

Capital Budgeting Practices and Risks Adjustment: Practices among Cambodian Companies

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Abstract

The purpose of this paper is to investigate prevailing capital budgeting practices in among Cambodian companies. A comprehensive primary survey was conducted of 53 out of 130 financial managers of manufacturing companies in Cambodia. Gathered data were then analysed using appropriate statistical techniques. The findings show that payback period, net present value (NPV), discounted payback period and accounting rate of return (ARR) are the most popular evaluation techniques. The study also finds that interest rate risk, as well as business cycle risk, are mainly adjusted with a discount rate, and the commonly used method for calculating the cost of capital is the after-tax cost of debt and the weighted average cost of capital (WACC). Furthermore, the finding suggests that the longer the existence of a company, the more likely for it to use NPV method. The finding also reveals that the higher the amount of capital investment, the more it is likely to use the NPV method, while the smaller the amount of capital investment, the more likely the payback method will be used. With higher educational background, NPV and ARR are most likely the methods to be used in capital budgeting among the Cambodian firms. Since Cambodia is an unexplored country in capital budgeting practices, this research is the first to explore and originally contributed to the extant literature per se. This study contributed to academics, practitioners, policymakers and stakeholders of the company. Moreover, this research has proffered a more reliable and comprehensive analysis of capital budgeting practices among Cambodian manufacturing firms.

Keywords: Capital Budgeting, Net Present Value, Risk, Payback period, WACC.

JEL Classification: G31, G32

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Introduction

Companies need to invest in wealth-creating assets in order to renew, extend or replace the means by which they carry on their business. Capital investment allows companies to continue to generate cash flows in the future or to maintain the profitability of existing business activities (Watson & Head, 2010). Financial management is concerned with the planning and controlling the provision of resources (financing decision), the allocation of resources (investment decision) and finally the control of resources (whether funds are being used effectively or not). This will ultimately lead to achieving the primary objective of financial management i.e. the maximisation of shareholder wealth. The continuity and sustainability of every company will rely on the returns generated from its investments. According to Miller and Modigliani (1961), future corporate earnings rely on the company's investment policy and that investment decisions are responsible for a company's future profitability and its market value. The capital budgeting theory lies within the concept of shareholders' wealth maximization (Slagmulder et al., 1995) and involves investment decisions in which expenditures and receipts continue over a significant period of time (Peterson and Fabozzi, 2002; Dayananda et al., 2002).

Investment decisions have significant effects on the long term financial and operational performance of companies and are surrounded with complexity and uncertainty which present particular challenges to management (Dempsey, 2003). Furthermore, investments involve huge capital outflow, has its unique risks and estimations about the future cash flows. The uncertainty of future cash flows and other estimation difficulties that exist in practice have resulted in the development of various risk analysis and management science techniques to supplement traditional present value-based decision models (Klammer et al., 1991). One of the most difficult and intractable issues faced by decision makers and researchers is how to identify, capture and evaluate uncertainties associated with long-term investments. Thus, it requires a rigorous appraisal to weight the cost and benefit to the business, and its ultimate impact on shareholders wealth as it requires prediction of future events (Slagmulder, 1997; Abdel-Kader & Dugdale, 1998). All investments involve risk and judgement. A disciplined approach helps management to make rational decisions based on the probable impact of an investment on the future of the business. The presentation of the proposed investment to the decision makers is as important as the process of gathering and evaluating information. The way such a presentation is made often determines the extent to which the appraisal influences the decision.

The main aim of this research is to investigate prevailing capital budgeting practices to make the investment decision in Cambodian companies. Survey of prevailing capital budgeting of Cambodian companies will be specially: (1) examining the capital budgeting methods used to evaluating an investment proposal and (2) analysing the risk techniques of capital budgeting used to adjusting risk in investment proposals and (3) determinant of capital budgeting methods. During the last two decades, Cambodia experience a strong economic growth, sustained an average growth rate of 7.6 percent in 1994-2015, ranking sixth in the world and the economy is expected to remain strong over the next five years (World Bank, 2017). Cambodia has attained the lower middle-income status as of 2015, with gross national income (GNI) per capita reaching US\$1,070, driven by garment exports and tourism. Cambodia has also experience tremendous amount of business investment not only local demand but also foreign heightened interest on investment escalated (Turunen & Zhou, 2017).

For example, according to statistics from the National Bank of Cambodia (NBC), total trade between Cambodia and the rest of the world in 2016 equalled US\$29 billion, around 161 percent of the country's GDP. Exports from Cambodia reached US\$11 billion while

import represent US\$18 billion. Foreign direct investment (FDI) into Cambodia increased by 25 percent last year amounting to \$2.15 billion, most of which were channelled into the financial and manufacturing sectors (Chan, 2017). The investment inflow from foreign countries mostly went to the financial sector, especially to banking, due to the increase in banking institutions' capital reserves and the manufacturing sector. The reasons behind for increasing capital investment are underpinned by peaceful domestic environment, improved investor confidence, favourable macroeconomic conditions, and increased capacity utilization together with expansion of economic activity (Turunen & Zhou, 2017). Therefore, nowadays, capital budgeting practices play a significant role than ever before and to the best of knowledge, there is no research on capital budgeting practices in Cambodia. Thus, this research has been designed to investigate prevailing capital budgeting practices in Cambodia.

Literature review

Defining and understanding capital budgeting

Different authors define the capital budgeting in different ways. For example, according to O'Sullivan and Sheffrin (2003), 'capital budgeting is the planning process used to assess whether an organization's long term investments such as replacement of machinery, new machinery, new products, new plants and research development projects are worth the funding of cash through the firm's capital resources'. It is the process of allocating resources for major capital, or investment, expenditures. One of the primary goals of capital budgeting investments is to increase the value of the firm to the shareholders (O'Sullivan & Sheffrin, 2003). Similarly, Dayananda et al. (2002) defined capital budgeting as mainly related to sizable investments in long-term assets which includes either tangible (i.e. property, plant or equipment) or intangible assets (i.e. new technology, trademarks). Regardless of their nature (tangible or intangible), the investment projects require careful evaluation as they requires very large amounts of cash to be raised and invested, and they will determine whether the company is profitable in the future (Dayananda et al., 2002). Varshney and Maheshwari (2014) sees capital budgeting is a step by step process that businesses use to determine the merits of an investment project. The decision of whether to accept or deny an investment project as part of a company's growth initiatives, involves determining the investment rate of return that such a project will generate.

Capital budgeting process

The specific capital budgeting procedure that a manager uses depend on the manager's level in the organisation, size and complexity of the project being evaluated, and the size of the organisation. Organisations seek to select the best or most profitable investment projects through a carefully designed process so that it can maximise the return to its shareholders. It also seeks to avoid the negative strategic and financial consequences which could follow from poor investment decisions. The typical steps in the capital budgeting process highlighted by Stowe and Gagne (2007) is shown in Figure 1. However, the capital budgeting process could be dynamic, not static and could be influenced by many changing factors in an organizational environment.

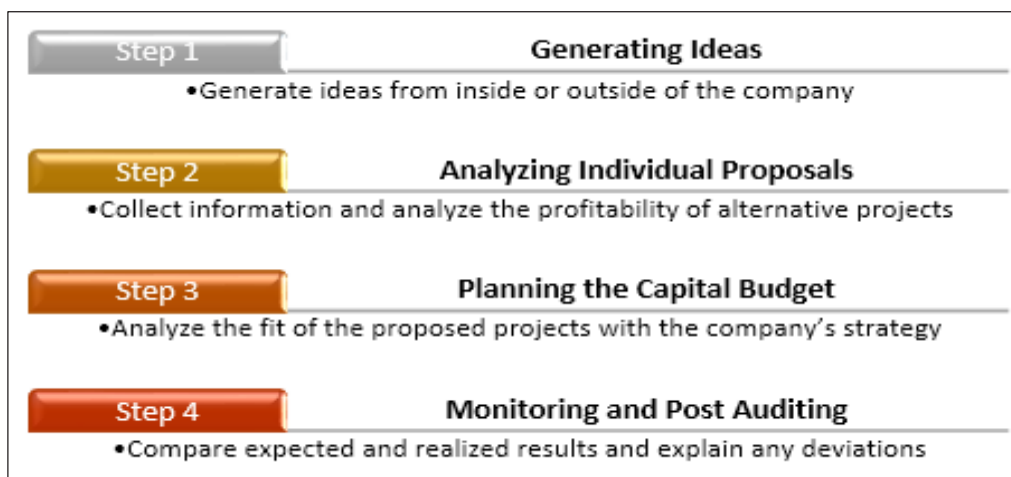


Figure 1: Capital budgeting process adopted from Stowe and Gagne (2007, p. 47)

The process starts from generating ideas i.e. to generate a proposal for investments and there could be various reasons for taking up investments in a business. The second step in the process is to analyse the individual proposals i.e. collecting information and selecting all correct criteria's to judge the desirability of the proposals. This has to match the objective of the firm to maximize its market value. The third step is to plan the capital budget i.e. organising the profitable proposals into a coordinated whole that fits within the company's overall strategies. Finally, monitoring and post-auditing i.e. involves comparison of actual results with the standard ones. The unfavourable results are identified and removing the various difficulties of the projects helps for future selection and execution of the proposals.

Capital budgeting methods/models

Over the last three decades, many research have been conducted on capital budgeting practices among companies. However, a review of this literature reveals inconsistent findings, financial managers and academics have not been in full agreement as to the choice of the best capital budgeting method. Therefore, there is no such defined method or model for the selection of a proposal for investments as different businesses have different requirements. The literature reveals net present value (NPV), internal rate of return (IRR), modified internal rate of return (MIRR), payback period (PB), discounted payback period (DPB), accounting rate of return (ARR) and profitability index (PI) as the more prevalent capital budgeting methods in today business world (Elumilade et al., 2006; Maquieira et al., 2012; Ryan and Ryan, 2002). These capital budgeting methods can be either discounted cash flow (DCF) methods or non-DCF methods. The DCF is an application of the time value of money concept i.e. the idea that money to be received or paid at some time in the future has less value, today, than an equal amount actually received or paid today. DCF analyses use future free cash flow projections and discounts them, using a required annual rate, to arrive at present value estimates. A present value estimate is then used to evaluate the potential for investment. Non-DCF do not use the concept of time value of money or discounting the free cash flow projection. Largely, NPV and IRR are considered DCF methods, and PB and ARR are of non-DFC methods.

Early studies generally report DCF models to be the least popular capital budgeting methods. This might be attributed to the lack of financial sophistication and limited use of computer technology in that era. Therefore, payback technique and the ARR as non-DCF are the most preferred method (Pike, 1996; Schall, Sundam, & Geijsbeek, 1978). However, with the modern financial theory, studies have shown that DCF model are the most prepared capital budgeting methods. Arnold and Hatzopoulos (2000) found that

practitioners placed greatest emphasis on the discounting techniques (NPV and IRR) with NPV rated higher than IRR (97% of large firms used NPV; 84% used IRR; 66% used payback). Furthermore, among the DCF methods, through the literature, NPV has trailed IRR in management preference. Managers have argued the perception of a percentage return is more easily understood and comparable than an absolute dollar value increase in shareholder wealth (Liu & Stowe, 2005). Therefore, in the past, managers have chosen IRR over NPV. Management view IRR as a more cognitively efficient measure of comparison (Liu & Stowe, 2005). However, academics have long argued for the superiority of NPV over IRR.

Methodology

The study focus on the manufacturing companies in Cambodia and a self-reported questionnaire has been administered to collect data. The manufacturing and other industrial sector accounts for 59 percent of the total GDP while services sector contribution to GDP is 41 percent (World Bank, 2016). The manufacturing sector especially the garment industry is the foremost driver of Cambodia's economic activity expansion, thus the selection of the manufacturing sector to conduct the study. The questionnaire adopted has been originally used and developed in previous studies to facilitate comparison (Elumilade et al., 2006; Graham and Harvey, 2001; Maquieira et al., 2012; Ryan and Ryan, 2002; Verma et al., 2009). The structured questionnaire includes closed ended questions inquiring use of discounted/non-discounted and risk-adjusted techniques of capital budgeting, cost of capital calculating methods, and capital budgeting process and activities on the Likert scale.

A total of 130 questionnaires were distributed based on nonprobability sampling to the financial manager/CFO on the basis that they are most likely to be involved in evaluating investment projects of the company. A covering letter attached to each questionnaire served as an introduction to the purpose of the survey and assured the confidentiality of the information supplied by each respondent. In an attempt to increase the response rate, the questionnaires were present in-person and appointment were scheduled in advance. Furthermore, fifty three usable responses were received, given a response rate of 40.8 percent, which is comparable to similar surveys. Data collected were presented and analysed using descriptive statistics and inferential statistics (including mean, mode and percentage analysis).

Analysis and Discussion

Discussion on participants' characteristics

The classification of educational background of the financial managers is presented in Table 1. Sixty percent (n=32) of managers had undergraduate degree qualification, followed by having masters/MBA degree with 34 percent (n=18). PhD and other qualification had 2 percent (n=1) and 4 percent (n=2), respectively.

Table 1
Educational background

Degree	No. of companies	% of companies
PhD	1	1.9
Masters/MBA	18	34.0
Undergraduate degree	32	60.3
Any other qualification	2	3.8

Total	53	100
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Source: Survey Data

The sampled companies have been classified in terms of number of years they are in business. The years were classified into 5 categories as shown in Table 2. Based on the respondents' feedback, 47 percent of the companies have been in business for between 10 and 20 years (n= 25), thirteen companies (25%) are considered to be newly established businesses that have been operating for less than 10 years. Nineteen percent of the respondents have been in business for between 31 and 40 years, while the remaining 9 percent of the respondents have stayed in business for between 21 and 30 years (n= 5).

Table 2
Classification of companies in term of Age

Age of Company	No. of companies	% of companies
<10	13	24.5
10-20	25	47.2
21-30	5	9.4
>30	10	18.9
Total	53	100.0

Source: Survey Data

The companies have been classified in terms of size of the capital budgets that they invested. The size of the capital budgets is defined as total annual spending in term of property, plant and equipment (PPE). As shown in Table 3 below, 57 percent of companies' size in terms of their capital budgets is above \$100,000 but below \$10 million, while 16 of the companies (accounting for 30%) have a capital budget up to \$100,000. Six companies (representing 11%) mentioned the size of their capital budget to be between \$10 million and \$100 million, while only one company has a capital budget between US\$100 million to US\$500 million. The reasons behind this huge investment could be as a result of the increased growth witnessed in the manufacturing sector and increased flow of FDI into Cambodia. This will increase the level of intense competition among companies and forcing businesses to invest in modern technological equipment and facilities in order to remain relevant and competitive.

Table 3
Size of the capital budget

Size of the Capital budget	No. of companies	% of companies
up to \$100,000	16	30.2
<\$10 million	30	56.6
\$10-\$100 million	6	11.3
\$100-\$500 million	1	1.9
>\$500 million	0	0
Total	53	100

Source: Survey Data

Purpose of investment for capital budgeting

Table 4 presents the survey findings on the purpose of investment. Forty seven percent of the respondent (n=20) stated that the dominant motivation for making investment is for expansion into new business and existing business. Moreover, 13 companies (24%) invest in order to expand existing business. Nine percent of the respondent mentioned that the reason is for equipment replacement and modernization of their operation. Expansion of existing business and equipment replacement is one the reasons of investment as mentioned by 8 percent of the respondents (n=4), while another 8 percent stated that expansion into new business (i.e., diversification) is the motive behind the investment. A majority of the respondents mentioned that expansion into existing business is the main reason for the investment. This could be in the form of increased production capacity, company acquisitions and the introduction of electronically integrated operations, thereby achieving economies of scale, increased sales or product volume to get more income and improve performance of company.

Table 4
Purpose of investment for capital budgeting

Purpose of Investment	No. of companies	% of companies
Expansion into new business/diversification only	4	7.5
Expansion into existing business only	13	24.5
Equipment replacement and modernization only	5	9.4
Expansion into new and existing business only	25	47.2
Expansion of existing business and equipment replacement	4	7.5
Expansion into new business and equipment replacement	1	1.9
Expansion into new business, existing business and equipment replacement	1	1.9
Total	53	100.0

Source: Survey Data

Factors determining capital budgeting method

The sample firms were asked about the factors determining the selection of capital budgeting method. Table 5 presents results from their respective financial managers. The most important factor determining capital budgeting method is top management familiarity (28.3%). This was followed by the importance of the project (20.8%), easy and understandability (17%), experience and competence (13.2%), finance theory (11.3%) and informal rule of thumb with just 7.5 percent. Notwithstanding, the remaining factor, i.e. other factors took the mean value less than two which implies “not important” in deciding capital budgeting decision.

Table 5
Factors determining capital budgeting method

Factors	No. of companies	% of companies
Finance theory	6	11.3
Experience and competency	7	13.2
Informal rule of thumb	4	7.5
Importance of the project	11	20.8
Easy and understandability	9	17.0

Top management familiarity	15	28.3
Any other factors	1	1.9
Total	53	100.0
Source: Survey Data		

More so, even though Cambodia is a developing market, the findings show increase awareness and quality of management education. Financial managers are becoming more aware of the decision aids at their disposal and are more than equipped to apply the benefits of information technology explosion.

Table 6
Capital budgeting method

Methods	No. of companies	% of companies
Payback (PB)	18	34.0
Discounted Payback (DPB)	9	17.0
Net Present Value (NPV)	10	18.9
Profitability Index (PI)	3	5.7
Modified Internal Rate of Return (MIRR)	4	7.5
Internal Rate of Return (IRR)	4	7.5
Accounting Rate of Return (ARR or ROCE)	5	9.4
Total	53	100.0

Source: Survey Data

Capital budgeting methods in practice

The financial managers were asked to respond on which of the financial analysis technique(s) is (are) used in their respective businesses for the appraisal of major investments. According to the respondents, as summarized in Table 6, payback period method (PB) (n=18) is the most important technique used to evaluate investment. This was followed by the net present value (NPV) method (n=10), discounted payback (DPB) (n=9) and accounting rate of return (ARR) or ROCE (n=5). The least likely methods to be employed by the respondent are internal rate of return (IRR) (n=4), modified internal rate of return (MIRR) (n=4) and profitability index (PI) (n=3). The respondent were further asked to indicate which of the capital budgeting method is either used as primary, secondary or neither. Results are presented in Table 7.

Table 7
Capital budgeting methods: primary vs secondary

Methods	Primary	Secondary	Neither
Payback (PB)	95% (50)	5% (3)	-
Discounted Payback (DPB)	23% (12)	77% (41)	-
Net Present Value (NPV)	85% (45)	15% (8)	-
Profitability Index (PI)	-	64% (34)	36% (19)
Modified Internal Rate of Return (MIRR)	-	-	100% (53)
Internal Rate of Return (IRR)	-	79% (42)	21% (11)
Accounting Rate of Return (ARR or ROCE)	13% (7)	34% (18)	53% (28)

Source: Survey Data

Note: Number in parenthesis represents the number of companies.

Ninety five percent of financial managers reported that PB method is a primary method for capital budgeting, whereas 85 percent of the managers indicated NPV as a primary method. Similarly, 23 percent of the managers were reported to use DPB as a primary method, while only 13 percent of the managers used ARR as a primary method. The result also shows that the managers preferred to use IRR (79%), DPB (77%), PI (64%) and ARR (34%) as secondary methods. Furthermore, the result shows that MIRR is neither used as primary nor secondary method. The PB and the NPV methods are reportedly being used as both primary and secondary. Moreover, the survey results also indicate the use of multiple techniques among the companies in Cambodia; some respondents used more than one financial analysis technique when evaluating investment projects (some technique as primary, while others as secondary). This result is consistent with other studies (e.g. Alkaraan & Northcott, 2006; Arnold & Hatzopoulos, 2000; Lingesiya, 2015).

Estimation of the Cost of Capital

The respondents were asked to report on how their respective companies derive the discount rate in the appraisal of major capital investments. Table 8 presents information on usage and estimation of the cost of capital. A substantial majority of respondent companies (98%) used a cost of capital in their investment evaluation techniques, while only about 2 percent of the financial managers indicated that they do not use cost of capital in their capital budgeting analysis. Results show that cost of debt after tax is the most prevalent method in calculating cost of capital (n=16). The next widely used methods are the weighted average cost of capital (WACC) (n=12), the cost of debt before tax (n=8), cost of equity derived from capital asset pricing model (CAPM) (n=6) and average historical returns (n=5). Cost of equity derived from dividend growth model (DVM) and an arbitrary chosen figure are not popular methods in calculating cost of capital amongst Cambodian companies. The findings highlight that the major source of finance to fund capital investment in Cambodia is through debt finance.

Table 8
Estimation of the Cost of Capital

Methods	No. of companies	% of companies
Cost of debt before tax	8	15.1
Cost of debt after tax	16	30.2
Cost of equity derived from Dividend Growth model (DVM)	3	5.7
Cost of equity derived from Capital Asset Pricing model (CAPM)	6	11.3
Weighted average cost of capital (WACC)	12	22.6
Average historical returns	5	9.4
An arbitrary chosen figure	2	3.8
None	1	1.9
Total	53	100.0
Source: Survey Data		

Risk factors and adjustments

Appraising long-term capital investments can be quite challenging to businesses due to the uncertainty surrounding the projects' cash flows. Therefore, risk factors should be considered and adjusted for. Some of this risk factors could be unexpected inflation, interest rate movements, GDP growth or business cycle risk, movement in commodity price and movement in foreign exchange among other factors. The results of the survey

as depicted in Table 9 shows that interest rate risk and business cycle risk are mainly adjusted by discount rate (63 and 85 percent, respectively). In contrast, risk of unexpected inflation, foreign exchange risk and commodity price risk are mainly adjusted by cash flows (70, 55 and 94 percent, respectively). Furthermore, risk of unexpected inflation and foreign exchange risk are both adjusted by cost of capital as well as cash flow according to some respondents, while 6 and 10 percent of the respondents neither adjust for risk of commodity price movement and foreign exchange risk respectively.

Table 9
Risk factors and adjustments

Risk Factors	Adjust cost of capital	Adjust cash flow	Both	Neither
Risk of unexpected inflation	25% (13)	70% (37)	5% (3)	-
Interest rate risk	63% (33)	37% (20)	-	-
GDP or business cycle risk	85% (45)	15% (8)	-	-
Commodity price risk	-	94% (50)	-	6% (3)
Foreign exchange risk	15% (8)	55% (29)	20% (11)	10% (5)

Source: Survey Data

Note: Number in parenthesis represents the number of companies.

Developing and testing hypotheses

The discussion in the previous sub-sections was based on comparing averages. Although the discussion provided some interesting results on the use of capital budgeting methods, in this section, the study goes one step further by performing multivariate regression analysis in order to test hypotheses developed. The objective is to investigate the determinants of capital budgeting methods. In this regards, three hypotheses were developed as follows:

H1. The age of the company affects the selection of capital budgeting methods.

H2. The size of capital budget affects the selection of capital budgeting methods.

H3. The educational qualification of CFO affects the selection of capital budgeting methods.

With respect to the above hypotheses, the study investigated the determinants of four different capital budgeting methods, i.e. the PB, NPV, IRR and ARR methods. The MIRR and PI methods were left out, since the results in Table 6 and 7 showed that the methods were the least preferred method among Cambodian companies.

To test the hypotheses, estimations are carried out using the binary logistic regression method. Binary logistic regression¹ deals with situations in which the observed outcome for a dependent variable can have only two possible outcome. Using this approach to test the research hypotheses is also applied by Hermes, Smid and Yao (2007).

$$Z_i = \beta'x_i + u_i$$

(1)

The dependent variables (Z_i) are binary dummy variables created as follows: PB = 1 if the label value of a firm for the PB method is 4, it is 0 if the label value of a firm is

¹ To investigate the determinants of capital budgeting method, a logistic regression model of the following form is estimated:

$$Z_i = \alpha_0 + \beta_1 \text{SBUDGET}_{i,t} + \beta_2 \text{EDUC}_{i,t} + \beta_3 \text{AGE}_{i,t} + \mu_t$$

otherwise; NPV = 1 if the score of a firm for the NPV method is 3, it is 0 if the label value of a firm is otherwise; IRR = 1 if the label value for a firm for the IRR method is 6, it is 0 if the label value of a firm is otherwise; ARR = 1 if the score of a firm for the ARR method is 7, it is 0 if the label value of a firm is otherwise. The independent variables (x_i) are also binary variables. We have used the following variable specifications: SBUDGET = 1 if the size of the budget is less than 10 million dollars, it is 0 if the size of the budget is 10 million dollars or more; EDUC = 1 if the CFO of the firm has a PhD or Master/MBA degree, it is 0 if (s)he has an undergraduate degree; AGE = 1 if the firm is 30 years or older, it is 0 if firm is less than 30 years. u_i = error term; Z_i ranges from $-\alpha$ to $+\alpha$.

The result from the logistic regression is presented in table 10. It shows the result for the determinants of the use of the different capital budgeting techniques. Size of capital budgeting budget (SBUDGET) and educational background of the finance managers (EDUC) are the most influential determinant of capital budgeting method among Cambodian firms. Furthermore, the results show a significant positive coefficient between age of company (AGE) and NPV; and it is statistically significant at the 10 percent level. The finding suggests that the longer the existence of a company, the more likely to use NPV method. Older companies probably have more experience and management capabilities (expertise). Thus, $H1$ is supported in case of NPV and not supported in case of all other methods (PB, ARR and IRR).

Table 10
Determinants of Capital Budgeting Methods (Logit Analysis)

	PB	NPV	ARR	IRR
<i>Constant</i>	-0.398*	0.544***	-0.156	2.645**
<i>SBUDGET</i>	-1.063***	0.345**	-0.432	1.200
<i>EDUC</i>	0.966	0.615*	1.429**	-0.159
<i>AGE</i>	-1.155	1.258*	1.207	1.142
McFadden R^2	0.107	0.09	0.10	0.07
Number of observations	53	53	53	53

*, **, *** significant at 10 percent, 5 percent and 1 percent levels respectively. The McFadden R^2 is an analogue to the R^2 reported for regular OLS regression models.

Moreover, the result shows a negative coefficient between SBUDGET and PB which is statistically significant at the 1 percent level. The larger the amount of capital investment, the less likely the PB method will be used. However, there is a positive relation between SBUDGET and NPV. The finding shows that the higher the amount of capital investment, the more likely the NPV method will be used. The variables are statistically significant at the 5 percent level. ARR and IRR are insignificant. The finding is consistent with previous studies where they found that organisations used NPV to appraise project when it involved huge investment (Brounen et al., 2004; Verbeeten, 2006; Hermes et al., 2007). Thus, it can be concluded that $H2$ was supported in case of NPV and PB, and not supported in case of all other methods.

On the other hand, with higher educational background (EDUC), NPV and ARR are most likely method to be used in capital budgeting. The result shows that EDUC is positively related to NPV and ARR and is statistically significant at the 10 percent and 5 percent levels respectively. Financial managers that are highly qualified preferred to use more advanced techniques such as NPV, while non-discounted methods like PB was preferred by less qualified personnel. Graham and Harvey, (2001) and Hermes et al. (2007) argued that managers with higher education have fewer problems in understanding more

sophisticated capital budgeting techniques and consequently, they preferred to use them. Thus, *H3* is supported in case of NPV and ARR.

Conclusion and Implications

The capital budgeting practices of a sample of 53 manufacturing companies operating in Cambodia have been investigated. The results revealed that the most important factor determining capital budgeting method are top management familiarity, the importance of the project and experience and competency. PB is the most preferred capital budgeting method, followed NPV, DPB and ARR. Similarly, the study finds that interest rate risk and business cycle risk are mainly adjusted with a discount rate, and the commonly used method for calculating cost of capital was the after tax cost of debt and the WACC. Furthermore, the findings suggest that the longer the existence of a company, the more likely to use NPV method. The finding also revealed that the higher the amount of capital investment, the more likely the NPV method will be used; while the smaller the amount of capital investment, the more likely the PB method will be used. And with higher educational background, NPV and ARR are most likely the methods to be used in capital budgeting.

As far as the world of empirical knowledge is concerned, this is the first study to investigate on capital budgeting practice among Cambodian companies, thus it make a contribution to literature on practices in Cambodia and other frontier markets. The outcome of this study will be useful to financial managers in order for them to understand the prevailing capital budgeting practices at their respective firms. The study highlights the importance of firm's training and improving their skills, as well as understanding and upgrading the competencies of their staff's performance. This is because educational background has significant influence on the selection of capital budgeting method. The outcome of this study also signifies the importance of risk adjustment in capital budgeting decision. Doing so will help the organisation to find out the best technique to maximise shareholders' wealth. In general, this study serves as a foundation for future research.

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