Management accounting and control systems – unnecessary evils to innovation?

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บทคัดย่อ

ในอดีตระบบการควบคุมทางการบริหาร รวมถึงระบบการควบคุมทางการบัญชี มักจะถูกมองว่าเป็นอุปสรรคต่อนวัตกรรม ทั้งนี้เนื่องจากการกำหนดมาตรฐานอย่างเป็นทางการของระบบการควบคุมทางการบริหารมักจะถูกมองว่าไปขัดขวางความคิดสร้างสรรค์ การเรียนรู้ และพฤติกรรมการยอมรับความเสี่ยง ซึ่งเป็นสิ่งที่สำคัญต่อการพัฒนานวัตกรรม แต่อย่างไรก็ตาม บทความนี้แสดงให้เห็นว่าหากมีการออกแบบและใช้งานอย่างเหมาะสม ระบบการควบคุมทางการบริหารจะมีความยืดหยุ่นและตอบสนองต่อการเปลี่ยนแปลง ซึ่งจะสามารถช่วยสนับสนุนการพัฒนานวัตกรรมซึ่งมีความไม่แน่นอนที่ยากที่จะคาดการณ์ได้ บทความนี้เสนอแนวความคิดของโรเบิร์ต ไซมอน เกี่ยวกับคานทั้งสี่ของการควบคุมเพื่อให้ผู้บริหารพิจารณาในการออกแบบและใช้ระบบการควบคุมทางการบริหารต่างๆ หากผู้บริหารสามารถผสมผสานการควบคุมทั้งสี่ประเภทได้อย่างเหมาะสม และสอดคล้องกับการปฏิบัติอย่างไม่เป็นทางการขององค์กรและวัฒนธรรมองค์กรได้นั้น องค์กรจะสามารถสร้างระบบการควบคุมทางการบริหารในรูปแบบที่เอื้ออำนวยต่อการส่งเสริมและสนับสนุนการพัฒนานวัตกรรมอย่างต่อเนื่อง

คำสำคัญ : การควบคุมทางการบริหาร นวัตกรรม คานของการควบคุม

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Abstract

Traditionally, management control systems, including management accounting and controls, are often perceived as hindrance to innovation. Formalisation of management control practices is usually considered inhibitive to creativity, learning and risk-taking behaviour, which are important for innovation development. However, in this paper, it is argued that if designed and used appropriately, management control systems can be flexible and dynamic, supporting unpredictable needs of innovation. Simons' (1995) four levers of control are proposed as a framework for managers to consider when designing and using variety of management control systems. With appropriate mix of four levers of control, which is also compatible with informal practices and culture of the organisation, it is argued that the organisation can create enabling form of controls, which will help foster continuous innovation.

Keywords : Management Control, Innovation, Levers of Control.

1. Introduction

In today's rapidly changing business environment, innovation has become increasingly important, as it can help foster a development of new sources of competitive advantage. Although it is widely accepted that a success of innovation process depends heavily on intangible elements, such as creativity, continuous learning and risk-taking behaviour, it is important that innovation process is carefully managed. Many corporations have spent a large amount of research and development expenditure, but often management is still frustrated by lack of innovation in their organisations (Davila et al, 2004). To ensure that resources invested would not be wasted and innovation would follow, effective management control systems, which monitor and assess progress of innovation process, are required.

Management accounting and control, including budgetary control, forms an important part of management control systems. However, management accounting and control is often considered inhibitive to innovation development (Damanpour, 1991). Rationalisation and high emphasis of work rules of management accounting and control are seen to constrain openness, limiting new ideas and behaviours (Burns & Stalker, 1961). Formalisation is viewed as being incompatible with creativity (Abernethy & Stoelwinder, 1991; Amabile et al, 1996; Miles & Snow, 1978; Ouchi, 1979). Formal management accounting control, particularly performance measurement, is perceived as constrain, or at best irrelevant, in innovation-focused and R&D settings (Abernethy & Brownell, 1997; Birnberg, 1988; Brownell, 1985; Hayes, 1977; Rockness & Shields, 1984; Rockness & Shields, 1988). Despite the early argument, which suggests that management accounting and control systems are obstacles and do not support innovation, it is increasingly argued that management accounting and control can enable innovation (Clark & Fujimoto, 1991; Davila, 2000; Davila & Wouters, 2004; Bisbe & Otley, 2004; Jørgensen & Messner, 2009). Management accounting and control, under certain circumstances, can provide relevant information and help firms facing rapidly changing product or market conditions develop innovation (Mouritsen et al, 2009).

In this paper, ways in which organisations may design and use management accounting and control systems to enable innovation are discussed. Rather than seeing management accounting and controls as stand-alone systems, the paper argues that it is important to consider management accounting and controls as part of a wider management control system package, which encompasses both accounting and non-accounting controls. Examples and discussions in the paper are drawn from research studies, which examine how innovative organisations in different parts of the world use their management accounting and control systems in managing

their innovation process. Although most of the studies reviewed focus mainly on companies in Europe and the US, it is hoped that their findings will also be applicable for Thai organisations. The aim of this paper is twofold. Firstly, it attempts to demonstrate that management accounting and control does not necessarily hinder innovation. Rather, if designed and used appropriately, it can benefit organisations in uncertain environments. Secondly, the paper aims to offer management accounting and control framework, based on existing literature, which supports management of innovation.

The paper is structured as follows: Section 2 briefly discusses definitions of innovation and innovation process. Meanings and components of management control systems and their relationships with innovation management are reviewed in Section 3, followed by the introduction of management accounting and control framework and characteristics of the systems which enable innovation in Section 4. Section 5 provides examples of how organisations may apply the framework when designing and using their management accounting and control systems. Section 6 discusses applicability of the framework in Thai business environment, and Section 7 offers a conclusion of the paper.

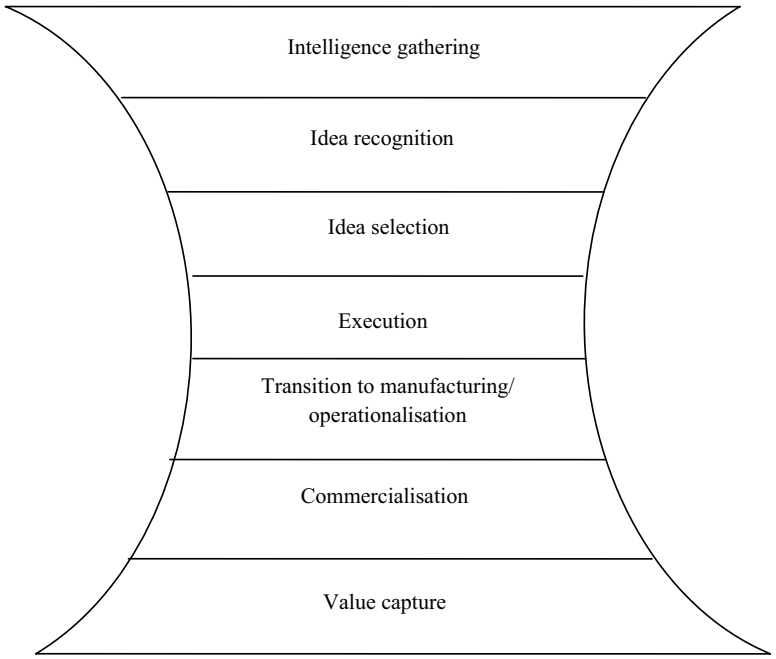
2. Innovation and Innovation Process

Innovation can be defined as "creative definition, development, and commercialization of substantially new products, services or businesses" (Davila et al, 2004, p.27). Various typologies of innovation have been proposed in the extant literature. Three typologies which have received most attention are (1) administrative and technical, (2) product and process and (3) radical and incremental (Damanpour, 1991). Administrative innovations are concerned with organisational structure and administrative processes, whereas technical innovations involve products, services and production process technology (Damanpour & Evan, 1984). Product innovations are new products or services introduced to meet an external user or market need, while process innovations are concerned with the introduction of new elements into an organisation's production or service operations (Utterback & Abernathy, 1975). Innovations can also be classified by the degrees of change the innovations make to the existing practices of the organisation. Radical innovations involve fundamental changes and represent substantial departure from existing products, processes or practices, whereas incremental innovations result in little departure from existing products, processes or practices (Dewar & Dutton, 1986).

To develop sustainable innovation, it is useful to view innovation as a process – "a process of turning ideas into reality and capturing value from them." (Tidd & Bessant, 2009, p. 19). Tidd & Bessant (2009) propose innovation process model which involves four key activities: (1) searching, a process of scanning internal and external environment for threats and oppor-

tunities for change; (2) selecting, a process of deciding which of these signals to respond to; (3) implementing, a process of translating idea into something new and launching it in a market; and (4) capturing value from the innovation. Davila et al (2009) also suggests a process view of innovation, which is in line with that of Tidd & Bessant (2009). Davila et al's (2009) innovation process model involves 7 stages as depicted in Figure 1. Intelligence gathering involves employees establishing internal and external networks to provide stimulus to generate ideas. Then, during the idea recognition stage, processes are structured to move ideas from any person in the organisation to those with authority to allocate resources. The formal portfolio management tools are then utilised in an idea selection stage. Following an idea selection, the idea chosen is translated into a project to be executed. The projects are then implemented, commer-cialised, and value from innovation is captured[1]. From these innovation process models,

Figure 1 Innovation process (Adapted from Davila et al, 2009)



[1] It should be noted that by classifying innovation process into different stages, it does not mean that the process is linear. Innovation may go back and forth through the process.

it can be seen that innovation is accomplished only after the ideas have been made operational (Knight, 1967) and value of innovation is captured. Appropriate mechanisms to manage innovation process may differ across stages of the process.

Innovation can come from various sources – inspiration, accidents, events which change the world and the way we think about it, advertising, application of ideas in a new context, changing regulation, imitating or extending others, exploration of alternative future which opens up different possibilities, knowledge push, need pull and users of innovation (Tidd & Bessant, 2009). External sources of knowledge have become increasingly important. Many innovative-focused companies, such as Procter & Gamble and IBM, have established extensive linkages with their potential external sources of innovation (Huston & Sakkab, 2006; Tid & Bessant, 2009). In order to promote creative culture within an organisation, which will lead to a development of sustainable innovations, ongoing creative practices and improvisation skills are keys (Paddy & Brankovic, 2010).

Although promoting creative culture is crucial for developing innovation, innovation is not only about creativity and having a creative culture. It is equally critical to choose the right ideas and implement them successfully (Davila et al, 2006). As Tid & Bessant (2009) argue, one of the key challenges in innovation process is managing growing commitment of resources, including time, money, energy and knowledge mobilisation, against uncertainty. It is important to ensure that innovations will deliver value which exceeds, or at least equals to, resources the organisation has put into the innovation process. To effectively manage innovation, which involves high uncertainty, timely, reliable and relevant information is necessary (Galbraith, 1973). In this respect, management control systems can play important roles. If designed and used appropriately, management control systems can provide information necessary for organisational members to perform their tasks in complex environment.

3. Management accounting and control systems and their relationships with innovation management

Management control systems can be broadly defined as “devices or systems managers use to ensure that the behaviors and decisions of their employees are consistent with the organization’s objectives and strategies.” (Merchant & Van der Stede, 2003, p. 4) Management controls systems are used to alter undesirable and maintain desirable patterns in organisational activities. Desirable patterns of activities include goal-oriented activities and patterns of unanticipated innovation. Therefore, management control systems must be able to accommodate intended strategies as well as strategies emerging from

employee initiatives and local experimentation (Simons, 1995).

Management control practices include both formal and informal controls. While formal controls concern rules, standard operating procedures and budgeting systems, informal controls involve unwritten policies, which are often derived from organisational culture and practices (Langfield-Smith, 1997). Traditionally, management control systems were seen as separate from strategic and operational controls (see Anthony, 1965), but with changed business environment and conditions during recent years, it is not sensible to distinguish them (Langfield-Smith, 1997; Otley, 2001; Malmi & Brown, 2008). In addition, strategies and operational practices are closely related to management controls, and they should be aligned.

As an important part of management control systems, accounting controls play significant roles in managing organisations. Budgeting process and budgetary control provide a means for organisations to plan their activities and allocate resources. They can also serve as feed-forward and feedback control devices. Accounting-based performance measures can be used, although with limitations, to monitor and manage performance at various organisational levels. They are also often used as a basis for rewarding organisational members. Accounting-based performance indicators are employed to monitor results of strategic implementation, and at the same time, inform strategic formulation. Although management accounting forms an important part of management control systems, most, if not all, organisations operate multiple control systems, which also include non-accounting control systems, such as personnel controls and quality controls. Different management control systems are often introduced by different interest groups at different times. There could be tensions among the systems (Malmi & Brown, 2008). To ensure that various parts of management control systems are not conflicting, it is important to consider management control systems as a package rather than considering each system individually (Malmi & Brown, 2008).

Traditional management control literature often suggests a negative relation between the use of formal management control systems and performance in settings which involve innovative and non-routine activities. In these settings, outputs are difficult to measure, knowledge of transformation process is low and number of exceptions is high. Ouchi (1979) explains how clan control, which is based on social norms, dominates formal control systems in these settings. Similarly, Rockness & Shields (1984) argue that, in research and development setting, relevance of budgets decreases as the ability to measure outputs and knowledge of transformation process decrease. Based on an empirical study of 150 senior research officers in research and development divisions of a large Australian industrial company

and a major US scientific organisation, Abernethy & Brownell (1997) also find that where task uncertainty is high, reliance on accounting controls has a negative impact on managerial performance. From traditional view of management control, management control systems are perceived as tools that encourage command and control, designed to eliminate variations and control routine activities (Davila et al, 2009). This is incompatible with innovation, which is often associated with taking advantage of unexpected opportunities, exceptions, risks and possibilities of failure. From this perspective, therefore, roles of formal management control systems in innovation-emphasis settings should be minimal.

Formal management control systems are traditionally seen as a hindrance to innovation primarily because they are viewed as tools to reduce goal divergence. However, if management control systems are interpreted as information tools to deal with uncertainty, they would be seen as relevant to innovation-focused environment (Davila, 2000). As Tushman & Nadler (1978) argue, management control systems can be a source of information that is used to close 'information gap' – the gap between the information required to perform a task and the amount of information already possessed (Galbraith (1973)). In settings where innovation is emphasised, involving high task uncertainties, management control systems can supply information organisational members need in order to effectively manage uncertainties. However, this does not mean that any information is relevant. Information has to be consistent to the type of uncertainty organisational members confront and also match with the strategy and organisational structure (Davila, 2000).

Recent studies have adopted information view of management control and found a positive relation between the use of formal management control systems and performance. For instance, Bisbe & Otley (2004) find that interactive use of management control systems can foster dialogue and interaction about development of new product and can accommodate the innovative pressure. Jørgensen & Messner (2009) also find that enabling form of control[2] (Adler & Borys, 1996) allows organisational members to better manage tensions between efficiency and flexibility. Similarly, Frow et al (2010) find that by integrating different uses of budgeting with other management controls, managers can effectively manage unexpected events and tensions between flexibility and financial discipline.

These recent studies have highlighted the relevance of formal management controls, including accounting controls, in managing innovation. If designed and used appropriately, management accounting and control systems can

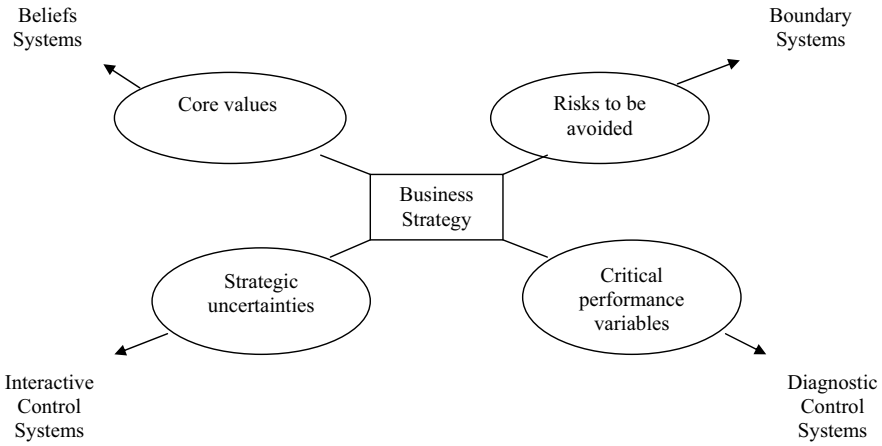
[2] See definition of enabling form of control in Section 4.

be flexible and dynamic, supporting unpredictable needs of innovation. At the same time, management accounting and control systems are stable enough to frame communication patterns and actions (Davila, 2005). To ensure that management accounting and control systems support, rather than inhibit innovation, managers need to ensure that the systems supply relevant information, which will facilitate coordination and learning. The information provided needs to go beyond traditional definition of management accounting and control, which focuses primarily on financial information, to include also non-financial information.

4. Management Control Framework

As previously discussed, management control systems encompass various control mechanisms, and there can potentially be tensions among the systems. Therefore, when designing and using management control systems, it is important to consider them as a package in order to ensure that they are not conflicting. In this respect, Simons (1995) proposes four levers of control which, if combining properly, can help organisations adapt to competitive environment with high strategic uncertainties. The four levers of control are (1) beliefs systems, (2) boundary systems, (3) diagnostic control systems and (4) interactive control systems. Simons (1995) argues that for organisations to have continuous innovation and implement market-driven strategies successfully, it is important for managers to analyse and understand four key elements – core values, risks to be avoided, critical performance variables and strategic uncertainties. These elements are controlled by different levers of control as depicted in Figure 2.

Figure 2: Key elements to analyse and four levers of control (Simons, 1995, p.7)



According to Simons (1995), beliefs systems are used to inspire and direct the search for new opportunities, while boundary systems help set limits on opportunity-seeking behaviour. Diagnostic control systems are used to motivate, monitor and reward achievement of specified goals. Interactive control systems are used to stimulate organisational learning and the emergence of new ideas and strategies. The four levers of controls can help balance competing demands innovation-focused organisations encounter, including tensions between freedom and constraint, tensions between empowerment and accountability, tensions between top-down direction and bottom-up creativity and tensions between experimentation and efficiency. It is argued that the four levers of control create the opposing forces, like yin and yang of Chinese philosophy. While beliefs and interactive control systems create positive and inspirational forces, boundary and diagnostic control systems create constraints and ensure compliance with orders. It should be noted that Simons' levers of control include only formal controls[3]. It is by no means suggesting that informal controls can be ignored. It is crucial for managers to choose the right mix of these four levers of controls, which are also consistent with the informal processes and practices, culture and value of the organisation.

If four levers of controls are designed and used properly, organisations can create enabling form of controls[4] - formal procedures which enable employees to deal effectively with inevitable contingencies, provide organisational memory that captures lessons learned from experience, and stabilise and diffuse new organisational capabilities (Adler & Borys, 1996). Enabling form of controls is crucial for organisations which attempt to develop continuous innovation, as it can provide needed guidance, clarify responsibilities, ease role stress and help organisational members be and feel more effective.

In order to have enabling form of control, Adler & Borys (1996) suggest three factors for organisations to consider – features of the systems, system design process and system implementation process. With regard to features of the systems, enabling form of controls allows non-expert employees to fix breakdowns caused

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[3] This is due to his definition of management control system which is defined as "formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities." (Simons, 1995, p. 5)

[4] This is as opposed to coercive controls, which are command-and-method type of management coercive controls may undermine employees' commitment and foster dissatisfaction. Coercive forms of control are likely to limit innovation, as employees will have little motivation to contribute to complex non-routine tasks that constitute innovations (Adler & Borys, 1996).

by system failures or user mistakes. Users are also able to understand the logic of the system and understand the up- and downstream implications of their work. Additionally, employees are granted certain degree of freedom in how they may use the systems. As for the process of design, users should be involved in the specification, development and test process. For the implementation process, organisations should be adaptive to technological changes and allow adjustive development; that is, "the emergence of practices that solve incipient operational problems, practices developed by employees in the course of their work that were not deliberately instituted by superiors." (Blau, 1955 in Adler & Borys, 1996, p. 76) These characteristics of management control systems will promote enabling form of controls, which will then foster innovation.

5. Application of Management Control Framework in Innovation-Focused Organisations

As discussed previously, formal management control systems do not necessarily inhibit innovations if designed and used appropriately. Toshiba's Fuchu Works software factory and several other US electronics firms make extensive use of highly systematic procedures and detailed formalised disciplines in their product development processes without alienating the software and product developers (Jelinek & Schoonhoven, 1993 and Cusumano, 1991 in Adler & Borys, 1996). Motorola's high level of formalisation also fosters high levels of commitment and innovation (Adler & Borys, 1996). To explain how companies may use management control systems to support innovation in more detail, examples of companies which have successfully applied management control systems to manage tensions between flexibility and efficiency are discussed[5].

Frow et al (2010) examine management control practices in a large, multinational, document technology and services company, Astoria plc[6]. Astoria operates in a highly competitive, global market, which is characterised by rapid technological change, increased level of uncertainty and need for creativity and innovation. The company recently suffered financial problems; therefore, financial controls are increasingly important while continuous innovation and learning is also needed. In order to balance tensions between the need for creativity

[5] It should be noted that the two companies were chosen for a discussion primarily because the authors of the two papers have provided details of the companies and their management practices which are sufficient for readers to learn from the companies the authors studied and adapt to the readers' own settings.

[6] The authors named the company Astoria plc to disguise the real name of the company in order to maintain confidentiality.

and the need for financial discipline, Astoria deploys a formal performance management system called 'performance excellence process' (PEP). PEP provides a framework for managers' decision-making when problems and unforeseen contingencies arise. It performs three important roles. Firstly, as a planning process, PEP is used to define organisational direction and strategy. Key drivers of business performance are also determined during the planning process. Secondly, PEP serves as a strategic communication device. Key drivers of business performance are communicated to lower levels of managers, and these key business drivers are translated into specific actions and initiatives, which each manager is held accountable. And thirdly, PEP is used to assess progress towards achieving objectives through periodic reviews of performance, which are pursued through various forums, including financial reviews, operations reviews and monthly management reports. Achievement of individual targets is not directly linked with financial rewards. Rather, financial rewards are based primarily on the profit achievement of the company. Individual performance would only have an impact on promotion prospects. Within Astoria, budgetary control is embedded within the PEP. Individual managers are held responsible for the targets to which they are allocated. However, unlike many other organisations which budgetary control and variance analysis is used for seeking corrective action to ensure achievement of pre-set individual level targets, Astoria employs an 'open' systems approach to budgeting. That is, performance review and variance analysis process is used to open up a discussion among organisational members to identify strategically aligned action in response to variances. Problem solving process is guided by Astoria's Quality Tools, which comprise Astoria Improvement Process, Customer Centred Productive Interactions, Fact Based Story Boards and Meeting Process Principles. Astoria Improvement Process involves the analysis of root causes for variances while focusing decisions on providing customer value. It can be used reactively to address problems as well as proactively to capture new opportunities. As for Customer Centred Productive Interactions, it involves training and assessment aiming to develop interactive skills, which enable managers to work better and more effectively with a focus on customer and business results. Fact Based Story Boards are used to share information among managers in order to find solutions collectively, and Meeting Process Principles set out how meetings are to be conducted. Key principles include 'be open and encouraging to new ideas', 'to critique ideas not people' and 'be willing to reach consensus'. Adherence to these principles is expected to facilitate teamwork, co-operation, learning and knowledge sharing, which will help the company develop co-operative competence (Ahrens & Chapman, 2006).

From a description of management control practices operated in Astoria, it can be seen that a part of PEP functions as a beliefs system which aims at directing and coordinating managers' decisions and behaviours in line with Astoria's strategic objectives. The strategic objectives are reinforced through the identification of key business drivers, individual action plans and initiatives and financial rewards, which are associated with the company's performance. Individual action plans and initiatives serve as a boundary control, and the targets act as a diagnostic control tool. Through performance review process, budgetary control is used diagnostically to identify problems, but budgetary control is also sometimes used interactively via Performance Improvement Process and Fact Based Story Boards, which promote a discussion on the areas involving high strategic uncertainties. Whether budgetary control is used diagnostically or interactively depends on the reasons for performance shortfalls and types of remedial action required. Despite a flexible use of budgets, budgets also serve as boundary controls, limiting actions which may jeopardise the organisation's ability to attain its strategic goals. The Quality Tools have become culture embedded in Astoria, which facilitate rapid reaction, customer focus and management by fact in executing Astoria strategy. A combination of various control mechanisms employed has helped Astoria maintain financial discipline while at the same time fostering innovations.

While Frow et al (2010) provide an example of how management control systems are applied in an innovation-focused organisation, Jørgensen & Messner (2009) provide an example of a use of management control systems in managing a new product development process in particular. In the case company which Jørgensen & Messner (2009) investigated (hereafter, the Company), the Company has successfully developed an enabling form of controls, which enables project managers and product development engineers to manage tensions between flexibility and efficiency effectively. The Company is a medium-sized, family-owned Danish company. It provides analytical solutions for routine control of quality and processing of agricultural, food, pharmaceutical and chemical products. The Company has a set of four values that were made explicit and were enforced on its divisions, including the product development division. The four values are (1) First, (2) Customer Satisfaction, (3) Knowledge and (4) People & Teams. Each value is explained in six or seven bullet points and constitutes a control mechanism

[7] Stage-gate model is a roadmap dividing the product development process into different stages. Cross-functional teams must successfully complete a prescribed set of tasks in each stage and obtain an approval from management in order to proceed to the next stage of the product development process (Cooper, 1999).

guiding the implementation of strategy. To convey a message that innovative ideas that cannot be materialised is costly, Chamber of Horrors was created to display the ideas that have completely failed. The Chamber of Horrors reinforces engineers, designers and project managers to pay careful attention to resources consumed during product design and development stage. In addition to the value statement and Chamber of Horrors, the Company has developed Product Development Process Manual and implemented Stage Gate model[7]. The Manual prescribes a number of criteria that each project has to fulfil before passing to the next stage. Particularly, contribution ratio level and payback ratio level are calculated. The Product Development Process Manual, to certain extent, prevents engineers and designers from taking things too far with uncertainties that are too large. Nevertheless, this does not mean that organisational members need to follow the procedures specified in the Manual in a strict manner. Organisational members can deviate from the rules if they can justify their actions. This design feature of the Company's control encourages employees to work with the system rather than giving them reason to work against it. To promote employees to mindfully bend the rules, the Company has created a culture of tolerance. The company does not penalise employees if negative outcome arises as a result of justifiable rule bending. As one senior manager of the Company commented, the company accepts that sometimes failure can occur. The Company wants to be the first, and it is difficult, if not impossible, to be the first by making things which success every time. Failed ideas displayed in Chamber of Horrors are simply to remind organisational members that it is costly to initiate ideas that cannot be materialised. It is not associated with performance evaluation of individual members of the product development team. Hard numbers, particularly costs and project progress, are also of importance in managing each stage of the product development process. Time and cost-related information is shared and discussed extensively among project manager and product designers and engineers within his/her team. Management board also evaluates costs and progress of the project at the end of each stage gate in order to determine whether the project should be continued.

Within the Company, the value statement serves as a beliefs system, communicating strategic objectives of the Company and co-ordinating actions and activities of the organisational members. The Product Development Process Manual is used as a boundary control, limiting organisational members from undertaking excessive risks. The management board uses time and cost information diagnostically to evaluate and decide on the project's continuation, whereas time and cost information is used interactively by project managers, as time and cost are areas that involve high strategic uncertainties and critical for competitiveness of the Company. In the Company, formal controls are designed and

used in a manner which has led to an enabling form of controls. Combined with informal control practices and culture, the Company has developed management control systems which enable managers to effectively manage efficiency and flexibility concurrently.

From the examples of Astoria and the Company, it can be seen that to develop management control practices which will foster innovation, it is important to consider various management control systems as a package and ensure that these systems balance each other. In addition, management control systems need to be compatible with informal practices and organisational culture. A closed linked between management control systems and strategic objectives is critical. And appropriate beliefs systems, which reinforce desirable patterns of behaviour and value of the organisation, are crucial.

6. Implications for Thai Organisations

Although a discussion on management control practices in the previous section is drawn on findings from field research conducted in western organisations, several lessons can be learned and applied to Thai organisations. Similar to organisations in other parts of the world, Thai business organisations confront with increasingly intensive competition from both local and global players. Product life cycle has become shorter. Thai companies can no longer rely on exploiting cheaper resources and lower cost of production as a main source for competitive advantage. In order to succeed, or indeed to survive, organisations need to learn to continually adapt, adjust, improve and innovate. In this respect, appropriate design and use of management control systems can provide useful information necessary for organisational members to plan and manage their activities effectively.

As previously discussed, it is important for organisations to develop a combination of management control systems which has enabling features. Formal and informal control practices need to be compatible and reinforce desirable patterns of behaviour. For management accounting and control systems in particular, they need to provide relevant and timely information, which organisational members require to manage areas involving high strategic uncertainties. Scope and use of the system need to go beyond what are considered traditional management accounting and controls.

In many Thai business organisations, accounting systems are still dominated by a need for external financial reporting. Attention to adjusting accounting systems for cost and internal management is relatively limited. Although a use of management instinct and limited accounting information may be sufficient for small companies, this management practice is less effective for larger organisations. Information from accounting systems which are designed primarily for external financial reporting is too late and too aggregate to be relevant for

managers' planning and control decisions in today's environment (Johnson & Kaplan, 1987; Cooper & Kaplan, 1999). Ways in which indirect costs are treated and allocated to products/services also distort product/service cost information (Cooper & Kaplan, 1988). Management needs to recognise these limitations of accounting systems designed primarily for external financial reporting purpose. In order to determine whether to develop accounting and control systems/tools specifically for internal management purposes, management should consider additional costs involved with improving the systems and benefits that organisations will obtain from having better management accounting and control systems.

In addition to having accounting systems dominated by external financial reporting requirements, many Thai companies are family businesses where owner family members have substantial control over ownership and management, and Thai society has cultural characteristics which differ significantly from many western societies. Different ownership structure and culture can have significant impact on effectiveness of management control systems and management practices within Thai organisations. Thai society is typically characterised by having high collectivistic culture. Ties between individuals are tight and individual tends to look after his/her ingroups (Hofstede, 1983). This differs from many other western cultures where degree of individualism is high and individual is expected to look after his/her self interest. In this respect, Thai organisations may find it more challenging to establish and manage cross-functional team, as organisational member tends to feel belong to his/her own departmental group rather than to the cross-functional work group (Harrison et al, 2000). Organisational members may also have difficulty in adapting to fluid teams with changing membership and leadership (Harrison et al, 2000). However, cross-functional team and fluid workgroup can be important for innovative ideas initiation and product development process. Thus, it is important for Thai companies to implement appropriate control and incentive mechanisms that will enable and encourage organisational members to work effectively and comfortably in cross-functional and fluid teams. In addition to high collectivism, in Thai society, individuals tend to accept inequality between power and wealth (i.e. high power distance) (Hofstede, 1983). Individuals are more willing to accept command and authority from superior without feeling that they are being coerced, compared to individuals from US, UK or many other western European countries which show small power distance. Degree of uncertainty avoidance is also large in Thai society, which implies that individuals may prefer rules and laws to create security and avoid risk (Hofstede, 1983). In this respect, formalisation, centralisation and top-down approach to management control may work more effectively in Thai organisations, compared to in western societies where the degree of power distance and uncertainty

avoidance is low (Harrison & McKinnon, 2007).

While ownership structure of Thai business organisations and Thai culture are among the important factors managers should to consider when designing and using management control systems, there are also other contingent factors which are not less important. These factors include business strategy, operational strategy, technology, organisational size, operating and market environment, specific characteristics of the industry in which the organisation operates and life cycle of the company's products. As contingency theorists argue, there is no single best management control system which can universally be applied successfully to every single organisation (Lawrence & Lorsch, 1967; Otley, 1980; Chapman, 1997; Chenhall, 2003). Managers should consider these contingent factors and adapt management control systems to make them suit their own settings and circumstances.

7. Conclusion

The paper has discussed and explained how organisations may use management control systems to support innovation. Extant innovation literature has shown that while idea initiation is critical, selecting the right ideas, translating them into something new and launching them to the market are equally challenging. It is important that organisations can capture value from innovations they have developed. Examples discussed in the paper demonstrate that efficiency and creativity are not two sides of the coin. Organisations can be flexible, creative and innovative while, concurrently, maintaining financial discipline and being efficient. Management control systems, if designed and used properly, can foster continual learning and creativity while at the same time provide information necessary to ensure that the right ideas are executed and value is captured. The paper has shown that management control systems are not unnecessary evil as some may have argued. We cannot simply dismiss them. Rather, we should understand specific conditions and circumstances of the organisations, consider variety of management control systems as a package and adapt the package to make it suit the local settings.

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