

CRITICAL FACTORS IN OUTSOURCING OF ACCOUNTING FUNCTIONS IN MALAYSIAN SMALL MEDIUM-SIZED ENTERPRISES (SMEs)

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The challenges that business face in sustaining competitive advantage in the corporate world have become a major concern. Businesses are adopting cutting-edge technologies and best practices to cope with rapid, global changes. Various business functions are being reengineered for this purpose. Accounting functions play an important role in helping businesses to maintain competitive advantage. However, some small and medium-sized enterprises (SMEs) face problems handling fundamental accounting functions. This is predominantly because of their lack of expertise; accounting functions require not only knowledge of generally accepted accounting rules or tax regulations but also the expertise needed to apply the rules in a given business environment (Everaert, Sarens and Rommel, 2006). This paper offers some insight on the outsourcing of accounting functions as there is paucity of data in this area in the context of Malaysia. Essentially, it presents empirical evidence regarding Malaysian SMEs' accounting outsourcing practices. A survey of SMEs was conducted to identify the overall outsourcing landscape as it relates to accounting and third-party organisations. The factors that contribute to the decision to outsource accounting functions are analysed. The study reveals a significant

Magiswary Dorasamy et al.

relationship between outsourcing accounting functions and two contributing factors, risks and operation management.

Keywords: outsourcing, accounting, SME, factors, Malaysia

INTRODUCTION

The current state of outsourcing in Malaysia suggests that outsourcing has emerged as a management strategy. Outsourcing is the practice of contracting out business processes to a third party or to an external source (Longenecker et al., 2003; Brown and Wilson, 2005; Rodriguez and Diaz, 2008) and hence involves the transfer of responsibility (Krell, 2006). As organisations shift their focus towards their core competencies, the outsourcing of less critical functions to a third party is becoming an attractive option (Longenecker et al., 2003). It has been suggested that efforts to rethink business strategies to focus them on core competencies are the fundamental reason for the increasing popularity of outsourcing practices. However, prior work by researchers suggests that US companies pursue outsourcing to gain more value-adding sourcing, whereas UK companies use outsourcing to develop economies of scale (Kakabadse and Kakabadse, 2002). These results run contrary to the data collected using a survey by Zarrella and Huckhai (2004) from KPMG, in which it emerged that Asia Pacific companies are outsourcing even their core business operations. Based on the Business Process Outsourcing (BPO) average, it appears that 33% of core business operations were outsourced during the period under study. This is illustrated in the Figure 1.

Critical Factors in Outsourcing of Accounting Functions

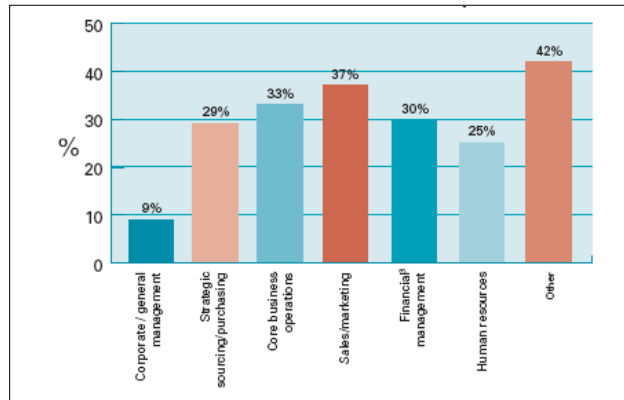


Figure 1: Average percentage of business process outsourced to external service providers (Zarrella and Huckhai, 2004)

The survey by Zarrella and Huckhai (2004) from KPMG also revealed that 95% of Asia Pacific companies outsource some component of either or both business process or IT functions. Whereas organisations see outsourcing as a tool used to increase efficiency and effectiveness in the process of improving business performance, the recent literature on outsourcing shows that cost reduction is the most critical reason for outsourcing (Kakabadse and Kakabadse, 2002). More so than large companies, small and medium-sized enterprises (SMEs) in Malaysia are increasingly outsourcing accounting functions for many reasons that will be discussed in later sections.

In view of the decision on the outsourcing of various types of business functions, it seems that the outsourcing of accounting functions is evidently increasing (Ya Ni and Bretschneider, 2007). In business, accounting functions (which include general ledgers, accounts receivable, accounts payable and payroll) are among the fundamental processes. Various off-the-shelf accounting software programs are available to support these functions. These include User Business System (UBS) and Mind Your Own Business (MYOB). Originally, accounting functions were mainly used to support periodic reporting, assisting with month-end reports and record-keeping. However, accounting functions have evolved to play a more

Magiswary Dorasamy et al.

serious and important role in business. Accounting information is key to maintaining business competitive advantage. Therefore, accounting information is essential for effective decision-making.

Three main problems facing accounting functions in SMEs are a lack of expertise or resources (Evaraert, Sarens and Rommel, 2006; Marriott and Marriott, 2000; Dibbern and Heinzl, 2001; Ismail, 2002), a lack of proper financial records to use as input in decision-making (United Nations Conference on Trade and Development, 2000) and a lack of accounting knowledge and support (Ismail, 2002). The diversity of businesses globally has decreased SMEs' capacity to sustain their competitive advantage because resource constraints are generally much more significant for SMEs than they are for large firms (Marriott and Marriott, 2000). Many large companies dedicate employees or even whole departments to handling certain functions for a firm (Svedberg, Do and Karlsson, 2006). SMEs do not have all of these resources. Fortunately, however, outsourcing practices have offered a helping hand, increasing the chances that SMEs will survive on the global market.

In accounting, a resource deficit occurs when a company lacks the people or knowledge necessary to fulfil its accounting functions. The greater the resource deficit, the more attractive outsourcing becomes (Dibbern and Heinzl, 2001). This is particularly relevant for SMEs because resource constraints are generally much more significant for SMEs than they are for large firms (Marriott and Marriott, 2000). Ismail (2002) claims that most SMEs tend to outsource their accounting work to accounting firms because they lack accounting knowledge and support. This is because they rely on statutory accounts as their main source of information.

SMEs are important to economic growth and are essential to economic development in both developed and developing countries (United Nations Conference on Trade and Development, 2000). However, many SMEs do not keep proper financial records and accounts because they are not aware or convinced of the usefulness of accounting and financial reporting requirements for control and decision-making purposes (United Nations Conference on Trade and Development, 2000). Prior work by researchers suggests that SMEs

Critical Factors in Outsourcing of Accounting Functions

lack the accounting knowledge and support necessary to perform accounting functions. Thus, they are more likely to outsource their accounting work to accounting firms (Ismail, 2002). It follows that having improved accounting information will permit SME owners to manage their firms better and allow them to get access to financial resources more easily (United Nations Conference on Trade and Development, 2000).

Many SMEs lack skilled accounting personnel and the infrastructure necessary to implement existing accounting rules and regulations (United Nations Conference on Trade and Development, 2000). Furthermore, SMEs lack access to expertise because accounting functions require not only knowledge of generally accepted accounting rules or tax regulations but also a knowledge of how to apply the rules in a given business environment (Everaert, Sarens and Rommel, 2006). Apart from that, SMEs have trouble attracting and retaining skilled employees (Ismail, 2002). This could be due to their limited number of senior positions and insufficient knowledgeable of accounting support, which renders them incapable of handling a full set of accounts. As an alternative, some SMEs choose to outsource accounting work rather than hiring an accountant at high cost.

Given the above context, it is essential to study the factors affecting outsourcing accounting functions at SMEs in Malaysia. With this in mind, the research questions that form the crux of this paper are as follows:

1. What elements affect outsourcing accounting functions?
2. Do firm size and business types affect outsourcing decisions?
3. Do the factors influence one another?

In tandem with the above research questions, the objectives of this research are as follows:

1. To study the elements that contribute to the outsourcing of accounting functions by Malaysian SMEs.
2. To investigate whether the outsourcing of accounting functions by Malaysian SMEs is related to firm size and industry type.

Magiswary Dorasamy et al.

3. To examine what kind of relationships exist (if any) among the factors.

This paper proceeds as follows. The first section defines SMEs in the context of Malaysia. The next two sections discuss accounting functions and outsourcing. Factors influencing the outsourcing of accounting functions will be elaborated upon in the subsequent section. The section continues by explaining the methodology guiding this research and highlighting the findings obtained. The paper concludes with the researchers' discussion of the overall outsourcing of accounting functions by SMEs in Malaysia.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

SME Defined

In 2005, the National SME Development Council (NSDC) approved the use of common definitions for SMEs in categories of sectors:

1. Manufacturing (including agro-based),
2. Manufacturing-Related Services (MRS),
3. Primary Agriculture, and
4. Services (including Information and Communication Technology).

These definitions were set by all government ministries and agencies involved in SME development and by the associated financial institutions (Bank Negara Malaysia, 2007). Malaysian SMEs can be grouped into three categories: micro, small and medium. These groupings are based on two assessable criteria either;

1. The number of people a business employs (Table 1), or
2. The total sales or revenue generated by a business in a year (Table 2).

Critical Factors in Outsourcing of Accounting Functions

Table 1: Definition of SMEs based on the number of full-time employees

| Size | Sector | | |
|--------|-----------------------------|--|---------------------------------|
| | Primary agriculture | Manufacturing (including agro-based) and MRS | Services sector (including ICT) |
| Micro | Less than 5 employees | Less than 5 employees | Less than 5 employees |
| Small | Between 5 and 19 employees | Between 5 and 50 employees | Between 5 and 19 employees |
| Medium | Between 20 and 50 employees | Between 51 and 150 employees | Between 20 and 50 employees |

Source: Bank Negara Malaysia (2007)

Table 2: Definition of SMEs based on annual sales turnover

| Size | Sector | | |
|--------|--|--|--|
| | Primary agriculture | Manufacturing (including agro-based) and MRS | Services sector (including ICT) |
| Micro | Less than RM200,000 | Less than RM250,000 | Less than RM200,000 |
| Small | Between RM200,000 and less than RM1million | Between RM250,000 and less than RM10 million | Between RM200,000 and less than RM1million |
| Medium | Between RM1million and RM5 million | Between RM10 million and RM25 million | Between RM1million and RM5million |

Source: Bank Negara Malaysia (2007)

SMEs have become the essence of Malaysian commerce. SMEs' business activities have become an important component of the Malaysian economy. Their contribution is visible in the goods and services that they provide and the degree to which they have increased employment and generated income (Hashim, 1999). Currently, SMEs' business activities are rapidly expanding throughout Malaysia. In the fast-changing world of business, SMEs continue to increase their importance as a force for national economic resilience in terms of their contribution towards growth (United Nations Development Programme, 2007).

Accounting Functions

Accounting is defined as financial activity that measures and provides statements or assurances about financial information (Meigs and Meigs, 1970). Drury (2005) describes accounting as a communication language used to convey economic information to business stakeholders such as managers, investors, creditors, and the government.

There are many types of accounting functions in business. Finance and accounting functions range from accounts payable, accounts receivable, general ledgers, and internal audit services to lease administration, payroll, property accounting, sales audits, and taxes (Alan, 2002: 50). Based on International Data Corporation (IDC) reports, accounts payable remains the most outsourced accounting function (Casale, 2004). Bramford and Bruton (2006: 180) define accounting functions as follows:

1. Accounts receivable – Records of receivables are vital not only to decision-making regarding credit extension but also to accurate billing and maintenance of good customer relations. An analysis of such records will indicate the effectiveness of a firm's credit and collection policies.
2. Accounts payable – Records of liabilities show what a firm owes its suppliers, cash discount facilities, and payment.
3. Inventory accounts – These types of records are essential for the control and security of inventory items. Inventory records supply information for use in making purchases, maintaining adequate stock levels, and computing turnover ratios.
4. Payroll – These records show the total salaries paid to employees and provide a basis for computing and payment of payroll taxes.
5. Cash records – These records, which show all receipts and disbursements, are necessary to safeguard cash. They provide essential information about cash flows and cash balances.
6. Fixed asset account – These records show the original cost of each asset and the depreciation to date, along with other information, such as the condition of each asset.

Critical Factors in Outsourcing of Accounting Functions

Other accounting functions that are vital to the efficient operation of a small business are the insurance register, records of leaseholds, and records of the firm's investments outside its business (Krell, 2006).

Outsourcing Accounting Functions

The outsourcing of accounting and finance functions will become prevalent and continue to grow (Shailendra, 2004). The global market for outsourcing finance and accounting functions is expected to grow at a 9.6% Compounded Annual Growth Rate (CAGR) and exceed \$47.6 billion in 2008 according to a new report from IDC (Casale, 2004). Krell (2006) affirms that some components of accounting functions are suitable to be outsourced. These include general ledgers, financial reporting and internal services. More specifically, the elements of finance and accounting services that can be outsourced are as follows:

1. General accounting
2. Audits
3. Accounts payable
4. Banking
5. Financial services solutions
6. Credit services
7. Insurance processing
8. Tax services
9. Billing systems
10. Accounts receivable
11. Collections and credit
12. Compliance
13. Management reporting

Bragg (2006) asserts that accounting functions are among the most that are commonly outsourced. Although the functions outsourced are limited, Bragg also claims that there are more opportunities for outsourcing if companies open up their outsourcing practices to include multiple suppliers (Bragg, 2006). For instance, cash management services are offered by most regional banks. Taxation, financial reporting, and internal audit services are provided by all of

Magiswary Dorasamy et al.

the largest auditing firms, such as Ernst & Young LLP and Deloitte & Touche LLP.

Outsourcing Accounting Online to India (2007) claims that outsourcing accounting functions enable companies to reduce overhead costs, focus on their core business and manage their work well. Because the total cost of managing accounting work via outsourcing firm is much less than that of hiring in-house staff members, almost every company is making accounting outsourcing a part of its long-term sustainable business model (Outsourcing Accounting Online to India, 2007). The outsourcing of accounts payable helps to reduce administrative costs without capital investment. Accounts payable outsourcing services include data capture, data processing, invoice entry and payment disbursement. Technology is capable of transforming accounts payable; by outsourcing accounts payable, it improves accountability and reduces cost and effort for SMEs (Outsourcing Accounting Online to India, 2007). By outsourcing tax processing, SMEs can save time and avoid penalties arising from late payment and filing. SMEs can remain free of the pressure associated with keeping track of changing laws and keeping up with the latest technology (Outsourcing Accounting Online to India, 2007).

However, outsourcing should be undertaken with caution because it involves a loss of direct control over quality and leads to additional coordination expenses and delays that will affect management and business decisions. It will also jeopardise employee loyalty because of the fear of job-loss (Brown and Wilson, 2005; Aubert, Patry and Rivard, 1998; Earl, 1996). Another concern related to outsourcing is exposure to data security and customer privacy issues. Firms that outsource also see a decrease in their ability to perform the services they outsource. Finally, dependence on one supplier compromises future negotiation leverage (Bragg, 2006).

Critical Factors Contributing to Outsourcing of Accounting Functions

Based on existing studies of outsourcing in general and particularly within accounting, seven independent variables that contribute to

Critical Factors in Outsourcing of Accounting Functions

outsourcing decisions were identified. These are costs, resources, competencies, operation management, the risks of outsourcing, firm size, and types of industry.

One of the two theories underlying this research is Resource-Based Thinking (RBT), which states that a company's resources are controlled by the company and its employees. These resources include business assets such as business processes, organisational characteristics, aptitudes, information, and knowledge (Barney, 1991; Rodriguez and Diaz, 2008; McIvor, 2009). It also involves the firm's capability to reconfigure and exploit all of its resources to achieve competitive advantage. This expertise is implicitly encoded in the firm's routines and in the know-how acquired by individual firm personnel throughout its history (Prahalad and Hamel, 1990).

The crux of the RBT is that the more limited the necessary resources of the firm, the greater the tendency for the firm to rely on external expertise to overcome this weakness (Prahalad and Hamel, 1990; Winter, 1998). Hence, the lower strategic value of resources results in more opportunities to outsource. According to this approach, a firm should focus on those activities that constitute its core competences and outsource the rest of the activities (Rodriguez and Diaz, 2008; Prahalad and Hamel, 1990; Quinn and Hilmer, 1994; Venkatesan, 1992; Quinn, 1999; McIvor, 2009).

Another prominent theory of outsourcing is Domberger's theory of the contracting organisation. Economist Simon Domberger (1998), in his book *The contracting organization*, elaborates at length on economic incentives that encourage businesses to contract out services to third parties. Based on various studies, Domberger and his team find that organisations contract out business processes to tap the benefits of specialisation, market discipline, flexibility, and cost savings.

In summary, because outsourcing warrants a multi-theory approach (Globerman and Vining, 2006), this study proposes to evaluate the factors involved in outsourcing in accounting based on these two different theories. The two theories and the associated variables are listed in Table 3.

Table 3: Theories and variables

| Theory / Law | Description | Research on outsourcing and the theory |
|--|--|--|
| Domberger's theory of the contracting organisation (Domberger, 1998) | Discusses economic incentives as the basis for contracting out services to third parties. | Domberger, 1998 |
| Resource-Based Thinking (RBT) | When a firm possesses fewer of the necessary resources, it will seek to overcome this weakness by calling upon external expertise. | McIvor, 2009, 2008; Marshall, McIvor and Lamming, 2007; Venkatesan, 1992; Quinn, 1999; Gilley, Greer and Rasheed, 2004 |

Although past studies of outsourcing have been conducted based on the theories above and after examining accounting functions with different attributes, the critical factors indicated tend to be different across studies. This study focuses on costs, resources, competencies, operations management, risk of outsourcing, firm size, and types of industry.

Cost Factor

One of the most frequently studied factors in outsourcing studies is the cost factor. Lacity and Hirschheim (1993) identify the most important motivation for outsourcing as cost reduction. Cost reduction in this context involves reducing the cost of acquiring relevant office equipment and avoiding technical updates. SMEs can benefit from economies of scale by outsourcing accounting functions to external accountants (Everaert, Sarens and Rommel, 2006; Kakabadse and Kakabadse 2002). Companies are only required to pay for the actual work done by the supplier and can thus turn their fixed costs into variable costs. In this way, SMEs can eliminate the fixed costs associated with employing internal staff members. This arrangement is much more manageable as it increases flexibility (Nicholas, 2006). In an empirical survey, Domberger and his team find that organisations that outsource services are able to cut costs by about 20% without affecting service quality (Domberger, Hall and Li, 1994; Domberger, Meadowcroft and Thompson, 1986, 1987; Domberger, Fernandez and Fiebig, 2000; Seddon, Cullen and

Critical Factors in Outsourcing of Accounting Functions

Wilcocks, 2002). This finding is similar to Hodge's (2000) meta-analysis of 28 empirical studies and Ya Ni and Bretschneider's (2007) study of reasons for contracting out e-government services. Ya Ni and Bretschneider (2007) have described these types of cost savings from an economic perspective. Governments seek private organisations to contract out services to reduce financial stress and also because private organisations always seek to keep their costs down through innovative service delivery (Ya Ni and Bretschneider's, 2007; Domberger and Fernandez, 1999; Globerman and Vinning, 2006). Accordingly, we hypothesise the following:

H₁: There is a negative and significant relationship between costs and the decision to outsource accounting functions.

The Resource Factor

Recent literature presents empirical evidence regarding the outsourcing of e-government services and stresses that resources are one of the major factors involved in contracting out government services (Ya Ni and Bretschneider, 2007; Domberger and Fernandez, 1999). This is because some contractors have better infrastructure and expertise in the field than the government. Therefore, outsourcing becomes a better option than incurring a large investment. In addition, a company may be able to free up resources for other purposes by outsourcing certain functions or departments to third parties. In other words, outsourcing allows a company to redirect its resources. The human resources can be redirected to other activities, allowing people to play a more valuable role based on their competencies (McIvor, 2009). Accordingly, we hypothesise the following:

H₂: There is a negative and significant relationship between resources and the decision to outsource accounting functions.

Competencies Factor

Ricardo (1817) suggests that firms should focus on their own relative comparative advantages and outsource other relevant activities to

Magiswary Dorasamy et al.

other companies that possess different relative comparative advantages. Expertise related to certain functions is an important reason why companies and governments decide to outsource their business functions (Seddon, Cullen and Willcocks, 2002; David, Lacity and Willcocks, 2005; Domberger and Fernandez, 1999; Winter, 1998). SMEs often lack the necessary accounting skills because accounting work requires both knowledge of general accounting and the know-how to apply the rules in conducting their business. According to Nicholas (2006: 50), outsourcing can help companies to avoid the costs associated with adopting new technologies and training employees. Accordingly, we hypothesise the following:

- H₃: There is a negative and significant relationship between competencies and the decision to outsource accounting functions.

The Operations Management Factor

SMEs may gain advantages from the focus on core business activities such as manufacturing and sales that they are able to establish when they transfer their non-core activities to an external provider (Nicholas, 2006). In this way, companies are able to achieve better decision-making and management. Outsourcing can also enhance control within a company. Hence, companies can reduce their administrative costs and increase competitive advantage (Domberger, Hall and Li, 1994; Domberger; Meadowcroft and Thompson, 1986, 1987; Domberger, Fernandez and Fiebig, 2000; Hodge, 2000). Accordingly, we hypothesise the following:

- H₄: There is a positive and significant relationship between operations management and the decision to outsource accounting functions.

The Risk of Outsourcing Factor

However, the risks involved in outsourcing accounting functions lead to the public disclosures of various types of accounting information. The decision-makers handling outsourcing are aware of these risks before they make the decision to hand over a function to a supplier.

Critical Factors in Outsourcing of Accounting Functions

The perceived risk factors as discussed by Bragg (2006) are as follows:

1. Changes in supplier circumstances – One change might be supplier financial difficulties. This risk can be minimised by using independent consultants or service providers.
2. Supplier failure – For instance, accounting information is also important for decision-making if the supplier fails to make a report on time because this may delay management arrangements or plans.
3. Loss of confidential information – This is a particular concern when low-wage supplier employees have access to sensitive information and have a monetary incentive to sell it.

A KPMG survey of Asia Pacific companies by Zarrella and Huckhai (2004) revealed that the greatest risks associated with outsourcing are loss of businesses process expertise, loss of responsiveness/flexibility and exposure to information privacy issues. Accordingly, we hypothesise the following:

- H₅: There is a negative and significant relationship between the risks associated with outsourcing and the decision to outsource accounting functions.

Firm Size

In this study, one of our objectives is to determine if differences in SME firm size in Malaysia have any effect on the decision to outsource accounting functions (Domberger, 1998; Gilley, Rasheed and Al-Shammari, 2006; Ang and Straub, 1998). Accordingly, we hypothesise the following:

- H₆: There is a positive and significant relationship between firm size and the decision to outsource accounting functions.

Types of Industry

We added this construct to further examine whether industry type can make a significant difference to SMEs deciding to outsource (Domberger, 1998). Accordingly, we hypothesise the following:

H₇: There is a positive and significant relationship between industry type and the decision to outsource accounting functions.

RESEARCH FRAMEWORK

The resulting theoretical framework for this study is illustrated in the Figure 2.

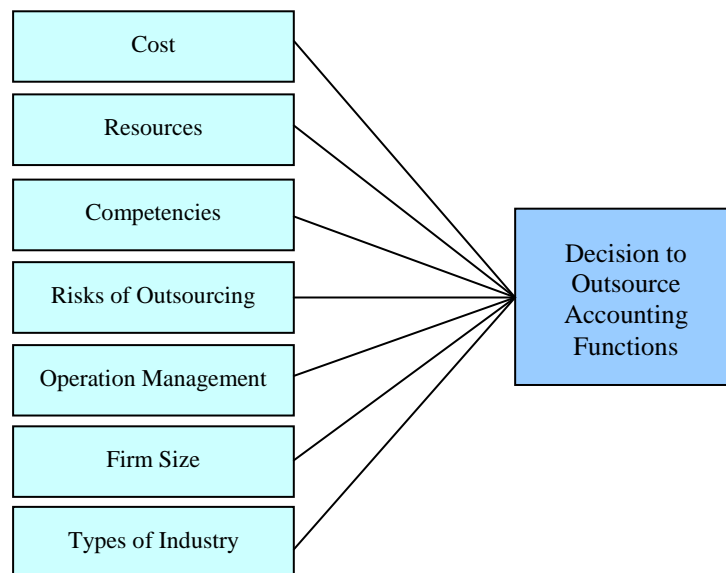


Figure 2: Theoretical framework

Operationalisation of Constructs and Measurement

The operationalisation of the constructs and measurement items are listed in Table 4.

Table 4: Operationalisation of the constructs and measurement items

| Construct | Conceptual definition | Measures | Sources |
|--------------|--|---|---|
| Costs | Reduction of the cost of acquiring relevant resources to carry out the business process | Organisational costs, production costs | Lacity and Hirschheim (1993); Nicholas (2006); Everaert, Sarens and Rommel (2006); Kakabadse and Kakabadse (2002); Seddon, Cullen and Willcocks (2002); Domberger, Hall and Li (1994); Domberger, Meadowcroft and Thompson (1986, 1987); Domberger, Fernandez and Fiebig (2000); Hodge (2000); Ya Ni and Bretschneider (2007); Domberger and Fernandez (1999); Globerman and Vinning (2006) |
| Resources | Resources are limited and can be directed toward core business processes. Resources that are scarce internally are accessible externally | Assets, organisational characteristics, processes, aptitudes, information employees | Ya Ni and Bretschneider (2007); McIvor (2009); Domberger and Fernandez (1999) |
| Competencies | Lack of internal competences and expertise | Knowledge, skills capabilities, know-how | Ricardo (1817); Winter (1998); Seddon, Cullen and Willcocks (2002); David, Lacity and Willcocks (2005); Domberger and Fernandez (1999); Nicholas (2006) |

(continued)

Table 4: (continued)

| Construct | Conceptual definition | Measures | Sources |
|----------------------|--|---|--|
| Operation management | The design and management of products, processes, services and supply chains to improve efficiency and effectiveness of operations | Focus on core functions, better management, enhanced control | Domberger, Hall and Li (1994); Domberger, Meadowcroft and Thompson (1986, 1987); Domberger, Fernandez and Fiebig (2000); Hodge (2000); Nicholas (2006) |
| Risk of outsourcing | Perceived risk of outsourcing accounting functions to third parties | Loss of confidential data, owner responsibility, changes in suppliers, supplier failure | Zarella and Huckhai (2004); Bragg (2006) |
| Firm size | Size of the SME firm | Large, small | Domberger (1998); Gilley, Rasheed and Al-Shammari (2006); Ang and Straub (1998) |
| Types of industry | SME industry type | Manufacturing, non-manufacturing | Domberger (1998) |

METHODOLOGY

The population used in this study consists of Malaysian SMEs. The total number of registered SMEs in Malaysia as of 18 October 2007 was 15,058. The list of SMEs was taken from the SME Info Portal (www.smeinfo.com.my). The study scaled down the sample size to 10% of the population, or 1500 companies. The SMEs were selected using the systematic sampling method. An online questionnaire-based survey was conducted. A total of 164 SMEs companies responded to this study. The constructs were measured using a five-point Likert scale with anchors ranging from "strongly disagree" to "strongly agree". The analysis process included descriptive statistics, reliability tests, correlations, and regressions.

FINDINGS AND DISCUSSION

Profile of SMEs Selected for Analysis

As indicated in Table 5, the majority of respondents (39.0%) are from partnership-oriented businesses, followed by sole proprietorships (33.5%) and private limited firms (27.5%). In addition, the SMEs were segmented based on firm size, and firms in the categories micro, small, medium and other were all included. Most of the firms were small companies (65.9%), followed by micro-size firms (21.9%), medium-size firms (11.0%) and others (1.2%). Most of the companies had between 5 and 19 employees (52.0%). Meanwhile, a total of 68.3% of the respondents were from firms that were 10 years old or fewer. The firms in the manufacturing and non-manufacturing categories accounted for about 49.0% and 51.0%, respectively. Overall, 72.6% of 164 companies outsource their accounting functions. If the companies are further segmented by industry type, we discover that 71.2% of all manufacturing SMEs (of a total of 80 firms) and 73.8% of all non-manufacturing SMEs (of a total of 84 firms) outsource accounting functions. Finally, 68.9% of small firms (of a total of 122 firms) and 83.3% of large size firms (of a total of 42 firms) outsource accounting functions.

Table 5: Demographic profile

| Profile | Frequency | Percentage (%) |
|--------------------------|-----------|----------------|
| Types of business | | |
| Sole proprietorship | 55 | 33.5 |
| Partnership | 64 | 39.0 |
| Private limited | 45 | 27.5 |
| Total | 164 | 100.0 |
| Firm type | | |
| Micro | 36 | 21.9 |
| Small | 108 | 65.9 |
| Medium | 18 | 11.0 |
| Others | 2 | 1.2 |
| Total | 164 | 100.0 |

(continued)

Table 5: (continued)

| Profile | Frequency | Percentage (%) |
|--|-----------|----------------|
| Number of employees in the firm | | |
| Less than 5 | 36 | 22.0 |
| Between 5 and 19 | 86 | 52.0 |
| Between 20 and 50 | 36 | 22.0 |
| Between 51 and 150 | 6 | 4.0 |
| Total | 164 | 100.0 |
| Number of years in business | | |
| Less than 5 years | 55 | 33.5 |
| Between 5 and 10 years | 57 | 34.8 |
| Between 11 and 15 years | 17 | 10.4 |
| Between 16 and 20 years | 18 | 11.0 |
| More than 20 years | 17 | 10.3 |
| Total | 164 | 100.0 |
| Type of Business | | |
| Manufacturing (including agro based) | 41 | 25.0 |
| Manufacturing related service | 39 | 24.0 |
| Services (including ICT) | 54 | 33.0 |
| Primary agriculture | 27 | 16.0 |
| Other | 3 | 2.0 |
| Total | 164 | 100.0 |
| Firm size | | |
| Large | 42 | 25.6 |
| Small | 122 | 74.4 |
| Industry type | | |
| Manufacturing | 80 | 48.8 |
| Non-manufacturing | 84 | 51.2 |
| Outsource accounting functions | | |
| No | 45 | 27.4 |
| Yes or previously yes | 119 | 72.6 |
| Total | 164 | 100.0 |

(continued)

Critical Factors in Outsourcing of Accounting Functions

Table 5: (continued)

| Profile | Frequency | Percentage (%) |
|---|-----------|----------------|
| Outsourcing based on industry type | | |
| Manufacturing | | |
| - Yes | 57 | 71.2 |
| - No | 23 | 28.8 |
| - Subtotal | 80 | |
| Non-manufacturing | | |
| - Yes | 62 | 73.8 |
| - No | 22 | 26.2 |
| - Subtotal | 84 | |
| Outsourcing based on firm size | | |
| Small (total) | | |
| - Yes | 84 | 68.9 |
| - No | 38 | 31.1 |
| - Subtotal | 122 | |
| Large (total) | | |
| - Yes | 35 | 83.3 |
| - No | 7 | 16.7 |
| - Subtotal | 42 | |

Reliability Tests

Table 6: Reliability test

| Variables | Cronbach's alpha | No. of items | No. of cases |
|-----------------------|------------------|--------------|--------------|
| Costs | 0.659 | 4 | 164 |
| Resources | 0.771 | 2 | 164 |
| Competencies | 0.782 | 2 | 164 |
| Operations management | 0.782 | 3 | 164 |
| Risks | 0.771 | 4 | 164 |

Table 6 shows that the Cronbach's alpha for costs is 0.659; that for resources is 0.771, that for competencies is 0.782, that for operations management is 0.782 and that for risks is 0.771. All of the constructs except for cost obtain a Cronbach's alpha that exceeds the recommended value of 0.70 is considered acceptable (Cortina, 1993). This signifies that the measures used to analyse the constructs are

relevant and that these constructs can later be used for other types of analyses (correlations and regressions).

Statistical Analysis

Table 7: Mean, standard deviation and bivariate correlation results

| | Mean | Std D | 1 | 2 | 3 | 4 | 5 |
|----------------------|------|-------|--------|--------|--------|-------|---|
| Cost | 3.96 | 0.65 | 1 | | | | |
| Resources | 3.87 | 0.78 | .305** | 1 | | | |
| Competencies | 4.15 | 0.66 | .131 | .386** | 1 | | |
| Operation management | 4.06 | 0.65 | .102 | .175* | .192* | 1 | |
| Risk factor | 3.85 | 0.58 | .124 | .217** | .333** | .201* | 1 |

* $p < 0.05$, ** $p < 0.01$

The mean, standard deviations and correlation coefficients are shown in Table 7 above. All variables registered an average mean score exceeding 3.5; competencies registered the highest score (4.15), and risk factors registered the lowest score (3.85), but this figure was still above average. The standard deviations ranged from 0.58 to 0.78, and risk factors registered the lowest score (0.58).

Correlation Analysis: Relationships between the Independent Variables

In terms of the associations among the independent variables (continuous variables), some significant results were obtained. There was a significant positive relationship between costs and resources (0.305). Competencies, operations management and risk factors were positively correlated with resources (0.386, 0.175 and 0.217, respectively). There existed significant correlations between competencies and operations management (0.192) and risk factors (0.333). Meanwhile, operations management and risk factors were also significantly correlated (0.201).

Logistic Regression Analysis

Multiple regressions were employed to test the hypothesis. Multiple regressions used applied to analyse the relationship between a single

Critical Factors in Outsourcing of Accounting Functions

dependant variable and several independent variables. The summary of the results obtained using binomial logistic regression is presented in Table 8.

Table 8: Binomial logistic regression

| Independent variable | β | S.E. | Wald | df | Sig. | Exp (B) | Result |
|----------------------|---------|-------|--------|----|------|----------|----------|
| Cost | -.120 | .437 | .076 | 1 | .783 | .887 | Rejected |
| Resources | -.342 | .415 | .679 | 1 | .410 | .710 | Rejected |
| Competencies | -.602 | .568 | 1.127 | 1 | .289 | .547 | Rejected |
| Operation management | -1.359 | .655 | 4.302 | 1 | .038 | .257 | Accepted |
| Risk | -2.739 | .590 | 21.588 | 1 | .000 | .065 | Accepted |
| Industry type | .551 | .495 | 1.235 | 1 | .267 | 1.734 | Rejected |
| Firm size | -.883 | .630 | 1.965 | 1 | .161 | .414 | Rejected |
| Constant | 22.748 | 4.616 | 24.285 | 1 | .000 | 757+E07. | |

In essence, operations management ($\beta = -1.359$, $p = 0.038$) and risk ($\beta = -2.739$, $p = 0.000$) emerge as having a significant influence on the decision to outsource accounting functions at 5% level. It should be noted that the negative coefficients of risk and operations management reflect their negative relationship with the decision to outsource. The lower the outsourcing risk, the greater influence on the decision to outsource. The negative coefficient of operations management indicates that considering operational benefits does not lead firms' outsourcing decisions. Hence, hypothesis H₅ is supported, but hypothesis H₄ is not supported.

However, the influence of costs ($\beta = -0.120$, $p = 0.783$), resources ($\beta = -0.342$, $p = 0.410$), competencies ($\beta = -0.602$, $p = 0.289$), industry type ($\beta = 0.551$, $p = 0.267$) and firm size ($\beta = -0.883$, $p = 0.161$) was found to be insignificant at 5% of confidence level. Arguably, these findings do not indicate the relevance of cost,

Magiswary Dorasamy et al.

resources, competencies, industry type or firm size to SME decisions to outsource accounting functions. Therefore, hypotheses H₁, H₂, H₃, H₆, and H₇ are not supported.

DISCUSSION

The results of this study indicate that risk and operations management are perceived as dominant factors in the decision to outsource accounting functions. Unlike in the existing studies on outsourcing, the decision to outsource accounting functions seems to take risk factors into account here. The outsourcing of accounting functions by SMEs depends on issues such as the loss of confidential data, owner responsibilities, change in suppliers and, in extreme cases, supplier failure to deliver as expected (Ellram, Tate and Billington, 2008). These results are consistent with those of other studies of general outsourcing practices (Zarella and Huckhai, 2004; Bragg, 2006; Seddon, Cullen and Willcocks, 2002; Ellram, Tate and Billington, 2008). It would appear that if they aim to successfully outsource accounting functions, SMEs need to analyse the track record of their third-party providers and the nature of the accounting functions that they are outsourcing so that they can assess risk levels.

Operations management is also an important determinant of SME decisions to outsource their accounting functions. This conclusion is supported by existing studies (Domberger, Meadowcroft and Thompson, 1986, 1987; Domberger, Hall and Li, 1994; Domberger, Fernandez and Fiebig, 2000; Hodge, 2000). However, unlike other studies, this research shows that the prospect of benefits to operations management does not encourage outsourcing. Instead, the lower the level of operations management, the greater the chance of outsourcing. In other words, a firm is more likely to outsource accounting functions when business operations are less efficient in terms of resource use and less effective in terms of meeting customer requirements. This also implies that SMEs believe that outsourcing accounting functions could be a good option for SMEs seeking to improve performance by accessing the specialist capabilities of external suppliers (Marshall, McIvor and Lamming, 2007).

Critical Factors in Outsourcing of Accounting Functions

Costs, resources, competencies, firm size, and industry type, however, were found to be insignificant determinants of the outsourcing of accounting functions. This is a significant finding because it contradicts those findings obtained in existing studies of outsourcing. Costs, resources, competencies, and firm size have been found to be significant determinants in prior research by Seddon, Cullen and Willcocks, 2002, (cost, resources and competencies) and Ang and Straub, 1998; Gilley, Rasheed and Al-Shammari, 2006 (firm size).

CONCLUSIONS

The study has revealed that the factors determining the decision to outsource accounting functions such as risk and operations management are significantly related to outsourcing levels. These findings help to create a better understanding of what influences the outsourcing of accounting functions by SMEs.

The existing literature has shown that firms are moving towards outsourcing. This study has made a theoretical contribution by extending previous research conducted in western countries, advancing our understanding of the association between influencing factors and the decision to outsource accounting functions. Additionally, previous outsourcing studies have considered various industries and different angles on outsourcing, exploring its challenges, effects, and performance, but there have been few studies of outsourcing in the realm of accounting. This study has tested the variables that affect the outsourcing of accounting functions by SMEs. Although costs, resources, competencies, firm size and industry type are significant determinants of outsourcing in other areas, they did not emerge as effective predictors of the outsourcing of accounting functions.

Accounting functions play an important role in today's businesses. As a result, SMEs need to be aware of the usefulness of accounting information; it can provide them with better management control and assist in decision-making, helping them to access new markets and maximise profits in the corporate world.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This research was a survey-based study. Future studies should use a research design that involves interviews with more SMEs so that they may further investigate what inspires SMEs to outsource their accounting functions. An e-mail questionnaire survey is not sufficient for this purpose as the identities of the respondents remain unknown. In addition, the findings of this study only apply to SMEs. Therefore, it is recommended that future studies work more in depth, studying the factors that lead to the outsourcing of accounting functions by firms of different sizes and firms in different industries in Malaysia. Such studies will provide useful information about more narrowly defined categories of users. It would also be interesting to explore whether the factors that lead firms to outsource accounting functions are similar for publicly listed and large corporations relative to SMEs.

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