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Role of Governance in Outcome-Based Budgeting Implementation Towards Accountability in the Malaysian Public Sector

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Abstract

Purpose: This study investigates the perceived influence of outcome-based budgeting implementation towards accountability in public sectors and the moderating role of governance.

Methodology: The quantitative method was applied using simple random sampling techniques. Eighty-two usable questionnaires were collected from the prospective respondents of public sector departments/agencies in the Federal Territories of Kuala Lumpur and Putrajaya, Malaysia. The primary data analysis technique for this study is Multiple Linear Regression analysis.

Findings: The research findings indicate a significant and positive influence of OBB implementation on accountability in public sectors. There is no significant direct influence of governance towards accountability. However, governance has a significant moderating role between the OBB implementation and accountability.

Practical Implications: This study can become a platform for public sectors to continue implementing outcome-based budgeting as their budgetary system, even though they face some challenges in setting up the performance measure for each activity. This study also seeks to inform policy-making within the government, which will support the shaping of better-managed, more legitimate, trusted and accountable public service in Malaysia.

Originality/Value: Few studies link new budgetary practices, outcome-based budgeting, with accountability and good governance. Given the lack of extensive literature on this topic, this is probably one of the first studies that provide evidence of the moderating role of governance in the relationship between OBB implementation and accountability, which is in line with the stakeholder theory.

Keywords: Outcome-based budgeting, accountability, governance, public sector.

1.0 Introduction

The issue of governance has become attention and a critical issue for the public sector, including those in Malaysia (Kamal, Romle, & Yusof, 2015). According to Rosli et al. (2015), governance in public administration has become a global issue due to the continuous stream of governance failures, fraud, inefficiency, corruption, and poor internal control and financial management. The public sector's function is to deliver services to the public to promote a better lifestyle in the community. Therefore, there is a need for corruption-free public institutions that should be accountable to the government and the public to achieve excellence in service delivery (Rana et al., 2019). Nowadays, citizens are increasingly asking for workable solutions to everyday problems. Their shared concerns are ensuring accountability and preventing corruption in the public sector (Irfan et al., 2019). The act of governance by the government through various ministries, departments and agencies tending towards efficient and effective service delivery (Ali et al., 2018).

A government aims to safeguard public interest through an efficient and effective governance system that improves rights protection and establishes accountability practices in its daily activities and from its public officers (Mutula & Wamukoya, 2009). Therefore, enhancements in the governmental system and social and spiritual aspects are important factors in promoting good governance. Good governance and accountability are crucial elements expected to propel Malaysia's economy towards higher growth. They are considered essential factors in achieving the country's vision and play a significant role in the nation's overall development. One of the elements that may affect the quality of the public sector is the good governance practice of public departments, ministries, statutory bodies and others. Thus, the government puts much effort into programmes and budgets to ensure that public funds are managed wisely (Said et al., 2016).

The use of performance information in budgeting also cannot be detached from the challenges and problems of implementing budget reforms. Barrett (2004, p. 252) has argued that four key factors to the failure of budget reform implementation.

Firstly, a lack of clear policy objectives can lead to differing interpretations and preferences when it comes to taking action. Secondly, the involvement of multiple agencies can result in communication and coordination problems along the implementation chain. Thirdly, differences in values and interests between these actors and agencies can also impede implementation. Finally, implementing agencies may have relative autonomy, which limits administrative

control. Furthermore, a sound governance system is vital in enhancing accountability in the public sector (Said et al. (2016).

On the other hand, Abdullah, Sulong and Said (2014) highlighted several issues relating to accountability, integrity and ethical behaviour in the Malaysian public sector. For example, bribery and corruption issues in the Malaysian public sector can be attributed to poor communication of the Code of Conduct and complaints regarding its inefficiency and ineffectiveness in operations (Ibrahim, Ghani, & Salleh, 2014). Malaysian government accountability is also being impacted by improper public infrastructure and facilities management, which weakens public satisfaction (Pawi et al., 2011).

The government of Malaysia has increased its focus on transparency, accountability, integrity and openness in the public sector. Malaysian public sector can become more effective, efficient and performing by having these values. The introduction of Outcome Based Budgeting (OBB) was one of the initiatives by the government to enhance its accountability through government expenditure and improved public sector service delivery. OBB is one of the budgeting tools that focuses on outcomes in which accountability in the public sector and authority over resources are needed. Compared to the other traditional budgeting system, OBB is seen as the best budgeting tool for the public sector because the government can measure its performance based on the outcome. Moreover, in current practices, there is an emergence of measuring the influence of good governance and accountability in the practice of OBB in public sectors in Malaysia. Thus, this study intended to examine the roles of governance in enhancing the accountability of public sectors through the OBB implementation.

2.0 Literature Review and Hypotheses Development

2.1 Overview of Budgetary Practices in the Malaysian Public Sector

In Malaysia, line-item budgeting was inherited from the British upon independence. The line-item budgeting system focused on detailed line-item requirements of a ministry or government agency. The federal budget was divided into three categories or “vote heads” which are emoluments, other annual recurring charges and other special expenditures through this system. Similar to profit organisations, the budget is prepared annually through this system, with a year-end rush to spend. The budget follows a typical incremental approach favouring existing programmes, regardless of any priority that might take place. Based on line items of expenditure, control is on inputs rather than outputs or impacts. Reports are produced by an institution for compliance purposes detailing approved costs and providing stabilisation and control over aggregate spending. However, additional economic classification maybe required. (Din et al., 2015).

The line-item budgeting is argued as not an ideal practice for the national level because it would not assist in promoting performance or achieving objectives. However, in contrast, it is a supreme system for budgeting and control at the departmental and lower management levels (Din et al., 2015). Therefore, due to the weaknesses in the line item budgeting system, the government introduced a new one, namely, Programme Performance Budgeting System (PPBS).

From 1969 through 1990, Malaysia started to implement PPBS. It is one of the management tools for better control and planning of government expenditure. This budgeting system was implemented to assist departmental management in making informed decisions about allocating resources among various options, thereby helping achieve the government's objectives. The integration of budget and accounting classification assists in fund reporting, fund control and performance reporting (Joon-Chien, 1981). On the other hand, PPBS accommodates all departments to propose their budgets from cost-benefit analysis estimation (Gnareswari, 1994). This is why PPBS is much superior to the traditional line-item budgeting system.

Later, the modified budgeting system (MBS) was officially introduced for the 1990 annual operating budget preparation. The system was implemented in all ministries in 1992 and applied to relevant Statutory Bodies that received an allocation for operating expenditure from the Treasury in 1997 (Treasury, 1996). The MBS was developed through optimising resource allocation and improved program performance while increasing accountability based on philosophies of Result Based Management (RBM) using an Integrated Performance Framework to drive results (Din et al., 2015). A Top-Down planning methodology is applied in MBS whereby the basis of 'let managers manage' was introduced, where managers were empowered to generate outputs as cost-efficient as possible, resulting in programme effectiveness. The main objective of MBS is to promote a coherent allocation of resources to a government programme. This rationality of MBS is to achieve fiscal limits upon agencies and forge a link between inputs and outputs. Besides, it also seeks to promote better programme management by adopting better management practices and encouraging greater delegation of authority from the Treasury to government organisations and then to line managers (Treasury, 1988). A meaningful performance assessment will be possible when the outcomes and results of given resources and activities achieve their intended purposes. As reflected in efficiency and effectiveness indicators, understanding the relationships between outputs and inputs is vital to measure performance (Mohamad & Karbhari, 2009).

In practice decentralisation of authority, MBS seeks to reorient accountability's focus on programme efficiency and effectiveness issues. First, programmes and activities must be evaluated to assess their impact and relevance. Then, managers would be held accountable for overall performance. Indirectly, it means managers would be given greater flexibility in managing resources in exchange. If managers were responsible for accountability (for outputs) and authority (over resources), the mismatch between both drivers thereby can be eliminated (Din et al., 2015). OBB addressed the mismatch between output and input. It revolved around the best-formulated budget to ensure the optimal allocation of resources to meet the policy target (Gianakis, 1996). It is to ensure the focus on the government's vision, mission and strategy to ensure the best applicable budgeting system for the public to enjoy. The OBB focuses on the management information system, performance monitoring and evaluation, integrates the national plans to achieve long-term objectives, and aims to provide clarity and present a holistic view of programmes and activities that are systematically aligned to the national development framework. The government will improve budget allocation and expenditure structure to be more efficient and effective. The emphasis given under the OBB approach is on the impact and effectiveness of projects and programmes, compared with expenditure and output.

Compared to performance budgeting, such as MBS, which emphasises outputs, economy and efficiency, outcome-based budgeting (OBB) concerns outcomes and effectiveness (Hendrick & Forrester, 1999). Xavier (1996) argues that one of the main weaknesses of the MBS is that it focuses only on operating budget processes but does not cover the whole budget process and the related institutional arrangements. Supposedly, MBS should include a development budget, another part of the budget process that is operated and monitored by the Economic Planning Unit of the Prime Minister's Department. The reason for separating these two types of budget is because it is tightly linked to the government's agenda for economic development (Esman, 1972). Moreover, Mauro et al. (2001) argued the need for management reforms in performance base budgeting in the public sector. Shah and Shen (2007) elaborated on four important advantages of outcome-based budgeting which would overcome MBS's weaknesses. First, OBB enhanced communication between budget preparers and citizens as it clarifies programme goals/objectives and identifies outcome targets, which gives agencies and employees a better sense of expectation for their performance. Second, it improved management in government agencies by assisting programme managers in specifying organisational goals/ achievements, monitoring programme performance, having better knowledge about problems with programme structure and operation, planning for the future, improving internal control, and communicating programme results. Third, OBB provides more informed budgetary decision-making as it provides appropriate information for politicians to exercise pressure for improvements and to better understand the issues involved. Lastly, OBB serves as a significant tool for higher transparency and accountability. The following paragraphs explain how these advantages can be attained.

The OBB system emphasises strategic and performance plans with measurable results, performance budgets, accountability processes, performance evaluation that de-emphasises micro-managing of line-item spending, and annual reports for communicating to stakeholders (Aristigueta, 1999). Under this approach, line managers are given the flexibility to manage lump-sum allocations that may be used for various needs and agree to be held accountable upon results in service delivery. Furthermore, departments can carry over a significant portion of their unutilised authority (Cothran, 1993). However, its implementation depends on policymakers' ability to uphold the contractual agreement (Hendrick & Forrester, 1999). Martin (1997) further indicated that, while outcome-based budgeting may be easy to implement at the programme/service level, it is challenging to implement at the community or state level because it relates outcomes and resources to change in state and community indicators and raises issues not encountered at other levels. OBB is argued to be able to enhance communication between budget preparers and citizens, improve management in government agencies, provide more informed budgetary decision-making, and encourage higher transparency and accountability (Shah & Shen, 2007).

The OBB document can be important for transparency and accountability to the legislative body and the public. Traditional budgets, typically budgeted according to line-item inputs, fail to deliver meaningful information regarding what and how well the government is doing. In contrast, an outcome-based budget classifies resources by programmes and presents performance indicators. The budget makes it much easier for the public to understand significant government activities and achievements. The government performance is under public enquiry with annual or semi-annual performance reports. Accountability in the public sector has traditionally been based on compliance with rules and procedures. The

outcome-based budgeting system seeks results-based accountability in holding managers accountable for what they achieve, not how they do it.

2.2 Budgetary Practices and Accountability

Accountability is defined as the "giving and demanding of reasons for conducting in the assurance that a certain task is performed in a responsible manner and the individuals or organisations answerable for their action and performance" (Ali et al., 2014). According to Barton (2006), accountability involves an obligation by an agent to answer to the principal by providing the information required, either by written report or verbal communication. He further argues that accountability in the context of government arises from the nature and role of governments in a democratic nation that requires the government to make the best decisions since citizen pays taxes, which later reflects the relationship between principal and agent. Both members and managers generally perceive accountability in terms of who was responsible for what, to whom they were responsible, and how an account was rendered (Goddard, 2004). These aspects are referred to as accountability responsibilities, accountability relationships and the nature of the account, which is in line with the view of Barton (2006).

There was consensus across all cases that the prime accountability responsibility was for public service delivery, although financial accountability was also perceived to be important. However, there was substantial variation concerning accountability responsibilities across organisations. (Goddard, 2004).

Several worldwide studies in their rankings have captured the state of affairs of the Malaysian government's transparency and accountability. Malaysia needs to put rigorous effort into improving its accountability and transparency (Bakar & Ismail, 2011). Usually, public information is not readily available (Barraclough & Phua, 2007; Yaakob, Kadir, & Jusoff, 2009), and in many circumstances, the information is difficult to access (Siddiquee, 2010). As a result, citizens face challenges in holding the government accountable for managing the public's money. This transparency would provide much-needed opportunities for democratic oversight of the data to hold the government accountable for its performance (Green & Kuch, 2022).

Since the budget documents showed limited performance data in the Malaysian context, and the problem of connecting actual allocations and performance targets happened. To some extent, it creates problems because political representatives' involvement tends to focus on allocation control rather than performance. However, success in controlling the allocation does not mean success in discharging accountability because efficiency and effectiveness are more credible in measuring accountability (Shah, 2003). It could be concluded that to be an accountable government, one of the aspects that need to be given attention is the management of public money by monitoring the performance of its activities (Ali et al., 2014). Mujennah et al.(2019) showed that implementing an effective budget influences government performance and accountability.

2.3 Governance

The perspective of good governance for the public sector refers specifically to efficient service delivery and improvement in the public sector performance, whereby it depends on

transparency, accountability and equality in ways that are responsive to the needs of people (Goddard, 2004). Good governance is often perceived as good leadership (Nofiantia & Suseno, 2014). The Organisation for Economic Co-operation and Development (OECD) claims that the criteria of good governance comprise fairness, transparency, accountability, and responsibility (Agoes, 2004). Satisfied and trusting citizens are supposedly reflected in good governance, whereby the concept of good governance recommends the ultimate administrative behaviour and rejects unethical or questionable behaviour (Bouckaert & Walle, 2003).

Governance is governing or directing an organisation which involves setting goals and using power to monitor their implementation (Bevir & Rhodes, 2003). There are three policies of governance: coercive governance, governance for performance and governance for a mission, as highlighted by Bevir and Rhodes (2003). Coercive governance is normative and punitive (English, 2013). It applies disclosure of information to monitor how accounts have complied with the rules and norms issued by their hierarchy (Forbes, Hill, & Lynn Jr, 2007). In contrast, governance for performance is output-focused (Saliterer & Korac, 2013) and relies on monitoring accountability through quantitative and non-quantitative data (Ebrahim, 2009; Forbes et al., 2007). Governance for mission is often applied in public and non-profit organisations, aiming to fulfil their ideal mission without profit (Ebrahim, 2009; English, 2013; Forbes et al., 2007). Governance for mission is adaptive between coercive and performance policies in monitoring budgetary accountability (Ebrahim, 2009).

Based on a study conducted by Kaufman, Kraay, and Mastruzzi (2008) for The World Bank on Governance Indicators in the aspect of 'Voice and Accountability' ranked Malaysia at 125th place out of 194 countries for the year 2017 with a score of -0.4 points. The result seems to support the governance problem in Malaysia. According to Carlitz (2013), a growing body of research tests that transparency facilitates accountability and leads to various developmental outcomes. Islam (2003) found that countries with better information flows have better quality governance. According to Kaufmann and Bellver's study in 2005, countries that prioritise transparency tend to have better socio-economic and human development indicators, as well as higher competitiveness and lower corruption rates, even when compared to countries with similar income levels. In addition, a transparent environment generally leads to more efficient government agencies, particularly in the provision of public services. They also decompose their transparency measure and show that government effectiveness is influenced more by institutional transparency (including budget transparency) than by political transparency.

2.4 Underpinning Theory

This study utilises stakeholder theory in establishing the relationship between the OBB implementation, accountability and governance in the public sector. A stakeholder is "any group or individual who can affect or is affected by an organisation's achievements" (Freeman & McVea, 2001, p. 4). Therefore, a stakeholder in this study context is the citizens, and the management is the government representing the Malaysian public sector.

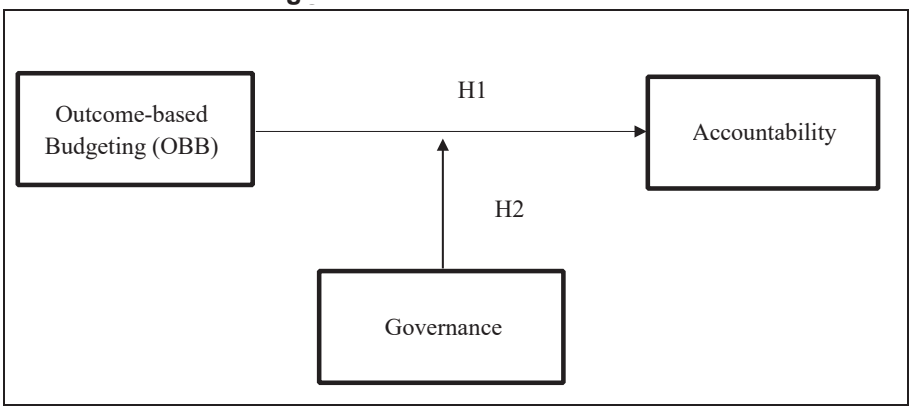
In order to successfully identify the Malaysian public sector budgetary process towards accountability and good governance, the objectives of these stakeholders need to be attended to. That does not necessarily mean that all stakeholders' needs can or should be met, but the

decision on which to attend should be made on a rational foundation (Flak & Dertz, 2005). Stakeholder theory has been developed as a response to this need in the context of non-profit organisations.

In the public sector context, decision-makers arrive at budget decisions in a political environment, and it is difficult to accurately predict the ultimate consequences of these actions (Ibrahim, 2016). It might abuse the right of other stakeholders when political actors interfere in public sector management. Moreover, it is not always clear which political actors and interests will side with which proposed program allocations (Ibrahim, 2016). Thus, budgetary politics often create odd coalitions and expected conflicts towards public needs and self-interest.

Based on the theoretical arguments, this study is carried out to examine the perception of public sectors towards OBB implementation in Malaysia and its influence towards accountability, and how the governance practice moderates the relationship between the two variables. The conceptual framework for the study is shown in Figure 1 as follows:

Figure 1: Research Framework



2.5 Hypotheses Development

Outcome-based budgeting and accountability

According to Ouda (2015), outcome-based budgeting is defined as presenting the purpose and objectives for which funds are requested, the cost of anticipated programmes for achieving those objectives, and the quantitative data for quantifying the accomplishment and task completed under each programme. The outcome-based budget aims to provide a systematic method of enhancing the allocation process; to incorporate in the planning activity the recognition of costs/benefits of alternative programmes and resources available; and to provide a basis for choosing the most economically feasible programme (Shah & Shen, 2007). The relationship between the inputs and the outputs represents the outcome-based budget, includes whether the resources have been effectively used and whether the target objectives have been achieved. On the other hand, it focuses on the purpose of the expenditure and the results/outcomes of the expenditures and provides data that can be used to evaluate those outcomes. As a result, the development of the budgeting system has gone beyond the scope of the output-based budget. Thus, a linkage between policy, performance, and resources must

be established (Ouda, 2015). Administrative leakages in the budgeting system initiated the Malaysian government to implement the OBB in 2012, for which the government, through its annual budget circulars, requested outcome information from all public organisations to monitor its compliance (Curristine, 2015).

In Malaysia, the public sector is currently subject to a more rigorous system of checks and balances. In order to stay relevant within the Malaysian political landscape, the public sectors need to work hard to meet the public's expectations and call for change Bakar, Saleh, and Mohamad (2011). According to Huzaila-Majid and Singaravelloo (2017), most budgetary management issues are financial non-compliant, negatively affecting the government's accountability. Thus, the first hypothesis is developed:

> *H1: OBB implementation is perceived to influence accountability among Malaysian public sectors.*

The moderating effects of governance

Good governance in the public sector is established to safeguard the public entity at any time and act according to public interests (Wardhani, Rossieta, & Martani, 2017). Implementing good governance practices enables the government to adopt policies consistent with the principles of public governance. According to Easterly and Levine (1997), good governance is an aspect that is essential in pursuing high economic growth.

The role of governance in budgeting is to provide the framework and oversight for the budget process. Kamal et al. (2015), the current perspective of good governance refers specifically to efficient service delivery and improvement in the performance of the public sector, whereby it depends on transparency, accountability and equality in ways that are responsive to the needs of people. Whereas accountability involves an obligation by an agent, in this context, the government, to answer to the principal by providing the information required, either by written report or verbal communication (Barton, 2006). To ensure a robust central coordination between the Prime Minister Office's and the Cabinet, there is a need to involve all parts of society, including businesses, investors and civil society (Abhayawansa, 2021). Thus, accountability provides a significant role in creating a good governance activity to improve public confidence in government performance.

Many studies have examined the relationships between budget transparency and good governance (Kolstad & Wiig, 2009; Mejía Acosta, 2013). Most studies have found that transparency in government operations positively impacts the quality of governance. For example, Benito and Bastida (2009) reveal the relationship between budget transparency, economic development and fighting corruption. Diversification of culture and political systems among all countries might affect how each country applies public budget transparency standards. Nevertheless, there is a strong relationship between budget transparency, economic development, and efforts to fight corruption in all countries. In addition, the study concludes that budget transparency increases a government's accountability and improves the decision-making process.

Zuccolotto and Teixeira (2014) found the influence of budget transparency on corruption, accountability, quality of legislature institutions, and democracy in countries which concludes

that "countries that are more transparent have better accountability mechanisms and, consequently, a greater level of democracy and less corruption, all of which points to the importance of transparency in the process of democratic consolidation". Although the literature has reached mixed conclusions in connecting transparency and budget transparency to good governance, there has been increasing interest in the potential of transparency to improve the quality of governance (Schmidt-Hebbel, 2012). According to Masud (2011, p. 43), "budget transparency has arisen as a key component in governance reform, particularly since citizens worldwide frequently lack some basic information about government decisions and actions at every stage of the budget process". To sum up, while budget transparency has been connected to good governance practices by governments, the public must assess the information provided by the government to ensure better governance practices. In order to have an effective and efficient system, the public (e.g., citizens and non-profit organisations) must be able to monitor authorities and hold them accountable for their actions. In conclusion, governance plays a central role in shaping a government's budget and accountability processes. It leads to the second hypothesis as follows:

> *H2: Governance will moderate the perceived influence of OBB on accountability among Malaysian public sectors.*

3.0 Research Design

This study utilises the quantitative approach to achieve its research objectives. In order to examine the perceptions of public sectors towards OBB, the data were collected using a questionnaire survey. The sample in this study embraces public sector accountants in Malaysia. Data for the study were collected based on a random survey from public sector accountants from the ministries and government agencies in Klang Valley. The public sector accountants were chosen as the accountants are believed to have better knowledge and understanding of the budgeting process as compared to others. Thus, they can provide a reliable response to the questions. The survey questionnaire was sent either by hand to respondents, through e-mail or Google Form application. A total of 155 surveys were distributed to individuals involved in budget preparation and the budget set for their departments and agencies with the guarantee of information confidentiality. Before sending out questionnaires, a list of respondents was compiled through respective ministries and agencies' websites to obtain the name and e-mail addresses of the respective person in each ministry or agency. Eighty-two (82) sets of questionnaires were received from the respondents (52.90%). The distribution of respondents is shown in Table 1 below:

Table 1: Tabulation of Respondents

Job Position	Distributed	Collected
Accountant (W41 and above)	102	68
Assistant Accountant 1 (W27-W36)	32	8
Assistant Accountant 2 (W17-W26)	21	6
TOTAL	**155**	**82**

The questions used in the questionnaire survey were adopted from previous studies relevant to the chosen variables. A five-point Likert-type rating scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used in the questionnaire.

The questionnaire is divided into four sections. Section A requests the respondents to measure outcome-based budgeting adoption in their departments or agencies. Section B requests the respondents' opinion on good governance practices in their departments or agencies, while Section C requests respondents to measure accountability practices of good governance in their departments or agencies. Lastly, Section D comprises questions relating to the respondent's demographic profile.

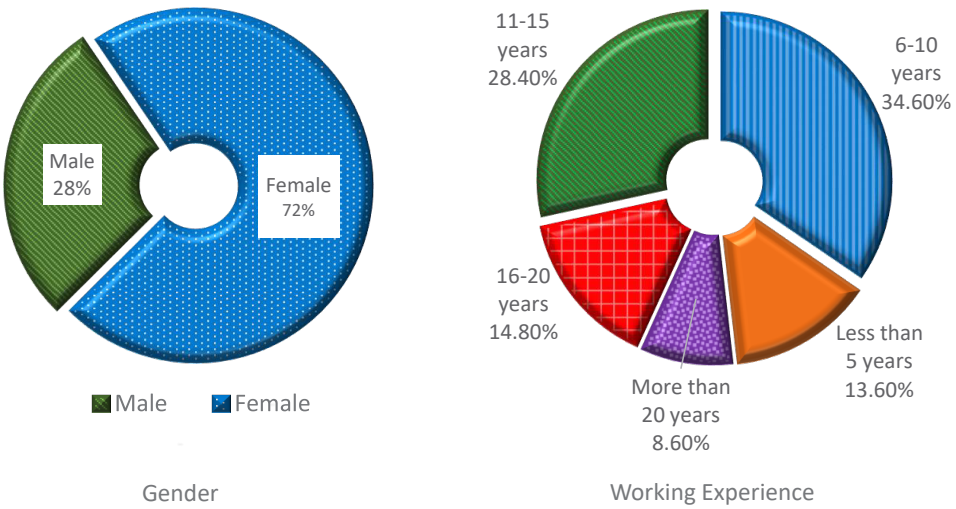
4.0 Results

4.1 Demographic Profile

Respondents were chosen among the accountants in public sectors, as they usually have a better understanding of budgetary practices. The demographic distribution of the respondents includes gender, work experience, work designation, department, and educational background. Out of the 82 responses received, only 81 were suitable for analysis because one response was identified as an outlier.

Figure 2 shows the distribution of the respondent's gender and working experience. Of 82 respondents, 58 (72%) are female, and 23 respondents (28%) are males. 34.6% have 6-10 years of work experience in current employment, followed by 11-15 years of experience (28.4%). The third highest is 16-20 years of work experience (14.8%), followed by work experiences below five years, 13.6% and 8.6% above 20 years.

Figure 2: Distribution of the Respondent's Gender and Working Experience



Figures 3 and 4 present the summary of respondents' Ministries and their educational backgrounds. The responses were received from sixteen ministries (out of twenty-four ministries, excluding the Prime Minister Department, when this study was conducted), and a majority of respondents have a bachelor's degree.

Figure 3: Respondents' Ministry

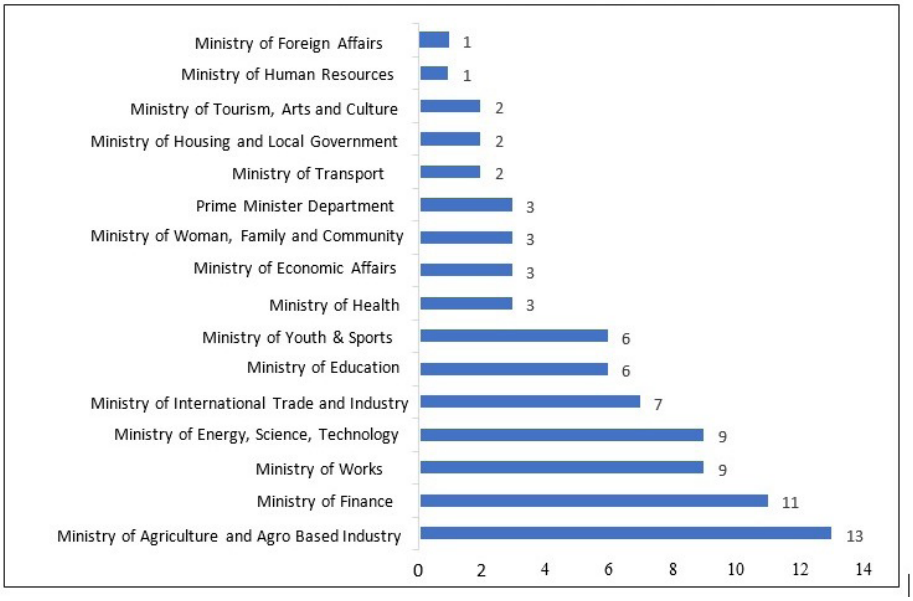
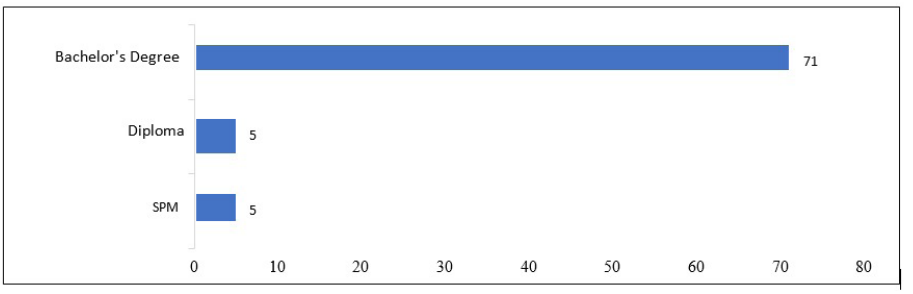


Figure 4: Respondents' Education Background



The majority of respondents have working experiences of more than six years and consist of accountants in Grade W41 and above. In addition, the majority of them are bachelor's degree holders. Therefore, it indicates that the responses are reliable as the respondents are perceived to have sufficient knowledge and experience in existing budgetary practices. However, further validity and reliability analysis is conducted to obtain statistical evidence.

4.2 Descriptive Analysis for the Variables

Out of the total respondents, 66.7% are entirely responsible for the budgeting process, 25.9% are involved primarily, and the remaining 7.4% of respondents have somewhat involved in the budgeting process. This study analyses the perceptions of public sectors towards OBB implementation using descriptive analysis. Results show that 100% of respondents use outcome measures information or programme outcomes in making a budget decision. Also, the OBB implementation will be carried out to measure department performance in the near future. The use of outcome measures information must be central to outcome based-budgeting.

Managers can use this information to make decisions about the levels of resources for programmes to either assess their efficiency and effectiveness or choose among alternative programmes (Ngoyi, 2004). Most respondents agree that OBB served as the best budgeting practice in public sectors. The overall mean is 4.629, with the standard deviation is 0.521 (Likert scale of 1 to 5: 1 being strongly disagreed; and 5 being strongly agreed).

To examine the perceived influence of OBB implementation, the respondents were asked to what extent OBB implementation can serve as an effective budgetary practice. Most respondents agreed that OBB implementation improves the budgeting system in public sectors. The overall mean score is 4.807, and the standard deviation is 0.302. It shows that they perceived OBB as a better tool for budgetary practice in public sectors. This result is consistent with the previous study by Ngoyi (2004), Shah and Shen (2007), Srithongrung (2017) and Widodo (2017), which found that OBB increases the efficiency and effectiveness by focusing on resources for the most critical and important outcomes. Second, OBB will enhance decision-making in using limited public resources effectively. Third, OBB improves processes by linking the budget to programme performance over time. Fourth, it improves understanding and communication about critical issues and priorities relative to resources. Fifth, it makes managers more accountable for programme decisions that affect budget outcomes. Sixth, it supports management by connecting budget results and budget performance measurement with programme performance measurement in monitoring, evaluating, and reporting results.

The governance system's role in implementing outcome-based budgeting is measured using a 5-point Likert scale. Respondents' were asked whether the implementation of OBB improved the governance system in their organisation's departments. The overall mean for the governance system is 4.779, and the standard deviation is 0.300. The high mean score of close to 5 perceived that good governance is important to be implemented in the public sector in line with OBB implementation. It is consistent with the views of other authors from previous studies by Bouckaert and Van de Walle (2003), Langlands (2004), Kamal et al. (2015) and Octariani, Akram, and Animah (2017), which found that government will provide efficient service delivery and improvement in the performance of the public sector. Good public governance can also assist the government in evaluating and monitoring government spending to increase performance.

To assess the impact of implementing the OBB on accountability in the public sector, respondents were asked to express their opinions using a 5-point Likert scale, where 1 indicated strong disagreement and 5 indicated strong agreement.

The overall mean for accountability is 4.828, and the standard deviation is 0.287. The result shows that accountability is important in enhancing the budgetary system in public sectors to improve public service delivery to other public sectors stakeholders. This result is consistent with previous studies by Yaakob et al. (2009), Mejía Acosta (2013), Said, Alam, and Aziz (2015) and Rana et al. (2019), which found that accountability is an essential factor in determining good governance, and hence the legitimacy of power. A budget preparer must be accountable for his action or behaviour. Thus, public service delivery can be optimised even with limited resources. (Refer to appendix for detailed results of the descriptive analysis.)

4.3 Hypotheses Testing

This study tests the hypotheses using Multiple Linear Regression analysis based on the following regression model:

$$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1X_2 + \varepsilon i \text{ Where:}$$

$$\text{Accountability} = \beta 0 + \beta_1 \text{Outcome-based Budgeting} + \beta_2 \text{Governance} + \beta_3 \text{Outcome-based Budgeting * Governance} + \varepsilon i$$

Assumption Test

Before regression analysis, the data's reliability, normality and multicollinearity were tested. Table 2 depicts the preliminary test results of the data collected. The skewness and kurtosis for outcome-based budgeting, governance and accountability (dependent variable) are between 2 and -2. According to George and Mallery (2010), data can be considered normal within the 2 and -2. There are also slight differences (0.037, 0.031, and 0.036) between the mean and the trimmed mean for outcome-based budgeting, governance and accountability of the normality test. Thus, it is assumed that the normality of the data is not violated. Factor analysis was also conducted to measure the extent to which shared variance (the intercorrelation between measures) exists between variables or items within the item pool for a developing measure. The result showed all items loading above the threshold value, ranging between 0.60 to 0.884. The Cronbach's Alpha for all variables is also above the threshold value, indicating that the variables are reliable for further analysis.

Table 2: Summary of Variables Testing

Variables	Mean	5% Trimmed Mean	Normality Test		Cronbach's Alpha
			Skewness	Kurtosis	
Outcome-based Budgeting	4.807	4.844	-2.037	3.112	0.960
Governance	4.779	4.810	-1.585	1.482	0.853
Accountability	4.828	4.864	-1.990	2.942	0.909

To examine multicollinearity, the correlation matrix and the value of tolerance and Variation Inflation Factor (VIF) is used (Table 3 and 4).

Table 3: Correlation Coefficient Matrix

	OBB	Governance	Accountability	OBB*Governance
OBB	1			
Governance	.695**	1		
Accountability	.753**	.637**	1	
OBB*Governance	.983**	.815**	.769**	1

**Correlation is significant at the 0.01 level (2-tailed)

Pearson correlation reveals a moderate effect between outcome-based budgeting and governance (r=0.695, n=81). Meanwhile, outcome-based budgeting and accountability have a significant positive effect (r=0.753, n=81) and a moderate positive effect between governance

and accountability (r=0.637, n=81). All these correlations are statistically significant. In addition, the VIF values are less than 10, and the tolerance values are more than 0.1. Thus, no multicollinearity issue exists, and all variables can be retained for the hypotheses testing.

Table 4: Variation Inflation Factor

Independent Variable	Dependant Variable	Collinearity Statistics	
		Tolerance	VIF
OBB	Accountability	0.517	1.934
Governance	Accountability	0.517	1.934
OBB * Governance	Accountability	0.336	2.977

Multiple regression analysis

Multiple linear regression analysis was used to analyse two hypotheses in this study. First, the model encompasses outcome-based budgeting as an independent variable and a moderating effect of accountability measured by governance. Table 4 presents the results of multiple regression conducted to test the relationship between outcome-based budgeting, accountability and the moderating effect of good governance.

The overall model is significant (p<.001). The coefficient of determination indicated R2 is a number of the proportion of variance in the dependent variable that is predictable from the independent variable. The R2 in Table 5 indicates that the model of outcome-based budgeting implementation explains the variance in the accountability practice. In this case, the value is 0.687 or 68.7% of accountability practice is explained by outcome-based budgeting implementation. The adjusted R2 is 0.679 or 67.9%. According to Pallant (2011), the adjusted R2 can be reported if small-size samples were used to provide a better estimate of the true population value.

Beta (β) values denote the contribution of each independent variable to the dependent variable. According to Pallant (2011), the largest beta value represents the strongest unique contribution by the independent variable to the dependent variable. A positive value of beta indicates a positive relationship between the independent and dependent variables; a negative value of beta indicates a negative relationship between the independent and dependent variables (Field, 2009).

Table 5: Multiple Regression Analysis Result

Variables	Accountability		
	B	*t*	Sig.
(Constant)	1.080	3.002	.004
OBB	0.571	5.969	.000*
Governance	0.210	2.184	.032
OBB * Governance	0.026	5.969	.000*
R^2		.592	
Adjusted R^2		.582	

Significant at p-value = 0.01

H1: OBB implementation is perceived to influence accountability among Malaysian public sectors

The results show a beta value of 0.571, indicating that accountability increases on average by 0.571 for a unit increase in outcome-based budgeting, net of the effects of changes due to governance and outcome-based budgeting multiplied with governance. The result significantly influences OBB implementation and accountability in Malaysian public sectors (p =.004). Thus, H1 is supported.

The OBB is perceived to influence accountability practices in Malaysian public sectors. This finding is consistent with studies by Goddard (2004), Bakar et al. (2011), Said et al. (2015) and Rana et al. (2019). According to Said et al. (2015), public sector accountability requires governments to justify the source and utilisation of public resources because governments are mostly perceived as inefficient and poorly performing in service delivery. Thus, through outcome-based budgeting implementation, the budget preparer needs to be accountable for his action because his performance will be measured and evaluated via the programme outcome. As a result, growing concern about how the government spends money can be accountably disclosed to the public.

H2: Governance will moderate the perceived influence of OBB on accountability among Malaysian public sectors

The second hypothesis (H2) developed in this study examines whether governance will moderate the influence of OBB implementation on accountability in Malaysian public sectors. The result shows the beta value for this hypothesis is 0.210, indicating that accountability increases on average by 0.210 for a unit increase in governance, net of the effects of changes due to outcome-based budgeting and outcome-based budgeting multiplied with governance. In addition, it showed that governance has no significant direct influence on accountability. However, it has a significant moderation effect on the influence of OBB on accountability (p-value < .001). Thus, H2 is supported.

The finding proves that good governance practice could help enhance accountability among public sectors in OBB implementation. This result is in line with previous studies by Committee (2001), Langlands (2004), Mutiganda (2013) and Wardhani et al. (2017). For example, according to Mutiganda (2013), governance involves setting goals and monitoring their implementation, and this led to the accountability practices of public sectors in managing public funds effectively.

5.0 Conclusion

The findings showed that most respondents strongly agreed that OBB is one of the budgetary practices used in Malaysian public sectors. OBB is the budgetary practice that uses an outcome to make budget decisions by linking the outcome result with the performance of ministries/departments/agencies. Thus, the efficiency of government spending will increase, and high-quality service can be provided to the public.

This study's findings confirmed a significant relationship between budgetary practices and accountability, as stipulated by (Octariani et al., 2017). The result showed a strong positive

effect between OBB implementation and accountability (r=0.753, n=81). A strong positive relationship is supported by a previous study (Ngoyi, 2004; Ngoyi, Miller, & Holzer, 2004; Widodo, 2017). It is consistent with the previous study whereby OBB is perceived to influence accountability in Malaysian public sectors. According to Widodo (2017), it was found that outcome information is available not only for the fulfilment of formal requirements in the planning and budgeting process.

Public sector outcome information can be used to measure the outcome of a ministry, department or agency and is also useful for more routine managerial purposes (Widodo, 2017). Outcome information has generally become well integrated into the outcome management systems of most line ministries or agencies. As a result, adequate accountability and an effective evaluation system are applied to budgetary practice in Malaysia (Said et al., 2015). Therefore, it is believed that implementing OBB would help the government increase its accountability and indirectly restore public confidence.

This study also highlights the important roles of governance in moderating the influence of OBB on accountability. According to Wardhani et al. (2017), public governance focuses on the relationship of power between government authorities, civil society and the market to enforce rules and regulations and deliver services to the community of citizens. Good governance in OBB implementation will help enhance accountability in Malaysian public sectors by creating a better disclosure on public service delivery. As a result, more accountable and transparent practices are promoted and thus, creating a strong, independent, prosperous, and democratic country (Sudaryati, Heriningsih, & Fitriyani, 2018).

Effective budgetary practice is important in a government as it will ensure public money is monitored and managed effectively. Due to scarce literature on outcome-based budgeting, this study can be added as part of the literature for outcome-based budgeting. Findings from this study can contribute to the public sector's management accounting literature. This study may add literature for the public sector from the perspective of federal government budgetary activities and policies. Besides, few studies link new budgetary practices, such as outcome-based budgeting, with accountability and good governance. This study can be a platform for public sectors to continue implementing outcome-based budgeting as their budgetary system even though they face some challenges in setting up the performance measure for each activity. Besides, the contributions are not only to highlight the perception of public sector practitioners of new budgetary practices but also seek to inform policy-making within government and elsewhere. Overall, it is hoped that this input will support the shaping of better-managed, more legitimate, trusted and accountable public service in Malaysia.

This study also faced several limitations that could be addressed in future research. First, in this study, only sixteen ministries were considered, even though there are 24 ministries in Malaysia, including the Prime Minister’s department. The survey only included a few representatives of a department. Due to time constraints, only 82 responses managed to be collected. Thus, more samples should be obtained for future research to better findings. Second, other variables that may affect the outcome-based budgeting implementation in public sectors in Malaysia can be added in future research to ensure the implementation can enhance public sector transparency and efficiency. Thirdly, despite using a questionnaire survey to collect data, future studies may consider using various methods such as case studies and interviews (Modell, 2005). Using this method, direct opinions from the top-level,

public sector representatives can be recorded and analysed to ensure the appropriateness of opinion can be gathered. Lastly, outcome-based budgeting is still in the early stages, and there are no genuinely mature examples of integrated outcome-based budgeting systems (Shah & Shen, 2007). In addition, there are only a few literature and empirical research regarding outcome-based budgeting preparation or implementation in Malaysia, which cause some limitations for further review on outcome-based budgeting in the Malaysian scenario. The scope of budgetary involvement of an individual could be different in the other ministries and among other government officers, which could be addressed in future research. For future research, a new variable, such as integrity, can be proposed in setting up a new framework for outcome-based budgeting, governance, accountability and integrity. The sample frame for future study may focus on different tiers of the Malaysian government, such as local authority. The smaller scope of budgeting territory may create different results for outcome-based budgeting and accountability and governance systems.

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Appendix

1. Descriptive Statistics of the variables

Public sector respondents' opinions on the use of outcome measures information or programme outcomes in budget making-decisions

Item	Yes (%)	No (%)
Does organisation now use outcome measures information or programme outcomes in making budget decision	100	0
Does organisation with implement Outcome-based budgeting in order to measure department/units performance in the near future	100	0
N=81		

Descriptive Statistics for Involvement in Budgeting Process

Involvement in Budgeting Process	Frequency	Percent
Involved Somewhat	6	7.4
Involved Primarily	21	25.9
Entire Responsibility for the Budget	54	66.7
Total	**81**	**100.0**

Descriptive Statistics for Outcome-based Budgeting Purposes

No.	Item	Mean	SD
1.	Outcome-based budgeting is a legislative requirement in our organisation	4.691	0.539
2.	Outcome-based budgeting activities are only based on administrative directives, policies and procedures in our organisation	4.592	0.685
3.	Our organisation can be considered a best practice for outcome-based budgeting	4.604	0.605
Overall mean		**4.629**	**0.521**

(Likert scale of 1 to 5: 1 being strongly disagree; and 5 being strongly agree)

Descriptive Analysis for Outcome-Based Budgeting Implementation

No.	Item	Mean	SD
1.	Improvement of fiscal discipline by limiting growth in expenditures	4.740	0.494
2.	Improvement of fiscal discipline by cutting the budget	4.765	0.454
3.	Increase of public accountability by promoting a focus on results	4.802	0.400
4.	Increase of public accountability by promoting a focus on service quality	4.864	0.344
5.	Increase of public accountability by promoting a focus on customer satisfaction	4.802	0.400
6.	Improvement of executive decision making with objective information	4.839	0.369
7.	Improvement of legislative decision making with objective information	4.827	0.380

No.	Item	Mean	SD
8.	Enhancement of communication with citizens	4.839	0.401
9.	Integrating outcome information in the budget is difficult due to budget incapability with long term performance plans	4.753	0.461
10.	Integrating outcome information in the budget is difficult due to the prohibitive cost of developing and implementing new information systems	4.839	0.401
11.	Information on outcome measures is included but not integrated in the agency written budget such information simply accompanies the budget	4.740	0.565
12.	My organisation has worked with the executive budget office to determine how outcome measures information will be represented in the budget	4.802	0.400
13.	My organisation prepares its budget requests by integrating and presenting goals and objectives, performance plan, and resources requests into one document	4.765	0.426
14.	Information on outcome measures is included in the negotiations when top executives address policy and budget issues at the organisation level	4.839	0.369
15.	Information on outcome measures is included in the negotiations when the top executives address policy and budget issues at the department level	4.827	0.380
16.	Program managers, stakeholders and other decision-makers deem useful and encourage the incorporation of outcome information into budget submission to the executive budget office	4.777	0.418
17.	My organisations top level mangers encourage the use of outcome information in communications with stakeholders	4.876	0.331
18.	Executive branch leaders encourage their budget office to consider the use of outcome measures information in reaching its budget decisions	4.839	0.369
19.	Programme managers, and their supervisors, develop and fully integrate outcome measure information in reaching its budget decisions	4.827	0.380
20.	The annual performance plan is an integral part of the organisation's budget requests	4.777	0.418
21.	Funding allocation are based on outcome measures information, hence, resources needs and outcome levels are directly linked in	4.839	0.369
22.	The outcome based budget used by my organisation is formulated based on variables levels of achievement according to variable levels of resources	4.765	0.426
Overall mean		**4.807**	**0.302**

(Likert scale of 1 to 5: 1 being strongly disagree; and 5 being strongly agree)

Descriptive Statistics for Role of Governance

No.	Item	Mean	SD
1.	My department focuses most attention on drivers of organisational success	4.654	0.478
2.	My department ensures that audit reports are timely and understood	4.740	0.440
3.	My department ensures that internal controls exist to minimise risk of fraud	4.777	0.418
4.	My department ensures that mangers are exposed to good practice outside the sector	4.790	0.409
5.	My department determines that good forecasting and performance management system exist	4.851	0.357
6.	My department ensures that staff development programs exist and are valued	4.814	0.390
7.	My department ensures that maintenance management is planned	4.827	0.380
Overall mean		**4.779**	**0.300**

(Likert scale of 1 to 5: 1 being strongly disagree; and 5 being strongly agree)

Descriptive Analysis for Accountability

No.	Item	Mean	SD
1.	My organisation prepares financial reports annually	4.839	0.369
2.	My organisation will report any serious incidence which may have a negative impact on the public to the higher authority	4.839	0.369
3.	My organisation gives a chance to beneficiaries to view and raise issues about the performance reports	4.703	0.459
4.	My organisation has a regular reporting system on the achievements and results of its programs or projects against their objectives	4.839	0.369
5.	My organisation produces several performance measures concerning the quality of services delivered	4.864	0.344
6.	My organisation provides a provision of transparent financial and governance information	4.864	0.344
7.	My organisation engages with beneficiaries in the evaluation of projects	4.876	0.331
8.	My organisation provides complaints and readiness's mechanism	4.753	0.488
9.	My organisation allows auditors to examine reports before being submitted to donors	4.814	0.450
10.	My organisation openly receives monitoring visits from funding and oversight agencies	4.888	0.316
Overall mean		**4.828**	**0.287**

(Likert scale of 1 to 5: 1 being strongly disagree; and 5 being strongly agree)