:	1500	-
Questionnaires returned from unqualified respondents, or not distributed	829	-
Total questionnaires distributed to qualified respondents, of which:	671	100
No response	76	11
Returned by qualified respondents	595	87
Less incomplete	4	.6
Number of useable questionnaires	591	88

7.1.2 Profiles of respondents

Based on the profiles of the respondents from the field study, out of a total of 591 respondents, 362 of them (61.3%) were female as compared to 229 males (38.7%). Besides, the majority of them (49.2%) were aged between 31 and 40 years old as compared to 138 respondents (23.4%), who were aged between 21 and 30 years old, followed by 108 respondents (18.3%) who were aged between

41 and 50 years old. A total of 168 respondents (28.4%) earned a monthly income of between RM 3,001 and RM 4,000 as compared to 137 respondents (23.2%) who earned between RM 2001 and RM 3,000 every month. There were 430 respondents (72.9%) who were managerial employees as compared to 160 respondents (27.1%) who were non-managerial employees. The majority (51.4%) of them had been working in their existing companies between 1 and 5 years, followed by 142 respondents (24%) who had been working between 6 and 10 years. The profiles of the respondents in the field study are illustrated in Table 7.2.

Table 7.2: Respondents' profile for field test

Item	Description	<i>f</i>	%
Gender	Male	229	38.7
	Female	362	61.3
	Total	591	100
Age	Below 21 years old	6	1
	Between 21 and 30 years old	138	23.4
	Between 31 and 40 years old	291	49.2
	Between 41 and 50 years old	108	18.3
	Above 50 years old	48	8.1
	Total	591	100
Monthly income	RM 2,000 or below	81	13.7
	Between RM 2,001 and RM 3,000	137	23.2
	Between RM 3,001 and RM 4,000	168	28.4
	Between RM 4,001 and RM 5,000	74	12.5
	Between RM 5,001 and RM 6,000	51	8.7
	Above RM 6,000	80	13.5
	Total	591	100
Job position	Non-managerial level	160	27.1
	Managerial level	431	72.9
	Others	0	0
	Total	591	100

Table 7.2, continued

Item	Description	<i>f</i>	%
Numbers of years working in the current organisation	Less than 1 year	82	13.9
	Between 1 and 5 years	304	51.4
	Between 6 and 10 years	142	24.0
	Between 11 and 15 years	63	10.7
	Between 16 and 20 years	0	0
	More than 20 years	0	0
	Total	591	100

7.1.3 Exploratory descriptive analysis

Based on the histograms and boxplots in Sections One and Two of Appendix D, respectively, empowerment (structural and psychological), psychological ownership, participation and budgetary slack were normally distributed and free from univariate outliers.

Besides, the Mahalanobis distance did not exceed the critical χ^2 value of 42.29 for $df = 69$ at $\alpha = .05$ for any of the cases in the data file, indicating that multivariate outliers were not a concern.

Using principal axis factoring with rotation, the first factor only accounted for 26.6% of the overall variance. It indicated that there was no general factor, as this factor did not account for a majority of the variance. It meant that common method variance unlikely affected the results (Podsakoff & Organ, 1986) and concluded that it was not an issue in this study.

In addition, the absolute skewness and kurtosis for empowerment (structural and psychological), psychological ownership, participation and budgetary slack in Table 7.3 were within the acceptable range of ± 1 . The skewness and kurtosis results for each item of the constructs are also displayed in Table 10.2 of Section 4 of Appendix D.

Table 7.3: Skewness and kurtosis

Variable	Skewness	Kurtosis
Structural empowerment	0.29	0.22
Psychological empowerment	0.38	0.45
Budgetary slack	0.39	0.28
Participation	0.24	0.16
Psychological ownership	-0.10	0.01

(a) Social desirability response (SDR) bias

Table 7.4 shows that there were significant differences between structural empowerment (t value = 25.44, $p < .05$), psychological empowerment (t value = 59.38, $p < .05$), psychological ownership (t value = 17.15, $p < .05$), participation (t value = 58.90, $p < .05$) and budgetary slack (t value = 57.43, $p < .05$) with and without adjustments for social desirability responses. Each item of the constructs for the mean and standard deviation is also presented in Table 10.1 of Section 3 of Appendix D.

Table 7.4: Social desirability response (SDR) bias

Variable	Mean	Standard deviation	t value	Sig.	Evidence of SDR
Structural empowerment	.31	.30	25.44	<.001	Yes
Psychological empowerment	.24	.10	59.38	<.001	Yes
Psychological ownership	.15	.22	17.15	<.001	Yes
Budgetary slack	.24	.10	57.43	<.001	Yes
Participation	.23	.10	58.90	<.001	Yes
Note: ** $p < .05$, $p < .01$					

7.2 Measurement model

Prior to proceeding to the assessment of the structural model, the quality of the measurement models was evaluated for reliability and validity.

7.2.1 Convergent validity

The PLS outer loadings were considered to assess the convergent validity of both the reflective and formative constructs. The items with a factor loading of less than .70 were deleted because they had high error variance and shared little variance with the component score. The outer loadings of the retained indicators are provided in Table 7.5.

Four items were removed from the formative index of budgetary slack, namely BS2 (non-achievable budget), BS4 (excessive resource requisition), BS6 (personalised budget adjustment) and BS7 (safe budget attainability); and nine items were removed from the index of participation, namely P10 (directive of corrective action), P11 (assurance by supervisors), P1 (involvement level in budgets), P2 (frequency of initiating advice), P3 (explanation from supervisors), P5 (advice on budget input), P7 (inclusion of budget suggestion), P8 (supervisors receptive of suggestions) and P9 (personal examination of budget difference). For the reflective constructs, six items were retained to measure structural empowerment, and these items were reduced to the employees being parsimonious to better represent the concept, while four items were retained to measure psychological empowerment, and 10 items were retained to measure psychological ownership. The loadings of all the omitted indicators are provided in Table 10.4 in Appendix D.

Table 7.5: Outer loadings for reflective and formative indicators

Code	Budgetary slack	Participation	Psychological empowerment	Psychological ownership	Structural empowerment
BS1	.74				
BS3	.90				
BS5	.70				
BS8	.70				
P12		.75			
P13		.82			
P4		.80			
P6		.84			
PE11			.86		
PE7			.84		
PE8			.83		
PE9			.88		
PO10				.83	
PO11				.82	
PO12				.85	
PO13				.72	
PO14				.84	
PO15				.78	
PO5				.78	
PO6				.83	
PO7				.84	
PE9				.88	
PO10				.83	
PO11				.82	
PO12				.85	
PO13				.72	
PO14				.84	
PO15				.78	
PO5				.78	
PO6				.83	
PO7				.84	
PO9				.77	
SE12					.81
SE15					.85
SE16					.86
SE1					.82
SE20					.82
SE21					.83

7.2.2 Test for indicator multicollinearity

The VIF statistics provided no evidence of multicollinearity among the indicators of any construct (values are provided in Table 10.4 in Appendix D).

7.2.3 Statistical significance of formative indicators

The outer weights of all the retained formative indicators of budgetary slack and participation were statistically significant at $p < .05$. All the demonstrated critical values were greater than 1.96 (Table 7.6).

Table 7.6: Outer weights from bootstrapping procedure

Path	Mean	Standard error	<i>t</i> value	p-value
BS1 -> Budgetary slack	.28	.05	6.01	< .001
BS3 -> Budgetary slack	.58	.05	10.80	< .001
BS5 -> Budgetary slack	.15	.05	3.28	< .001
BS8 -> Budgetary slack	.24	.05	4.88	< .001
P12 -> Participation	.23	.05	4.64	< .001
P13 -> Participation	.28	.04	6.84	< .001
P4 -> Participation	.38	.04	9.00	< .001
P6 -> Participation	.35	.04	8.55	< .001

7.2.4 Reliability of reflective measures

All the reflective variables (i.e., structural empowerment, psychological empowerment and psychological ownership) met the requirements for composite reliability (Table 7.11) and average variance extracted (AVE) (Table 7.7).

Table 7.7: Composite reliability and average variance explained

Variable	Composite reliability	AVE
Psychological empowerment	.92	.73
Psychological ownership	.95	.65
Structural empowerment	.93	.70

7.2.5 Discriminant validity

After deleting the indicators with low loadings, a full measurement model was assessed for discriminant validity. An examination of the cross loadings (Table 7.8) revealed that no indicator loaded higher on any opposing construct than on the construct it was designed to measure.

Table 7.8: Cross loadings for formative and reflective indicators

Variable	Code	BS	P	PE	PO	SE
Budgetary slack (BS)	BS1	.74	.58	.56	.43	.56
	BS3	.90	.67	.68	.56	.69
	BS5	.70	.53	.53	.39	.53
	BS8	.70	.57	.53	.33	.48
Participation (P)	P12	.52	.75	.67	.51	.61
	P13	.56	.82	.75	.50	.66
	P4	.67	.80	.59	.50	.68
	P6	.68	.84	.72	.45	.63
Psychological empowerment (PE)	PE11	.68	.76	.86	.53	.67
	PE7	.56	.72	.84	.48	.64
	PE8	.62	.66	.83	.40	.56
	PE9	.72	.73	.88	.56	.68
Budgetary slack (BS)	BS1	.74	.58	.56	.43	.56
	BS3	.90	.67	.68	.56	.69
	BS5	.70	.53	.53	.39	.53
	BS8	.70	.57	.53	.33	.48
Participation (P)	P12	.52	.75	.67	.51	.61
	P13	.56	.82	.75	.50	.66
	P4	.67	.80	.59	.50	.68
	P6	.68	.84	.72	.45	.63

Table 7.8, continued

Variable	Code	BS	P	PE	PO	SE
Psychological empowerment (PE)	PE11	.68	.76	.86	.53	.67
	PE7	.56	.72	.84	.48	.64
	PE8	.62	.66	.83	.40	.56
	PE9	.72	.73	.88	.56	.68
Psychological ownership (PO)	PO10	.50	.53	.49	.83	.61
	PO11	.45	.52	.52	.82	.57
	PO12	.51	.52	.50	.85	.63
	PO13	.44	.51	.50	.72	.50
	PO14	.48	.53	.51	.84	.63
	PO15	.45	.46	.43	.78	.56
	PO5	.50	.44	.42	.78	.54
	PO6	.48	.44	.46	.83	.57
	PO7	.50	.49	.47	.84	.59
	PO9	.43	.43	.38	.77	.52
Structural empowerment (SE)	SE12	.57	.67	.61	.55	.81
	SE15	.67	.69	.64	.62	.85
	SE16	.65	.66	.58	.59	.86
	SE1	.68	.69	.65	.55	.82
	SE20	.59	.64	.61	.58	.82
	SE21	.62	.67	.64	.65	.83

All the constructs also demonstrated discriminate validity according to the Fornell-Larcker criterion (Table 7.9). In addition, they all achieved a HTMT specificity that was less than the most stringent criterion of .85 (Table 7.10).

Table 7.9: Discriminant validity, Fornell-Larcker criterion

Variable	BS	P	SE	PE	PO
Budgetary Slack					
Participation	.77				
Structural Empowerment (SE)	.76	.81	.83		
Psychological Empowerment (PE)	.76	.84	.75	.85	
Psychological ownership (PO)	.59	.60	.71	.58	.81

Note: The diagonal elements (in bold) are the square roots of the AVEs, while the non-diagonal elements are the correlations.

Table 7.10: HTMT ratios

Variable	PE	PO	SE
Psychological empowerment (PE)			
Psychological ownership (PO)	.64		
Structural empowerment (SE)	.84	.77	

7.2.6 Summary of remarks for the measurement model

The overall assessment for the measurement model substantiated that all the construct measures were reliable and valid. The results for the structural measurement model will be discussed in the next section.

7.3 Structural model

This section provided the results for path coefficients of the measurement model and its coefficient of determinations. It also presented a summary of remarks for the model.

7.3.1 Path coefficients

A total of nine path coefficients were significant at 0.05, as shown in Figure 7.1 and Table 7.11. However, the relationship between psychological ownership and the propensity to create slack was not significant.

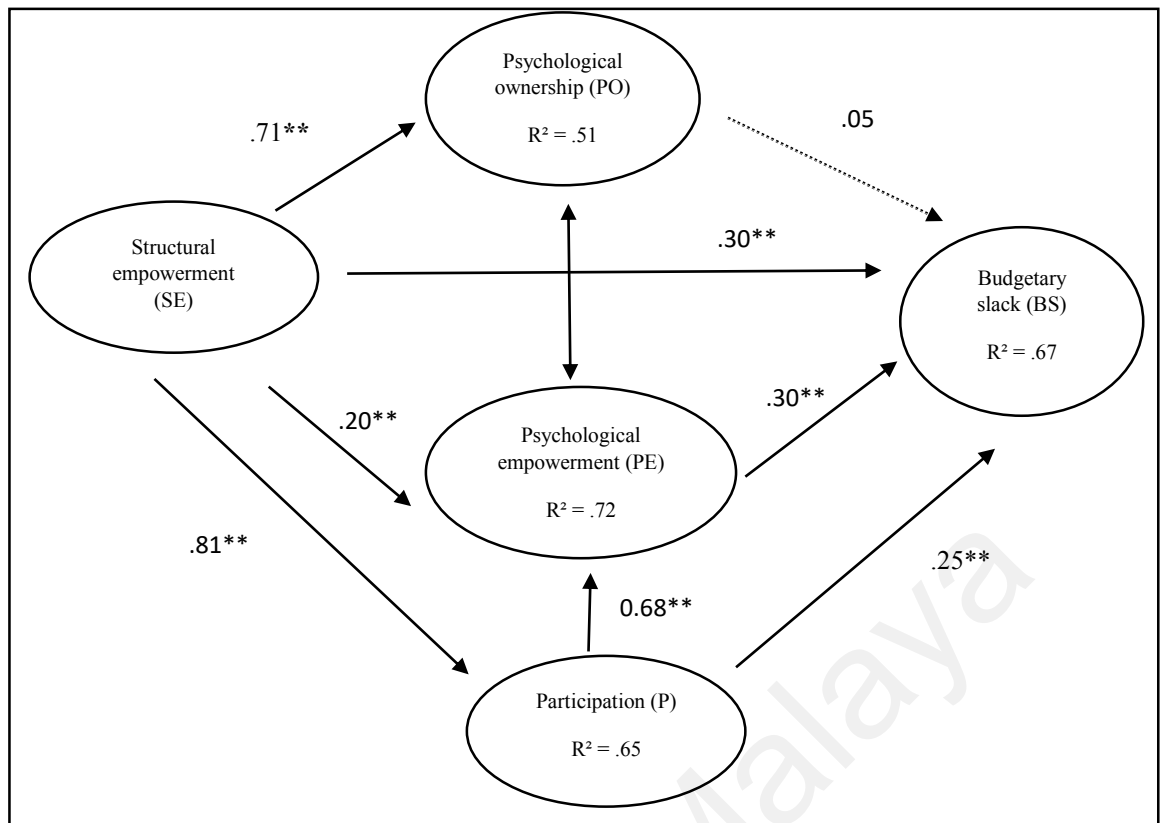


Figure 7.1: Structural model result

Table 7.11: Effects in the structural model

Relationship	Path coefficient	Standard error	<i>t</i> value	<i>p</i> -value
SE to PO	.71	.03	27.44	<.001
PO to BS	.05	.04	1.40	.16
SE to BS	.30	.08	3.67	<.001
SE to PE	.20	.05	3.83	<.001
PE to BS	.30	.07	4.04	<.001
SE to P	.81	.02	34.76	<.001
P to BS	.25	.08	3.07	<.001
P to PE	.68	.05	14.22	<.001
Note: ** <i>p</i> < .05, <i>p</i> < .01				

7.3.2 Coefficient of determination

The overall model explained 68% of the variation in budgetary slack (adjusted $R^2 = .67$, $p < .05$), 65% of the variation in participation (adjusted $R^2 = .65$, $p < .05$), 72% of the variation in psychological empowerment (adjusted $R^2 = .75$, $p < .05$) and 51% of the variation in psychological ownership (adjusted $R^2 = .51$, $p < .01$), respectively (Table 7.12).

Table 7.12: R² and adjusted R² for the structural model

Variable	R ²	Adjusted R ²
Budgetary Slack	.68	.67
Participation	.65	.65
Psychological Empowerment	.72	.72
Psychological Ownership	.51	.51

7.3.3 Summary of remarks for the structural model

The measurement and structural models both met the established criteria for the PLS-SEM model quality. The model also provided valuable new information. It explained the determinants of budgetary slack. In addition, all the structural model relationships were significant at the .05 level, except for the path from psychological ownership to the propensity to create budgetary slack.

7.4 Mediation

The following reports on the mediation analysis examined the direct relationship between each pair of affected variables before proceeding to examine the hypothesised mediation effect.

7.4.1 Mediation of psychological ownership on structural empowerment and the propensity to create budgetary slack

As shown in Figure 7.2, psychological ownership had a positive and direct effect on the propensity to create budgetary slack when it was examined in isolation from structural empowerment ($\beta = .60, p < .05$). It accounted for 36% of the variance in the propensity to create budgetary slack.

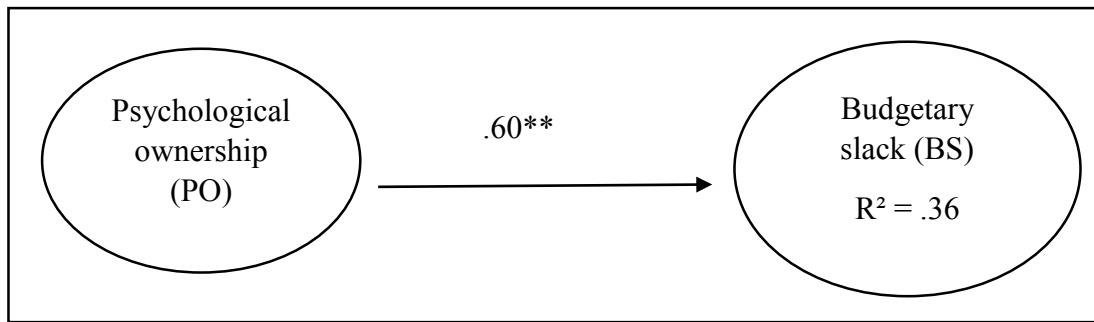


Figure 7.2: Direct effect of employees' psychological ownership on the propensity to create budgetary slack

Structural empowerment also had a direct effect on the propensity to create budgetary slack ($\beta = .76, p < .05$) (Figure 7.3). It accounted for 58% of the variance in the propensity to create budgetary slack.

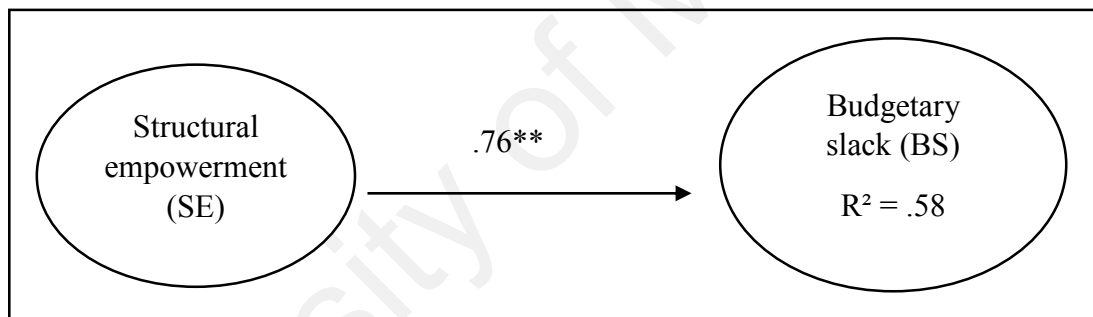


Figure 7.3: Direct effect of structural empowerment on the propensity to create budgetary slack

In Figure 7.4, after including the mediator construct (i.e., employees' psychological ownership), structural empowerment had a positive and significant effect on psychological ownership, which in turn had a positive and significant relationship with the propensity to create budgetary slack. The indirect effect of structural empowerment (i.e., $.08, p < .05$) via the employees' psychological ownership was significant.

Meanwhile, the relationship between structural empowerment and budgetary slack remained significant (Figure 7.4: $\beta = .69, p < .05$) but, with a difference in

the path coefficient of .07 (Figure 7.3: $\beta = .76, p < .05$), was significantly lower than when psychological ownership was not present (Table 7.12). Hence, the employees' psychological ownership mediated the effect of structural empowerment on the propensity to create slack.

On the other hand, the partial mediation of this model had a VAF level of 10%, which was considered to be insubstantial, since it was less than 20% (Table 7.17).

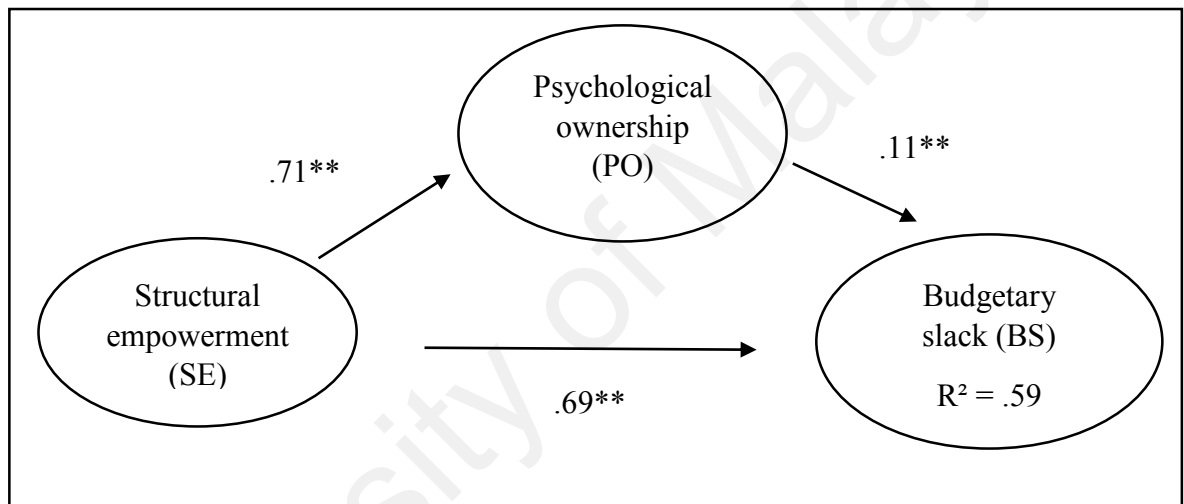


Figure 7.4: Mediation of psychological ownership on the effect of structural empowerment and the propensity to create budgetary slack

Table 7.13: Mediation analysis: structural empowerment (SE), psychological ownership (PO) and budgetary slack (BS)

Assessment procedure	Path	Path coefficient	Standard error	<i>t</i> value	<i>p</i> -value
Without mediation	SE to BS	.76	.03	26.10	<.001
With mediation	SE to PO	.71	.03	27.60	<.001
	PO to BS	.11	.05	2.11	.04
	SE to BS	.69	.05	13.65	<.001
	Direct effect	.69**			
	Indirect effect	.08**			
	Total effect	.77**			
	VAF value	.10			
Conclusion	No mediating effect				
Note: ** <i>p</i> < .05, <i>p</i> < .01					

7.4.2 Mediation of psychological empowerment on structural empowerment and the propensity to create budgetary slack

Structural empowerment had a positive and direct effect on the propensity to create budgetary slack ($\beta = .76, p < .05$). It explained 58% of the variance in the propensity to create budgetary slack (Figure 7.3).

Subsequently, the mediator (i.e., psychological empowerment) was included in the model. Structural empowerment had a positive and significant effect on psychological empowerment, which in turn had a positive and significant relationship with the propensity to create budgetary slack. The indirect effect of structural empowerment (i.e., .32, $p < .05$) via the employees' psychological empowerment was significant (Table 7.13).

At the same time, the direct effect of structural empowerment on budgetary slack was significant (Figure 7.5: $\beta = .44, p < .05$) but, with a difference in the path coefficient of .32, was significantly lower than when the employees' psychological empowerment was not present (Figure 7.3: $\beta = 0.76, p < .05$). Therefore, it was

concluded that the employees' psychological empowerment mediated the effect of structural empowerment on the propensity to create budgetary slack.

Besides, the partial mediation of this model had a VAF level of 42% and it was considered as moderate, since it was greater than 20% but less than 80% (Table 7.13).

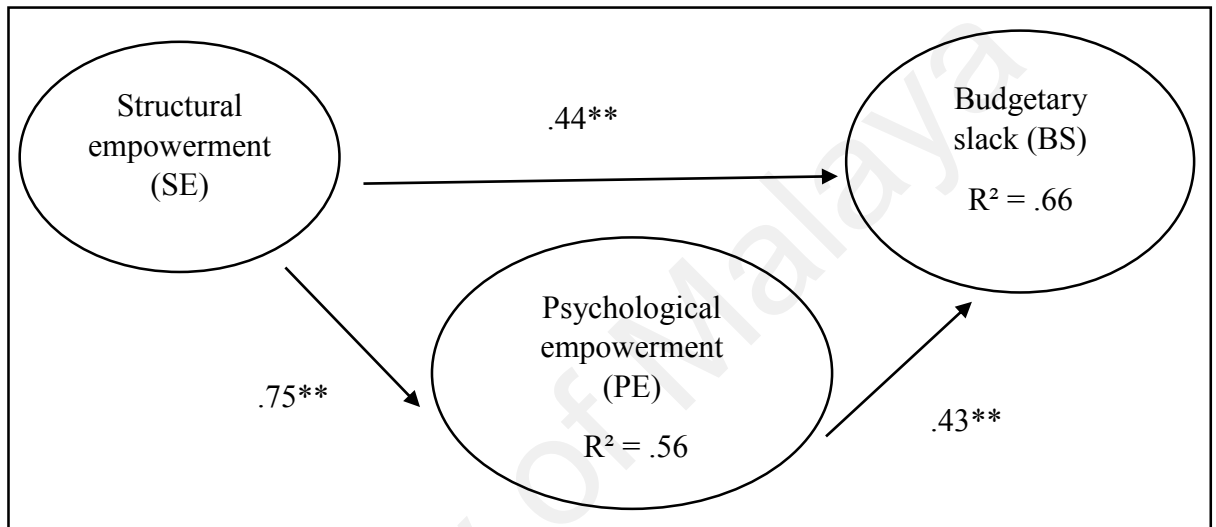


Figure 7.5: Mediation of psychological empowerment on the effect of structural empowerment and the propensity to create budgetary slack

Table 7.14: Mediation analysis: structural empowerment (SE), psychological empowerment (PE) and budgetary slack (BS)

Assessment procedure	Path	Path coefficient	Standard error	<i>t</i> value	<i>p</i> -value
Without mediation	SE to BS	.76	.03	26.10	<.001
With mediation	SE to PE	.75	.03	25.12	<.001
	PE to BS	.43	.07	6.07	<.001
	SE to BS	.44	.07	6.39	<.001
	Direct effect	.44**			
	Indirect effect	.32**			
	Total effect	.76**			
	VAF value	.42			
	Conclusion	Partial mediating effect			
Note: ** <i>p</i> < .05, <i>p</i> < .01					

7.4.3 Mediation of participation on structural empowerment and the propensity to create budgetary slack

Participation had a positive and direct effect on the propensity to create budgetary slack and accounted for 62% of the variance (Figure 7.6).

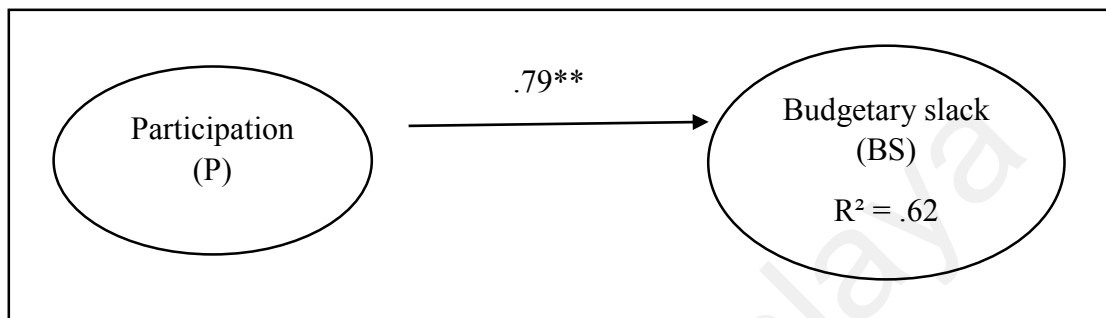


Figure 7.6: Direct effect between participation and the propensity to create budgetary slack

When participation was included as a mediator in the relationship between structural empowerment and the propensity to create budgetary slack, it had a positive and significant effect (Figure 7.6). Meanwhile, the relationship between structural empowerment and the propensity to create budgetary slack remained significant, with a significantly lower path coefficient (Table 7.14). The partial mediation of this model had a VAF level of 51%, which was considered to be moderate. Thus, it was concluded that participation mediated the effect between structural empowerment and the propensity to create budgetary slack.

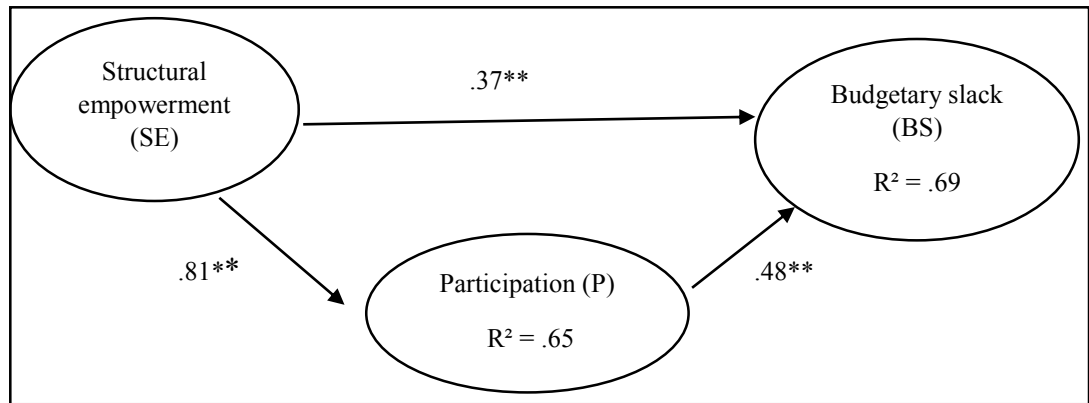


Figure 7.7: Mediation of participation on the effect of structural empowerment and budgetary slack

Table 7.15: Mediation analysis: structural empowerment (SE), participation (P) and budgetary slack (BS)

Assessment procedure	Path	Path coefficient	Standard error	<i>t</i> value	<i>p</i> -value
Without mediation	SE to BS	.76	.03	26.10	<.001
With mediation	SE to P	.81	.02	35.78	<.001
	P to BS	.48	.08	6.39	<.001
	SE to BS	.37	.07	5.00	<.001
	Direct effect	.37**			
	Indirect effect	.39**			
	Total effect	.76**			
	VAF value	.51**			
Conclusion	Partial mediating effect				
Note: ** <i>p</i> < .05, <i>p</i> < .01					

7.4.4 Mediation of psychological empowerment on participation and the propensity to create budgetary slack

Psychological empowerment partially mediated the effect of participation on the propensity to create budgetary slack (Figure 7.8 and Table 7.15). The partial mediation of this model had a VAF level of 40%, which was considered to be moderate since it was greater than 20% but less than 80% (Table 7.15).

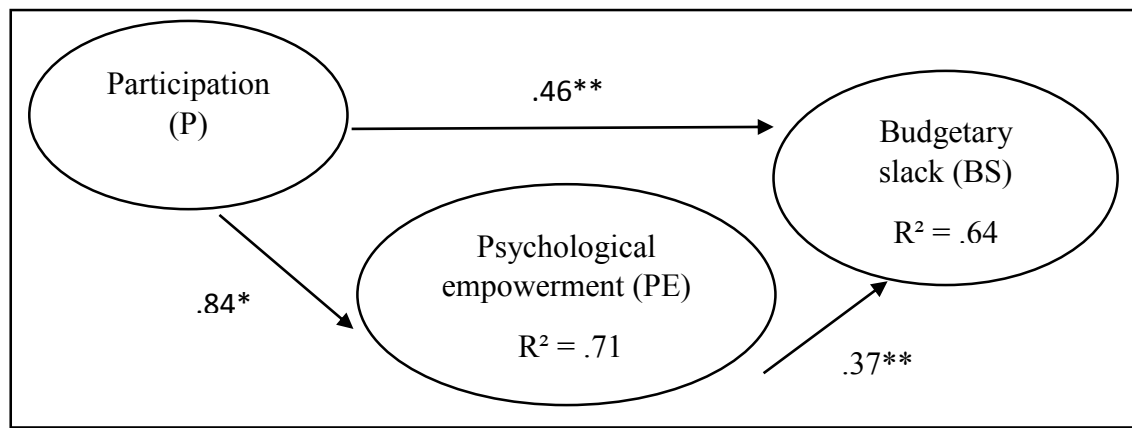


Figure 7.8: Mediation of psychological empowerment on the effect of participation on budgetary slack

Table 7.16: Mediation analysis: participation (P), psychological empowerment (PE) and budgetary slack (BS)

Assessment procedure	Path	Path coefficient	Standard error	<i>t</i> value	<i>p</i> -value
Without mediation	P to BS	.79	.03	30.57	<.001
With mediation	P to PE	.84	.02	56.46	<.001
	PE to BS	.37	.07	5.34	<.001
	P to BS	.46	.06	7.19	<.001
With mediation	Direct effect	.46**			
	Indirect effect	.31**			
	Total effect	.77**			
	VAF value	.40**			
Conclusion	Partial mediating effect				
Note: ** <i>p</i> < .05, <i>p</i> < .01					

7.4.5 Mediation of participation on structural empowerment and psychological empowerment

Structural empowerment had a positive and direct impact on psychological empowerment ($\beta = .75$, $p < .05$) (Figure 7.9). It also accounted for 56% of the variance in the employees' psychological empowerment.

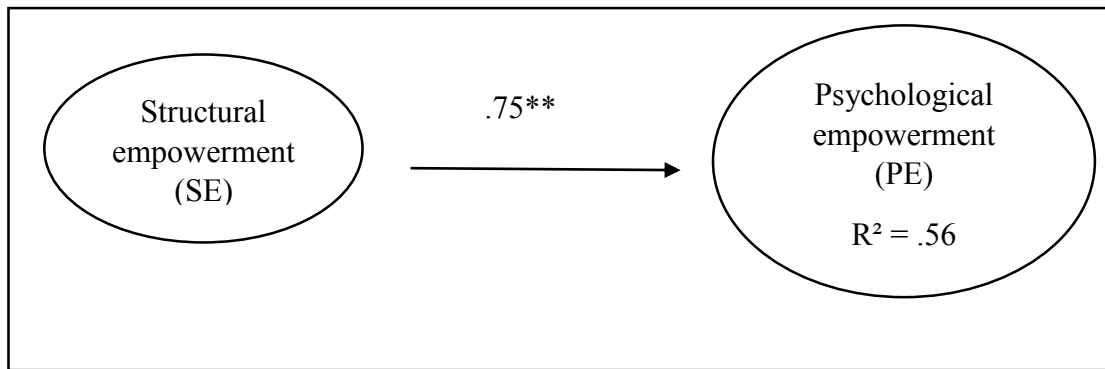


Figure 7.9: Direct effect of structural empowerment on psychological empowerment

After including participation as the mediator, structural empowerment had a positive and significant effect on participation, which in turn had a positive and significant relationship with psychological empowerment. The indirect effect of structural empowerment (i.e., .57, $p < .05$) via participation was significant (Table 7.21).

Meanwhile, the relationship between structural empowerment and psychological empowerment remained significant (Figure 7.10: $\beta = .19$, $p < .05$) but, with a difference in the path coefficient of .56, was significantly lower than when participation was not present (Figure 7.9: $\beta = .75$, $p < .05$). Hence, participation mediated the effect of structural empowerment on psychological empowerment.

In addition, the partial mediation of this model had a VAF level of 58%, which was considered to be moderate since it was greater than 20% but less than 80% (Table 7.16).

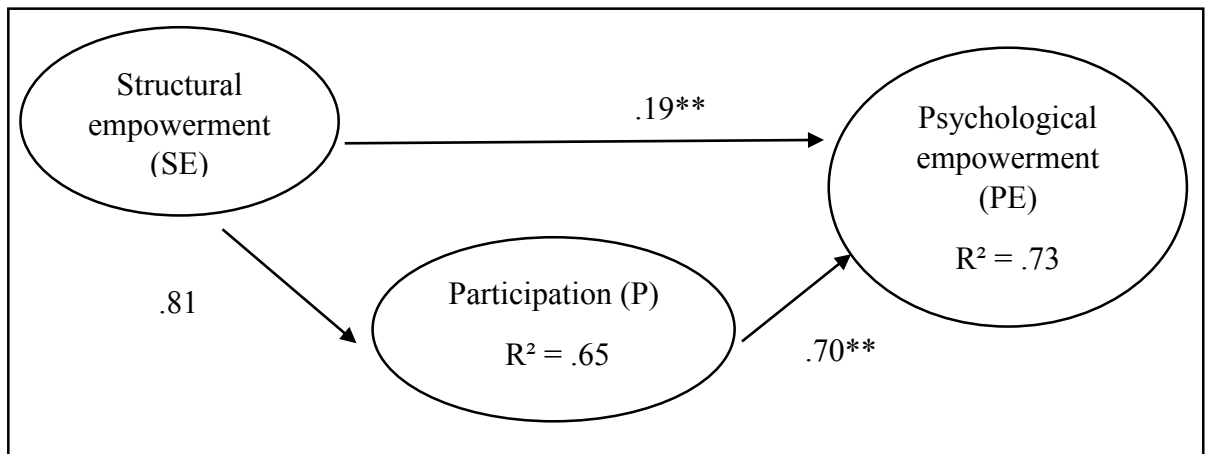


Figure 7.10: Mediation of structural empowerment on the effect of psychological empowerment through participation

Table 7.17: Mediation analysis: structural empowerment (SE), participation (P) and psychological empowerment (PE)

Assessment procedure	Path	Path coefficient	Standard error	<i>t</i> value	<i>p</i> -value
Without mediation	SE to PE	.75	.03	25.82	<.001
With mediation	SE to P	.81	.02	33.34	<.001
	P to PE	.70	.05	14.85	<.001
	SE to PE	.19	.05	3.61	<.001
	Direct effect	.19**			
	Indirect effect	.57**			
	Total effect	.76**			
	VAF value	.75			
Conclusion	Partial mediating effect				
Note: **p < .05, p < .01					

7.4.6 Hypotheses test results

The results of the field test are summarized in Table 7.18 against the research questions and hypotheses. All the tested hypotheses were supported except one hypothesis. The test of the hypothesized mediation of psychological ownership on the effect of structural empowerment on the employees' creation of budgetary slack showed that the small and statistically significant observed effect was insubstantial.

Table 7.18: Results of hypotheses testing

	Hypothesis	Result
RQ1	What is the role of employees' ownership (formal and psychological) in the creation of budgetary slack?	
H1	The greater the right of formal ownership, the more employees create budgetary slack.	Not tested
H2	The greater their formal ownership, the greater employees' psychological ownership	Not tested
H3	The greater their psychological ownership, the more employees create budgetary slack	Supported
H4	Psychological ownership mediates the effect of formal ownership on employees' creation of budgetary slack	Not tested
RQ2	What is the role of employees' empowerment (structural and psychological) in the creation of budgetary slack?	
H5	The greater their structural empowerment, the more employees create budgetary slack	Supported
H6	The greater their structural empowerment, the greater employees' psychological ownership	Supported
H7	Psychological ownership mediates the effect of structural empowerment on employees' creation of budgetary slack	Not supported
H8	The greater their structural empowerment, the greater employees' psychological empowerment	Supported
H9	The greater their psychological empowerment, the more employees create budgetary slack	Supported
H10	Psychological empowerment mediates the effect of structural empowerment on employees' creation budgetary slack	Supported
RQ3	What is the role of participation in the creation of budgetary slack when empowerment is taken into account?	
H11	The greater their structural empowerment, the greater participation in budgeting	Supported
H12	The greater their participation, the more employees create budgetary slack	Supported
H13	Participation mediates the effect of structural empowerment on employees' creation of budgetary slack	Supported
H14	The greater their participation, the greater employees' psychological empowerment	Supported
H15	Participation mediates the effect of structural empowerment on their psychological empowerment	Supported
H16	Employees' psychological empowerment mediates the effect of participation on their creation of budgetary slack	Supported

7.4.7 Empirical model: The effect of empowerment and participation on budgetary slack

The model supported by the empirical findings of this study is presented in Figure 7.11.

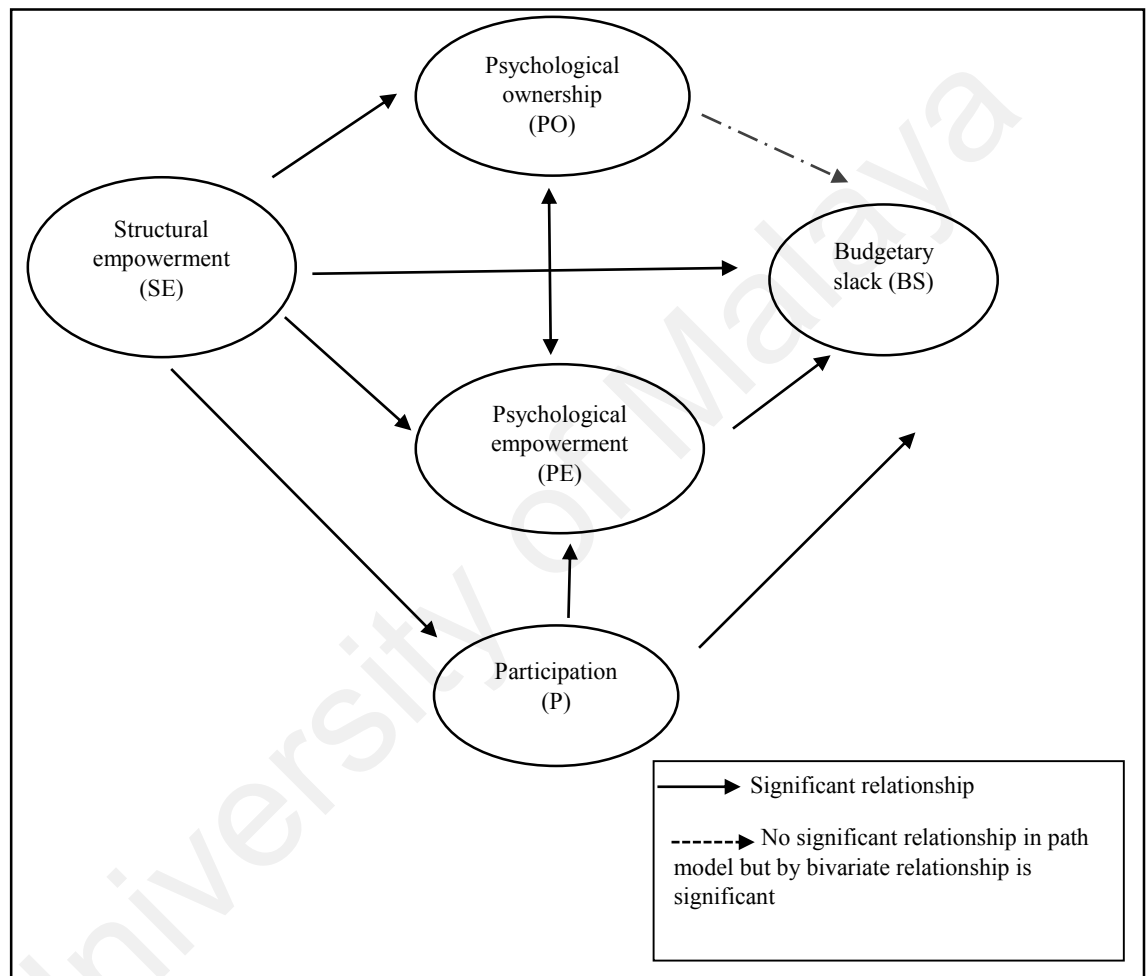


Figure 7.11: Empirical model: The effect of psychological ownership, empowerment (structural and psychological) and participation on budgetary slack

7.5 Conclusion

This chapter presented the findings of the main study in this research. The research model was tested using PLS-SEM. Both the measurement and structural models were satisfactory, and 11 of the 12 tested hypotheses were supported. The study identified the determinants of budgetary slack and the mediation tests demonstrated several interesting results. Firstly, structural empowerment had both direct and indirect effects on (i) the propensity to create budgetary slack, and (ii) the employees' psychological empowerment. Secondly, the participation had both a direct and indirect influence on the propensity to create budgetary slack. In addition, although the employees' psychological ownership had the hypothesized direct effect on the propensity to create budgetary slack when it was examined in isolation from structural empowerment, the effect was insubstantial when empowerment was taken into consideration. The findings are discussed in Chapter Eight.

CHAPTER 8

DISCUSSION AND CONCLUSION

8.0 Introduction

This chapter provides a comprehensive discussion of the empirical results presented in the previous chapter and a conclusion for the study. These results are linked back to the research problem, the main research objectives as well as the research questions. The empirical data were analysed based on 591 budget makers' questionnaires using statistical software. By revisiting the research questions, this chapter offers an empirical explanation based on the statistical findings presented in the earlier chapter.

This chapter consists of several sections. Section One provides an overview of the research. It revisits the main research problem, objectives and questions. It also discusses the various phases of the research design involved in this study. It then offers an overall empirical result based on the proposed conceptual framework.

Section Two presents a comprehensive discussion of the empirical results obtained from the empirical findings. The discussion is focused on the mediation analysis based on key variables examined in this study, namely structural empowerment, psychological ownership, psychological empowerment and budgetary slack.

Section Three discusses the implications of the empirical results from the theoretical and practical perspectives. Sections Four and Five highlight the limitations of the study and suggestions for future studies, respectively. The conclusion is discussed in Section Six.

8.1 Research overview

This study was motivated by the problems associated with budgetary slack in the participative budgeting system adopted by government agencies in Malaysia. Previous studies have examined the factors leading to budgetary slack at the organisational level and in for-profit organizations. Therefore, new research was performed to investigate the determinants of budgetary slack at the individual level in public sector organisations. The initial objective of this research was to examine how budgetary slack is influenced by ownership (formal and psychological), empowerment (structural and psychological), and participation. However, after validating the determinants of budgetary slack in phase one of the research design, formal ownership was removed from the research, because the respondents did not consider themselves as owners of the organisations. Hence, the revised objective of this study was to assess how budgetary slack is affected by the employees' psychological ownership, empowerment (structural and psychological), and participation in budgeting.

The research was conducted in five phase. First, the researcher conducted expert interviews with professional and management accountants to validate the determinants of budgetary slack in the research model. An initial pilot test showed that the scale, known as Onsi's (1973) scale, which was most commonly used to measure budgetary slack in the accounting literature, was unsatisfactory. By combining the items generated from the interviews and previous literature with Onsi's (1973) items, a revised budgetary slack instrument was developed in phase three. Subsequently, in phase four, all the research instruments were included in a pilot study for the final field study. In the last phase, the field study was carried out with the data collected from a questionnaire survey and analysis using component-based Structural Equation Modelling (PLS-SEM).

The theoretical basis for this research was drawn from the accounting, public sector management and organisational psychology literature. The concepts of authority, resource acquisition and participation were drawn from Lukka's (1988) argument in the accounting literature that these factors promote the employees' creation of budgetary slack, which is considered to be a dysfunctional behaviour. Besides, Laschinger, Finegan, Shamian & Wilk's (2001) work empowerment theory suggests that employees are empowered both structurally and psychologically. In a similar vein, the psychological ownership theory (Pierce, Rubenfeld & Morgan, 1991) proposes that employees demonstrate a sense of ownership toward their possession of organisational, including budgetary, resources, even if they do not have formal ownership of them.

Empirically, much effort has been put into examining budgetary slack from the organisational perspective in which ownership, power and participation are granted by executives or managers to employees. However, there is a lack of research that considers behavioural issues in the creation of budgetary slack from the cognitive perspective of psychological ownership, psychological empowerment and participation. In addition, no individual level research has been conducted on the creation of budgetary slack in public sector organisations.

Based on the reviewed theory, a conceptual framework was therefore developed for this study to model the relationship between ownership (formal and psychological), empowerment (structural and psychological), participation and budgetary slack, as a behavioural outcome (see Figure 3.1 in Chapter 3). Formal ownership was removed from the model after the validation interviews in the first phase because it was irrelevant to budget makers, not only in the government sector, but also in the private organisations in which the expert interviewees were working. The research model was revised accordingly (see Figure 3.2 in Chapter 3). It proposed that structural empowerment acts both directly

and indirectly in the creation of budgetary slack, and that the indirect effects are mediated by the cognitions of psychological empowerment, psychological ownership and participation.

8.2 Discussion of research findings

This section offers empirical insights into the research questions posed in Chapter One.

These are:

1. What is the role of employees' ownership (formal and psychological) in the creation of budgetary slack?
2. What is the role of employees' empowerment (structural and psychological) in the creation of budgetary slack?
3. What is the role of participation in the creation of budgetary slack when empowerment is taken into account?

8.2.1 What is the role of employees' ownership (formal and psychological) in the creation of budgetary slack?

Formal ownership does not result in the employees' creation of budgetary slack in public sector organisations. However, it is worth noting that formal ownership exists in private organisations and therefore, its concept in budgeting is contextual.

Psychological ownership affects the creation of budgetary slack, but only when it is examined in isolation from empowerment. Thus, the greater the psychological ownership of the budget makers, the greater will be their intention

to create budgetary slack. When budget makers perceive that they have resources, they are more likely to create budgetary slack.

These findings provide a deeper understanding of the role of ownership in the creation of budgetary slack than prior understanding from studies of the effect of formal ownership through, for example, the granting of equity. They ascertain that, in the absence of formal ownership and psychological ownership – the sense of possession of resources and the classification of specific assets as an extension of themselves (Pierce, Kostova & Dirks, 2001) – acts in a similar way to formal ownership to promote the creation of budgetary slack. Slack creation, therefore, appears to be associated with the employees' desire to protect their possession of budgetary resources. This is consistent with Avey, Avolio, Crossley & Luthans' (2009) theory of psychological ownership.

However, these results also show that when structural and psychological empowerment are taken into account, the employees' sense of psychological ownership has little or no additional effect on the creation of budgetary slack. In addition, structural empowerment has a strong effect on psychological ownership (explaining around 50% of the variance in the construct in this study).

8.2.2 What is the role of employees' empowerment (structural and psychological) in the creation of budgetary slack?

Structural empowerment has a direct and positive effect on the propensity to create budgetary slack. When employees are granted more authority, they are more likely to create budgetary slack. This finding adds to the understanding of budgetary slack by showing that Kanter's (1977) concept of empowerment as the

power granted to employees to make autonomous decisions with minimal approval is important for understanding slack creation behaviour.

The employees' psychological empowerment also has a positive and direct effect on the propensity to create budgetary slack. This finding suggests that budget makers are more likely to create slack not only when they have greater authority, but also when they perceive that they have greater authority. In this sense, psychological empowerment acts, as Laschinger, Finegan, Shamain & Wilk (2001) describe, as a form of informal authority practised among employers, peers and subordinates.

Psychological empowerment partially mediates the effect of structural empowerment on the propensity to create budgetary slack, and it explained 66% of the variance in slack in this study. Employees with more structurally-granted authority experience a greater sense of autonomy and subsequently, create more budgetary slack. The strong relationship between structural empowerment and psychological empowerment supports Laschinger, Finegan, Shamain & Wilk's (2001) claim that granting authority to employees is an important factor that influences the employees' perception of authority. Hence, the budget makers' sense of autonomy in the decisional outcome of budgeting is associated with the creation of greater slack, and, to a moderately large degree, this comes from an increase in authority.

8.2.3 What is the role of participation in the creation of budgetary slack when empowerment is taken into account?

The participation has a positive and direct effect on the propensity to create budgetary slack. It also has an indirect effect through its influence over

psychological empowerment. In doing so, it partially mediates the effect of structural empowerment on the propensity to create budgetary slack, as a mediator of both the direct relationship between structural empowerment and slack creation and the relationship between structural empowerment and psychological empowerment. Besides, employees who participate in budget input exchanges have a greater influence over budgeting decisions, resulting in higher budgetary slack. This finding is consistent with the observations of several accounting scholars (e.g. Fisher, Frederickson & Pfeffer, 2000).

An important extension to the work of previous accounting scholars is the demonstration of the relationship between participation and empowerment. Budget makers from public sector organisations are more likely to create budgetary slack when they participate more in budget-related matters as their authority is increased. The strong relationship between structural empowerment and participation supports Laschinger, Finegan, Shamain & Wilk's (2001) claim that employees with authority are able to exchange information to accomplish budgetary tasks. The link to the employees' psychological empowerment is consistent with Spreitzer's (1995) argument that empowered employees are more participative in shaping a greater sense of autonomy in making decisions.

Increasing the participation of budget makers in budgeting also increases their psychological empowerment, giving them a stronger feeling of autonomy. Thus, the budget makers' psychological state of empowerment is an important cognitive mechanism through which their participation influences the creation of budgetary slack.

8.3 Implications of the study

The findings presented in this study contribute to the theoretical knowledge of budgetary slack, the methodology for the study of budgetary slack, and the practice of budgeting in the public sector.

8.3.1 Theoretical implications

By moving beyond the traditional accounting perspective, this study explored the employees' creation of budgetary slack from the perspectives of psychological ownership empowerment (structural and psychological) and participation. It yielded several important theoretical implications.

Firstly, this study introduced structural empowerment as an important determinant of budgetary slack. Structural empowerment has a direct effect on the propensity to create budgetary slack. Although much research effort has been devoted to the investigation of organisational level factors that affect budgetary slack (Dunk & Nouri, 1998), this study has introduced a new theoretical lens of empowerment into the study of budgetary slack.

Secondly, this study has highlighted that structural empowerment is an important predictor of the employees' behaviour in participative budgeting. Previous researches have invested much effort into examining the effects of participative budgeting and in attempting to explain the inconclusive results of earlier studies (Shields & Shields, 1998). None of these studies considered empowerment as having an effect on participative budgeting and its outcomes. Therefore, the present study provides a new theoretical insight that structural empowerment moderates the effect of participation on budgeting.

Thirdly, individual cognitions have important and significant effects on budgetary slack. This study introduced theories of psychological ownership and empowerment to the understanding of creation of budgetary slack, which has not been examined in previous studies. Employees mentally acquire and process the knowledge about the creation of budgetary slack through thoughts and experience. The findings of this study explains the formation and outcome of employees' behaviour in terms of the mental process of budgetary slack creation. Hence, this study also offers a new theoretical perspective to the study of budgetary slack.

Fourthly, this study identified the impact of the employees' psychological empowerment on the creation of budgetary slack. Psychological empowerment has a direct effect on slack creation and partially mediates the effect of structural empowerment. Psychological empowerment has been neglected in the literature on budgetary slack (e.g. Maiga & Jacobs, 2007). Recognising the role of cognition in the new empowerment perspective on budgetary slack takes the budgeting theory beyond the traditional perspective.

Fifthly, although many studies have associated formal ownership with employees' behaviour (Kaarsemaker & Poutsma, 2006), including budgeting, formal ownership is not present in all organisations, and specifically not in the public sector organisations that were included in this study. However, psychological ownership is present, even when formal ownership does not exist. This theoretical understanding could guide the hypotheses about organisational behaviour, including the creation of budgetary slack, that have previously been associated with formal ownership.

Finally, psychological ownership appears to have no significant effect on the propensity to create budgetary slack once structural empowerment is taken into consideration. Much consideration has been given to the effect of psychological ownership on employees' behaviour (O'Driscoll, Pierce & Coghlan, 2006), yet this study suggests that empowerment, rather than ownership, explains the behaviour of employees with regard to budgeting. This finding suggests that the psychological ownership theory does not contribute to the theoretical understanding of budgetary slack.

In short, this study concludes that empowerment (structural and psychological) and participation are determinants of budgetary slack at the individual level in public sector organisations. In addition, employees' psychological ownership is not a cause of budgetary slack in organisations, when structural empowerment is taken into consideration. Formal ownership is also not present in public sector organisations.

8.3.2 Methodology contributions

This study contributed to the methodology in several ways.

Firstly, it developed and validated an index to measure budgetary slack. The development of a new budgetary slack instrument was necessary given the less than satisfactory performance of existing measurement scales and inconsistent results in previous studies. As a result, researchers and practitioners are advised to be cautious about the interpretation of the results of budgetary slack studies. Numerous studies adopted the instrument known as Onsi's (1973) scale to examine the antecedents to and the consequences of budgetary slack (Lau & Eggleton, 2004; Lau, 1999). However, no consideration was given to whether

budgetary slack was better measured with an index or a scale. In this current study, budgetary slack was treated as a behaviour which would be better measured by an index. This approach produced a satisfactory result. In addition, the new budgetary slack index is appropriate for studies of budgetary slack in the public sector and is applicable in countries where English is not the only business language, such as in Malaysia.

Secondly, expert interviews were used to validate the determinants of budgetary slack. The interviewees' opinions were useful in determining whether ownership, empowerment, participation and budgetary slack, as incorporated in the conceptual framework were worth examining empirically. In doing so, a more in-depth knowledge about the determinants of budgetary slack was gained.

Thirdly, the selection of public sector organisations for the study was another contribution. This thesis is among the few studies that examined the budgeting environment of government agencies, even though new public management (NPM) reforms are being greatly emphasised in Malaysia.

8.3.3 Practical contributions

These results suggest that less budgetary slack may be created in public sector organisations if the authority for budget decisions is distributed differently, restricted or even centralised. One way to reduce slack may be to assign independent budgeting tasks to budget makers. The results suggest that empowering budget makers with authority over different aspects of the budget may reduce the amount of slack created.

Secondly, budget makers may comply strictly to the management's instructions concerning the performance of budgeting tasks in order to avoid the

creation of slack. They may also monitor the mobilisation of valuable resources in budgeting. Hence, an inference that could be drawn is that public sector organisations encourage greater direct control in budgeting to better manage the behaviour of budget makers.

Thirdly, the management of public sector organisations may have the ultimate authority to make decisions in budgeting, even though the budget makers' inputs are considered, to avoid the creation of slack. The management may always maintain a pre-conceived notion of the decisional outcome in budgeting, while encouraging budget makers to provide valuable inputs in discussions. The absence of inputs from employees may demotivate them in their behaviour and yet, there is an argument that employees' inputs from participative budgeting may be evaluated critically. Previous researchers (e.g. Chong, Eggleton & Leong, 2006; Awio & Northcott, 2001; Douglas & Wier, 2000) have made suggestions to evaluate the quality of inputs by assessing employees' past history of slack creation. The higher the budgeting authority of the budget maker, the greater will be the scrutiny that will likely be required, given the strong relationship between empowerment and the propensity to create slack in this study.

8.4 Limitations of the study

This study has several limitations. Firstly, the propensity to create budgetary slack is an imperfect indicator for predicting the employees' actual behaviour. The introduction of stronger controls on the taking up of individual employees' budget estimates may not immediately reduce the propensity to create slack but could reduce actual slack.

Secondly, this study did not include senior managerial budget makers. Thus, the conclusions drawn and the implications for practice could be specific only to low and middle levels budget makers in public sector organisations.

Thirdly, this study did not examine the difference that may exist among different types of public sector organisations. For instance, slack behaviour of employees from Ministry of Finance may be of difference from that in Ministry of International Trade and Industry. Budget makers from Ministry of Finance may have more budgeting experience in budgetary activities as compared to other ministries. While these results provide a generic view, detailed study within each Ministry would be required to determine specific influences on slack behaviour in each specific context.

Fourthly, there is a lack of recognition of the difference of slack behaviour that may exist between budget makers at the ministerial level organisations and departmental level organisations. Budget makers at the ministerial level organisations usually oversee budgetary activities performed at departmental level organisations. They may have more budgetary input from departmental level organisations. In this regard, they may be able to provide a higher level viewpoint about budgeting activities as compared to those at departmental level organisations. In spite of its general viewpoint about budgetary behaviour, a comprehensive examination between ministerial and departmental level organisations would effectively determine a definite impacts on slack behaviour within each context.

Lastly, respondents in this study were not distinguished by the system of job grading, which is commonly practised in public sector organisations. Such information may help to identify differences in slack behaviour between different levels of budget makers within organisations. Hence, the results of this study and the implications of

practice could only be specific to budget makers who are ranked according to a generalised job levels.

8.5 Suggestions for future study

This study offers several insights to enrich the body of knowledge concerning cognitive behavioural perspectives on ownership, empowerment, participation and budgetary slack for the purpose of future research.

Firstly, future researchers are encouraged to explore the need for and the use of budgetary control to restrain the authority of budget makers to avoid budgetary slack. The question that may be considered is that what amount of authority is sufficient for employees to effectively perform budgeting, while avoiding the creation of budgetary slack.

Secondly, an investigation into the actual behaviour of budget makers in the creation of budgetary slack may be considered. Future researchers may consider using an experimental or longitudinal approach to examine how budget makers use power to allocate or distribute valuable budgetary resources.

Thirdly, it is suggested that budget makers from senior management be included in future studies. The senior management has to exercise its authority to make decisions in times of uncertainty, so their budgeting tasks are unstructured and non-routine.

Fourthly, the research model can be adopted for researches into the creation of budgetary slack in private sector organisations. Some studies have concluded that there are differences in the roles of employees in the creation of budgetary slack, depending on the nature of their organisations (e.g. Shields & Shields, 1998). The model developed in this thesis may be used to study budgeting behaviours in different types of organisations,

including those in which budget makers from private organisations are entitled to equity through an employees' stock ownership plan (ESOP).

Fifthly, it is suggested that future researchers validate the results of this study in other countries, particularly in developing countries which share a similar public administration background to that of Malaysia. In all national contexts, researchers may explore national-level factors that influence slack in public sector agency budgeting. Such factors may include the public policy of the central government (Abdullah, Warokka & Kuncoro, 2011) and the political behaviour of senior bureaucrats (Ahmad, Mansor & Ahmad, 2003; Tamam, Hassan & Said, 1996).

Sixth, future research is suggested to apply the research model to examine the slack creation behaviour of budget makers in government linked companies in Malaysia. Their budget makers may demonstrate slack behaviour that is of difference from public sector organisations. Similar with public sector organisations, government-linked companies support corporatisation in which the result-oriented management is practised. However, budget makers from these companies may be permissible to accumulate budgetary resources for flexibility in operational system (Van der Stede, 2000; Dunk, 1993) to improve managerial effectiveness. Hence, it may be an interesting research to further examine the budgetary behaviour of budget makers in government linked companies.

Seventh, future researchers to examine the effect of differences between different groups of public sector organisations and public sector employees. Comparisons might also be made between ministerial and departmental level organisations, and between different types of organisations, such as those that provide specific services (e.g., education) and general administration. Multi-group analyses could also compare different levels of employee and examine the effects of demographic differences such as gender.

8.6 Conclusion

This study developed and tested a research model that explained the determinants of budgetary slack in public sector organisations in cognitive terms, moving beyond the traditional perspective in accounting research that has relied on organisational perspectives. It has shown that empowerment plays a key role in slack creation in budgeting. Centralising the budgeting practice within the hierarchal structure of public sector organisations may be the most effective, indeed the only, way to avoid the creation of budgetary slack.

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Appendices

University of Malaya

Appendix A

Interview invitation letter and questions



Date

Dear Sir/Madam,

REQUEST FOR PERMISSION TO CONDUCT AN INTERVIEW

With regards to the matter above, I, Cheok Mui Yee, am a PhD candidate in University of Malaya who is currently working on my thesis writing. I would like to seek your permission to participate in an interview project, which is a part of my research requirement in completion of PhD thesis.

This research examines employees' perception in budget planning and decision-making. Specifically, I hope to investigate possible reasons that affect employees' preparation of budgets and possible motivational approaches to improve employees' budget making.

The interview should take about one hour. Please be asserted that all information will be kept strictly confidential as it will only be used for the purpose of academic research and no identification in you or your organization will be revealed in the report.

I attach herewith a copy of interview questions for your kind perusal.

If you have any inquiry, please do not hesitate to contact me at 6019-3728529 or email to cheok_my@siswa.um.edu.my.

Once again, your approval and valuable information provided is highly appreciated.

Thank you.

Yours sincerely,

Cheok Mui Yee

Supervised by:
Assoc. Prof. Dr. Edward Wong
Senior Lecturer
Faculty of Business & Accountancy
University of Malaya

Interview guide

Guidelines:

- The interview session will be commenced once interviewee's consent is granted.
- Introduction to researcher and affiliation.
- Seek the interviewee's permission to record the session.
- Assurance of information confidentiality and participant's identity.

Scope:

The interview has open-ended questions that covers issues on:

- Problems encountered in budget preparation and execution.
- Employees' possession of organisational resources financially.
- Employees' feeling of possessing organisational resources.
- Granting employees with power in budgeting.
- Employees feeling of authority utilisation in budgeting.
- Employees' participation in budgeting process.

Briefing to participants:

- There are five sections in this interview.
- Interviewees are briefed to provide insight based on the case scenario for the interview questions in section A.

Demographic information:

Could you please provide the following information for me?

- Your designation: _____
- Gender: _____
- Age: _____
- Nationality: ___ Malaysian ___ Non-Malaysian
- Years of working experience: _____
- Nature of work sector: ___ Government sector ___ Private sector
- Nature of employment: ___ Employee ___ Self-employed
- The job description in your organisation

Interview questions

Section A: Problems encountered in budget preparation and execution

Case scenario:

According to the Auditor's General Report 2011, public agencies experience problems in budget planning and execution. Specifically, it is related to employees' ineffectiveness of financial control in the areas of revenue & expenditure. These agencies are therefore advised to take corrective actions to improve employees' effectiveness in budgeting.

Considering the case above, kindly provide your opinion on the following sections:

1. What are the criteria of a well-planned budget?
2. What factors cause the failure of achieving the objectives of budget planning and execution?
3. What is your expectation when you are requested to achieve objectives of budget planning and execution?
4. What factors cause the mismatch between revenue with expenditure estimation in budgeting?
5. What would you do if you experience difficulty in reconciling revenue to expenditure estimation?

Section B: Employees' possession of organisational resources financially

Interview questions:

1. As employees, what types of organisational resources do you possess financially?
2. Do you frequently obtain organisational resources that is more than what you require in budgeting? If so, why do you obtaining these additional resources?
3. As employees, do you think you have the right to possess these additional resources? If so, how do you obtain them?

Section C: Employees' feeling of possessing organisational resources

Interview questions:

1. Do you feel that you are an important employee because you possess organisational resources for budgeting?
2. While preparing or executing budgets, do you feel that the organisational resources are yours? If yes (no), why do you think so?
3. What factors motivate you to treat these resources as yours in budgeting?
4. Do you think it will affect your planning and executing budgets when you perceive these resources are your? If so, how does it affect you?
5. How would you behave in front of your superiors when you perceive these resources as yours in budgeting?

Section D: Granting employees with power in budgeting

Interview questions:

1. Do you organisation practise top-down (vertical) or bottom-up (horizontal) budgeting?
2. Are you given power to perform your budget related work effectively? If yes (no), why do you think so?
3. In what ways do you think you are given power to perform your budget related work effectively?

Section E: Employees feeling of authority utilisation in budgeting

Interview questions:

1. Do you think you have the power to influence the decisional outcome in budgeting?
If yes (no), why do you think so?
2. Relating to question one, in what ways do you think you have influenced the decisional outcome in budgeting using your power?
3. What reasons induce you to influence the decisional outcome in budgeting using your power?
4. How do you feel when you think that you have power to change the decisional outcome in budgeting?

Section F: Employees' participation in budgeting process

Interview questions:

1. Are you given opportunity to participate any budget related discussion? If yes (no), why do think so?
2. What types of budget related discussion have you participated recently?
3. What factors encourage you to participate budget related discussions?
4. Do you contribute your idea/comment/suggestion when you participate budget related discussions? If yes (no), why do you think so?
5. Relating to question four, in what way have you contributed your idea/comment/suggestion in discussions and then applied it onto budget planning and execution?

Appendix B

Cover letter and bilingual questionnaire sample



Cheok Mui Yee
Fakulti Perakaunan dan Perniagaan
University Malaya,
50603 Kuala Lumpur

Tarikh

Name Organisasi

Datuk/Datin/Tuan/Puan,

Perkara: Permohonan Untuk Menjalankan Penyelidikan

Saya merujuk kepada perkara diatas.

Saya, Cheok Mui Yee, adalah studen PhD di Universiti Malaya, kini sedang menjalankan kajian penyelidikan seperti di atas. Disini saya ingin membuat permohonan bebenaran supaya kakitangan dari ibu pejabat dan cawangan-cawangan pejabat di seluruh Malaysia untuk menyertai kajian penyelidikan tersebut. Penyelidikan ini adalah sebahagian daripada memenuhi syarat-syarat kelayakan tesis PhD saya.

Matlamat penyelidikan ini ialah untuk menyelidiki persepsi tugas kakitangan dalam penyediaan bajet dan membuat keputusan terhadapnya. Terutama sekali, ia dapat kaji selidik kemungkinan haluan motivasi untuk menggalakkan kakitangan secara intrinsik dengan tujuan menaikkan taraf dan prestasi kerja mereka dengan lancar.

Bersama dilampirkan salinan surat pengesahan dan sokongan dari Universiti Malaya.

Untuk pengetahuan tuan, semua maklumat yang diterima dari penyelidikan tersebut adalah sulit dan digunakan semata-mata untuk kajian akademik iaitu untuk analisa agregat dan tiada maklumat atau identiti peserta akan didedahkan.

Sekira tuan ada pertanyaan lanjut sila hubungi saya di talian bimbit 019 3728529 atau melalui emil cheok_my@siswa.um.edu.my.

Sekian terima kasih.

Yang ikhlas,

Cheok Mui Yee
019 3728529



Versi: FM WOC

Kod: _____

Peserta Yang Dihormati,

Kajian ini bertujuan mengkaji persepsi pekerja terhadap penyediaan belanjawan di sesebuah jabatan atau organisasi. Urusan ini akan mengambil jangka masa 15 minit. Sila jawab SEMUA soalan di muka surat berikut dengan mematuhi arahan yang terdapat di setiap seksyen.

Semua maklumat akan dianggap sulit dan digunakan khas untuk maksud penyelidikan akademik sahaja.

Sekiranya terdapat sebarang pertanyaan, sila hubungi saya di cheok_my@siswa.um.edu.my atau telefon bimbit **019-3728529**.

Terima Kasih

Catitan:

Peserta yang menjawab soal selidik ini seharusnya pernah menyedia bajet sekurang-kurangnya sekali di sesebuah jabatan atau organisasi.

Jika tidak, sila kembalikan soal selidik ini kepada pegawai yang bertanggungjawab terhadap pengedaran soal selidik.

Ruang yang disediakan untuk soalan menunjukkan tahap mana anda setuju atau tidak setuju dengan pada sesuatu soalan. Untuk satu soalan berikut pilih jawapan dengan pangkah “X” pada ruang yang disediakan seperti di bawah:

Seksyen A

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	<i>Kerja bajet yang saya buat ini adalah amat penting bagi saya.</i>	
9	I seek more organisational resources than absolutely necessary when preparing a budget. <i>Saya cuba memperolehi lebih banyak sumber organisasi daripada yang diperlukan apabila menyediakan bajet.</i>	Agree ____:____:____:____:____:____:____: Disagree
10	No matter who I am talking to, I am always a good listener. <i>Tidak kira dengan siapa saya berbual, saya memang seorang pendengar yang baik.</i>	Agree ____:____:____:____:____:____:____: Disagree
11	My superior has listened to my request, opinions or suggestions about budget matters. <i>Pegawai atasan saya telah mendengar kepada permintaan, pandangan atau cadangan saya tentang hal hal belanjawan.</i>	Agree ____:____:____:____:____:____:____: Disagree
12	The amount of opportunity I have to do a challenging budgetary work in my present job. <i>Setakat mana berpeluang membuat kerja bajet yang mencabar dalam tugas saya kini .</i>	A lot ____:____:____:____:____:____:____: Very little
13	I am confident about my ability to do my budgetary work. <i>Saya yakin dengan kemampuan saya melaksanakan kerja bajet .</i>	Agree ____:____:____:____:____:____:____: Disagree
14	In good times, my superior accepts a reasonable level of slack in a budget. <i>Di waktu makmur, pegawai atasan saya menerima tahap kendur/leka bajet yang munasabah.</i>	Agree ____:____:____:____:____:____:____: Disagree
15	My superior frequently seeks for my request, opinions and/or suggestions when the budget is being set. <i>Pegawai atasan sentiasa cuba mendapatkan permintaan, pandangan dan/atau cadangan saya semasa belanjawan di sediakan.</i>	Agree ____:____:____:____:____:____:____: Disagree
16	The amount of opportunity I have to gain new skills and knowledge from budgetary work in my present job. <i>Peluang tersedia bagi saya untuk memperolehi kemahiran baru dan pengetahuan dari kerja bajet dalam tugas semasa saya ini.</i>	A lot ____:____:____:____:____:____:____: Very little
17	I can decide on my own how to go about doing my budgetary work. <i>Saya boleh membuat keputusan sendiri mengenai cara mengendalikan kerja bajet saya.</i>	Agree ____:____:____:____:____:____:____: Disagree
18	I understand that there is a difference between what goes in the budget and actual projected expenditure. <i>Saya memahami bahawa terdapat perbezaan antara kandungan bajet dan perbelanjaan terunjur sebenar.</i>	Agree ____:____:____:____:____:____:____: Disagree
19	I have been given assurance and/or support by my superior in achieving changes in budgeting.	Agree ____:____:____:____:____:____:____: Disagree

18	The amount of resources available to acquire temporary help when needed to do budgetary work in my present job. <i>Jumlah sumber yang ada untuk memperolehi bantuan sementara bila perlu melaksanakan tugas bajet dalam pekerjaan semasa ini.</i>	A lot ____:____:____:____:____:____:____ Very little
19	I have mastered the skills necessary for my budgetary work. <i>Saya telah menguasai kemahiran yang diperlukan untuk kerja bajet saya.</i>	Agree ____:____:____:____:____:____:____: Disagree
20	I have been asked by others about any special factor I would like considered in the budgeting being prepared. <i>Saya telah ditanya oleh orang lain tentang mana mana faktor khusus yang saya ingin perlu diberi pertimbangan dalam belanjawan yang disediakan.</i>	Agree ____:____:____:____:____:____:____: Disagree

Seksyen C

1	The amount of support I get on helpful hints or problem solving advice on budgetary work in my present job. <i>Tahap sokongan yang saya dapat dari tunjuk ajar dan nasihat untuk menyelesaikan masalah bajet dalam kerja saya kini.</i>	A lot ____:____:____:____:____:____:____ Very little
2	The budgetary work that I do is meaningful to me. <i>Tugas bajet yang saya buat ini bermakna bagi saya.</i>	Agree ____:____:____:____:____:____:____: Disagree
3	The amount of opportunity I have in budgetary work to help managers solve problems. <i>Peluang di mana saya dapat membantu pengurus untuk menyelesaikan masalah kerja bajet.</i>	A lot ____:____:____:____:____:____:____ Very little
4	To protect myself, I submit a budget that can be safely attained. <i>Bagi melindungi diri, saya menyerahkan bajet yang boleh dicapai dengan selesa.</i>	Agree ____:____:____:____:____:____:____: Disagree
5	The amount of opportunity I have in budgetary work to collaborate with immediate superior. <i>Peluang yang saya ada di kerja bajet untuk bekerjasama dengan pegawai atas.</i>	A lot ____:____:____:____:____:____:____ Very little
6	I have significant autonomy in determining how I do my budgetary work. <i>Saya ada autonomi yang ketara untuk menentukan cara pelaksanaan kerja bajet.</i>	Agree ____:____:____:____:____:____:____: Disagree
7	The amount of support I get on specific information about budgetary work that I do well in my present job. <i>Kadar sokongan yang saya dapat dengan maklumat tertentu mengenai kerja bajet untuk saya membuat kerja dengan baik.</i>	Agree ____:____:____:____:____:____:____: Disagree

8	Corrective action for budget difference in my department has been under my direction. <i>Tindakan untuk memperbaiki perbezaan belanjawan dalam jabatan saya telah dijalankan di bawah pengawasan/pengarahan saya.</i>	Agree ____:____:____:____:____:____:____: Disagree
9	The amount of flexibility in handling budget matters. <i>Tahap kelonggaran dalam bajet/menetapkan bajet.</i>	A lot ____:____:____:____:____:____:____ Very little
10	I have never intensely disliked anyone. <i>Saya tidak pernah sama sekali benci sesiapa.</i>	Agree ____:____:____:____:____:____:____: Disagree
11	The amount of opportunity I have to seek ideas from professional accountants other than immediate superiors. <i>Kadar peluang yang saya ada untuk mendapat nasihat dari akauntan profesional selain dari pegawai atasan saya.</i>	A lot ____:____:____:____:____:____:____ Very little
12	Overall, my current work environment empowers me to accomplish my budgetary work in an effective manner. <i>Pada keseluruhannya, suasana tempat kerja memberi saya kuasa mencapai tugas bajet secara efektif.</i>	Agree ____:____:____:____:____:____:____: Disagree
13	Budgets have included changes that I have suggested. <i>Perubahan/pindaan yang saya telah mencadangkan diambilkira dalam belanjawan.</i>	Agree ____:____:____:____:____:____:____: Disagree
14	The amount of rewards for innovation in handling budget matters. <i>Jumlah ganjaran untuk inovasi dari bajet/penetapan bajet..</i>	A lot ____:____:____:____:____:____:____ Very little
15	I prepare a budget that is favourable to my employer's request. <i>Saya menyediakan bajet yang menyebelahi permintaan majikan saya.</i>	Agree ____:____:____:____:____:____:____: Disagree
16	The amount of visibility of my budgetary work-related activity within the organisation. <i>Kadar penglihatan aktiviti kerja berkaitan bajet saya di dalam organisasi.</i>	A lot ____:____:____:____:____:____:____ Very little
17	The budget is not finalised until I am satisfied with it. <i>Belanjawan ini tidak dimuktamadkan sehingga saya berpuas hati dengannya.</i>	Agree ____:____:____:____:____:____:____: Disagree
18	When I do not know something, I will readily admit it. <i>Saya rela mengaku jika saya tidak tahu..</i>	Agree ____:____:____:____:____:____:____: Disagree
19	Overall, I consider my workplace to be an empowering environment for doing budgetary work. <i>Pada keseluruhannya, saya anggap suasana tempat kerja memberi kuasa untuk saya melaksanakan kerja bajet.</i>	Agree ____:____:____:____:____:____:____: Disagree

Instruction for Part D: Below are statements that describe how you may think about yourself right now. Use the following scales to indicate your level of agreement or disagreement with each statement.

Strongly agree	Agree	Somewhat agreed	Somewhat disagree	Disagreed	Strongly disagree
1	2	3	4	5	6

Panduan untuk seksyen D: Dibawah adalah kenyataan kenyataan yang menghuraikan bagaimana anda berfikir tentang diri sendiri pada masa ini. Sila menggunakan skala dibawah untuk menunjukkan tahap persetujuan atau tidak persetujuan dengan setiap kenyataan.

<i>Sangat bersetuju</i>	<i>Bersetuju</i>	<i>Agak bersetuju</i>	<i>Agak tidak bersetuju</i>	<i>Tidak bersetuju</i>	<i>Tidak bersetuju langsung</i>
1	2	3	4	5	6

1	I feel I need to protect my budgetary idea from being used by others in my organization. <i>Saya rasa saya perlu melindungi pendapat saya tentang belanjawan daripada digunakan oleh orang-orang lain dalam organisasi.</i>	1	2	3	4	5	6
2	I feel that people I work with in my organisation should not invade my budget matters. <i>Saya rasa rakan sejawat dalam organisasi tidak harus melibatkan diri dalam hal hal belanjawan saya.</i>	1	2	3	4	5	6
3	I feel I need to protect my property from being used by others in this organisation. <i>Saya rasa saya perlu melindungi hak milik saya daripada digunakan oleh rakan sejawat dalam organisasi.</i>	1	2	3	4	5	6
4	I feel I have to tell people in my organisation to 'back off' from budgetary projects that are mine. <i>Saya rasa saya perlu memberitahu rakan sejawat dalam organisasi untuk tidak bercampur tangan dalam projek projek belanjawan saya.</i>	1	2	3	4	5	6
5	I am confident in my ability to contribute to my success in the budgetary work. <i>Saya yakin keatas kebolehan saya untuk menyumbang kearah kejayaan saya dalam tugas belanjawan.</i>	1	2	3	4	5	6
6	I am confident I can make a positive difference in this budgetary work. <i>Saya yakin saya boleh membuat perbedzaan yang positif dalam tugas belanjawan ini.</i>	1	2	3	4	5	6
7	I am confident setting high performance goal in my budgetary work. <i>Saya yakin menetapkan objektif prestasi yang tinggi dalam tugas belanjawan saya.</i>	1	2	3	4	5	6
8	I would challenge anyone in my organisation if I thought something was done wrong in budget matters. <i>Saya sedia bercabar sesiapa dalam organisasi jika saya berfikir terdapat sebarang kesilapan dalam hal hal belanjawan.</i>	1	2	3	4	5	6
9	I would not hesitate to tell my organisation if I saw something that was done wrong in budget matters/work.	1	2	3	4	5	6

	<i>Saya tidak teragak-agak memberitahu organisasi saya jika saya melihat sesuatu kesalahan/kesilapan dibuat dalam hal-hal/ tugas belanjawan.</i>					
10	I feel I belong in this budgetary team. <i>Saya rasa saya menganggotai pasukan belanjawan.</i>	1	2	3	4	5 6
11	This place (i.e., organisation) is home for me to perform budget matters. <i>Tempat ini (organisasi ini) adalah gelanggang saya untuk menjalankan hal-hal belanjawan.</i>	1	2	3	4	5 6
12	I am totally comfortable being in this budgetary team. <i>Saya selesa sangat berada dalam pasukan belanjawan ini.</i>	1	2	3	4	5 6
13	I feel this budgetary team's success is my success. <i>Saya rasa kejayaan pasukan belanjawan adalah kejayaan saya.</i>	1	2	3	4	5 6
14	I feel being a member in this budgetary team helps defines who I am. <i>Saya rasa menjadi anggota pasukan belanjawan ini membantu membentuk watak saya.</i>	1	2	3	4	5 6
15	I feel the need to defend my budgetary work when it is criticised. <i>Saya rasa keperluan mempertahankan tugas belanjawan saya apabila dikritikan.</i>	1	2	3	4	5 6

Panduan untuk seksyen E: Untuk soalan berikut, pilih respons/jawab balas yang sesuai dengan pangkah X pada tempat disediakan.

Contoh : X Puas Tidak Puas

Jantina	<u> </u> Lelaki <u> </u> Perempuan
Umur	<u> </u> Bawah 21 tahun <u> </u> Antara 21 dan 30 tahun <u> </u> Antara 31 dan 40 tahun <u> </u> Antara 41 dan 50 tahun <u> </u> 50 tahun ke atas
Gaji	<u> </u> RM2,000 atau ke bawah <u> </u> Antara RM2,001 dan RM3,000 <u> </u> RM3,001 dan RM4,000 <u> </u> Antara RM4,001 dan RM5,000 <u> </u> Antara RM5,001 dan RM6,000 <u> </u> Atas RM6,000
Status pekerjaan semasa	<u> </u> Bukan Pengurusan <u> </u> Pengurusan <u> </u> Lain-lain. Sila terangkan <u> </u>
Gred pekerjaan semasa	<u> </u>
Berapa tahun membuat bajet	<u> </u> Kurang dari 1 tahun <u> </u> Antara 1 dan 5 tahun <u> </u> Antara 6 dan 10 tahun <u> </u> Antara 11 dan 15 tahun <u> </u> Antara 16 dan 20 tahun <u> </u> Lebih dari 20 tahun

Berapa tahun bekerja di organisasi sekarang	<input type="text"/> Kurang dari 1 tahun	<input type="text"/> Antara 1 hingga 5 tahun
	<input type="text"/> Antara 6 hingga 10 tahun	<input type="text"/> Antara 11 hingga 15 tahun
	<input type="text"/> Antara 16 hingga 20 tahun	<input type="text"/> Lebih dari 20 tahun

Terima kasih kerana meluangkan masa dan kerjasama anda.

Researcher's contact detail:

Name: Ms. Cheok Mui Yee, Email address: cheokmy@siswa.um.edu.my

University of Malaya, Faculty of Business & Accountancy

Appendix C

Cover letter and budgetary slack instrument development questionnaire



VERSION: SI WOC

Code: _____

Dear participant,

This study seeks to examine employees' perception in preparing budget in a department or organisation. This exercise should take about 15 minutes of your time. Kindly answer **ALL** questions on following pages according to the instruction given on each section.

If you are of the opinion that the meaning of a statement is unclear, kindly suggest alternative wording that expresses the meaning more clearly.

All information will be treated with strict confidence and for the use of academic research only.

If you have any enquiry, please do not hesitate to contact me at cheok_my@siswa.um.edu.my.

Thank you.

Remark:

The participant who answers this questionnaire should have at least once prepared a budget in a department or organisation for higher management's review.

Otherwise, kindly return this questionnaire to the person-in-charge of questionnaire distribution.

Instruction for section A:

For each of the following statement, select your answer by putting an “X” in the space provided below:

Example: Agree ___: X ___: ___: ___: ___: ___: Disagree

1	I comply fully with my employer’s request when I prepare a budget.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
2	It is difficult to meet actual budget targets.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
3	I seek more organisational resources than absolutely necessary when preparing a budget.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
4	I pre-assess the budget I prepare to make sure it is achievable.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
5	There is always a variance between budgeted and actual expenditure.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
6	I prepare a budget that is favourable to my employer’s request	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
7	I have never deliberately said something that hurts someone’s feelings.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
8	To protect myself, I submit a budget that can be safely attained.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
9	I keep my personal estimates to myself when preparing estimates for my employer.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
10	No matter who I am talking to, I am always a good listener.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
11	It is never possible to spend the allocated budget as expected.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
12	When I do not know something, I will readily admit it.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree
13	I try to balance personal estimates with the outcome expected by my employer when I prepare the budget.	Agree ___: ___: <u> </u> ___: ___: ___: ___: Disagree

14	Slack in the budget is good to do things that cannot be officially approved.	Agree ____:____:____:____:____:____ Disagree
15	I set two levels of standards: one set is between me and my immediate superior, and another set is between me and my employer, to be safe.	Agree ____:____:____:____:____:____ Disagree
16	A well planned budget cannot always be met because of the difference between the organisation's needs and the availability of internal resources.	Agree ____:____:____:____:____:____ Disagree
17	I have never been irritated when people expressed ideas very different from my own.	Agree ____:____:____:____:____:____ Disagree
18	There is a difference between what goes in the budget and actual projected expenditure.	Agree ____:____:____:____:____:____ Disagree
19	I should prepare a budget that is achievable.	Agree ____:____:____:____:____:____ Disagree
20	I submit a safe estimate of budgetary expenditure.	Agree ____:____:____:____:____:____ Disagree
21	In good times, my immediate superior accepts a reasonable level of slack in a budget.	Agree ____:____:____:____:____:____ Disagree
22	I have never intensely disliked anyone.	Agree ____:____:____:____:____:____ Disagree

Instruction for section B:

In general, when your personal worksheet estimate is a net expenditure of 500, 000 (based on your local currency), what is your budget request likely to be?

Rank the following choices from 1 to 5, where

1 = the budget request you are most likely to submit, and

5 = the budget request you are least likely to submit

<p>_____ 500, 000 - 2%</p> <p>_____ 500, 000 exactly</p>
--

<p>_____ 500, 000 + 2%</p> <p>_____ 500, 000 + 5%</p> <p>_____ 500, 000 + 10%</p>

Instruction for section C: For each of the following statement, select the appropriate response putting an “X” in the space provided below:

Example: _____ X Happy _____ Unhappy

Gender:	_____ Male _____ Female
Age:	_____ Below 21 years old _____ Between 21 and 30 years old _____ Between 31 and 40 years old _____ Between 41 and 50 years old _____ Above 50 years old
Monthly income (based on your local currency):	_____ 2,000 or below _____ Between 2,001 and 3,000 _____ Between 3,001 and 4,000 _____ Between 4,001 and 5,000 _____ Between 5,001 and 6,000 _____ Above 6,000
Current job position:	_____ Non-managerial level _____ Managerial level _____ Others. Please specify: _____
Numbers of years working in the current organisation:	_____ Less than 1year _____ Between 1 and 5 years _____ Between 6 and 10 years _____ Between 11 and 15 years

	_____ Between 16 and 20 years _____ More than 20 years
--	--

Section D: Kindly provide your valuable comment on statements above.

Thank you for your valuable time and kind assistance.

Researcher's contact detail:

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University of Malaya, Faculty of Business & Accountancy

Appendix D

Preliminary analysis results

University of Malaya

Section 1: Data distribution diagrams

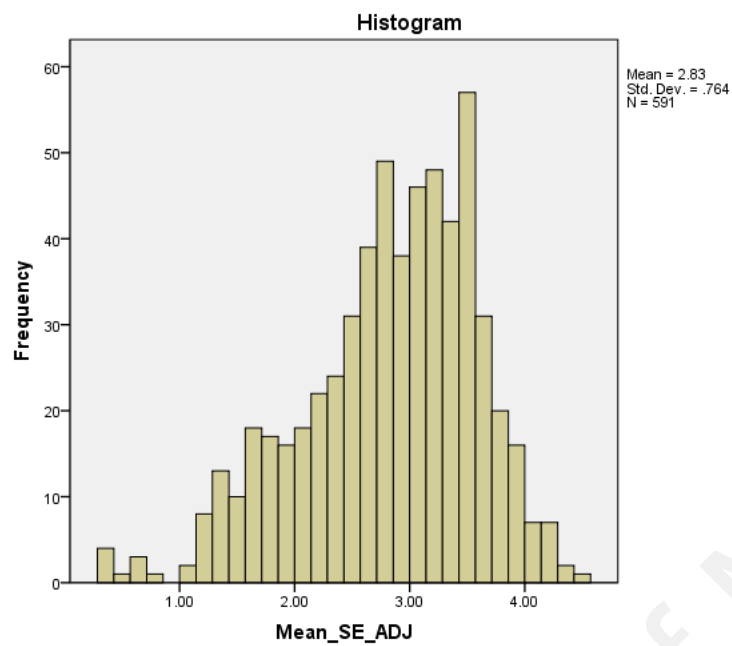


Figure 10.1: Structural empowerment

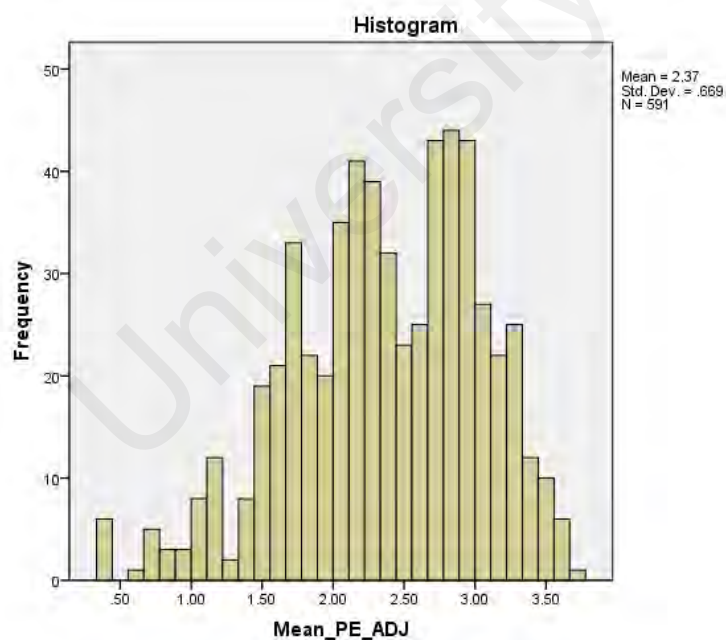


Figure 10.2: Psychological empowerment

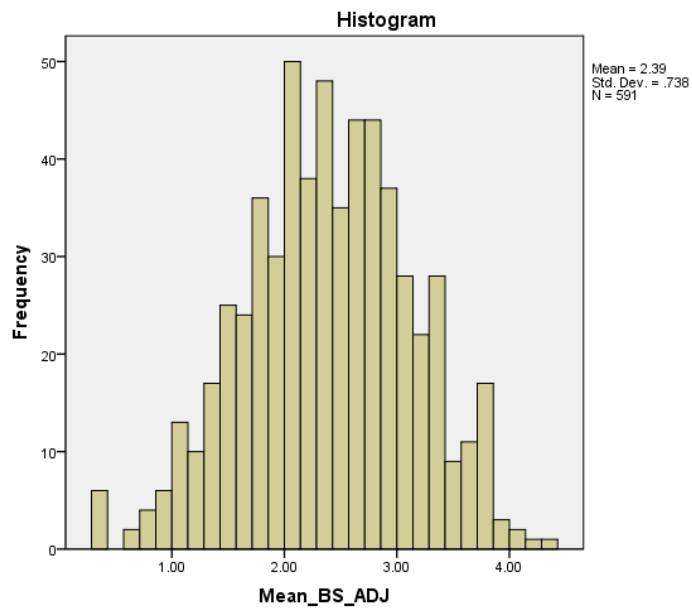


Figure 10.3: Budgetary slack

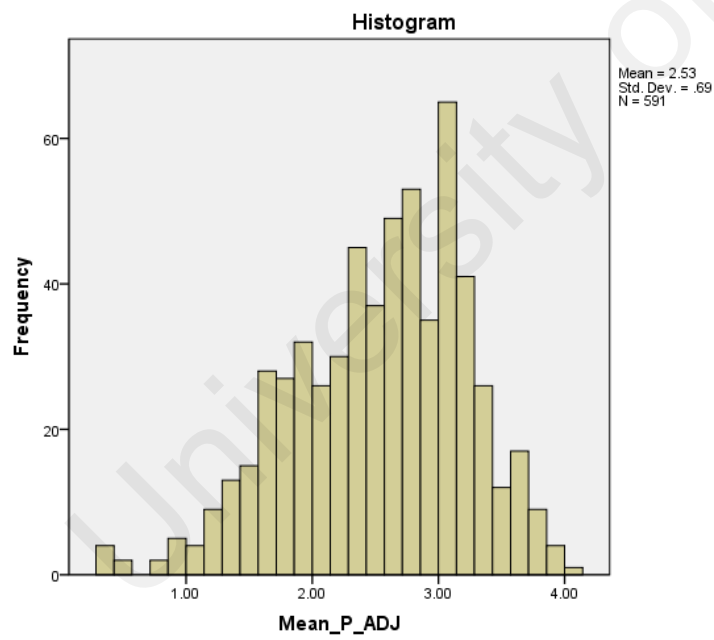


Figure 10.4: Participation

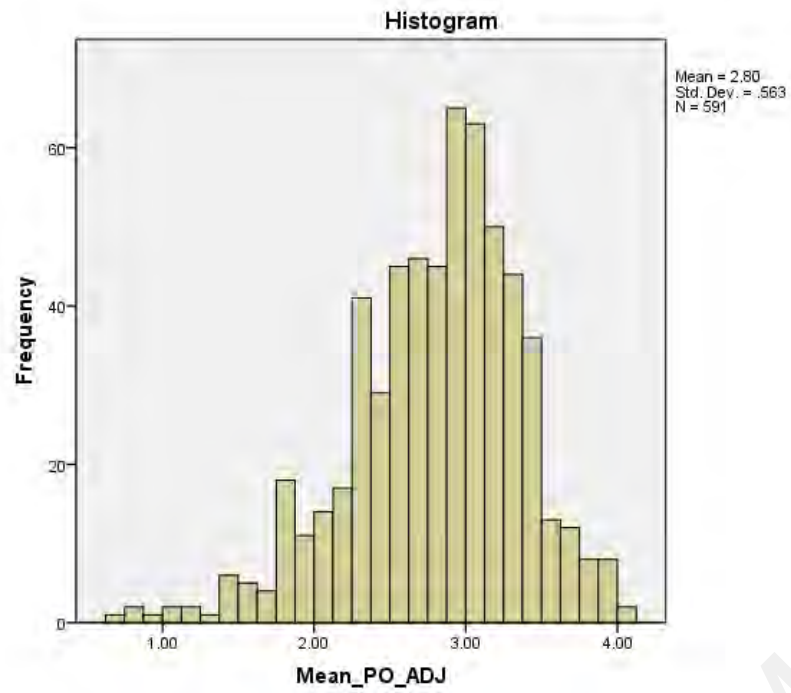


Figure 10.5: Psychological ownership

Section 2: Box plot diagrams

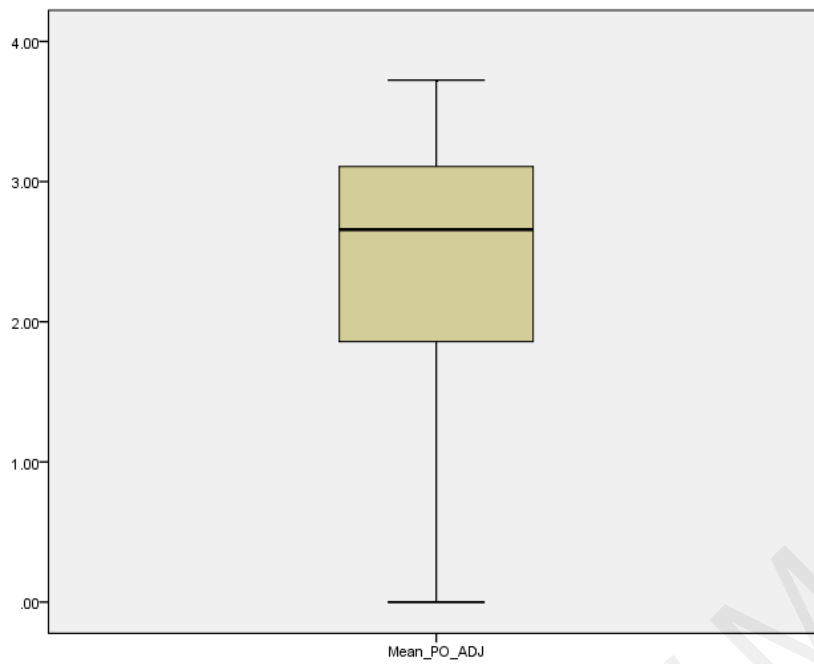


Figure 10.6: Psychological ownership

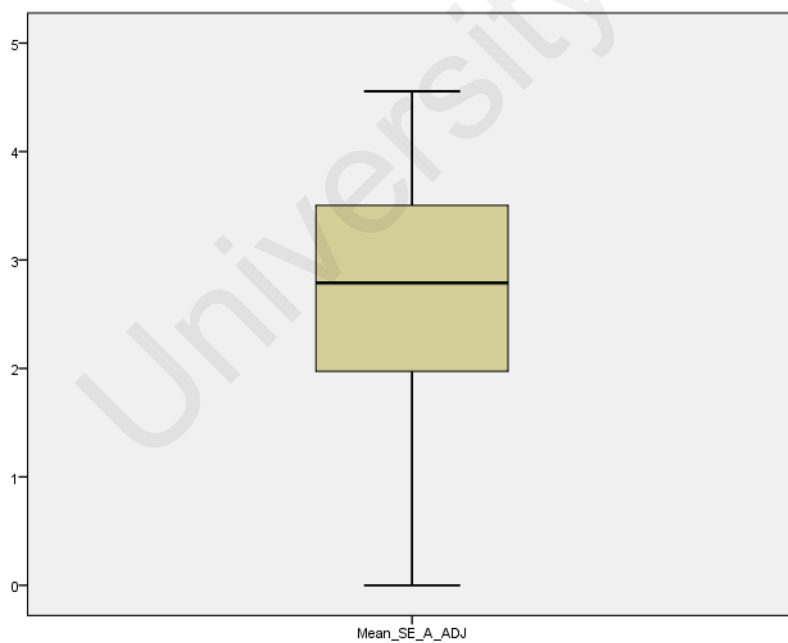


Figure 10.7: Structural empowerment

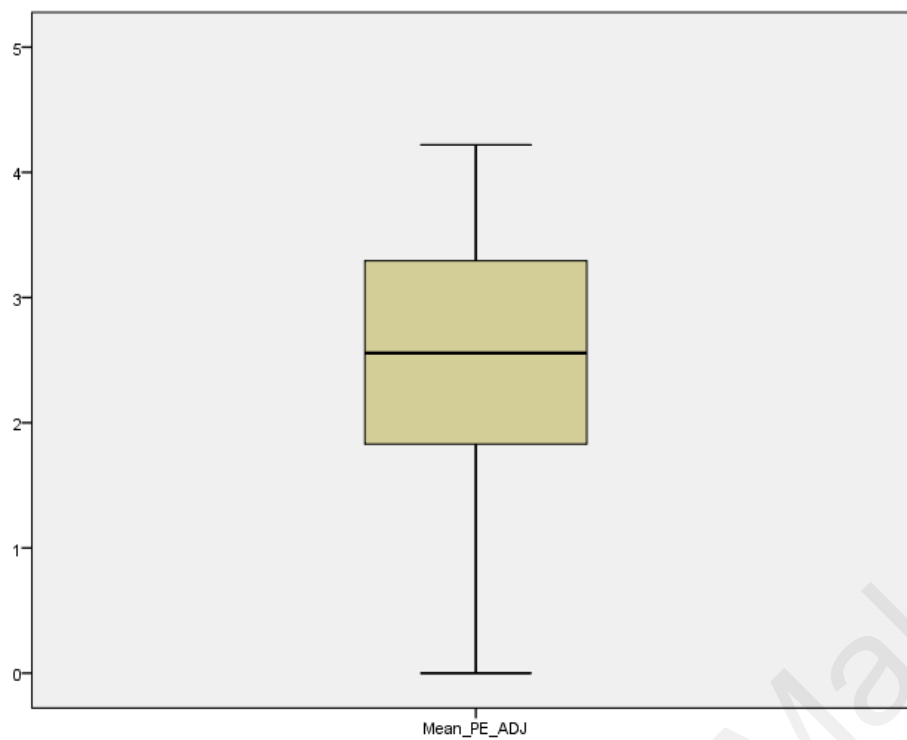


Figure 10.8: Psychological empowerment

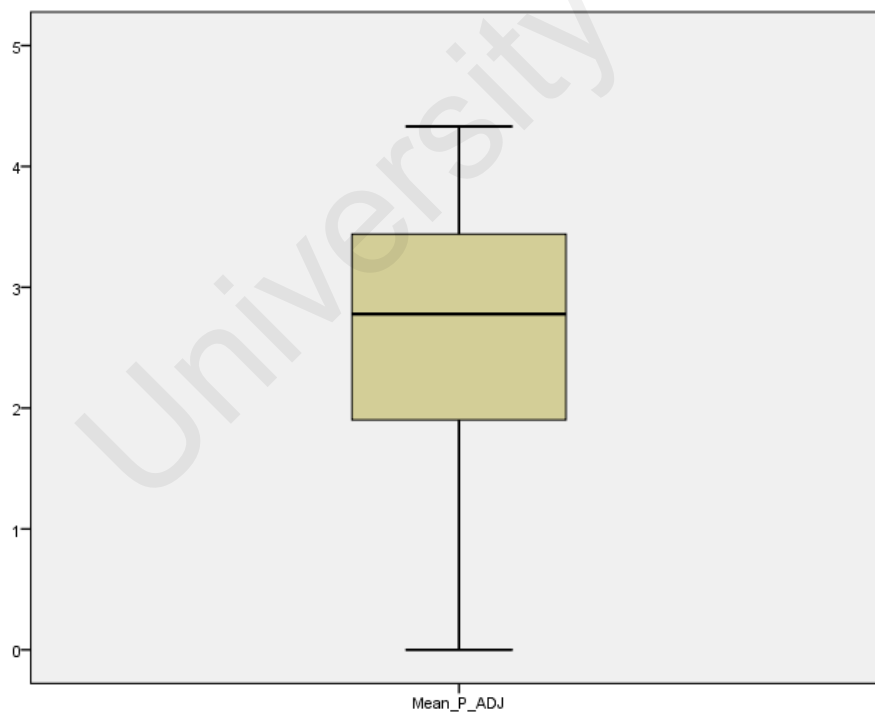


Figure 10.9: Participation

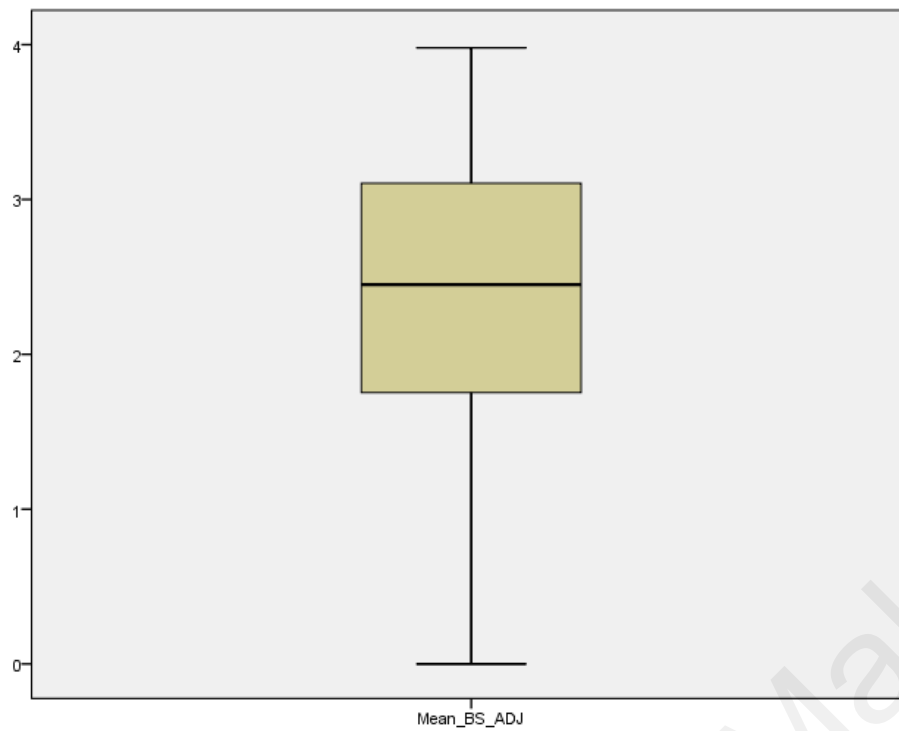


Figure 10.10: Budgetary slack

Section 3: Mean and standard deviation results

Table 10.1: Mean and standard deviation

Variable	Code	Abbreviation	Mean	Standard deviation
Structural empowerment	SE1	Opportunity of challenging budgetary work	3.07	1.53
	SE2	Opportunity on skill & knowledge acquisition	2.84	1.48
	SE3	Opportunity on skill & knowledge application	3.19	1.58
	SE4	Information on company's existing status	3.11	1.43
	SE5	Information on company's value	3.08	1.45
	SE6	Information on company's goals	2.95	1.37
	SE7	Support on specific information	2.85	1.35
	SE8	Support on guidance	2.90	1.40
	SE9	Support on problem solving	2.98	1.38
	SE10	Time allocation	3.42	1.40
	SE11	Time for completion	3.41	1.34
	SE12	Resource availability	3.42	1.40
	SE13	Reward for innovativeness	3.87	1.52
	SE14	Flexibility	3.62	1.50
	SE15	Visibility	3.21	1.41
	SE16	Opportunity for collaboration vertically	2.96	1.47
	SE17	Opportunity for collaboration horizontally	3.38	1.47
	SE18	Opportunity for internal expertise	3.08	1.47
	SE19	Opportunity for external expertise	3.47	1.56
	SE20	Empowered environment	2.88	1.37
	SE21	Empowered workplace	2.82	1.47
Psychological empowerment	PE1	Importance of work	2.48	1.43
	PE2	Personalised meaning	2.62	1.44
	PE3	Meaningful work	2.59	1.35
	PE4	Confidence in ability	2.62	1.37
	PE5	Self-assurance in ability	2.85	1.46
	PE6	Mastery of skill	3.03	1.37
	PE7	Significant autonomy	3.38	1.50
	PE8	Personalised decision	3.15	1.50
	PE9	Independence to work	3.01	1.37
	PE10	Impactful work	2.82	1.36
	PE11	Great control of work	2.99	1.38
	PE12	Significant budget influence	3.24	1.52

Budgetary slack	BS1	Excessive resource requisition	2.79	1.47
	BS2	Budget favourability	3.05	1.48
	BS3	Personalised budget adjustment	2.73	1.33
	BS4	Resource incompatibility	2.50	1.47
	BS5	Non-achievable budget	2.52	1.38
	BS6	Imbalance budgetary outcome	2.55	1.40
	BS7	Safe budget attainability	2.93	1.45
	BS8	Reasonable slack tolerance	3.17	1.47
Employees' participation	P1	Involvement level in budgets	3.17	1.59
	P2	Frequency of initiating advice	2.77	1.36
	P3	Explanation from supervisors	2.59	1.41
	P4	Seeking advisory by supervisors	2.88	1.43
	P5	Advice on budget input	3.03	1.37
	P6	Recognition of special factors in budget	3.00	1.30
	P7	Inclusion of budget suggestion	3.10	1.40
	P8	Supervisors' receptive of suggestions	2.63	1.40
	P9	Personal examination of budget difference	3.02	1.43
	P10	Directive of corrective action	3.49	1.58
	P11	Assurance by supervisors	2.92	1.36
	P12	Budget finalisation	3.41	1.53
	P13	Resultant changes in budget	3.46	1.47
Psychological ownership	PO1	Protection of idea	3.43	1.32
	PO2	Invasion of matters	3.98	1.37
	PO3	Protection of property	3.40	1.31
	PO4	Telling other to stay out	3.86	1.29
	PO5	Confidence in work contribution	2.59	.94
	PO6	Confidence in positive difference	2.60	1.07
	PO7	Confidence in setting performance goals	2.65	1.06
	PO8	Dare to challenge	3.26	1.16
	PO9	Dare to report	2.66	1.11
	PO10	Belongingness in team	2.65	.97
	PO11	Belongingness in company	3.03	1.21
	PO12	Comfortable in team	2.86	1.15
	PO13	Personal success	3.06	1.17
	PO14	Team membership	2.85	1.19
	PO15	Defensive in work	2.85	1.07

Section 4: Skewness and kurtosis results

Table 10.2: Skewness and Kurtosis

Variable	Code	Abbreviation	Skewness	Kurtosis
Structural empowerment	SE1	Opportunity of challenging budgetary work	.36	-.26
	SE2	Opportunity on skill & knowledge acquisition	.38	-.20
	SE3	Opportunity on skill & knowledge application	.44	-.28
	SE4	Information on company's existing status	.21	-.20
	SE5	Information on company's value	.18	-.26
	SE6	Information on company's goals	.28	-.09
	SE7	Support on specific information	.56	.46
	SE8	Support on guidance	.40	-.14
	SE9	Support on problem solving	.33	.19
	SE10	Time allocation	.21	-.19
	SE11	Time for completion	.28	.22
	SE12	Resource availability	.15	-.22
	SE13	Reward for innovativeness	.16	-.58
	SE14	Flexibility	.10	-.51
	SE15	Visibility	.21	-.10
	SE16	Opportunity for collaboration vertically	.41	-.14
	SE17	Opportunity for collaboration horizontally	.22	-.21
	SE18	Opportunity for internal expertise	.36	-.15
	SE19	Opportunity for external expertise	.26	-.44
	SE20	Empowered environment	.53	.53
	SE21	Empowered workplace	.67	.24
Psychological empowerment	PE1	Importance of work	.53	.53
	PE2	Personalised meaning	.67	.24
	PE3	Meaningful work	.71	.43
	PE4	Confidence in ability	.52	-.02
	PE5	Self-assurance in ability	.65	.65
	PE6	Mastery of skill	.69	.47
	PE7	Significant autonomy	.61	.08
	PE8	Personalised decision	.63	.46
	PE9	Independence to work	.55	-.05
	PE10	Impactful work	.56	-.07
	PE11	Great control of work	.59	.34
	PE12	Significant budget influence	.49	.16
Budgetary slack	BS1	Excessive resource requisition	.55	.22
	BS2	Budget favourability	.57	-.01

	BS3	Personalised budget adjustment	.58	-.02
	BS4	Resource incompatibility	.49	.02
	BS5	Non-achievable budget	.67	.68
	BS6	Imbalance budgetary outcome	.67	-.02
	BS7	Safe budget attainability	.75	.61
	BS8	Reasonable slack tolerance	.57	.16
Employees' participation	P1	Involvement level in budgets	.62	.12
	P2	Frequency of initiating advice	.58	.02
	P3	Explanation from supervisors	.59	-.03
	P4	Seeking advisory by supervisors	.87	1.04
	P5	Advice on budget input	.67	.40
	P6	Recognition of special factors in budget	.64	.29
	P7	Inclusion of budget suggestion	.37	.26
	P8	Supervisors' receptive of suggestions	.46	.54
	P9	Personal examination of budget difference	.42	.26
	P10	Directive of corrective action	.68	.52
	P11	Assurance by supervisors	.49	.09
	P12	Budget finalisation	.36	-.40
	P13	Resultant changes in budget	.56	.50
Psychological ownership	PO1	Protection of idea	.42	-.21
	PO2	Invasion of matters	.35	-.18
	PO3	Protection of property	.17	-.72
	PO4	Telling other to stay out	-.31	-.88
	PO5	Confidence in work contribution	.09	-.69
	PO6	Confidence in positive difference	-.22	-.81
	PO7	Confidence in setting performance goals	-.22	-.74
	PO8	Dare to challenge	.52	.69
	PO9	Dare to report	.54	.80
	PO10	Belongingness in team	.21	-.19
	PO11	Belongingness in company	.43	.34
	PO12	Comfortable in team	-.33	-.79
	PO13	Personal success	.37	-.08
	PO14	Team membership	.39	.09
	PO15	Defensive in work	.03	-.76

Section 5: Items of the constructs validation results

Table 10.3: Items with unsatisfactory factor loadings deleted

Code	Budgetary Slack	Participation	Psychological Empowerment	Psychological Ownership	Structural Empowerment
BS2	.47				
BS4	.56				
BS6	.52				
BS7	.44				
P10		.46			
P11		.29			
P1		.57			
P2		.31			
P3		.44			
P5		.37			
P7		.50			
P8		.45			
P9		.33			
PE10			.52		
PE12			.46		
PE1			.54		
PE2			.38		
PE3			.44		
PE4			.43		
PE5			.60		

PE6			.33		
PO1				.31	
PO2				.32	
PO3				.28	
PO4				.34	
PO8				.61	
SE10					.47
SE11					.38
SE13					.46
SE14					.65
SE17					.40
SE18					.45
SE19					.38
SE2					.48
SE3					.65
SE4					.54
SE5					.42
SE6					.37
SE7					.36
SE8					.52
SE9					.34

Table 10.4: Outer variance inflation factor (VIF) values

Variable	Code	Abbreviation	VIF
Budgetary slack	BS1	Resource incompatibility	1.57
	BS3	Imbalance budgetary outcome	1.53
	BS5	Budget favourability	1.58
	BS8	Reasonable slack tolerance	1.41
Participation	P12	Budget finalisation	1.78
	P13	Resultant changes in budget	2.03
	P4	Seek advice from supervisors	1.51
	P6	Recognition of special factors in budget	1.81
Psychological Empowerment	PE11	Great control of work	2.20
	PE7	Significant autonomy	2.08
	PE8	Personalised decision	1.97
	PE9	Independent to work	2.49
Psychological Ownership	PO10	Belongingness in team	2.66
	PO11	Belongingness in company	2.99
	PO12	Comfortable in team	3.20
	PO13	Personal success	2.08
	PO14	Team membership	3.14
	PO15	Defensive in work	2.26
	PO5	Confidence in work contribution	2.76
	PO6	Confidence in positive difference	4.01
	PO7	Confidence in setting performance goals	3.93
	PO9	Dare to report	2.34
Structural Empowerment	SE12	Resource availability	2.15
	SE15	Visibility	2.54
	SE16	Opportunity for collaboration vertically	2.72
	SE1	Opportunity of challenging budgetary work	2.19
	SE20	Empowered environment	2.38
	SE21	Empowered workplace	2.47