# The Role of Competitive Strategy, Strategic Alliance, and MAS Information in Improving Human Capital-related Performance

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**Abstract**

The purpose of this research is to examine the relationship between competitive strategy, strategic alliance, use of management accounting system (MAS) information and human capital-related performance. The study investigates the effect of human capital-related performance on internal process-related performance. An online survey involving 85 hotel general managers was conducted to collect data from 4- and 5-star hotels located in Indonesia. Partial least square (PLS) analysis was used to test the hypotheses. Results suggest that competitive strategy and strategic alliance have a positive and significant relationship with human capital-related performance. Results also show that managerial use of MAS information mediates the relationship between competitive strategy and human capital-related performance as well as between strategic alliances and human capital-related performance. Additionally, improvement in human capital-related performance increases internal process-related performance. This research focused only on the human capital aspect of learning and growth-related performance. The study dealt only with the hotel industry, since this field of business relies heavily on the competency of its human resources to provide the best customer service. The application of this work to other sectors that focus on human capital is recommended. The results reveal that managerial use of MAS information assist hotels to implement competitive strategy and strategic alliance, leading to higher human capital-related performance. The results also provided support for Kaplan and Norton (1992, 1996a, 1996b, 2004a) suggestion that human capital, as a part of learning and growth-related performance, provides foundation to achieve a better internal process-related performance. The research provides evidence that competitive strategy and strategic alliances, through managerial use of MAS information, improve human capital-related performance.

**Keywords:** Competitive strategy, strategic alliances, MAS information, human capital-related performance, internal process-related performance

## 1. INTRODUCTION

In assessing an organisation's performance, one of the most useful conceptual measurement instruments is the Balanced Scorecard (BSC), an approach developed by Kaplan and Norton (1992, 1996a). This model complements financial measures of past performance with measures of drivers of future performance. The BSC was based on the assumption that competitive advantage will be influenced not only by the efficient use of investment capital but also by nonfinancial factors such as knowledge, customer orientation, and intellectual capital (Figge, et al., 2002; Kaplan, 2001, 2006; Kaplan & Norton, 1996, 2004; Schaltegger & Wagner, 2006). The major advantage of BSC lies on its ability to integrate financial and nonfinancial measures with business strategy (Figge, et al., 2002; Kaplan & Norton, 1996; Norreklit, 2000). BSC translates the vision and strategy of a business unit into objectives and measures in four different perspectives: financial, customer, internal process,

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and learning and growth perspectives (Kaplan & Norton, 1992, 1996b). Improvements in learning and growth measures are lead indicators for internal process, customer, and financial performance (Kaplan & Norton, 2004b). In other words, the learning-and-growth performance area provides the foundation for achieving the other three.

The learning and growth perspective has been identified as the foundation of the BSC as it drives the internal business process, which in turn influences the customers who provide company income (Atkinson, 2006; Kaplan & Norton, 2004b). This perspective focuses on infrastructure such as human capital, information capital and organisation capital as intangible assets to support the internal business process (Kaplan & Norton, 1996a, 2004b). Kaplan and Norton (2004a, p. 53) described these assets as follows: (1) Human capital refers to the skills, talent and knowledge that a company's employees possess; (2) Information capital refers to the company's databases, information systems, networks, and technology infrastructure; (3) Organization capital describes the company's culture, its leadership, how aligned its people are with its strategic goals, and employees' ability to share knowledge.

Despite the importance of the learning and growth dimension in the BSC, it has attracted the least research attention of all the four dimensions in the accounting literature especially in the service industry, including hotels (McPhail, Herington, & Guilding, 2008; Sainaghi, 2010). The hotel industry prioritises on-the-spot customer service (Winata & Mia, 2005). Consequently, it needs a highly skilled, trained and motivated workforce to provide high quality customer service. When a hotel provides effective and efficient interactions between staff and customers, customers are more likely to be motivated to return to that hotel in future (Patiar & Mia, 2009), which leads to a higher revenue. Therefore, learning and growth-related performance is a highly important perspective in the hotel industry, a fact that has motivated the present study to focus on this performance aspect. Particularly, this current study emphasises the human capital aspect of the learning and growth perspective.

Porter (1985) stated that, in general, the formulation of a clear set of strategic priorities is recognised as an important aspect of effective management. Particularly in the global environment such as that of the hotel industry, where competition is becoming more intense, a competitive strategy is required as there is need for greater adaptability and flexibility (Ghobadian, O'Regan, Viney, & Gallear, 2004; Volberda, 1996). This means that developing a good and workable strategy is crucial for improving the probability of success of company performance. Therefore, companies operating in a highly competitive market should apply their strategy by having their own unique value in order to differentiate themselves from their competitors. This becomes one reason that company managers need to understand their competitive strategy, which is a combination of policies, rules and method employed by a company to establish a profitable and sustainable position against the competitors in the industry (Porter, 1980; Zhao & He, 2008). Though a number of studies on competitive strategy have been conducted, most have focused on the effects of competitive strategy on financial performance (Chathoth & Olsen, 2005; Dess & Davis, 1984; Dev, 1989; Hambrick, 1983; Helms, Dibrell, & Wright, 1997; Miller & Dess, 1993; West & Olsen, 1988). No research has been found to identify the effect of competitive strategy (based on Porter typology) on human capital-related performance, especially in industries that focus on on-the-spot customer service such as the hotel industry. Hence, the aim of this study was to fill this gap and help managers to have a better understanding of how competitive strategy may affect their hotels' human capital-related performance.

The increased demand for the expansion of hotel services comes from growing numbers of both domestic and foreign customers. In response, hotel managers need highly skilled employees in order to provide international standard customer services. Hotel managers also need to adopt other resources such as technology that allows a flexible reservation procedure for their customers. This motivates hotel managers to engage in strategic alliances, which means a cooperative and mutual agreement between two (or more) parties for the purpose of securing a competitive advantage and long-term profitable value for all the cooperating parties (Hubbard, Rice, & Beamish, 2008; Winata, 2005). By engaging in strategic alliances, for instance, hotels may gain knowledge from their international partners and learn from their experience how to employ international standard customer service and sophisticated reservation systems. Therefore, strategic alliances are relevant to support the human capital-related performance of the hotel industry.

To implement competitive strategies, hotels must use appropriate information that will help managers to make appropriate decisions and improve their hotels' performance (Mia & Patiar, 2001; Patiar & Mia, 2008). This information should be able to describe accurate company internal and external business environments; it should provide not only internal, financial, and historical information but also include external environmental, nonfinancial and future-oriented information (Chenhall & Morris, 1986; Mia, 1993; Mia & Patiar, 2001; Mia &

Winata, 2008; Patiar & Mia, 2008). Previous researchers name it as broad scope management accounting system (MAS) information (Gordon, 2000).

We limit our research focus to Indonesia because this country represents the largest economy in Southeast Asia (BBC News, 2012; Belford, 2010). Further, Indonesia has a solid reputation on the world tourism circuit (Hitchcock & Putra, 2008), responsible for creating one out of every twelve jobs in the country (Asia-Pacific Economic Cooperation, 2012). It has a diversity of unique cultures, a strategic location and mild weather, all of which attract foreign investors to establish hotels there, resulting in strong competition. This highly competitive market requires the managerial use of broad scope management accounting system (MAS) information (hereafter, the MAS information) to support managers in making proper decisions that will lead to better human capital-related performance. Despite the important role of the use of MAS information in improving human capital-related performance, no research related to this area has been done in Indonesia. Investigating this relationship may help managers to determine how to use MAS information to improve their employees' skill, and so lead to a better human capital-related performance. Therefore, the objective of this paper is to contribute to the limited body of knowledge in this area by investigating the role of MAS information in improving human capital-related performance. Further, the current study also evaluates the effect of two other variables: competitive strategy and strategic alliances, on the use of MAS information and human capital-related performance. In the end, the effect of human capital-related performance on internal process-related performance is investigated as well.

This paper is organised as follows. The next section explains the background theory and hypotheses development. After that, the research method is described, followed by the results. The final section presents a discussion of the major findings, limitations, and implications for future research.

## 2.     THEORY AND HYPOTHESES DEVELOPMENT

### 2.1     Competitive Strategy and Strategic Alliances

The competitive strategy classification proposed by Porter (1980) is used in the present study. Porter argued that a company needs a competitive advantage resulting from innovation, quality enhancement, and cost reduction in order to survive in the market. He proposed three generic strategies to gain a competitive advantage: low cost or cost leadership, differentiation, and focus (Porter, 1980, 1985). The cost leadership strategy applies to an organisation's ability to become the lowest-cost producer in the industry, compared to its competitors. The differentiation strategy applies to an organisation's ability to produce unique or superior quality products that will be highly valued by customers. The focus (or niche) strategy applies to an organisation's ability to target a specific market, which has not been served or is poorly served by its competitors. The focus strategy may be applied only if the company already employs a cost leadership or differentiation strategy, especially for medium and large-size companies (Wright, 1987). However, cost leadership or differentiation strategies can be applied without a focus strategy (Dickson & Ginter, 1987). Moreover, a focus strategy emphasises market coverage (Olson & Slater, 2002), or a particular segment of a broad scope market (Bangchokdee, 2008; Porter, 1980, 1985). The present study emphasises how hotels obtain competitive advantage rather than market segmentation. Therefore, a focus strategy is not considered to be suitable for this study. Accordingly, the present study conceptualises competitive strategy as the extent to which a hotel differentiates its products and services from those of its competitors.

There are various options for a company to deliver a greater value to its customers through a competitive advantage. However, sometimes a company has insufficient resources to do it alone. According to resource-based view theory, resources are "those (tangible and intangible) assets which are tied semi-permanently to the firm." (Wernerfelt, 1984, p. 172). Based on this perspective, a company may engage in strategic alliances with other companies in order to integrate their resources and gain greater value from the integration (Das & Teng, 2000). In the hotel industry, for instance, hotels need the services of transport industries such as airlines or car companies to transport customers from and to hotels. Hotels also need travel agents to import customers. By a hotel's engagement in strategic alliances with transport industries and travel agents, customers may benefit from an effective reservation system that can make all arrangement in the one place (e.g., a travel agent) and at the same time. In this way, hotels can provide a greater value to their customers by engaging in strategic alliances with transport industries and travel agents. Thus, to apply a competitive strategy, a company may be influenced to establish strategic alliances.

Joshi, Kashlak and Sherman (1998) provided empirical evidence that prospector-type firms (innovative, greater focus on differentiation) will be engaged in the largest number of alliances in comparison to defenders,

analysers, and reactors-type firms. Based on a study in a US telecommunication industry, they found that prospector-type firms were the most active in setting up strategic alliances compared to defenders, analysers, and reactor-type firms. This may happen because managers in prospector-type firms tend to engage in strategic alliances more than managers in defender-type firms. Prospector firms emphasise product innovation and new market development; here, managers are more motivated to actively search for partners who may have the required resources in order to keep up with customer demands and market developments.

Other studies have also found the use of competitive strategy in the form of differentiation in the hotel industry. Becerra, Santalo, and Silva al. (2013) state that hotels are likely to use competitive strategy in the form of differentiation as an answer to competitive pressure by reducing prices in this industry. Based on data collected from Spanish hotels, they also revealed that hotels with vertical differentiation (i.e., competing along one product dimension valued similarly by all customers, such as overall hotel quality) are more ready to cope with increasing competition compared with hotels with horizontal differentiation (i.e., offering a unique combination of product features that satisfies the needs of a specific customer segment). McCaskey and Symes (2004) described a differentiation strategy by focusing on customer satisfaction applied by a budget hotel leader in the UK. This hotel offered a 100 per cent, unconditional money-back guarantee if customers were dissatisfied with its products or services. As a result, room occupancy increased because customers were happy with this guarantee. Moreover, the hotel's trading position with its key suppliers (e.g., the laundry service) became involved as these key suppliers were required to compensate the hotel if their services also were claimed to be unsatisfactory. Hence, the hotel needed to maintain more intensive contact with its supplier while giving high quality service to its customer. This supports the value of greater engagement in strategic alliances.

Jonsson and Devonish (2009) revealed that hotels in Barbados recognised that it was more important to provide a high quality service as their differentiation value, than to remain cost competitive. Based on 35 samples, they suggested that hotels in the 5-star and higher categories placed more emphasis on quality service and performance, compared with 1-star hotels. Another study by Bordean et al. (2010) found that some hotels in Romania were pursuing a differentiation strategy by concentrating on offering unique products and services to attract customers. All of these studies (Becerra, et al., 2013; Bordean, et al., 2010; Jonsson & Devonish, 2009; McCaskey & Symes, 2004) revealed that hotels are familiar with the application of competitive strategy in the form of product differentiation. However, none of these studies analysed the effect of competitive strategy on strategic alliances. Strategic alliances may help a hotel to improve its quality, especially in the case where the hotel lacks knowledge about superior hotel quality. By engaging in a strategic alliance with a partner that has knowledge and experience related to product quality, a hotel may also improve its product/service quality and therefore add value that helps it to maintain its competitive position. As this relationship is important, it needed to be further investigated. Given the importance of strategic alliance as discussed above, the current study investigated the hypothesis below.

Hypothesis 1:     The more a hotel employs a competitive strategy in the form of product differentiation, the greater is its engagement in strategic alliances.

## 2.2    Competitive Strategy and Managerial Use of the MAS Information

Companies facing different environments may employ different strategies. To remain competitive, hotels operating in an emerging and competitive market like Indonesia's need to apply a strategy that differentiates them from their competitors. In order to find the proper strategy, hotel managers need information that can help them to decide and conduct relevant actions in facing strong competition. In this case, hotel managers need information about their competitors so that they can offer customers special packages that are different and more interesting. This competitor-related information can be obtained from MAS. Therefore, MAS information is useful for maintaining hotel competitive strategy.

Mia (1993) provided evidence of the indirect relationship between managers' Perceived Environmental Uncertainty (PEU) and their performance with the use of MAS information as a mediating variable. This means that in a more uncertain environment, managers use MAS information more intensively, which leads to improved managerial performance. This may happen because a highly uncertain environment requires managers to be flexible, innovative, and be able to deal with any problem (Mia, 1993). By using MAS information, managers are able to learn about current problems, outcomes (feedback) and opportunities, leading to appropriate decision-making (Ferris & Haskins, 1988). However, Mia (1993) did not include competitive strategy in the study; therefore, the impact of the strategy on performance remains unknown.

Previous studies have shown that companies with a differentiation strategy tend to use broad scope MAS information more intensively because they need to provide a quick response to market changes (Abernethy & Guthrie, 1994; Boulianne, 2007; Chong & Chong, 1997; Khan, Ahmed, & Halabi, 2010; Naranjo-Gil & Hartmann, 2007). However, these studies used Miles and Snow's (1978) typology which may not be appropriate for the hotel industry because this typology is based on the rate of change of product and/or market (Langfield-Smith, 1997). Hotels usually produce the same service year after year. Hotel managers may need to change a restaurant menu or improve a reservation system occasionally, but they do not change them annually since the primary product—hotel service—stays the same. Hence, the present study used Porter's typology in conceptualising competitive strategy.

Chenhall and Langfield-Smith (1998) reported that companies applying a differentiation strategy are likely to gain benefit from management accounting techniques such as benchmarking. Using benchmarking, managers may improve their current performance by learning from competitors' experience. This is imperative for a company that is actively seeking opportunities for being different in the market. However, Chenhall and Langfield-Smith did not provide empirical evidence to support the argument that differentiators may need more intensive use of broad scope MAS information than those with less differentiation. As competitor-related information, which becomes the foundation for conducting benchmarking can be obtained from broad scope MAS, a study analysing the effect of differentiation strategy on the managerial use of broad scope MAS information will be useful.

Bangchokdee's (2008) study of the Thai manufacturing industry provided empirical evidence that the more a company becomes a differentiator, the more the manager uses broad scope MAS information. However, results from the manufacturing industry may not be generalise to the hotel industry because these two industries have different characteristics (Harris & Brown, 1998; Mia & Patiar, 2001; Winata & Mia, 2005). A hotel that operates in a competitive market needs to have competitive advantages that will differentiate the business from its competitors. A hotel must meet individual customer needs and preferences and satisfy its customers; but it must do more, by providing high customer value. It is these higher values that attract customers to choose one hotel over another. Examples of values resulting from differentiation strategies that may be applied by hotels are service innovations, superior customer service, creative advertising or better supplier relationships leading to better service (Bordean, et al., 2010).

Bordean et al. (2010) argue that Porter's typology can be used to explain the current strategies applied by the hotel industry in Romania. Furthermore, other researchers suggested that applying only a cost leadership strategy may not guarantee hotel sustainable performance in the long-term (Kandampully & Suhartanto, 2000; Lee, Barker, & Kandampully, 2003). For example, Kandampully and Suhartanto (2000) suggested that hotel image and customer satisfaction influence customer loyalty, which leads to better hotel performance. Another study (Lee et al. 2003), indicated that technology-supported service may have a positive impact on customer loyalty as the hotel's ability to provide this service may meet customer needs. In conclusion, hotels need to be innovative and find their own competitive advantage to survive in the highly competitive market. Because of this strong competition, hotel managers need information to monitor their competitors' actions closely, so that they can make accurate decisions to continually sustain their hotels. This information about competitor activities may be obtained from MAS (Chenhall & Morris, 1986). Therefore, it can be argued that the more that hotels apply a differentiation strategy, the more extensively managers are expected to use MAS information. This discussion leads to the formulation of Hypothesis 2.

Hypothesis 2:     The more a hotel employs a differentiation strategy, the greater is its managerial use of the MAS information

## 2.3     Strategic Alliance and Managerial Use of the MAS Information

An effective strategic alliance depends on the formation process and management of the alliance (Doz, Olk, & Ring, 2000; Glaister & Buckley, 1996; Ireland, Hitt, & Vaidyanath, 2002). In order to find out the best practice in achieving an effective strategic alliance, managers need to use information from the management accounting system (Anderson & Sedatole, 2003). This information is not limited to financial data but also includes nonfinancial data such as market share and customer satisfaction. For example, hotel food and beverage (F&B) department managers (including their subordinates) may require direct contact with customers to prepare and deliver the meal either in the restaurant or the customers' rooms. By having this close relationship, the F&B staff can gain information about customers' needs or customers' expectations of the menu. Customer-related information can be considered as an example of MAS information (Chenhall & Morris, 1986). The more intense

the effort by a company to forge an effective strategic alliance (i.e., with its suppliers or customers), the more managers will use MAS information.

Hakansson and Lind (2004) conducted a case study in the Swedish telecommunications industry between Ericsson and Telia to identify how accounting may have an impact on the strategic alliances between these two companies. The alliance referred to the engagement in a software development project and to any services related to this project. They found that the existing accounting system had influenced building a strategic alliance. They identified that the existing accounting system could not give proper information relating to the new integrated activities after the alliance was established. As a result, they suggested that these companies needed an accounting system that would provide information to support them in solving non-routine problems, such as handling customer heterogeneity or shaping a cellular system that could communicate with the competitors' systems. As MAS also provided information relating to the customer and competitor (Chenhall & Morris, 1986), Hakansson and Lind's (2004) study showed how companies may need MAS information after they engage in a strategic alliance. However, this study was based on only one case study between two companies, and the authors did not use statistical analysis to test the argument; empirical evidence to validate the result would be beneficial.

Previous studies in the manufacturing industry have revealed that where the market environment is changing, it is likely that a company will engage in a strategic alliance to sustain its position among its competitors. For example, Marino, Lohrke, Hill, Weaver and Tambunan (2008) found that an emerging market environment like Indonesia's may affect how companies engage in strategic alliances. In emerging markets, companies are more vulnerable to a rapidly changing environment due to their lack of knowledge and resources. As a response, companies may engage in strategic alliances which may improve hotel sustainable performance by enhancing company skills, securing resources, distributing risk, giving access to new markets, or increasing reputation (Varadarajan & Cunningham, 1995). It is imperative for companies to monitor their alliances after having engaged in a strategic alliance. Therefore, managers may use broad scope MAS information to monitor the progress of their alliances. For instance, strategic alliance engagement with suppliers allows companies to have better supplier-buyer communication. Both parties benefit from the information shared between them to help managers to monitor the progress of the production process, which may minimise defective products and avoid delay, leading to a more efficient production process (Lo & Yeung, 2004; Monczka, Petersen, Handfield, & Ragatz, 1998; Zaheer, McEvily, & Perrone, 1998). This information can be obtained from broad scope MAS. Hence, it can be argued that companies that engage in strategic alliances will make intensive use of broad scope MAS information. As the manufacturing industry focuses more on the production process while the hotel industry emphasises human resources, the type of information required from broad scope MAS might be different.

The application of a strategic alliance in the hotel industry can have various impacts. The positive impacts result from the mix of companies' resources, companies' culture and companies' functions, which, in turn, makes hotels stronger (Morrison, 1994). One of the most common motives for engaging in a strategic alliances in the hotel industry is to gain market share (Olsen & Roper, 1998). For example, hotels may conduct alliances with tour operators (hotel suppliers) to offer a one-stop reservation system to their customers (Ozturen & Sevil, 2009) or use their competitor-partner to extend their market to a new market (Chathoth & Olsen, 2003). In order to improve their market share, hotel managers require market- or customer-related information provided by broad scope MAS. However, studies analysing the effect of strategic alliances on the managerial use of broad scope MAS information are very limited. The present study aims to reveal how strategic alliances in the hotel industry may have an impact on the managerial use of broad scope MAS information. The results may advise hotel managers on how to make proper strategic alliances supported by broad scope MAS information, leading to a better sustainable performance. Hypothesis 3 has been formulated from this discussion.

Hypothesis 3:     There is a positive relationship between a hotel's engagement in a strategic alliance and its managerial use of the MAS information

## 2.4     Competitive Strategy and Human Capital-Related Performance

Being innovative is important for a hotel operating in a competitive environment to make it different from other hotels. One key to maintaining this competitiveness is to continuously find new ways to improve current products and services. It is imperative for companies applying a competitive strategy to have employees who have a thorough understanding of their daily tasks so they can respond to any situation immediately. By having a better understanding of their tasks, employees are able to make timely and appropriate decisions (Govindarajan, 1988). To be able to have knowledgeable and skilled employees, companies may provide

relevant courses and other training. For instance, a luxury hotel may want to offer a special menu program in its restaurant. To do this, the hotel needs a highly skilled chef to prepare special dishes which accommodate the easily changing needs and preferences of customers. The manager may provide courses and other training to improve the chef's skill. Hence, skilled employees are important for the hotel to employ a competitive strategy.

A positive relationship between competitive strategy and company learning and growth-related performance (human capital is a part of learning and growth-related performance as explained previously) has been found by Bangchokdee (2008) in Thailand's manufacturing industry, particularly the food processing and technology industries. She used three items to measure company learning and growth-related performance: employee efficiency, employee satisfaction, and a computerised information system. A study by Neal, West and Patterson (2005) of 92 UK manufacturing firms found that a company applying a higher differentiation strategy tends to use a human-capital-enhancing Human Resource Management (HRM) system more extensively than a cost leadership company (Neal, West, & Patterson, 2005) (Neal, et al., 2005). The human-capital-enhancing HRM system consists of selection, training, performance appraisal, compensation (Youndt, Snell, Dean, & Lepak, 1996), and work design (Huselid, 1995). The differentiator companies need highly skilled, competent and motivated employees to support the company in providing qualified services and innovative products (Guthrie, Spell, & Nyamori, 2002; Youndt, et al., 1996). In order to meet these criteria, the company needs to invest in a comprehensive selection, training, performance appraisal and compensation system. Highly skilled, competent, and motivated employees are more confident in performing their tasks properly. As a result, they may receive a reward for achieving or bettering a pre-determined target. Gaining a reward for good performance may lead to the higher satisfaction of employees. Therefore, it can be concluded that a differentiation strategy may have an impact on employee satisfaction. However, all the previous studies were conducted in the manufacturing industry, which may not generalise to the hotel industry.

McCaskey and Symes (2004) showed that the application of a differentiation strategy also has an effect on employee turnover. Based on their analysis, the success of Travel Inn hotels in the UK in applying their 100% customer satisfaction campaign decreased employee turnover by 29%. This came as a result of improved employee satisfaction. For example, the training for employees in the above hotel is based on the feedback about how they would like to see the design of the materials. As a consequence, the employees feel more appreciated and have higher motivation to participate in achieving company goals (McCaskey & Symes, 2004). However, the result was based on only one hotel group (Travel Inn), so more studies are needed to generalise the result.

Based on the discussion above, it can be concluded that hotels need skilled employees particularly to apply a differentiation strategy. As hotels in Indonesia are facing intense competition, which requires the high capability of employees to understand their daily tasks and immediately respond to any changing situation, hotels need to provide relevant courses and/or other training to improve their employees' skills. This is more important for hotels applying a differentiation strategy rather than a cost leadership strategy. For example, international hotels applying a differentiation strategy by being advanced in technology (i.e., sophisticated reservation system) need skilled employees. Therefore, employees need to attend the relevant training programmes provided by hotels. After completing such training, employees have improved skills, which make them feel more confident in doing their jobs. This confidence leads to higher work satisfaction and may cause lower employee turnover, thus, improving human capital-related performance. This discussion leads to Hypothesis 4.

Hypothesis 4:    The more a hotel employs a differentiation strategy, the greater is its human capital-related performance

## 2.5    Strategic Alliance and Human Capital-Related Performance

Learning from a partner's knowledge is one benefit of engaging in strategic alliances (Preble, Reichel, & Hoffman, 2000). For example, local hotel employees (especially new recruits) may have limited know-how, skills and experience related to how to serve customers. This may end with customer dissatisfaction, leading to low room occupancy. Realising this risk, hotel managers may take the initiative to engage in a strategic alliance with training consultants to improve employees' customer service skill and ability. The material can be technical (i.e., how to arrange a table for restaurant staff, how to make accurate reservations for incoming guests) or non-technical (i.e., how to treat hotel guests in an appropriate manner). As a result, hotel employees gain better knowledge, feel more confident in doing their job, and, thus, can perform well. By having a good job performance, employees have a better chance to obtain appropriate rewards from their managers by achieving predetermined targets. This reward may lead to enhanced employee satisfaction, resulting in a lower intention to quit (low employee turnover). Hence, it can be assumed that strategic alliances may improve company human capital-related performance.

Previous studies in the manufacturing industry have suggested that strategic alliances may have an impact on improved employee knowledge as a result of information sharing between partners. Having a better understanding of their job may cause employees to do their job better and get better rewards, resulting in better employee satisfaction and lower employee turnover. For example, Lo and Yeung (2004) suggested that companies conducting strategic alliances with their suppliers may enhance employee involvement in improving product and production process quality. This condition resulted from a close buyer-supplier relationship, which may increase communication and strategic information sharing activities between employees from both sides relating to product quality (Lo & Yeung, 2004). Lawson, Petersen, Cousins, and Handfield (2009) suggested that product development managers should facilitate knowledge sharing between the buyer and supplier, which may lead to improved product performance. These studies provide empirical evidence that strategic alliances have an impact on improved employee skill by knowledge sharing between partners.

A case study in construction projects suggested that successful alliances may improve organisational performance such as profit and market share (Cheng, Li, Love, & Irani, 2004). As a result of this favourable increased performance, an employee feels more satisfied, leading to improved commitment and lower employee turnover. This study stated that there was an interdependent process between employee satisfaction and commitment, which helped strategic alliances to endure. This study proposed a model to explain the relationship between strategic alliances and employee satisfaction and commitment, but it did not provide empirical evidence. Anand and Khanna (2000) conducted a study on 2000 joint ventures (JVs) and licensing agreements in the US manufacturing industry to compare the impact of the learning effect between JVs and licensing contracts. Results from their analysis showed that the learning effect had a significant influence on management alliances. This means that firms generate more value as they obtain more experience in the formation of alliances. However, this study may be limited to public companies in the manufacturing industry that used JV and licensing methods in their alliances.

There has been one study conducted by Winata (2005) in the Indonesian manufacturing industry that reported no relationship between engagement in strategic alliances and a company's learning and innovation performance (i.e., number of new products, number of new patents, and time to market new products). Winata (2005) suggested that this may happen because of the lack of trust and communication between alliance partners in the Indonesian manufacturing industry. Another reason was that because of the Indonesian collectivist culture, engagement in a strategic alliance is already commonplace in the Indonesian business environment. Therefore, engagement in a strategic alliance in Indonesia may no longer be used by companies as a competitive advantage.

Generalisation of the result to the hotel industry needs caution. For example, a strategic alliance in the manufacturing industry may focus on improving the production process while the hotel industry is likely to emphasise human resource skill development. Moreover, hotels need to cooperate with other parties within the tourism industry to provide a quality service to their customers (Pansiri, 2009). For example, hotels may engage in a strategic alliance with their suppliers such as tour operators, travel agents, airline companies, or even other hotels to employ a sophisticated reservation system where customers can make reservations at these alliance partners when planning a holiday. Therefore, it is likely that engagement in a strategic alliance becomes a competitive advantage for hotels to survive in the highly competitive market.

Hotels may conduct strategic alliances in order to learn from their partners. For example, Preble et al. (2000) proposed that local hotels in Israel might benefit from improved staff knowledge resulting from training provided by their foreign partner. Another benefit is that local hotels may learn about the comprehensive reservation system owned by their international partner (Preble, et al., 2000). By being allied, the local hotel gains the benefit of learning this knowledge and technology, which may be difficult to obtain without a strategic alliance. Unfortunately, they did not conduct a statistical analysis to test their arguments.

In developing countries like Indonesia, where customer satisfaction with hotel services is generally lower than managers' perceptions (Nasution & Mavondo, 2008), it is necessary to improve hotel service quality, relating it more to customers' expectations and needs. Skilful employees are needed to achieve this goal. In response, managers may focus on appointing staff who have a customer-oriented attitude and who understand the importance of service quality (Sparks & Weber, 2008). This skill may be obtained during induction or by training programmes that emphasise customer service and service quality. In this case, managers may need external partners such as hotel consultants or to form alliances with foreign partners who are able to provide such training to their staff. By using another party's expertise, managers benefit from more-skilled employees. In the end, the more-skilled employees can give better customer service. It can be argued that a strategic alliance may have a positive influence on company human capital-related performance. Hypothesis 5 is formulated based on this argument.

Hypothesis 5:    There is a positive relationship between a hotel's engagement in a strategic alliance and its human capital-related performance

## 2.6    Managerial Use of the MAS Information and Human Capital-Related Performance

Employees are considered to be a more significant resource in the current business organisation as employee development may make a positive contribution to company performance (Jacobs & Washington, 2003). For example, hotel staff courtesy and customer service ability are amongst the most important factors considered by potential customers in choosing a hotel (Min & Min, 1997; Min, Min, & Chung, 2002). Maintaining employee's satisfaction and providing relevant training to employees become crucial factors for managers to improve the ability of employee to provide better customer service. Communicating performance targets and explaining the achievement evaluation bases may improve the performance of employees (Mia, 1993). As broad scope MAS information provides feedback on employees' performance, employees may be more motivated to improve their work and might receive rewards, which result in improved job satisfaction. Therefore, it can be concluded that the managerial use of broad scope MAS information has positive impacts on human capital-related performance.

There is empirical evidence from the Thai electronics industry that supports the relationship between managerial use of MAS information and company learning and growth-related performance (Bangchokdee, 2008). Here, human capital is seen as part of learning and growth-related performance. However, the relationship was weak, with p < 0.10; consequently, more study is required to validate the result (Bangchokdee, 2008).

These findings from a Thai manufacturing industry may not generalise to the hotel industry because of their different characteristics. For example, dealing with customer complaints in the hotel industry is more immediate than in the manufacturing industry (Winata & Mia, 2005). The hotel industry involves much closer personal relations and faster delivery of the product, as customers in the hotel industry are almost always on the spot (Winata & Mia, 2005). Therefore, personal relations in the hotel industry become more important than in the manufacturing industry because almost all hotel staff always need to interact directly with customers to provide the best service. Training is imperative to increase staff skills and knowledge, leading to greater confidence in doing their job. As a result, hotel staff may perform their job well.

Research in the hotel industry has found a relationship between the managerial use of MAS information and employees' performance. For example, Patiar and Mia (2008) stated that the combined effect of market competition and managerial use of broad scope MAS information has a significant effect on nonfinancial performance, such as the success of staff development plans and the level of staff morale. By using more broad scope MAS information, hotel managers are able to provide appropriate feedback on performance and reward their staff accordingly. Consequently, employees feel satisfied with their job and tend to improve their performance. However, it should be noted that the above study only analysed the effect of broad scope MAS information on overall nonfinancial performance, and not particularly on human capital-related performance. The present study extends Patiar and Mia's study by investigating the relationship between managerial use of broad scope MAS information and hotel human capital-related performance. This discussion leads to the following hypothesis.

Hypothesis 6:    There is a positive relationship between the managerial use of the MAS information and hotel human capital-related performance

## 2.7    Human Capital-related Performance and Internal Process-related Performance

The main goal of improving the internal process-related performance is to allow managers to identify the most significant process to achieve customer and shareholder goals (Kaplan & Norton, 1996a). The hotel business has to provide fast service directly to the customer, which leads to a better internal process-related performance. One of the good indicators for measuring internal process-related performance in the hotel industry is the time required to complete key processes and tasks such as bookings and the check-in system (Denton & White, 2000). Consequently, hotel managers may improve the quality of staff training in order to enhance employee professional ability to provide a fast service related to the reservation system. For example, a hotel may give training to its front office staff about how to provide a sophisticated reservation service. After finishing the training, this staff will be able to solve any problem related to reservations, such as customer check-in or check-out in a professional way, so leading to a better human capital-related performance. Further, the hotel's operation cycle also will be faster. This means an improved internal process-related performance. Thus, hypothesis 7 is formulated as follows.

Hypothesis 7:     There is a positive relationship between hotel human capital-related performance and internal process-related performance

Discussion on these hypotheses supports the argument that competitive strategy and strategic alliance may have a direct influence on hotel human capital-related performance, and/or indirect influence through a third variable: managerial use of the MAS information. Improvement in human capital-related performance leads to the higher internal process-related performance. Figure 1 shows the model used in this paper.
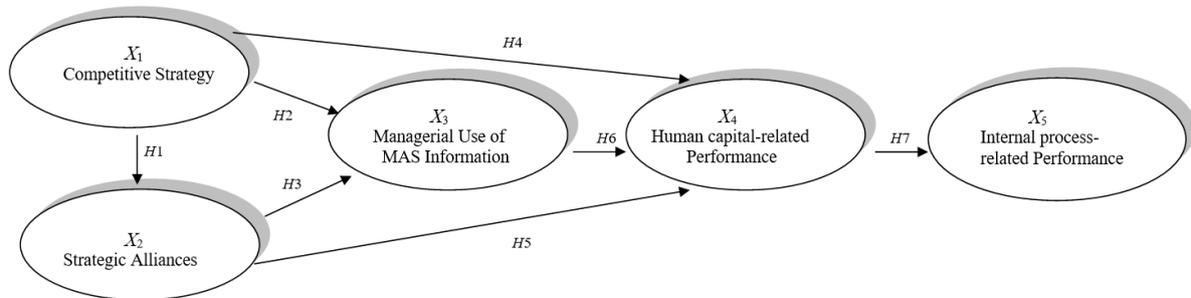


Fig. 1. PLS structural model.

## 3.     RESEARCH METHOD

### 3.1     Sample

For this study we selected 4- and 5-star hotels in all areas of Indonesia in order to get a clear concept related to hotel strategy (Harris & Brown, 1998) and to avoid weaknesses related to small and medium-sized tourism companies, such as (i) supply dominated by family business; (2) lack of commercial drive and initiative; and (iii) limited skills of marketing, quality, assurance, pricing policy, cost control and re-adjustment, and a shortage of financial resources (Barros & Mascarenhas, 2004; Wanhill, 1997).

Classification of star hotels in Indonesia is mandatory under Indonesian regulations, particularly UU no. 9/1990 (Kementerian Kebudayaan dan Pariwisata Republik Indonesia, 2012). Therefore, data of 4- and 5-star hotels were obtained from the Indonesian Hotel and Restaurant Association, which indicated that there were 232 hotels that were 4-star and 118 hotels that were 5-star, a total of 350 hotels as the population. Questionnaires were pilot-tested by being sent to five Australian academics, five Indonesian academics and five Indonesian hotel General Managers (GMs). Academics were selected due to their understanding of the design and topic of the study, while General Managers were selected to ensure that the instruments measuring the variables were clear, comprehensive, and relevant (Winata, 2005). Based on the feedback received, the questionnaires were improved and then sent to all 4- and 5-star hotel GMs in the population, using the Internet online, in two languages (English and Indonesian). General Managers of the hotels were chosen as they were able to provide information about the use of MAS information and performance (Patiar & Mia, 2008). Of the 350 distributed questionnaires, 85 were received, providing a response rate of 24.28 %.

The data were collected following the four-step implementation strategy of Dillman (2007). Firstly, each hotel was telephoned to check data accuracy. Secondly, e-mails were sent with a covering letter explaining the purpose of the study, and inviting the GM to follow a web-based survey link. This link provided (a) further information about the purpose of the study, (b) the questionnaire, and (c) a closing letter which invited the GM to participate in an interview. Thirdly, three reminder e-mails were sent two weeks, four weeks, and six weeks after the questionnaire package. Finally, a follow-up phone call was made two weeks after the last reminder e-mail was sent to arrange the interview.

Two tests were conducted to investigate the non-response bias for the sample. Firstly, a one-way analysis of variance (ANOVA) was conducted to determine whether there were significant differences between the responses to the four e-mail deliveries based on demographic variables (not presented here). Secondly, a t-test was conducted to test the equality of the multivariate means of the first twenty and last twenty respondents (not reported here). The results of these two tests indicated no significant differences based on demographic variables used in the questionnaire, such as hotel location, company type (chain or non-chain), hotel category, number of employees, number of rooms, year of establishment, gender, managerial experience of GM in the hotel industry, and length of work at current hotel. Taken together, these results indicate that non-response bias for the sample of the current study was not a concern.

### 3.2. Measurement of Variables

*3.2.1 Competitive Strategy*

To describe a company's strategic orientation, the Govindarajan (1988) approach was used. Respondents identified their perception of the organisation's products relative to those of competitors using six items: (1) product selling price, (2) percentage of sales spent on research and development, (3) percentage of sales spent on marketing, (4) product quality, (5) product features (e.g., entertainment, Internet, and gym facilities), and (6) brand image. The questionnaire used a 5-point Likert scale ranging from 1 (significantly lower) to 5 (significantly higher). The overall score indicated the competitive strategy applied by a hotel; a high score suggested higher differentiation strategy.

*3.2.2 Strategic Alliances*

For assessing strategic alliances, we used the instrument from the study by Bucklin and Sengupta (1993). This has also been used by Li and Atuahene-Gima (2001), and Winata (2005) in order to measure a company's engagement in strategic alliances in the manufacturing industry. However, it was adopted here with minor changes to accommodate the hotel industry characteristics. It used a 5-point Likert scale, where 1 represents strongly disagree and 5 represents strongly agree (Bucklin & Sengupta, 1993; Li & Atuahene-Gima, 2001). A high score indicated a high level of strategic alliance engagement. Each respondent was asked to indicate the extent to which their company used strategic alliances relative to their competitors over the last three years, based on the following four items: (1) Entered into cooperative agreements with other firms to design new products and services; (2) Collaborated with other firms to market new products and services; (3) Joined with other firms to introduce new products and services; and (4) Jointly provided support activities for new products and services with other firms. Two items from the original Bucklin and Sengupta (1993) study were excluded because it focused on new product lines and research and development (which are not the main activities in the hotel industry).

*3.2.3 Managerial Use of the MAS Information*

For the present study, the managerial use of MAS information instrument was developed from earlier research (Chenhall & Morris, 1986; Patiar & Mia, 2008), particularly the study conducted by Patiar and Mia (2008), which also applied the instrument to the hotel industry. This instrument assessed managerial use of MAS information using the following seven indicators: (1) Financial aspects of the operation; (2) Nonfinancial aspects of the operation; (3) Nonfinancial aspects of the market; (4) Future events; (5) Likelihood of the future events taking place; (6) Social changes; and (7) External environment. Respondents (General Managers) were asked to indicate the level of MAS information usage that supported them in a decision-making activity. A 5-point Likert scale was used, where 1 represented not used at all and 5 represented very high (Mia & Patiar, 2001; Patiar & Mia, 2008).

*3.2.4 Human capital and internal process-related performances*

A search of the literature failed to reveal evidence of any objective measure of hotel human capital and internal process-related performance. As a result, we turned to using subjective measures by asking the respondents to indicate their hotel's human capital and internal process-related performances compared to their competitors. For this, a 5-point Likert scale was employed, where 1 indicated well-below average and 5 indicated well-above average. This method has been used in previous studies to measure organisational performance (Abernethy & Lilis, 1995; Bangchokdee, 2008; Chen, Hsu, & Tzeng, 2011; Hoque & James, 2000; Patiar & Mia, 2008). Despite some criticism of this self-insight approach, this method is considered to be able to improve the quality of managerial self-insight because it uses the actual decision makers, such as top managers, as respondents (Chenhall & Morris, 1986; Larcker, 1981; Wright, 1977). The human capital and internal process-related performance items in this study were adopted from indicators used by Chen et al. (2011) based on Kaplan and Norton's balanced scorecard approach (Kaplan & Norton, 1992, 1996a, 2001). The human capital-related performance items are: (1) Employee satisfaction; (2) Employee professional ability; (3) Employee productivity; (4) Employee ability to manage emergencies; (5) Employee ability to accurately use IT products; (6) Knowledge and resource sharing among employees. Internal process-related performance items are: (1) Availability of customer background information compilation; (2) Hotel management efficiency enhancement; (3) Time reduction of operation cycle; (4) Time reduction in handling customer complaints.

The hypotheses were tested using the partial least squares (PLS) technique (Chin, 1998; World, 1982). PLS has been used in other studies with small sample size; for example Hoque (2011) conducted a study of management accounting with 34 samples. Hence, PLS was used to analyse the hypotheses in the present research. The validity and reliability of measures, and appropriateness of the causal model, were investigated in a preliminary data analysis (Hair, Black, Babin, Anderson, & Tatham, 2005). Following the procedure advised by Hulland

(1999), an evaluation of the PLS model was conducted, as described below. Firstly, the PLS measurement model was analysed. Secondly, the PLS structural model was evaluated by performing hypotheses tests.

## 4.   MEASUREMENT MODEL

The measurement model indicates relations between observed items and latent variables. The model was assessed by examining the reliability of individual items and the convergent and discriminant validity of the constructs (Chin, 1998; Fornell & Larcker, 1981; Lee, Petter, Fayard, & Robinson, 2011). Particularly, the measurement model was evaluated by calculating the factor loadings for each variable, reliability (Cronbach's $\alpha$), composite reliability, and AVE (Average Variance Extracted).

The final factor loadings from the PLS measurement model are reported in Table 1. The reliability of each variable was assessed using Fornell and Larcker's (1981) measure of composite reliability and Cronbach's (1951) alpha. As shown in Table 2, the composite reliability and alpha scores for each variable were above 0.70, which indicated acceptable reliability (Hair, Ringle, & Sarstedt, 2011; Nunnally, 1978).

Table 1. Factor loadings from final PLS measurement model

|  | CS | SA | MAS | HC | IP |
|---|---|---|---|---|---|
| CS_1 | 0.818 | 0.123 | 0.185 | 0.377 | 0.352 |
| CS_2 | 0.818 | 0.123 | 0.185 | 0.377 | 0.352 |
| CS_3 | 0.571 | 0.033 | 0.233 | 0.212 | 0.266 |
| CS_4 | 0.725 | 0.112 | 0.381 | 0.370 | 0.402 |
| CS_5 | 0.775 | 0.041 | 0.131 | 0.437 | 0.360 |
| CS_6 | 0.857 | 0.078 | 0.211 | 0.402 | 0.396 |
|  |  |  |  |  |  |
| SA_1 | 0.252 | 0.712 | 0.214 | 0.248 | 0.197 |
| SA_2 | -0.157 | 0.576 | 0.091 | 0.201 | 0.115 |
| SA_3 | 0.103 | 0.923 | 0.287 | 0.302 | 0.397 |
| SA_4 | 0.177 | 0.818 | 0.393 | 0.235 | 0.363 |
|  |  |  |  |  |  |
| MAS_1 | 0.298 | 0.382 | 0.656 | 0.260 | 0.422 |
| MAS_2 | 0.193 | 0.282 | 0.806 | 0.351 | 0.442 |
| MAS_3 | 0.266 | 0.104 | 0.701 | 0.251 | 0.380 |
| MAS_4 | 0.212 | 0.240 | 0.696 | 0.232 | 0.298 |
| MAS_5 | 0.325 | 0.173 | 0.731 | 0.307 | 0.426 |
| MAS_6 | 0.233 | 0.158 | 0.736 | 0.446 | 0.384 |
| MAS_7 | 0.014 | 0.365 | 0.635 | 0.198 | 0.317 |
|  |  |  |  |  |  |
| HC_1 | 0.247 | 0.612 | 0.343 | 0.762 | 0.460 |
| HC_2 | 0.338 | 0.186 | 0.297 | 0.802 | 0.454 |
| HC_3 | 0.261 | 0.244 | 0.354 | 0.717 | 0.451 |
| HC_4 | 0.515 | 0.167 | 0.187 | 0.715 | 0.423 |
| HC_5 | 0.319 | 0.253 | 0.307 | 0.796 | 0.476 |
| HC_6 | 0.327 | 0.322 | 0.452 | 0.784 | 0.447 |
|  |  |  |  |  |  |
| IP_1 | 0.182 | 0.016 | 0.288 | 0.181 | 0.696 |
| IP_2 | 0.269 | 0.316 | 0.274 | 0.386 | 0.762 |
| IP_3 | 0.241 | 0.127 | 0.622 | 0.298 | 0.595 |
| IP_4 | 0.494 | 0.197 | 0.293 | 0.434 | 0.765 |

CS=competitive strategy; SA=strategic alliances; MAS=managerial use of broad scope management accounting system; HC=human capital-related performance; IP=internal process-related performance. $n = 85$.

Table 2. Descriptive statistics, reliability and average variance extracted (AVE) statistics, and correlations from PLS model

| Variable | Mean | Standard deviation | Cronbach Alpha | Composite reliability | AVE | Correlations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  | CS | SA | MAS | HC | IP |
| CS | 3.747 | 0.662 | 0.845 | 0.885 | 0.565 | 0.757 |  |  |  |  |
| SA | 3.802 | 0.850 | 0.813 | 0.876 | 0.645 | 0.096 | 0.803 |  |  |  |
| MAS | 4.336 | 0.512 | 0.843 | 0.881 | 0.516 | 0.319 | 0.298 | 0.718 |  |  |
| HC | 4.052 | 0.515 | 0.840 | 0.882 | 0.557 | 0.458 | 0.351 | 0.417 | 0.746 |  |
| IP | 4.222 | 0.475 | 0.702 | 0.814 | 0.525 | 0.449 | 0.444 | 0.492 | 0.597 | 0.725 |

CS=competitive strategy; SA=strategic alliances; MAS=managerial use of broad scope management accounting system; HC=human capital-related performance; IP=internal process-related performance

The convergent validity was assessed by examining the AVE statistics. Table 2 shows that the AVE for each variable is 0.50 and above, thus demonstrating adequate convergent validity (Chin, 1998; Hair, et al., 2005; Hair, et al., 2011). Further, AVE statistics were also used to assess discriminant validity by comparing the square root of the AVE statistics to the correlations between the latent variables (Chin, 1998; Hair, et al., 2011).

Table 2 shows that the square roots of the AVEs (diagonal) were all greater than the correlations between constructs. Additionally, Table 1 shows that each item loads higher on the construct it intends to measure than on any other construct (Barclay, Higgins, & Thompson, 1995; Chin, 1998). Results obtained from these two tests indicate adequate discriminant validity. In conclusion, the results from the PLS measurement model demonstrate that each construct in the current research exhibits satisfactory reliability and validity.

## 4.1. Tests of Hypotheses

The structural model indicates relations between latent constructs. In this case, the PLS structural model was used to test the hypotheses. Therefore, the analyses of the path coefficients are discussed in the following section, together with the description on the significance of the standardised $\beta$ resulting from the analyses. The analyses were based on a bootstrapping procedure that used 5000 samples with replacement, as PLS does not make distributional assumptions (Chin, 1998; Hair, et al., 2011). The bootstrap sample enables the estimated coefficients to be tested for their significance (Henseler, Ringle, & Sinkovics, 2009). Table 3 presents the results of the PLS.

Table 3. Results from PLS analysis

| From | To | Relevant hypothesis | Relevant path | Path coefficient[a] | t-value | p- value[b] |
|---|---|---|---|---|---|---|
| $X_1$ CS | $X_2$ SA | H1 | $P_{21}$ | 0.106 | 0.902 | 0.185 |
| $X_1$ CS | $X_3$ MAS | H2 | $P_{31}$ | 0.277* | 3.072 | 0.001 |
| $X_2$ SA | $X_3$ MAS | H3 | $P_{32}$ | 0.269* | 2.383 | 0.010 |
| $X_1$ CS | $X_4$ HC | H4 | $P_{41}$ | 0.363* | 3.244 | 0.001 |
| $X_2$ SA | $X_4$ HC | H5 | $P_{42}$ | 0.240* | 2.850 | 0.003 |
| $X_3$ MAS | $X_4$ HC | H6 | $P_{43}$ | 0.235* | 2.689 | 0.004 |
| $X_4$ HC | $X_5$ IP | H7 | $P_{54}$ | 0.597* | 7.275 | 0.000 |

\* Significant at 0. 05 level (one-tailed)
CS=competitive strategy; SA=strategic alliances; MAS=managerial use of broad scope management accounting system; HC=human capital-related performance; IP=internal process-related performance.
[a] Standardised partial least squares (PLS) path coefficient.
[b] One-tailed level of significance.

Hypothesis H1 stated that there is a positive association between competitive strategy and strategic alliance. Results from Table 3 indicate that this relationship was not supported ($\beta = 0.106$, t = 0.902, p > 0.18). The results also show that there is a positive association between competitive strategy and managerial use of broad scope MAS information, thus providing support for Hypothesis H2 ($\beta = 0.277$, t = 3.072, p < 0.05).

Hypothesis H3 suggested that engagement in strategic alliances may affect managerial use of MAS information. Results from Table 3 provide evidence to support this hypothesis ($\beta = 0.269$, t = 2.383, p < 0.05). The positive relationship is also found between competitive strategy and human capital-related performance ($\beta = 0.363$, t = 3.244, p < 0.05). Hence, the results supported hypothesis H4.

Hypothesis H5 stated that there is a positive relationship between the managerial use of broad scope MAS information and human capital-related performance. Table 3 presents a positive and significant result to support this statement ($\beta = 0.240$, t = 2.850, p < 0.05); therefore hypothesis H5 was accepted. The results in Table 3 also show that the proposed association between managerial use of MAS information and human capital-related performance (H6) was supported ($\beta = 0.235$, t = 2.689, p < 0.05). Finally, Table 3 indicates a positive and significant result between human capital and internal process-related performance ($\beta = 0.597$, t = 7.275, p < 0.00); thus Hypothesis 7 was supported.

Figure 2 summarises the results in the PLS structural model with a significant path coefficient and R2. From this figure, it can be concluded that competitive strategy, strategic alliances, and managerial use of MAS information explain 34.9 per cent variance in the human capital-related performance.
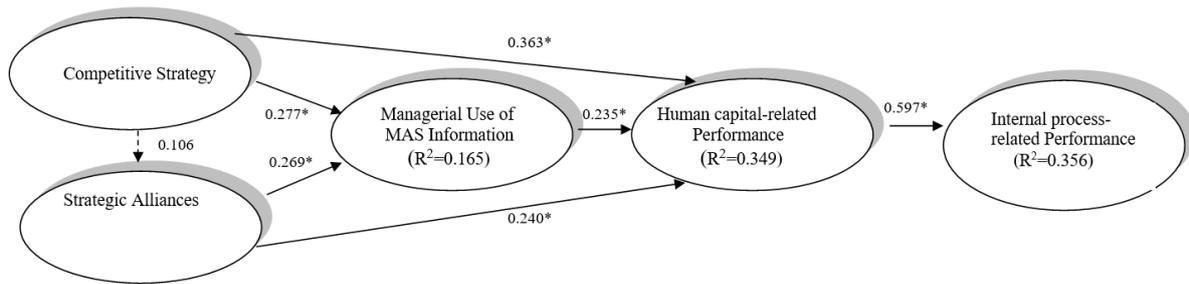
Figure 2. PLS structural model with significant path coefficient and $R^2$. *p<0.05. n=85.

Table 4. Path analysis: decomposition of direct and indirect effects

| Combination of variables | Direct + effect | Indirect + effect through SA | Indirect + effect through MAS | Indirect = effect through SA and MAS | Total Effect |
|---|---|---|---|---|---|
| CS -> SA | 0.106 | | | | 0.106 |
| CS -> MAS | 0.277* | 0.028 | | | 0.305 |
| SA -> MAS | 0.269* | | | | 0.270 |
| CS -> HC | 0.363* | 0.025 | 0.065 | 0.007 | 0.460 |
| SA -> HC | 0.240* | | 0.063 | | 0.303 |
| MAS -> HC | 0.235* | | | | 0.235 |
| HC -> IP | 0.597* | | | | 0.597 |

\* Significant at 0. 05 level (one-tailed)
CS=competitive strategy; SA=strategic alliances; MAS=managerial use of broad scope management accounting system; HC=human capital-related performance; IP=internal process-related performance.

Table 4 exhibits direct and indirect effects between variables in the present study. The results show that engagement in strategic alliance does not mediate the relationship between competitive strategy and managerial use of MAS information as well as between competitive strategy and human capital-related performance. Further, the results indicate that managerial use of MAS information mediate the relation between competitive strategy and human capital-related performance, and also between engagement in strategic alliances and human capital-related performance.

## 5.    DISCUSSION, LIMITATIONS AND CONCLUSIONS

The insignificant relationship between competitive strategy and engagement in strategic alliance indicates that managers may not focus on engaging in strategic alliances when they contemplating differentiation strategies. These hotels are considered to have their own resources to pursue competitive strategy. For instance, with the financial support these hotels already have, they are able to keep their technology updated, such as Marriott with its advanced reservation system or Hilton with its self-service check-in and check-out system (Zhao & He, 2008). These upscale hotels are also employing training and career development programmes as they are investing in their human assets in order to provide high standard of service quality (Zhao & He, 2008). It can be concluded that these hotels are likely to have sufficient financial and technological resources, or skilled employee. As a result, these 4- and 5-star hotels may not consider engaging in strategic alliances when they are thinking about applying competitive strategies. Therefore, hypothesis H1 was not supported.

The positive and significant relationship between competitive strategy and managerial use of MAS information supports the argument that managers increase their use of MAS information with increasing employment of a differentiation strategy. Hotels need to have a value which may differentiate them in this highly competitive industry, as applying a cost leadership strategy cannot secure their sustainable performance (Kandampully & Suhartanto, 2000; Lee, et al., 2003). In order to maintain their competitive advantage, hotels need information about their competitors, which may result from MAS information (Chenhall & Morris, 1986). Hence, the more a hotel becomes differentiator, the more its managers use MAS information.

The positive and significant relationship between strategic alliance and managerial use of MAS information supports the argument that hotel managers increase their use of MAS information with their hotel's engagement in strategic alliances. As hotels in developing countries like Indonesia may experience lack of resources (i.e., financial, knowledge and technological) compared to their international alliance partners, hotel managers need information resulting from MAS to solve problems such as cost allocation among alliances. This result extends Hakansson and Lind's (2004) case study by using more samples and providing statistical evidence to support the argument that managers need proper management accounting system information after engaging in strategic alliances.

The relationship between competitive strategy and human capital-related performance was positive and significant. The results support the argument that the more a company applies a differentiation strategy, the more the company needs highly skilled employees to provide quality services and innovative products (Guthrie, et al., 2002; Youndt, et al., 1996). The relationship becomes stronger when the company uses information provided by MAS. For example, a differentiator hotel may improve its chef's capability by sending him/her to training which may enhance his/her ability to create a specific menu. Before sending the chef for training, the hotel manager should check that the most appropriate training is selected. Information about appropriate training is provided by MAS. Therefore, managers may use MAS information to improve their chefs' capabilities, which means improved human capital-related performance.

Strategic alliances have a positive and significant influence on the human capital-related performance. This result extends previous findings by Preble et al. (2000) by providing empirical evidence that strategic alliances in the hotel industry may improve human capital-related performance. It also supports Pansiri's (2009) statement that hotels need to engage in a strategic alliance with their suppliers, customers, or competitors to survive in the highly competitive market. The results did not support the study by Espino-Rodriguez and Padron Robaina (2004) which revealed that a strategic alliance through outsourcing does not have an impact on employee welfare. However, as the Espino-Rodriguez and Padron Robaina (2004) study focuses only on outsourcing types of strategic alliances and employee welfare, the present study extends it by including a more general type of strategic alliance and human capital-related performance which covers not only human resources but also aspects of information systems and organisational processes. Moreover, the present study also provides empirical evidence that managers may use information provided by MAS to improve human capital-related performance after engaging in a strategic alliance.

The positive and significant relationship between managerial use of the MAS information and human capital-related performance supports the argument that managers require broad information provided by MAS to maintain their human capital-related performance. This study extends previous studies which found the relationship between the managerial use of MAS information and performance (Mia & Patiar, 2001; Patiar & Mia, 2008) as no such studies had focused on human capital-related performance. As broad scope MAS contains financial and nonfinancial information (Chenhall & Morris, 1986; Langfield-Smith, 1997; Mia, 1993), then managers may use it to update stored information related to human capital-related performance.

Finally, the positive and significant relationship between human capital and internal process-related performance confirms Kaplan and Norton's (1992, 1996a, 1996b, 2004a) suggestion that human capital, as a part of learning and growth-related performance, provides the foundation to achieve a better internal process-related performance.

There are three limitations to this study that could be improved in future research. First, this study focuses only on the human capital aspect of learning and growth-related performance, and its relation to competitive strategy, strategic alliance, managerial use of MAS information, and internal process-related performance. However, Kaplan and Norton (2004a) have suggested that learning and growth-related performance consists of not only human capital, but also information capital and organisation capital; consequently, all of these aspects could be included in similar research undertaken in the future. Second, in this study, human capital has been empirically tested for its relationship with internal process-related performance; future research may test the effect of human capital-related performance with other perspectives of BSC: customer and financial performances. Third, this study deals only with the hotel industry. As competitive strategy also becomes an important variable in other sectors of the service and manufacturing industries, it will be beneficial to investigate the relationship between competitive strategy, strategic alliance, managerial use of MAS information, and human capital-related performance in other service industry sectors (e.g., hospitals, restaurants) or the manufacturing industry.

Despite these limitations, this study has implications for both theory and practice. It offers empirical evidence that, besides applying a competitive strategy and engaging in a strategic alliance, managers should also pay more attention to their human capital-related performance. For example, hotels may need to improve their staff's skills on how to do promotion and provide the best customer service. In order to be able to do that, hotels need to be innovative (in their competitive strategy) and cooperate with their partners (in strategic alliances). By having highly skilled staff, hotels may deliver fast and accurate customer service, hence improve internal process-related performance. Furthermore, it should be noted that MAS may help managers to get proper information to establish appropriate competitive strategies and strategic alliances, leading to a better human capital-related performance.

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