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Does National Culture Impact Capital Budgeting Systems?

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Keywords
Capital budgeting systems, National culture, Indonesia, Australia.

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JEL Classification: M40

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1. INTRODUCTION

We explore whether national culture (NC) impacts organisational selection of capital budgeting systems (CBS) in the context of listed firms in Indonesia and Australia. Our central research question is: what are the perceptions of managers on the various CBS used to make project investment decisions in these two countries?

NC is the set of beliefs, customs, values and behaviours that exist within a sovereign country. CBS are formal techniques that are used throughout the entirety of decision-making steps in evaluating project investments (Farragher et al. 2001). These may be classified as either naïve (e.g. payback period) or sophisticated (e.g. real options). They are instrumental in evaluating project investments. Alkaraan & Northcott (2013) note that project investments have an extensive impact on profitability, but many benefits are difficult to quantify and comprise high levels of uncertainty. Consequently, CBS in the context of project investment decisions is important, as such decisions are strategically significant (Verbeeten 2006), consume substantial resources and are difficult to reverse (Chittenden & Derregia 2015).

There are four categories of CBS - capital budgeting techniques (CBT) used to evaluate project investments (Haka 1987); risk management techniques (RMT) which supplement CBT by assessing uncertainty associated with project investments (Verbeeten 2006); capital budgeting procedures (CBP) which provide formal processes for project investments (Alkaraan & Northcott 2013); and non-financial information (NFI) which may supplement CBT and RMT when financial measurement of project outcomes is not possible (Chen 2008). We focus on these categories of CBS because to our knowledge prior studies have not captured these while examining the link between NC and CBS.

The study specifically explores organisational selection of CBS in two NC settings: Australia and Indonesia which have distinct cultural context as explained later. The cross cultural focus was motivated by a growing body of research which suggests that people from different countries often have difference approaches in selecting CBS (Shields et al. 1991; Carr & Tompkins 1998; Hermes et al. 2007; Carr et al. 2010).

The study is exploratory in nature for several reasons. Firstly, prior research on the link between CBS and NC has predominantly relied on quantitative survey methods. Survey methods possess several advantages made popular by researchers following Hofstede (1980), but do not provide consistent results (Harrison & McKinnon 2007). Cultural commentators have indicated that research in this area should move forward by incorporating a qualitative methodology (Bhimani 2006). Using a qualitative approach to explore the impact of NC on CBS is thought to provide a deeper understanding of the research issues in order to a build theory in this area. This methodological change is envisaged to provide unique insights to inform extant literature. Furthermore, no study has compared the selection of CBS between Australian and Indonesian contexts.

The context of these countries is important to consider because of the close proximity and growing trade relations. The Department of Foreign Affairs and Trade reported that the two way trade relationship between Australia and Indonesia was $A11.2 billion in 2013, with approximately 250 Australian firms operating in Indonesia (DFAT n.d). The recent introduction of Islamic banking and finance in Australia has also been described as a substantial development that will provide positive impacts for increased trade and investment between Australia and Islamic countries (AUSTRADE 2010). Islamic banking and finance in Australia would further encourage trade and investment between Australia and Indonesia, the country with the world's largest Islamic population (AUSTRADE 2010). These unique finance and investment approaches also inform the design of CBS (Hamid et al. 1993) as our study found.

One of the aspects of our study is to examine how uncertainty is managed through the selection of CBS. While prior studies have found that the selection of CBS to manage uncertainty, have implications for project investment decisions (Verbeeten 2006), this area is understudied in cross-cultural research. The lack of attention cross-cultural studies have paid to managing uncertainty when selecting CBS is surprising because NC influences the ways firms manage uncertainty (Liu et al. 2015). We contrast Australian and Indonesian cultures to highlight differences in the types and levels of uncertainty experienced by managers when selecting CBS. These uncertainties can arise from economic, political, legal and social dimensions.

The remainder of the paper is ordered as follows. Section two provides a literature review. Section three provides an overview of Indonesian and Australian economies. Section four describes the research method. Section five presents results. Section six provides a discussion and the last section concludes.

2. LITERATURE REVIEW

Many studies have been conducted to examine CBS. Reviews of these studies are provided by Haka (2006) for Anglo-American firms; Truong et al. (2008) for Australian firms; Leon et al. (2010) for Indonesian firms; Sandahl & Sjögren (2003) and Hermes et al. (2007) for European and Asian firms.

From the above studies four categories of CBS can be discerned:

a) Capital budgeting techniques (CBT) used to evaluate projects (Haka 1987);
b) Risk management techniques (RMT) which supplement CBT by assessing project uncertainty (Verbeeten 2006);
c) Capital budgeting procedures (CBP) which provide formal processes for projects (Alkaraan & Northcott 2013); and
d) Non-financial information (NFI) which provides qualitative measurement of strategic factors important in making project decisions (Alkaraan & Northcott 2006).

Prior studies have focused on only one type of CBS that is CBT. This limitation may impact the link between NC and CBS. Prior studies document an increasing proportion of firms selecting sophisticated CBT in many Anglo-American countries (Truong et al. 2008; Haka 2006). European and Asian firms have historically selected more naïve CBT (Hermes et al. 2007; Sandahl & Sjogren 2003). In contrast, fewer firms select sophisticated RMT in these contexts (Haka 2006; Leon 2010). The contribution of our paper is we include the other three categories and thus provide a more comprehensive measure of the construct CBS. Differences in CBS are intriguing and rationales for these differences have been described in the literature including: environmental uncertainty and national culture.

2.1 Environmental uncertainty

Prior studies provide support for firms that faced more certain environments, typically selected sophisticated systems and delivered superior performance under these conditions than they would have had they had selected naïve CBT systems (Haka 1987). Sophisticated CBT incorporate the time value of money to estimate project investment outcomes (e.g. net present value). In contrast, naïve CBTs do not discount cash flows and are easily calculated (e.g. payback period). The usefulness in selecting sophisticated CBT is dependent on the firm's ability to accurately estimate discounted cash flow parameters. It is theorised that firms facing more certain environments are able to more accurately estimate sophisticated CBT parameters and therefore improve project outcomes relative to firms selecting naïve CBT (Chen 2008).

Prior studies have found that when firms select sophisticated RMT they face uncertain environments (Chittenden & Derregia 2015). Sophisticated RMT incorporate probability analysis and formally consider risk when assessing expected project outcomes (Verbeeten 2006). Naïve RMT integrates more subjective adjustments to expected project outcomes (e.g. sensitivity analysis). The use of sophisticated RMT is costly due to the complexity in effectively applying these techniques (McGrath et al. 2004). As environmental uncertainty increases the benefits of using sophisticated RMT offset costs (Verbeeten 2006).

However, in situations of extreme uncertainty, both CBT and RMT offer little help and in such situations management judgment becomes paramount (Elmassri et al. 2016). Unfortunately, judgment may become impaired due to cognitive biases. Impairment increases with the complexity of decisions (Phelan 1997). Judgments typically involve careful consideration of NFI to improve the accuracy of decisions and assess strategic issues (Alkaraan & Northcott 2006).

2.2 National culture

Prior studies have consistently found national differences in CBS (Shields et al. 1991; Carr & Tompkins 1996, 1998; Hermes et al. 2007; Carr et al. 2010). Despite consistent findings, several methodological limitations are evident including: all the dimensions of the construct NC, for example, are not captured; grouping countries together based on NC dimensions; and predominant reliance on quantitative survey methods.

Prior CBS studies have, however, generally treated the NC construct simplistically. Several studies have not clearly established a theoretical basis for national differences in CBS (Shields 1991; Carr & Tompkins 1996; Hermes et al. 2007; Carr et al. 2010). Other studies (Carr & Tompkins 1998) have relied generally on Hofstede (1980) NC dimensions resulting in difficulties when interpreting results. These limitations are concerning and are well documented in the international accounting literature (Baskerville 2003). Heidhues & Patel (2011) suggest a way forward by developing deeper foundations for NC differences based on historical, economic, legal, political and social origins.

Several CBS studies have grouped countries together based on similarities in national cultures, for example, Carr & Tompkins (1998) grouped firms from the United Kingdom and USA and contrasted CBS from this grouping to Japanese and German firms. While it is true that some countries share distant historical backgrounds, other socio-political context is ignored by grouping countries together limiting the usefulness of the findings (Patel 2004).

Another limitation evident in prior studies on CBS (Shields et al. 1991; Hermes et al. 2007) has been a reliance on quantitative survey methods. Survey methods possess several advantages made popular by researchers following Hofstede (1980) but do not provide consistent results. Cultural research commentators have indicated that research in this area should move forward by incorporating a qualitative methodology (Harrison & McKinnon 2007). A qualitative approach to explore the impact of NC on CBS is thought to provide a deeper understanding of the research issues in order to build theory.

Due to a lack of established theory, it is difficult to make definitive predictions as to whether we would expect to find significant differences in selection of CBS from firms in Indonesia and Australia. Though some studies do throw light on the differences in the national culture of Indonesia and Australia, the literature does not directly address the link between the constructs: NC and the CBS. The approach that we have taken is to conduct an exploratory study to further our understanding in the area.

There are numerous differences in the cultural and contextual settings that might lead to cross-national differences in the selection of CBS. Drawing on an approach used by Heidhues & Patel (2011), the historical, political, legal, economic and social characteristics of NC in both Indonesia and Australia and how the design of CBS may be informed by the NC in the national context where it is used has been examined below. But before that a brief overview of the context would be in order.

3. BRIEF OVERVIEW OF INDONESIAN AND AUSTRALIAN ECONOMIES

In this section we introduce contextual issues that may impact on the uncertainty experienced by managers and CBS selected by managers in Indonesia and Australia.

3.1 Economic socio-political context of Indonesia

Indonesia is the fourth largest country by population and has the largest Islamic population in the world (OECD 2012; Tsamenyi et al. 2008). During the Asian financial crisis, uncertainty shocked Indonesia forcing a change to democratic reforms after years of autocratic rule (Harun et al. 2015). Economic growth in Indonesia has been stymied by uncertainty since reforms were commenced in 1999 and brought uncertainty in the political, legal, economic, and social spheres as explained below.

Political uncertainty in Indonesia is manifested through corruption scandals and changes in government policies. Political corruption was evident during Suharto's reign that ended in 1998 (Taylor 2003). Since this time political uncertainty has remained intractable despite democratic reforms and decentralisation of government activities (Wihantoro et al. 2015).

Legal uncertainty has also been a matter of concern in Indonesia. The legal system inherited by an Independent Indonesia in 1945 was a combination of traditional customs (*adat*), Dutch law previously implemented in the Indonesian colony and *Sharia* (Taylor 2003). The current legal system continues to undergo change. While these changes provide clearer guidelines, they also increasingly favour a nationalist agenda (Lindsay 2008).

A prolonged period of economic growth has corresponded with the introduction of Indonesian democratic reforms. Growth in real gross domestic product (GDP) has fluctuated between 5% and 7% since the global financial crisis (GFC) (*EIU* 2013a). While economic growth has been consistently higher than developed countries, uncertainty also impacts the Indonesian economy. Inflation has fluctuated between 2% and 12% since the GFC and political changes restricting food imports have also impacted inflation (OECD 2012). Volatility in foreign exchange rates due to changes in balance of payments, withdrawals of foreign capital and changes in real interest rates have also fuelled uncertainty.

3.2 Economic socio-political context of Australia

Australia is situated to the south of Indonesia, straddling the Indian and Pacific oceans. Originally based on British models, the Australian political and legal systems provide solid foundations for business and trade in a relatively open economy (Lawrence & Davies 2010). Indigenous influence on local regulations was less apparent in Australia until recent times when the government acknowledged the original owners of the land (McLean 2012). Uncertainty has been less of an issue for Australia, though it still impacts on political, legal, economic and social contexts.

Political corruption in Australia is reported as low (*EIU* 2013b). The federal government has committed to reducing taxes and making spending cuts, but negotiations with minor parties have often failed, creating some political uncertainty (*Marketline* 2014).

Though the GFC impacted business performance in Australia, real GDP growth has remained positive between 1 – 4% due to substantial trade with growing Asian economies. Economic volatility has also been modest in recent years with low, but stable interest rates as well as low inflation. In 2013, GDP was around US$50 000 per head and unemployment was 5.9% (*EIU* 2013b). Australia society is multicultural, with Christian religion and European heritage predominating (Lawrence & Davies 2010).

Our focus in this analysis was to flesh out how politico-socio-economic differences contribute to uncertainty between Indonesia and Australia. One may expect that differences in uncertainty impact CBS and hence provide a theoretical framework for interpreting our data. NC influences the ways that people manage uncertainty. In the next section, we discuss socio-cultural differences.

3.3 CBS and the differences in NC of Indonesia and Australia

Two NC qualities that may impact the use of CBS include: individualism/collectivism and the Islamic concept of discouraging risky transactions.

3.3.1 Individualism/Collectivism

Indonesia is a collective culture with people being well integrated and loyal to collective outcomes (Reisinger & Turner 1997). Anthropological studies trace collective principles to agricultural traditions centred on maintaining social harmony (*rukan*) (Tsamenyi et al. 2008). Harmony is maintained through making cooperative decisions (*gotong royong)* at communal meetings (*musyawarah*) in order to achieve united (*mufacat*) decisions (Wihantoro et al. 2015).

In contrast, Australia is ranked second highest of all countries on individualism (Hofstede 2001). Individualism in the Australian culture emphasises independence and autonomy (Reisinger & Turner 1997). Individualism is highly correlated to national wealth (Hofstede 2001) and Australia is the wealthiest nation (GDP per capita) in the Asia-Pacific region (*EIU* 2013b). A higher level of individualism in Australia is supported from early European settlement. From this time individuals began making their own choices on ways of life due in part to its remote location (Patel 2003). Individualism is maintained through self-focused dialogue central to education and business in Australia (Auyeung & Sands 1996).

Cultural attributes of collectivism in Indonesia and Individualism in Australia may have implications for CBS. It has been noted that Indonesian people utilise collective processes in decision making. It is plausible that Indonesian firms also incorporate collective approaches when evaluating projects. Another characteristic of collective cultures is an emphasis on collective rather than individual goals. It is conceivable that Indonesian firms may collect NFI information on a broader range of stakeholder goals than Australian firms.

3.3.2 Sharia rules to mitigate risky transactions

Sharia is partially regulated at the regional and national level in Indonesia. Regional *Sharia* laws largely relate to religious symbolism. These laws are binding on Muslims and supported by religious courts (Lindsey 2008). National *Sharia* relate to the Islamic economy and introduction of Islamic banking. National *Sharia* has culminated in substantial growth in Islamic finance (Fealy & White 2008). While national *Sharia* is not binding on Indonesians, this does not prevent Indonesians from voluntarily following *Sharia*. Islamic views on mitigating risky transactions are particularly salient when evaluating projects. If Islamic views on mitigating risky transactions are applied to project decisions, then it may be that Indonesian firms are more likely to adopt sophisticated CBS to minimise uncertainty.

4. RESEARCH METHOD

The objective of this study is to explore whether NC impacts organisational selection of CBS in the context of listed firms in Indonesia and Australia. In pursuit of this objective, semi-structured interviews were used to collect information from finance managers in Indonesia and Australia on CBS. We argue that semi-structured interviews are suitable because they allow for exploration of the specific phenomenon and elaboration of individual perceptions (Alkaraan & Northcott 2006). A grounded theory approach (Glasser & Strauss 1967) was used as it enabled exploration of how finance managers perceived CBS use in making project investment decisions.

4.1 Participants

Participants were recruited from listed firms in Australia and Indonesia. Purposive sampling was used to select the participants. It was ensured that the major industry groups from each country were represented in the sample. Participants were drawn from the major industry groups like financial, consumer discretionary, health care, telecommunications, industrials, information technology and consumer staples. It was ensured that participants were drawn from each of these major industry groups as mentioned in table 1. Within each industry group firms were randomly selected. Initially, we contacted the company secretaries and asked them to nominate a senior manager to interview to understand how the choice of CBS is decided by firms. The participants selected for interviews were required to have previously undertaken project decisions for the firm.

Fourteen finance managers were interviewed during 2011-12. Seven participants were recruited from Australia and seven participants were recruited from Indonesia. The interviewees were university educated with finance experience ranging from eight to 32 years. Further information about interviewees is provided in table 1.

Table 1: Interview participants for semi-structured interviews

Interviewee code	Country	Role in Organisation	GICS Sector	Interview time
AUS1	Australia	Senior executive	Consumer discretionary	56 minutes
AUS2	Australia	CFO	Consumer discretionary	80 minutes
AUS3	Australia	Senior finance manager	Health care	55 minutes
AUS4	Australia	CFO	Financials	41 minutes
AUS5	Australia	CFO	Consumer discretionary	75 minutes
AUS6	Australia	CFO	Telecommunications	33 minutes
AUS7	Australia	CFO	Industrials	40 minutes
IND1	Indonesia	CEO	Consumer staples	142 minutes
IND2	Indonesia	CEO	Health care	80 minutes
IND4	Indonesia	Senior executive	Consumer staples	80 minutes
IND5	Indonesia	Director	Information technology	89 minutes
IND6	Indonesia	Senior finance manager	Consumer staples	73 minutes
IND7	Indonesia	Senior finance manager	Consumer discretionary	41 minutes
IND8	Indonesia	CEO	Financials	42 minutes

4.2 Data Collection

Interviews were held at the participant's place of business with an average duration of 66 minutes. In order to provide some assurance of consistency in structure, a semi-structured interview schedule was used. The interview schedule was pilot tested and focused on the following themes:

- Organisational background, context, aims and strategies;
- Steps in making project investment decisions;
- Information requirements for each step in making project investment decisions;
- Differences in decision-making processes due to size or type of project;
- Involvement of employees and stakeholders in making project investment decisions;
- Influence of market volatility on project decision processes.

For Interviews conducted in Indonesia the interviewer spoke in English followed by a translation into Bahasa Indonesian by a research assistant fluent in both the languages. The data was recorded and transcribed by the primary researcher into a word document. Completed transcripts were checked for accuracy and then uploaded to NVivo in order to aid data analysis.

5. DATA ANALYSIS AND FINDINGS

Interview transcripts were analysed using a four stage grounded theory procedure advocated by Locke (2003). The data was coded into preliminary categories based on perceived patterns emerging from empirical observations. The categories were gradually refined through a number of formal stages until a theoretical framework emerged from the data.

5.1 Perceptions of CBS in Indonesia and Australia

Management perceptions of CBS were mostly similar in Australia and Indonesia, though some differences were apparent, especially for RMT, CBP and NFI. The similarities and differences (starred) in CBS emerging from interviews are presented in table 2.

Table 2: Capital budgeting systems emerging from interviews in Australia and Indonesia

CBS category		CBS	Australia	Indonesia	Differences
Capital budgeting techniques (CBT)	1.	Payback period	Yes	Yes	
	2.	Return on investment	Yes	Yes	
	3.	Net present value	Yes	Yes	
	4.	Internal rate of return	Yes	Yes	
Risk management technique (RMT)	1.	Real options	Yes	Yes	
	2.	Scenario analysis	Yes	Yes	
	3.	Sensitivity analysis	Yes	Yes	
	4.	**Adjusting cash flows to manage risk**	**Yes**	**No**	*
	5.	**Adjusting discount rate to manage risk**	**Yes**	**No**	*
	6.	**Simulations**	**No**	**Yes**	*
Capital budgeting procedures (CBP)	1.	Idea generation	Yes	Yes	
	2.	Preparation of business case	Yes	Yes	
	3.	Project approval	Yes	Yes	
	4.	Project monitoring	Yes	Yes	
	5.	Post implementation review	Yes	Yes	
	6.	Consultant advice	Yes	Yes	
	7.	Annual capital plan	Yes	Yes	
	8.	**Formal committee workings**	**No**	**Yes**	*
	9.	Rewards linked to project results	Yes	Yes	
	10.	Consider project alternatives	Yes	Yes	
Non-financial information (NFI)	1.	Strategy and competitiveness	Yes	Yes	
	2.	Customers	Yes	Yes	
	3.	Employees	Yes	Yes	
	4.	Supplier and raw materials	Yes	Yes	
	5.	Social and community	Yes	Yes	
	6.	Quality	Yes	Yes	
	7.	**Politics and regulation**	**No**	**Yes**	*
	8.	Environment	Yes	Yes	
	9.	Synergies	Yes	Yes	

Analysis of interview transcripts revealed that different RMT were used in making project investment decisions by interviewees in Indonesia and Australia. Indonesian firms used more sophisticated RMT included simulations, real options and scenario analysis, but Australian firms recounted using a greater variety of RMT. The reasons for these differences are analysed subsequently. An Australian CFO responded as below:

> *The way you deal with risk in a project [is]… you either use scenarios about your cash flows, and/or you load some risk into your discount rate. So you increase your discount rate to provide some risk buffer above your cost of funds. (AUS2)*

Particularly noticeable from interviewee descriptions of CBP used in making project investment decisions were the different workings of formal committees in Australia and Indonesia. Indonesian interviewees described approaches designed to achieve consensus amongst committee members through discussion. An Indonesian interviewee reflected on the time it took to reach consensus:

> *Sometimes we need two or three hours in the meeting. Sometimes one meeting is not enough and we need two or three meetings. This is the biggest problem. We try to accommodate everyone's point of view. These are the pros and cons to get everyone under the same umbrella and make the same decisions (IND8).*

According to Australian participants the committee chair usually made a final decision and consensus was not a requirement for project approval. For example, one CFO puts it as below:

> *The board put the management team through the wringer with all the assumptions that the management team have made supporting [the project] and to the extent that there are differences in opinion, ultimately… the chairman has the final call (AUS5).*

We also noted differences in perceived NFI between Indonesia and Australia. In contrast to Australian interviewees, two Indonesian firms referred to collecting political & regulatory NFI when evaluating project decisions. Interestingly, interviewees perceived that collecting NFI was required due to opaque and shifting regulations. For example:

> *In Indonesia sometimes the situation is still chaos [and] we can buy in the wrong area. The first time we are permitted to build the factory there, sometimes the government said no … You have to be careful ...We also talk to the [existing] local companies … We ask about the … existing situation - the regulations. Then we try to compare [this] with the information provided by the local government (IND6).*

Closer examination of interview transcripts identified differences in the ways the firm's select CBS in order to manage uncertainty. These differences are discussed next.

5.2 Perceptions of uncertainty and CBS in Indonesia and Australia

Interviewees from Australia and Indonesia noted that three types of uncertainty impacted on their selection of CBS. These included (a) economic uncertainty, (b) political and legal uncertainty, and (c) social uncertainty.

5.2.1 Perceived impact of economic uncertainty on CBS

Apart from two Australian interviewees, managers perceived that economic uncertainty impacted on their selection of CBS. Different approaches to deal with economic uncertainty were observed in Australia and Indonesia, especially with respect to the RMT and the CBP. In contrast to Australian firms, Indonesian firms tended to implement sophisticated CBS to evaluate economic uncertainty. These differences in approach are consistent with Indonesian cultural traits, particularly mitigating risky transactions.

Indonesian interviewees voiced selecting sophisticated RMT (e.g. simulations, and real options), in contrast to a broader range of RMT selected by Australian interviewees. For example, as one Indonesian CEO explained:

> *Financial factors will be accommodated when they design the scenarios and simulations. … Taking the currency, [if] the rupiah will be appreciated to 8 500 for example, or say the rupiah will be depreciating to 9 000. Now there are two scenarios and we build this into the model … We [also] look at competition from [the] food industry… It impacts on our market share. This is built into the scenarios (IND2).*

The CBP selected to contend with economic uncertainty were mostly similar in Australia and Indonesia, but some differences were observed. For firms that had not prepared the RMT, economic uncertainty though discussed in the CBP, was not formally included. An Australian interviewee, for example, described preparing a business case following the GFC as below:

> W*e tend to say let's cut back on our spending [but] sometimes it's the best time to invest. There are a lot of suppliers out there that are desperate for your business, so you can build … things cheaply so you're well prepared for when the economy turns around. So economic factors, you discuss it in your business case (AUS1).*

Most managers also revealed that they did not formally monitor economic uncertainty after project approval had been granted, with one exception. An Indonesian interviewee described a formal review of project risk profiles for economic uncertainty as follows:

> *We describe the risk profiles… macro-outlook, currency [and] foreign risk. Based on this, the risk management department will do some monitoring to make sure that the data are in line with the original plan. If there is some variance then there are some reminders to … management to mitigate the risk and secure the business (IND8).*

5.2.2 Perceived impact of political and legal uncertainty on CBS

Contending with political and legal uncertainty was perceived to be a vital issue for Indonesian managers. The concerns emphasised by Indonesian interviewees, highlight the potential impact of NC traits, especially mitigating risky transactions. Interviewees informed us that political and legal uncertainty encompassed government policies (e.g. foreign ownership, protections for local businesses, issuing of licences, taxes), and legal arrangements. Political and legal uncertainty was felt to occur at both national and local levels. Several interviewees highlighted how political and legal uncertainty influenced their selection of CBS, mainly the NFI and the CBP.

As for the NFI such as regulatory changes, five Indonesian managers informed that these impact the viability of their projects. Most Australian interviewees did not have such concerns. The NFI collected was used to evaluate the potential impacts on proposed strategy and synergies. Some Indonesian firms rearranged their business structures to capitalise on regulatory changes. The CEO of one company, for example, was considering new projects as a relaxation of foreign ownership regulations was in the offing:

> *We [plan to] work together with strategic partners to develop our projects. It is a good strategy to work together with [foreign companies]. Firstly, they will bring more equity. Secondly, they will bring new markets (IND8).*

Two Indonesian interviewees stated that political and legal NFI was obtained to assess government policies. A senior finance manager, for example, stated that the divergence in national policy and local regulations can create unexpected financial challenges for the firm:

> *The central government has already [granted permission] for us to build a factory there because they see the hope and the investor. This will be money for the country, but the local government also need money. They try to make it difficult for us (IND7).*

As for the CBP, less than half the interviewees discussed political and legal uncertainty as projects progressed through various decision steps (e.g. business case, project approval). Such deliberations were more prevalent for Indonesian firms. In contrast, a decision to consult with government was undertaken by an Australian firm. The consultations were used to comprehend and influence changes in policy. As an Australian interviewee recalled:

> *You can influence [the] thinking [of government ministers] by educating them on what's happening and the firm plays a key role in [this] … because the Governments want a*

> *healthy [industry]. We don't have any formal processes [or] lobbyists. We just see the ministers whenever we can, appease them as best we can (AUS1).*

Some interviewees from both countries perceived that political and legal uncertainty was substantial and impacted on their willingness to invest in projects. As one CFO put it:

> *If that policy gets up … revenue … could drop anywhere up to 40%. The government [has] put in something like 40 different regulatory measures designed to reduce revenue in [our industry]. Public policy is [our] biggest risk (AUS2).*

5.2.3 Perceived impact of social uncertainty on CBS

Social uncertainty encompassing community concerns, competitiveness uncertainty and employee uncertainty, was thought to be a significant problem for several managers.

5.2.3.1 Community concerns

Four Indonesian and two Australian firms perceived that community concerns impacted on selection of the CBS, especially the NFI. For the Indonesian managers, community concerns had lasting impacts. Indonesian managers strongly recalled how community tensions during periods of social unrest impacted on projects. They also emphasised that social tensions continued to simmer in areas where projects were proposed.

In response to Indonesian community concerns, one of the managers going by sophisticated RMT deferred projects, while four of the managers collected the NFI (social and community information) to assess community concerns. A CEO reflected on firm's new CBS policy of collecting social and community NFI. Previously they had made a costly error when positioning a project near a temple:

> *We referred to that project as a reminder to us … We have to consider the community around the area. [The project] is nearby a very sacred temple, (IND8).*

Two Australian firms also recounted collecting the NFI to monitor local community concerns following the proposed location of their new project. For example a senior finance manager noted:

> *That is always a part of our consideration. We have a responsibility to the outside world, our employees and neighbours. We want to make sure that our [projects], don't have negative impacts regarding pollution or something else (AUS3).*

5.2.3.2 Competitive uncertainty

Several interviewees emphasised that competitive uncertainty impacted their CBS. This was the case mostly in Indonesian firms. Managers emphasised that competitive uncertainty impacted on project profitability. Most interviewees experiencing competitive uncertainty described collecting the NFI and incorporating concerns into the CBP (business case, project approval). In contrast, two Indonesian interviewees also evaluated the competitive uncertainty using the RMT (scenario analysis).

5.2.3.3 Employee uncertainty

Employee uncertainty impacted on project investments for two Australian and one Indonesian firm. Interviewees recalled that employee uncertainty was experienced due to lengthy training requirements and through competitors poaching employees. Employee uncertainty impacted on the amount of new projects that firms could reasonably implement. The two Australian firms used the CBP to generate ideas for labour efficiency improvements. In contrast, the Indonesian firm collected NFI to prioritize projects:

> *There have to be brains behind that project but … we need to be in tune with the goal and at some stage we have too many projects. That's not good as well. (IND).*

5.3 Perceptions of project characteristics and the CBS in Indonesia and Australia

5.3.1 Project size and CBS

All interviewees stated that though similar information was sought for projects involving large or small outlays, the rigor of background information varied. For example:

> *The business cases have the same headings it's just that if you spend five million you need to have more detail as to how it was researched. You validate the benefits you're going to get out of a capital approval request (AUS1).*

Several interviewees only calculated the CBT for larger projects. For example:

> *If the project is big we will analyse it [using] the payback period and internal rate of return. There is no need to analyse for small projects (IND6).*

Interviewees informed us that larger projects required formal use of many CBP including: capital plans; consideration of project alternatives; establishment of formal committees; requiring consultant reports; completion of post implementation reviews and preparation of business cases. Four Australian and three Indonesian interviewees stated that business cases for larger projects require extra detail. For example, one CFO recalled:

> *For $17 million you have to do some work (laughs) ... to put the figures in front of the board so they can understand them, understand what it means going forward (AUS5).*

Most interviewees also described additional approval requirements for large projects including reviews of project calculations by the finance committee or the board of directors.

5.3.2 Project type and CBS

Several types of projects emerged through discussions with interviewees including:

a) Acquisition decisions: purchasing a firm, licence or brand name;
b) Business extension decisions: the internal development of business operations;
c) In-house information technology development: software development;
d) Modernizing decisions: improving efficiency or capacity of operations;
e) New infrastructure decisions: building new facilities;
f) Stay in business decisions: replacement of existing assets.

Overall, Australian and Indonesian interviewees stated that all types of decisions required similar CBS. For example, a senior executive stated:

> *It's the same process just the sign offs are different, so the process is fundamentally the same (AUS1).*

5.3.3 Project complexity and CBS

Five Australian and three Indonesian interviewees voiced that the use of CBS increased with project complexity. Interviewees identified complexity of projects as emanating from: (1) developing new products; (2) using new components or technology; (3) setting-up in new locations; (4) navigating projects through government regulations; (5) making the best use of scarce resources to achieve project outcomes. Interviewees thought that complexity could emanate from most types of projects irrespective of project size. For example:

> *It depends on the complexity of the project … [and] how different the process is. … Regulation [and] quality makes a difference. (AUS3).*

6. DISCUSSION

The contextual basis of the CBS has attracted renewed attention (Elmassri et al. 2016). Our study adds to a body of knowledge regarding the link between the NC and the CBS. Previous studies primarily focused on the CBT and the NFI categories of CBS (Hermes et al. 2007; Carr et al. 2010). A major contribution of our study is to explore all categories of CBS used by finance managers by means of a grounded approach.

The key findings of this study point to several systematic differences in the ways firms used CBS in Australia and Indonesia when faced with uncertainty. Our findings also support differences in uncertainties felt by firms, with Indonesian firms recurrently facing economic, political, legal and social uncertainties. When faced with uncertainty, Indonesian firms chose more sophisticated CBS, particularly, RMT, CBP and NFI, in contrast to the Australian firms. Liu et al. (2015) found that NC traits influence the ways firms manage uncertainty. We believe that differences in CBS in Indonesia and Australia are consistent with the NC traits, particularly (a) mitigating risky transactions; and (b) individual vs collective decision making approaches.

Firstly, a consistent theme emerging from the Indonesian transcripts was a concern to mitigate project uncertainties by selecting sophisticated CBS. Mitigating risky transactions is an Islamic concept enshrined in *Sharia* (Hamid et al. 1993). Interest based finance, important to funding business projects, is discouraged under *Sharia* law as interest is exploitative and places unnecessary risk on the poor. Indonesia has the largest Islamic population in the world and a growing Islamic economy supported by non-binding national *Sharia,* which controls this Islamic economy and binding regional *Sharia,* which controls the religious symbolism (Fealy & White 2008). Indonesian corporate governance guidelines are also consistent with *Sharia* (Sakai 2010). By contrast to Indonesian concerns for mitigating risky transactions, Australian interviewees were prepared to undertake projects when faced with uncertainty and often did so without preparing sophisticated CBS.

Secondly, whilst other Islamic countries may also follow *Sharia*, we believe that collective Indonesian traits also encouraged use of sophisticated CBS. Indonesian interviewees documented making cooperative decisions (*gotong royong*) to achieve united (*mufacat*) outcomes. The provision of more sophisticated CBS at project meetings (*musyawarah*) would provide persuasive evidence to facilitate united decision outcomes. United outcomes are essential to maintain social harmony (*rukan*) in Indonesian culture. These cultural traits are well documented in other contexts (Wihantoro et al. 2015). Australian interviewees reported greater individual assertiveness and a focus on the self in project meetings. These features are consistent with an individualistic culture (Patel & Millanta 2011).

We also found that firms selected sophisticated CBS for large and complex projects, but similar CBS were used for the various types of projects undertaken by them. Our findings of similar

CBS used for various types of projects supports previous findings in this area (Alkaraan & Northcott 2006). Importantly, we have also identified that it is the complexity of projects that drives sophistication of CBS. Interviewees perceive that complexities could arise from most types of projects.

Our study is exploratory. Nevertheless, we believe that the findings have implications for theory. We developed an emerging theory built upon rich text findings. As advocated by several commentators (Heidhues & Patel 2011), we developed deeper, holistic foundations for NC differences in the CBS incorporating historical, political, legal and social origins. We also implemented several methodological alterations suggested by researchers, including deploying a qualitative research design (Harrison & McKinnon 2007).

Though the study is exploratory, some practical implications for management may be evident. The study revealed instances where cultural traits and environmental conditions may assist or inhibit using sophisticated CBS. Conditions inhibiting the use of sophisticated CBS were mostly found in the Australian sample. Several firms facing uncertainties chose to undertake projects without the backing of sophisticated CBS. For these firms, emphasis on individual responsibility was evident. By contrast, Indonesian managers voiced a collective culture accompanied by approaches to mitigate risk. This approach seemed to underpin the selection of sophisticated CBS.

Potential limitations, involved the difficulty in obtaining informed consent and restrictions in reporting of findings due to confidentially requirements of participant firms which resulted in limited response – a typical limitation encountered in field research. Similarly, the findings may have limited relevance to other countries where the context and CBS could differ. Despite these limitations, our study shows the direction for future research in this important area.

7. CONCLUSION

This study aims to develop an understanding of how national culture impacts capital budgeting systems. We compare Indonesia (predominantly a Muslim country with collectivist culture) and Australia (individualistic, self-focused culture). We applied a holistic conception of national culture (not used in prior studies) to examine the perceptions of managers on the capital budgeting systems used to make project investment decisions in these two countries. A holistic understanding of national culture is important, because it offers a richer link between national culture and capital budgeting systems to advance extant literature. We found that Indonesian managers were inclined to select more sophisticated capital budgeting systems than Australian managers to inform project investment decisions. Consistent with contingency theory, we showed that economic, political, legal and social uncertainty impacted on the use of capital budgeting systems. Higher levels of uncertainty in Indonesia seemed to underpin the use of more sophisticated capital budgeting systems. We also found that firms were influenced by project size and complexity when selecting project investments. These findings would be of help to multinational firms with business relationships in Indonesia. Limitations of the study were also noted including the difficulty in obtaining informed consent and confidentiality restrictions.

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