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PERFORMANCE MEASUREMENT SYSTEM
DESIGN IN SERVICE ORGANIZATIONS IN
MALAYSIA

BY

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ABSTRACT

The service sector is the most dominant economic force and its impact is experienced by both developed and developing countries like Malaysia, where it has progressed considerably over the past three decades. Under the Third Industrial Master (IMP3) and Ninth Malaysia Plan, its growth is expected to continue. Its development to become the major source of economic growth certainly offers great business opportunities; however, continued globalization and liberalization will inevitably lead to increasingly intense business competition. Therefore, this study was undertaken to emphasise the needs for a systematic and formal way of management control. Despite substantial transformation in the service business environment, management accounting theories have been biased towards manufacturers. Yet, intangibility, perishability, simultaneity and heterogeneity of service products are deemed to require attention in their own right. Hence, looking from the perspective of service firms, this study hypothesizes the importance of service process type, business strategy and perceived environmental uncertainty (PEU) on performance measurement systems (PMS) as a means of control. Previous studies focused on a single service industry or a single service organization. Since deregulation affects the service sector generally, a broader scale investigation was conducted to generate generalizable findings. Focusing on the experiences of Malaysian service firms, the study investigates whether there are significant associations between the three contextual variables and the way PMS is designed. Subsequently, it examines whether a fit between the organizational characteristics and PMS design may enhance organizational performance. Presenting the evidence from the perspective of a developing country, several aspects of PMS design were explored – the significance of the information attributes (PMS attributes), the way the system is used (PMS use) and the measurement mechanisms (PMS mechanisms). The issues were tested using a mixed method approach with the collection of survey questionnaires and a series of post-survey interviews. Stronger emphasis was placed on a quantitative approach as the objectives were to develop generalized PMS findings in the service sector. Data was collected from operations managers of locally owned service firms. Findings indicate that differentiation strategy and environmental competitiveness have a significant influence on PMS design, which is a determinant of organizational performance. In other words, the attributes and use of PMS play a mediating role in the relationships between the differentiation strategy, environmental competitiveness and organizational performance. Interpretation of the results underlines the complementing roles of each of the design elements in building an effective PMS. More importantly the results show that the PMS design of professional service firms is not much different from that of mass service firms. Nonetheless, the importance of psychological and motivational values should not be underestimated as they also determine the success of a PMS. To PMS designers, the evidence demonstrates the relevance of PMS in service firms, where the greater strategic uncertainty and intensity of market competition requires greater reliance on sophisticated and interactive use of PMS. Meanwhile, to PMS users, their involvement and commitment are critically important in setting up an effective PMS. Finally, the study concludes by proposing several recommendations for future research.

ملخص البحث

حيث ماليزيا مثل المتقدمة الدول بها تتأثر المسيطرة الاقتصادية القوة تمثل الخدمات قطاع إنَّ البرنامج تحت نموها استمرار يتوقع. الأخيرة العقود ثلاثة في ملحوظا تطورا اكتسبت أنها يتيح الاقتصادي نمو كمصدر تطورها. الثالث الصناعي برنامج تحت تطورت أنها كما التاسع في الزائدة التحدى سينتج الاقتصادية والحرية العولمة استمرار ذلك مع الكبيرة، التجارية فرص والرسمية المنظمة الإجراءات إتخاذ ضرورة على لتؤكد الدراسة هذه أجريت وقد. المجال هذا تلوح النظرية الإدارية محاسبة الخدمات، بيئة في البارز التغير من الرغم على الإدارية للسيطرة الخدمات وتعددية والتزامن الاستهلاك إدراك عدم هذا مع. الصناعات نحو التعصبية من بنوع هذه الدراسة الخدمات الشركات النظر وجهة من إذن بنفسها الناس أنظار يجلب الانتاجية تقدير من المحسوس وثوق وعدم الإدارية والستراتيجية الخدمات سير نوعية أهمية تقترض الخدمات نظام أو واحدة خدمة على السابقة الدراسات تركزت. والسيطرة التحكم كوسيلة النظام الواسع النطاق على البحث أجريت قد. جميعها الخدمات قطاع يؤثر التحكم عدم أن حيث. الواحدة هل تبحت الدراسة. هذه المالىزية الخدمية شركات تجربة على تركيزا. العامة النتائج على لنيل وبالتالي. الأداء مقياس لنظام طرح الذي والطريق المختلفة الثلاث الحالات بين صلة هناك توجد عرض مع. التنظيمي إجراء بقاء ممكن التنظيمية الصفات بين التطابق هل تفحص الدراسة هذه مواصفات أهمية مثل التصميم من النواحي عدة استكشف المتطورة الدولة من الشواهد أو الأدلة الاختبار في المركب المنهج استعمل قد مقاييس آلية النظام استعمال والطريق المعلومات، منهج على البحث تركز وقد بعدها والمقابلات العامة الإستفتاء قبيل من القضايا هذه والتفحص مديري من جمعت المعلومات. الخدمات قطاع في العامة النتائج تطوير يهدف أنه حيث الكمي الميزية التفاصيل الاستراتيجية أن إلى تشير فالنتائج المحلية الخدمات الشركات العمليات أو التنظيمي أداء يحدد الذي الأداء مقياس لنظام التصميم على هام تأثير لها البيئي والتنافس بين العلاقة في الواسطى دور تلعب الأداء مقياس لنظام والتنفيذ الميزات أخرى بعبارة المقومات من لكل الإجمالي دور يؤكد النتائج تفسير. البيئي والتنافس التفاصيل الاستراتيجية أن النتائج تظهر هذا، إلى والإضافة الأداء مقياس لنظام المؤثر والتشكيل البناء في التصميم الشركات من كثيرا تختلف لا الخاصة الخدمات بالشركات متعلق الأداء مقياس لنظام التصميم لنظام النجاح تقرر أنها حيث الذاتية والحوافز القيم أهمية تقليل يمكن لا ذلك ومع العامة الخدمات مقياس نظام صلة تظهر الشواهد ، الأداء مقياس لنظام المصممي النظر وجهة من. الأداء مقياس أكبر إلى يحتاج السوق التنافس وشدة استراتيجي غموض أكثر أن حيث الخدمات بشركات الأداء نظام لمستعملي الوقت نفس في. الأداء مقياس لنظام والتفاعلي المتطور استعمال على اعتماد هذه أخيرا. المؤثر الأداء مقياس نظام بناء في هامة دورة تلعب الجدي اشتراك كان الأداء، مقياس المستقبل في لبحوث المقترحات من عدة بتقديم تنتهي الدراسة

ABSTRAK

Sektor perkhidmatan adalah peneraju ekonomi di negara-negara maju dan membangun. Malaysia, sebagai salah sebuah negara membangun, telah menunjukkan pertumbuhan ekonomi berasaskan perkhidmatan yang positif sepanjang tiga dekad yang lalu. Malahan sektor ini dijangkakan terus berkembang pesat di bawah Pelan Induk Perindustrian Ketiga (IMP3) dan Rancangan Malaysia Kesembilan, menjadi penyumbang utama ekonomi negara. Dalam usaha berterusan mengglobalisasi dan meliberalisasikan sektor perkhidmatan pastinya menjanjikan lebih banyak peluang-peluang perniagaan, yang mana menyumbang kepada persaingan yang lebih sengit. Sehubungan itu, kajian ini menjurus kepada penekanan keperluan kaedah kawalan pengurusan yang sistematik dan formal dalam menghadapi cabaran persaingan hari ini. Disebalik kemajuan ekonomi berasaskan perkhidmatan, teori perakaunan pengurusan adalah cenderung membincangkan pengamalan di sektor perkilangan. Menyedari hakikat produk perkhidmatan mempunyai ciri-ciri yang unik, ia memerlukan perbincangan yang khusus. Justeru itu, kajian ini melihat kesan pengaruh proses operasi perkhidmatan, strategi perniagaan dan ketidaktentuan persekitaran ke atas sistem pengukuran prestasi (PMS) sebagai mekanisma kawalan. Kajian-kajian lepas sering memperkatakan pengamalan di satu industri ataupun sebuah firma perkhidmatan. Sebaliknya kajian ini adalah berskop lebih luas, melihat sektor perkhidmatan secara menyeluruh, bagi menghasilkan penemuan kajian yang lebih umum. Berdasarkan pengamalan di firma-firma perkhidmatan di Malaysia, hubungan diantara ketiga-tiga pembolehubah kontekstual dan rekabentuk PMS diuji, dan seterusnya, menentukan samada keserasian diantara mereka mempertingkatkan prestasi organisasi. Melihat daripada perspektif sebuah negara membangun, beberapa aspek rekabentuk PMS telah ditinjau – kepentingan ciri-ciri maklumat (“*PMS attributes*”), pendekatan penggunaan (“*PMS use*”) dan mekanisma pengukuran (“*PMS mechanisms*”). Isu-isu ini dikaji dengan mengabungkan kaedah penyelidikan melalui pengumpulan data soal selidik dan temubual. Walau bagaimanapun, kaedah kuantitatif ditekankan sejajar dengan objektif kajian menghasilkan suatu penemuan umum. Berdasarkan maklumbalas yang diperolehi daripada pengurus operasi firma-firma perkhidmatan milik tempatan, hasil kajian menunjukkan strategi pembezaan dan kesengitan persaingan adalah pengaruh utama dalam merekabentuk PMS. Ciri-ciri maklumat dan kegunaan PMS berperanan sebagai pengantara dalam hubungan diantara strategi pembezaan, kesengitan persaingan dan prestasi organisasi. Disamping itu, setiap elemen rekabentuk merupakan pemelengkapan antara satu sama lain dalam membangunkan PMS yang efektif. Yang pastinya tiada perbezaan ketara diantara PMS firma perkhidmatan profesional dan massa. Nilai-nilai psikologi dan motivasi juga didapati berperanan penting dalam menentukan kejayaan sesuatu PMS. Penemuan ini membuktikan kepada pengumbang PMS pentingnya PMS di sektor perkhidmatan. Ketidaktentuan pasaran mengkehendaki PMS yang lebih canggih dan penggunaan secara interaktif. Sementara kepada pengguna PMS, penglibatan dan komitmen mereka adalah penting dalam membangunkan PMS yang efektif. Akhirnya kajian ini membuka ruang penyelidikan lanjut di masa hadapan.

APPROVAL PAGE

The thesis of Amizawati Mohd Amir has been approved by the following:

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Amizawati Mohd Amir

Signature.....

Date.....

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CHAPTER 1

AN OVERVIEW OF THE STUDY

1.1 BACKGROUND

Service sectors around the world are experiencing substantial transformation at macro and micro levels due to the rapid development and requirements for the service-based economy. The change in governments' attitudes towards services, trade and investments along with the establishment of statutory bodies enforcing internationalizing services, such as the World Trade Organization (WTO), have intensified the growth and significance of the service sector. Undeniably, customers changing demographics (for example, increased affluence and leisure time, better education, more women in the workforce) are also creating more demands for services, and, technological advancement has created more opportunities for a broader range of services (Javalgi and White, 2002). Thus, services can no longer be viewed as secondary activities supporting the manufacturing sector. Instead, they have become the dominant economic force across the globe (Sigala and Christou, 2006).

In most countries, the significance of the service economy is reflected in the favourable relationships between GDP and employment opportunities. The impact is not only experienced by developed economies, such as the USA, Sweden and Japan, but also in developing countries like Malaysia. In Malaysia, the sector has grown steadily over the past three decades. As a share of the GDP, the sector contributed approximately 37% in the 1970s. In the 1980s the percentage increased to 43% rising to 47% in the 1990s. By the year 2000, the share had risen to almost 50% (EPU, 2002) and it is expected to continue growing with an estimated GDP contribution for

2008 of almost 55% (Malaysia Economic Report, 2007/2008). A similar pattern was reported for most countries, demonstrating the dominance of service activities (WTO, 2005). Indeed, the sector has been identified as the key driver of the modern economy (Preißl, 2000).

Globalization and deregulation of the service sector have had a profound implication on the development in the post industrial era. The increased service business opportunities and the opening up of local markets are making the world more and more borderless. Liberalization not only provides market access, but also increases the intensity of competition by an unconstrained service market. In most cases, the battle for the market share is no longer restricted to domestic competitors but is opened up to competition from global players (WTO, 2005; Jara and Dominguez, 2006; EPU, 2008). As a result, customers are becoming less loyal, more price sensitive and discerning. In order to address such challenges and satisfy the dynamically changing customer needs, service firms have to be proactive in offering the right quality of services to the customers at the right time and price. Business strategy is certainly becoming even more important (McLaughlin and Fitzsimmons, 1996). However, the strategic objectives may not be achievable without the support and commitment from the organizational members. Therefore, in facing the great impact of the organizational and environmental changes, service firms need to have an effective control system to facilitate managers in managing the internal and external factors (Gordon and Narayanan, 1984; Chong and Chong 1997; Abdel-Kader and Luther, 2008). The system should be tailored to the service requirements and be constantly monitoring business performance. In spite of the economic significance of the service sector, relatively little has been done from the management accounting perspective (Sharma, 2002; Chenhall, 2003; Md. Auzair and Langfield-Smith, 2005).

The intensified competition demands service firms to compete on several levels simultaneously. Knowledge, competence and intangible assets such as reputation, customer loyalty and relationship are becoming critically important in developing competitive advantage (Nixon and Burns, 2005). Hence, firms require a sophisticated control system that can help them in monitoring, controlling and making decisions pertaining to business operations. A sophisticated system, in the sense that it provides a broader scope of information that is relevant for the managers to monitor and control their organizational activities with the aim of enhancing organizational performance (Abdel-Kader and Luther, 2008). Such systems are required as the traditional feedback type of information largely reports on comparison between actual performance and preset targets/standards where a deviation signals the need for corrective action. Yet, management needs feed-forward information that can guide organizational decisions and actions prior to any adverse performance consequences (Otley, 1999).

A firm's control approach has to go beyond the budgeting, standard variance analysis and traditional performance measurement system (PMS). The literature often refers to the feedback systems as a diagnostic control system designed to make sure the predetermined targets are attainable (Simons, 1994; 1995a, 1995b, Tuomela, 2005; Widener, 2007). The main motivation of the system is to ensure that activities and performance are aligned with the organizational objectives. However, given the increased competitiveness of the service sector, firms have to be innovative and creative in strategically positioning themselves in the dynamic marketplace. New strategies will only emerge when there is a change in the management concentration, moving away from traditional short-term efficiency based measures to long-term strategic emphasis. In other words, relying solely on a diagnostic approach through

searching and correcting deviations is no longer sufficient. Indeed, researchers, (Simons, 1995b, 2000; Widener, 2007), suggest that to provide an effective control environment, diagnostic control has to be supported with three other levers of control – belief system, boundary system and interactive system. In essence, the belief and interactive systems will instil a positive influence to inspire and stimulate the search for new ways to establish a firm's positioning in the competitive market, while boundary systems will act as a constraint on employee behaviour (Simons, 2000).

Following the work of Abernethy and Brownell (1999) and Bisbe and Otley (2004), the present study concentrates on the way control is used (i.e. diagnostically and/or interactively) to meet the service managers' requirements. A recent study (Widener, 2007) finds that diagnostic and interactive uses of PMS complement each other. Again, the study has overlooked the service sector's practices. Hence, by focusing on PMS in service organizations this study examines the design of the system as a means of maintaining service organizational control. Considering the dynamism of the service business environment, the study generally suggests that sophisticated and contemporary, as opposed to the traditional approach, is relevant in managing service organizations.

In addition, the uniqueness of services should also be a factor to be considered in managing businesses. Their intangible nature, the inseparability of production and consumption, heterogeneity and perishability make them different from tangible products. Moreover, the lack of inventory to buffer during peak and trough periods increases business uncertainty. The risk from insufficient resources as well as from unused capacity has an adverse impact on a service firm's performance. Besides losing sales, the inability to match the current demand may ruin a firm's reputation among stakeholders. Consequently, in view of all the possible implications a PMS

may help the service manager to closely monitor the internal and external factors, thereby ensuring that the organization pursues its strategic emphasis and leads to the achievement of its organizational objectives (Nanni, Dixon and Vollmann, 1992). Besides evaluating organizational success, PMS is also an instrument to assist an organization's communication and learning processes and to motivate individuals to perform at their best (Simons, 2000). Considering the significance of PMS, to some practitioners and researchers PMS is the key to change (Brignall, 1997). PMS ensures customers requirements are met, provides visibility and a scorecard to gauge individual performance levels, justifies the use of resources and guides the improvement efforts.

The PMS denotes a change in the business environment and consistently provides ways to meet organizational targets. Therefore, the design of the system should match with the firm's business process, its strategic priority and the stability of external environment. In fact, the design aspect is a recent research topic in PMS studies (Malina and Selto, 2004; Ferreira and Otley, 2005; Chenhall, 2005). Although much research has been undertaken with industrial initiatives, the needs of service organizations have been overlooked (Abernethy and Stoelwinder, 1991).

Hence, recognizing the limited management accounting research on service organizations, this study explores the requirements on PMS design from the service organization perspective. An explanation of the motivation to undertake the study is presented in the next section. This follows with a section on the purpose and objective of the study. Subsequently, Section 1.4 and Section 1.5 discuss the contributions and the scope of the study. The operationalized measurement variables are then explained in Section 1.6. Finally, the structure of thesis is presented in Section 1.7.

1.2 MOTIVATION OF THE STUDY

Notably, PMS issues have been extensively explored in the manufacturing sector. Often the argument is to directly apply the same concepts, tools and techniques to the service sector. Besides a bias towards manufacturers, there are circumstances that the existing instruments fail to grasp due to the uniqueness of service activities that require attention in their own right, for example, the absence of an inventory for services makes the substantial management accounting developments on inventory valuation a meaningless activity. Instead, service operations place greater emphasis on intangible assets such as knowledge, competency and reputation, which are difficult to measure financially. Meanwhile, the unpredictability of demand for services and customer behaviour, due to the simultaneous service production and consumption process, requires service firms to have advanced capacity planning techniques, which may not be so critical in manufacturing. For that reason, Anthony and Govindarajan (2007: 616) state that, "...management control in service industries is somewhat different from management control in manufacturing companies". Therefore, the direct application of the management control theory, expounded from manufacturing to services, might not be appropriate owing to the uniqueness of the service sector (Abernethy and Stoelwinder, 1991, 1995; Modell, 1996; 1997; Anthony and Govindarajan, 2007). However, another theory contends that the need to re-orientate the control system stems from the different nature of operations and organizational contexts between profit and non-profit service firms, rather than from the different characteristics between services and manufacturing organizations (Sharma, 2002; Md. Auzair, 2003).

Despite the competing theories, the need to study service organizations has been emphasized by a number of researchers (Brignall and Ballantine, 1996; Modell,

1996; Chenhall 2003). Specifically in the area of PMS, the emerging trend of the studies demonstrated a very limited focus on a single service industry (for example, Wouters, Kokke, Theeuwes and Donselaar, 1999; Ittner, Larcker, and Randall, 2003b) or in other cases, a single service organization (for example, Moon and Fitzgerald 1996; Davis and Albright, 2004). Although the narrow focus may assist in tractable research findings, it tends to be less generalizable.

The paucity of research involving a wider spectrum of service industries (Md. Auzair and Langfield-Smith, 2005) is the main motivating factor for this study, which takes a broader approach in the study of PMS advances and the understanding of the practice of PMS in the service environment. Such views remove the perception that all service industries and problems are unique. Instead, it stimulates the sharing and cross-over of ideas in understanding the appropriate management methods for each service type (Perrow, 1970).

Additionally, most PMS research for services has been conducted in western countries. Given that theories developed in one country reflect the cultural boundaries of that region (Hofstede, 1980, 1983), this study seeks to extend the knowledge of PMS within the setting of a developing country. According to Hofstede (1983), organizational functions are related to a society's distribution of power, which refers to the extent that people accept the power inequality in organizations. The western countries small power distance suggests that the inequality in society is minimized where superiors and subordinates are interdependent and have an equal right to give ideas and opinions. The way of thinking may likely influence the style and design of their management control systems (MCS). Conversely, developing countries (most Asian and African countries), having a large power distance, may likely address situations differently from the western developed economies (Hofstede, 1980). Albeit

the literature highlights that organizational theories are culturally bounded, little empirical work has been undertaken to examine the validity of the assumption. (Hofstede, 1980; 1983). Considering the limited discussion on developing economies' management control practices, this study attempts to fill the gap and contribute to a meaningful body of PMS knowledge from a developing country's perspective.

Malaysia was selected as it is representative of the emerging service economic market. Ranked third among the top growth centres in emerging markets from 2006–2020 by Deutsche Bank and third in AT Kearney Global Services Location index (i.e. a tool to measure the viability of a country as a location for business services), Malaysia leads as a potential service market in this region (MIDA, 2008). Besides becoming a regional centre for services, it is the aim of the Malaysian government, under the Third Industrial Master Plan (IMP3), 2006-2020, to make the private service sector the major contributing factor for economic growth (Malaysia Economic Report, 2007/2008; MIDA, 2008). A recently published midterm review of the Ninth Malaysia Plan (2006-2010) indicated that the service sector will be the “major source of (Malaysia economic) growth”, (EPU, 2008: 14). In spite of the tremendous development in the Malaysian service economy, scarce attention, particularly from management accounting, has been directed at the service sector. Demonstrating the common pattern of management accounting based studies, local PMS research (for example, Rozita, Yuserrie and Fauziah, 2004; Yean, Zailani, and Keng, 2006; Burgess, Ong and Shaw, 2007; Ruzita, Daing and Yuserrie, 2007) has concentrated mainly on manufacturing practices. Meanwhile, the very few published papers in the area have focused on a single organization case study (Othman, Ahmad Domil, Senik and Abdullah, 2006; Nitithamyong and Tan, 2007). Despite the fact that the literature on Malaysian services (MCS) is largely underdeveloped, the current market scenario