A CAUSAL MODEL OF FACTORS INFLUENCING STRATEGIC HUMAN RESOURCE MANAGEMENT EFFECTIVENESS: EMPIRICAL EVIDENCE ON MANAGEMENT ACCOUNTING

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Abstract

Prior research shows that strategic human resource management (SHRM) minimizes the risk of ignoring human resources as an important source of organizational competitive advantage. Recently, literature also asserts actively involvement in SHRM of management accountants, but evidence of the extent of the management accountant's role and accounting information to assist HR managers in fulfilling the SHRM goals is limited. Thus, this research is aimed to (1) study factors related to strategic human resource management effectiveness from empirical evidence on management accounting and (2) analyze the causal relationship between business partner roles of management accountants (BPMA), managerial relevant information (MRI) that influences SHRM effectiveness. Data was collected from the auto parts businesses in Thailand 212 firms by questionnaire mail survey, and using confirmatory factor analysis and structural equation modeling to analyze data. The results found that BPMA and MRI were confirmed in the measurement portion of the model because these two-factor models appear to be a good fit to the empirical data. Moreover, the results also showed that the hypothesized model fit to the empirical data (χ^2=88.364, df=69, p-value=0.058, χ^2/df =1.281, CFI=0.990, IFI =0.990, GFI=0.943, RMSEA=0.037) and all variables in the model could explain SHRM effectiveness at 58%. There was a stronger indirect effect of BPMA on SHRM effectiveness by transmission MRI with a path coefficient that equaled 0.695. In total, this empirical evidence reveals that organizations need management accountant business partners in providing information for planning, decision-making, evaluating and controlling HR strategy. Importantly, the management accountant role should focus on the areas of strategic support, risk and business management, technical skill, and social skill to advise strategy and achieve organizational goals.

Keywords: Management accountants, Business partner, Managerial information, Strategic human resource management

1. INTRODUCTION

In the era of disruptive technologies that change the basis of competitive advantage and innovative organizational structures it has become clear that the capacity of organizations to innovate and manage their human resources can be sources of competitive advantage in this environment. Strategic human resource management (SHRM) is identified as one component of an organization's strategy that plays a key role in building and maintaining competitive advantage in globalization and dynamic markets (Cania, 2014). Effective SHRM minimizes the risk of ignoring human resources and creates a "unique tool of human capital" that fosters innovative ability, flexibility, productivity, quality of goods and service, and responsiveness to customers toward increased firm performance (Richard & Johnson, 2001; Armstrong, 2006; Çalişkan, 2010; Pirzada et al., 2013; Shahnaei & Long, 2015).

Management accountants are being increasingly recognized as an important part of SHRM enhancement. Recently, the literature also asserts an interaction of management accountants with SHRM. For instance, Kouhy et al. (2009), Zeng (2018) pointed out that management accountants utilize management accounting techniques to provide information to HR managers for developing, evaluating and controlling SHRM. On the other hand, the relevance of accounting information for HR decision making will vary depending on the management accountant's role. Although manager accountants are increasingly involved in providing information for HM managers, the information they provide is still insufficient to formulate and implement HR strategy (Vedd, 2005; Tayles, Pike & Sofian, 2007; Zeng, 2018). Armstrong (2011) suggested that in order to improve SHRM, HR managers must be able to understand the language of management accounting. At the same time, management accountants must be able to measure the HR activities in the language that is spoken and understood by HR managers. Having in mind these views it is interesting to see that management accountants need to act in a business-oriented way to develop even further their business partnership roles with HR managers.

Prior management accounting literature claims that the business partner role of management accountants (BPMA) is more appropriate in contemporary business because it is focusing mostly on technical skills, toward business-orientation, strategic capabilities, and social skills (Byrne & Pierce, 2007; Järvenpää, 2007, 2009; Hartmann & Maas, 2011; Goretzki, Strauss & Weber, 2013; Linsley & Linsley, 2014; Windeck, Weber & Strauss, 2015). Moreover, BPMA also combines accounting knowledge with an understanding of business processes, products, and markets (Windeck, Weber & Strauss, 2015). Accordingly, a BPMA must be able to analyze and adjust financial information according to the needs of various departments appropriately (Byrne & Pierce, 2007) and provide future managerial-relevant information (MRI) beneficial to the organization's strategy (Yazdifar & Tsamenyi, 2005; Järvenpää, 2009; Weber, 2011). In sum, evidence is mounting that the BPMA is likely related to strategic management effectiveness by customizing information to fit various organizational actor groups. However, little empirical research has specifically addressed how BPMA enhances strategic human resource management, while the question about what useful information from BPMA is available to HR managers has not yet been explored.

This research, therefore, intends to develop the causal relationship framework between BPMA and MRI influencing SHRM effectiveness to extend existing literature. In order to capture the causal relationship framework, the auto parts businesses in Thailand are selected as the population of this research because they rely on advanced technology and highly skilled workers to produce their products. Thailand is the largest automotive producer in Southeast

Asia and 13th in the world (National Science and Technology Development Agency, 2019). As an "Automotive Hub of Asia", the value of foreign direct investment in Thailand has steadily increased. In particular, investment in high technology and human capital in order to enhance labor skills, expertise, and new knowledge to support the current technology. According to productivity and investment climate survey data from the World Bank, Thailand's auto parts industry has the highest labor productivity in the manufacturing sector (World Bank, 2008). The survey data reflects that this industry needs highly skilled production workers and more investment in human capital to increase their productivity (World Bank, 2013). Thus, Thailand's auto parts businesses are likely to require more relevant accounting information for HR decision making and HR strategy setting which contributes to enhancing human capital and the achievement of competitive advantage. For instance, formulating strategies and long-range plans, resource allocation decisions, cost planning and cost control of operations and activities, performance measurement and evaluation of employee. The research question is "How does BPMA and MRI impact SHRM effectiveness in organizations?". The focus of this research is on two projects. The first will analyze factors related to SHRM effectiveness from empirical evidence on management accounting, including BPMA and MRI. The second will develop a causal model of factors influencing SHRM effectiveness and examine the fit of the model to the empirical data. This research provided both theoretical and managerial contributions. Firstly, this study adds to literature on the determinants of the BPMA. This has practical consequences for firms transitioning management accountants in traditional roles into a business partner role which is beneficial to organizations. Secondly, this study extends the literature by examining the causal relationship between the BPMA, MRI, and SHRM effectiveness and showing that BPMA are being seen as consultants within an organization, providing crucial information during the formulation of human resource strategies and significant in the implementation of said decisions and strategies of HM managers.

1.1 Objectives

1. To study factors related to strategic human resource management effectiveness from empirical evidence on management accounting.
2. To analyze the causal relationship of BPMA and MRI influencing SHRM effectiveness.

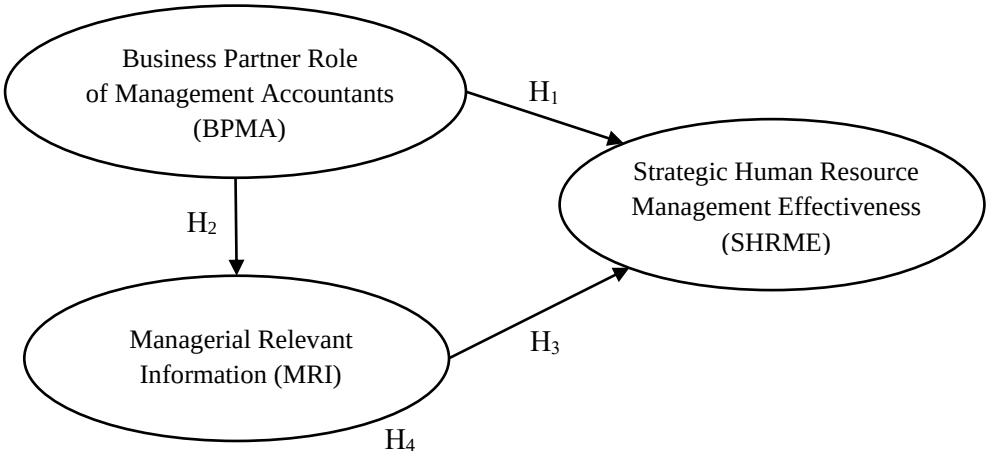
2. LITERATURE REVIEW AND DEVELOPMENT OF THE HYPOTHESES

2.1 The resource-based view theory (RBV)

This research also applied the resource-based view theory (RBV) to develop the conceptual model. The core concept of this theory assumes firms are fundamentally heterogeneous in resources and capabilities; firms will obtain sustained competitive advantage over their competition when their resources and capabilities are inimitable and non-substitutable in addition to being valuable and rare (Barney, 1991; Lahiri, Kedia & Mukherjee, 2012). In the field of SHRM research, a resource-based view of strategy prescribes that the SHRM capability of a firm depends on its unique capabilities for managing human resources (Wright, Dunford & Snell, 2001). Prior research found that management accountant as business partner roles and management accounting information are seen as resources facilitating the development of unique capabilities for managing human resources of HR managers (Vedd & Kouhy, 2005; Karlsson, Hersinger & Kurkkio, 2019). Based on the theoretical perspective and

literature mentioned above, BPMA and MRI are seen as the important factors influencing SHRM effectiveness. Hence, the hypothesized model of the causal relationship of factors influencing SHRM effectiveness is developed that lead to the conceptual framework presented in Fig.1

Figure 1
Conceptual Framework



2.2 The BPMA role and the SHRM effectiveness

The BPMA in this research refers to a proactive involvement of management accountants in strategic management processes and operational decision making which is closely linked with business orientation and a high level of technical skills and social skills (Jönsson, 2009; Linsley & Linsley, 2014; Karlsson, Hersinger & Kurkkio, 2019). The study of Ferreira and Moulang (2009) found that involvement of management accountants in strategic management processes enhances the success of strategic implementation. Increasing the strategic capability of management accountants helps HR professionals to develop, evaluate and control HR strategy (Vedd & Kouhy, 2001). Moreover, management accountants also need to be in greater partnership to understand business operations, including the HR side of the business, to be able to integrate with the HR community and to communicate their possible contributions in order to help HR managers achieve their strategic goals (Vedd & Kouhy, 2001). In addition, Zeng (2018) indicated that the BPMAs have a broader scope of responsibility, which results in a greater application of a management accounting system (MAS) which enhances strategic effectiveness. For instance, BPMAs use MAS in a rather interactive way by emphasizing communication and fact-based decision making in the implementation of innovative strategies (Haustein, Luther & Schuster, 2014; Chenhall & Moers, 2015; Pasch, 2019). Furthermore, BPMA fulfills a valuable coordinating role within the organization by communicating top management policies to improve collaboration with operational managers (Byrne & Pierce, 2007; Pietrzak & Wnuk-Pel, 2015). BPMA is also capable of team-building, and conflict resolution and skilled at motivating and negotiating with others (Burns & Baldvinsdottir, 2005; Vaivio & Kokko, 2006). These technical and social skills are involved with the efficiency of human resource management towards increasing firm performance (Cania, 2014). From the discussion above, the following hypothesis is formulated:

Hypothesis 1: The BPMA has a positive direct effect on SHRM effectiveness.

2.3 The BPMA and MRI

According to the Chartered Institute of management Accountants (CIMA), management accountants played a significant role in analyzing and providing managerial relevant information to advise on strategy and ensuring that the organization was moving in the right direction toward achieving its goals. Williams and Seaman (2002) suggest that managerial relevant information (MRI) has two dimensions. The first dimension is decision-facilitating information which is related to increased ability of the decision maker to predict future situations to reduce ex ante uncertainty, such as information for planning or setting targets. The second is decision-influencing information which is related to reduce ex post uncertainty, such as information for monitoring and evaluating functions of the firm. In this research, therefore, MRI is defined as accounting information that is involved in strategic planning, business decision-making, measuring performance, and strategic control which increases the ability of managers to accomplish their strategic management activities (Veed & Kouhy, 2001). Vedd (2005), Veed and Kouhy (2005) suggest that management accountants needed a clear understanding of the organization's objectives and goals, business operation, and business environment to provide more various future-orientated information and key risk indicators for HR managers during the formulation and evaluation strategies. Moreover, becoming business partners involves new tasks and broader responsibilities beyond the recording and analysis of historical financial data, so they must be able to analyze and provide MRI beneficial to the organization's strategy (Yazdifar & Tsamenyi, 2005; Järvenpää, 2009; Weber, 2011). Accordingly, BPMA have a greater awareness of the managers' information needs for decision making (Burns & Baldvinsdottir, 2005). The above discussion leads to the following hypothesis:

Hypothesis 2: The BPMA has a positive direct effect on MRI.

2.4 The MRI and SHRM effectiveness

Strategic human resource management (SHRM) is the connecting of human resources with strategies, objectives, and goals in order to increase competitive advantage and firm performance (Armstrong, 2006). Richard and Johnson (2001), Çalişkan (2010), Pirzada et al. (2013), Shahnaei and Long (2015) stated that effective SHRM are practices that create a "unique tool of human capital" that foster innovative ability, flexibility, productivity, quality of goods and services, and responsiveness to customers through HR activities. SHRM effectiveness can be measured from the capability of HRM functions in developing a firm's employees and consists of: employee participation; employee empowerment; teamwork; workforce planning; management and executive development; succession planning (managers); workforce productivity; and employee and manager communications (Richard & Johnson, 2001). Qualitative work of Vedd and Kouhy (2005) pointed out that HR managers needed management accounting information in helping to set HR targets, measuring HR performance, reporting and communicating between managers and employees. Especially, management accounting information made available to HR managers for ex ante decision making, and ex post monitoring and evaluation purposes, which is what researchers call "managerial relevant information (MRI)". For example, information for setting performance indicators, guiding day-to-day HR decisions by individual managers, reporting actual versus budgeted HR performance to monitor the return on the investment. In summary, an increase in MRI may positively influence SHRM effectiveness. Therefore, the hypothesis is offered as follows:

Hypothesis 3: The MRI has a positive direct effect on SHRM effectiveness.

2.5 The BPMA, MRI and SHRM effectiveness

The Institute of Certified Management Accountants (ICMA) states that management accountants apply their professional knowledge and skill in providing managerial relevant information (financial and non-financial reports) to assist management in conducting their duty to achieve an organization's goals. The concept of management accounting intended to provide MRI for decision making and evaluation implies that the relationship between BPMA and SHRM effectiveness may not be a simple, direct one. Qualitative work by Byrne and Pierce (2007) suggested that BPMA use the information available to line managers to stimulate discussions and decision making based on strategic analyses. Moreover, Vedd (2005) points out that the management accountants' role, with greater emphasis on business orientation, is becoming more integrated and interdisciplinary contributing a diverse set of more future-orientated information for HM managers during the formulation and evaluation of human resource strategies. There is a possibility that the relationship between BPMA and SHRM effectiveness is mediated by MRI, and the indirect effect is strengthened when MRI is high. The above discussion leads to the following hypothesis:

Hypothesis 4: The BPMA has a positive indirect effect on SHRM effectiveness by transmission MRI.

3. RESEARCH METHODOLOGY

3.1 Population and Sample

The target population for this study is auto parts businesses in Thailand. Using a commercial contact list from the Thai Auto Parts Manufacturers Association (accessed February 8, 2016), all 648 firms were selected as the samples. According to Kline (2011), sample size for structural equation modeling should be greater than 200 and 5-10 samples per one parameter. The number of parameters in the model is 36 parameters. Therefore, the minimum sample size is 200 firms. However, typical response rates for a mail survey is approximately 20% (Aaker, Kumar, & Day, 2001). To get adequate sample size to meet the reliable research results and achieve a maximum response rate, this research finally uses all 648 firms as a sample for a distributed mail survey.

3.2 Research Instrument

A questionnaire was developed based on the literature review. The questionnaire's items have been modified to comply with the definitions and characteristics of the variables to be measured, which has a total of 37 items. All variables were measured using a 5-point Likert scale to express the degree of each questionnaire item (Likert, 1932). After the instrument was developed, the questionnaire was verified as to content validity with item-objective congruence (IOC) by three experts to check the consistency of instrument measures and research objectives. The result found that there were 32 questions with IOC>0.5 which is considered acceptable (Rovinelli & Hambleton, 1977). Thereby, 5 questions with IOC<0.5 were excluded. After that, the first 30 respondents were used to pilot-test to check the reliability and assess the internal consistency of a questionnaire (using Cronbach's alpha). The result showed that item-total correlation values ranged from 0.496 to 0.816 and Cronbach's alpha coefficients = 0.925 ($\alpha >$ 0.80) reach acceptable reliability (Nunnally, 1994).

3.3 Measures

3.3.1 Business partner role of management accountants (BPMA)

BPMA is the extent of the accountant's ability to involve in strategic management processes and decision making in business processes based on high level of technical skills and social skills (Jönsson, 2009; Linsley & Linsley, 2014; Karlsson, Hersinger & Kurkkio, 2019). This construct was measured by using a four-item scale which assessed the degree of active involvement in strategic analysis, and business process, focusing more on technical skill and social skill, adapted from Jönsson (2009), Linsley and Linsley (2014).

3.3.2 Managerial-Relevant Information (MRI)

MRI is the feature of accounting information that has a broader scope, timeliness, complete and sufficient for strategic planning, risk identification in business process, measuring performance, and strategic control for HR management (Veed & Kouhy, 2001). This construct was measured through the use of a four-item scale by assessing the degree of accounting information feature (scope, timeliness, complete and sufficient) in four HR management functions include: planning strategies, business decision-making, measuring performance, and strategic control, adapted from Vedd (2005), Veed and Kouhy (2005).

3.3.3 Strategic Human Resource Management Effectiveness (SHRM effectiveness)

SHRM effectiveness is the level of human resource function achievement in empowering the firm's employee to support its business needs including facilitating teamwork, communications, and involvement, enhancing quality, and developing talent to serve the business in the future (Richard & Johnson, 2001; Armstrong, 2006; Çalişkan, 2010; Pirzada et al., 2013; Shahnaei & Long, 2015). This construct was measured using a six-item scale by assessing the degree of the perceptions of how well the HRM function is performing including participation and empowerment of employees, teamwork, flexible workforce planning and deployment, management succession and development, workforce productivity, and employee and manager communications, adapted from Richard and Johnson (2001).

3.4 Data collection

Questionnaires were distributed through mail to respondents. Accounting directors or accounting managers of all selected firms were addressed with personalized mail and were asked to participate in this research. They were chosen due to the fact that they have experience and understanding of accounting information systems as well as responsibility for company performance. The follow-up calls were made two weeks after the initial mailing to boost the response rate. As a result, the number of questionnaires returned was 217, with 212 valid questionnaires, yielding a response rate of 32.72%. To check for non-response bias of survey research the data were split into two groups. Then, the data received was compared from early and late responses in terms of general characteristics. This comparison shows no significant differences between the two groups, suggesting no response bias (Armstrong & Overton, 1977).

3.5 Data analysis technique

3.5.1 Descriptive statistics include: mean and standard deviation is used to summarizes features of a sample.

3.5.2 Correlation analysis is used to evaluate the strength of relationship between two variables (e.g., between an independent and a dependent variable or between two independent variables) before computing a correlation coefficient.

3.5.3 Confirmatory factor analysis (CFA) is used to verify the factor structure of a set of observed variables (test construct validity) in order to analyze the goodness of fit of measurement models.

3.5.4 Structural equation modeling (SEM) is conducted to examine the fit of the causal model to the empirical data. Furthermore, SEM can estimate the direct effect, indirect effect, and the total effect of variables in the causal model by analyzing path coefficient statistics. Thus, SEM is an appropriate method for examining the hypothesized relationships.

4. RESULTS

4.1 Descriptive Statistics and Pearson Correlation Analysis

Descriptive statistics for all variables and inter-correlations were provided in Table 1. The mean scores for all variables exceed 2.5, suggesting that the respondents perceived that they were in more business partnership roles, provided more relevant information for management, and perceived that their firms achieved SHRM effectiveness. The Pearson correlation coefficients were between 0.565-0.618, $p<0.05$, indicating that all variables had positively correlated. Moreover, none of the correlation coefficients exceed 0.80. Thus, multicollinearity was not found as a serious problem in this study (Hair et al., 2013).

Table 1

Descriptive statistics and correlation matrix

Variables	BPMA	MRI	SHRME
Mean ($\bar{x}$)	3.57	3.87	4.05
Standard Deviation (S.D.)	.82	.70	.55
Business Partner Role of Management Accountants (BPMA)	1.000		
Managerial-Relevant Information (MRI)	.565***	1.000	
Strategic Human Resource Management Effectiveness (SHRME)	.578***	.618***	1.000

*** $p<0.01$

4.2 Confirmatory Factor Analysis (CFA) of measurement models

In this research, CFA was used to determine the construct validity of the observed variables in order to analyze the goodness of fit of measurement models. It means how well the observed variables explained the latent variables under the construct (Hair et al., 2013). The indicators of goodness-of-fit to assess a model, including Probability level (P-value>0.05); Chi square divided by the degrees of freedom (CMINDF or χ^2/df <3.0); the comparative fit index (CFI>0.90); Incremental fit index (IFI>0.90); Goodness-of-fit index (GFI >0.90); the root mean square error of approximation (RMSEA<0.08) (Byrne 2010; Hair et al., 2016). The initial hypothesized model will be revised until it fits the empirical data by taking into consideration

the modification indices (MI) (Whittaker, 2012). The results of CFA of the three measurement model were as follows:

4.2.1 The result of the first CFA, the re-specified CFA model of BPMA variable as in Table 2 and Figure 2 showed that the hypothesized model fits the empirical data. The fit index yielded $\chi^2 = 3.933$, df = 1, p-value = 0.047, $\chi^2/df = 3.933$, CFI = 0.99, IFI = 0.995, GFI = 0.990, RMSEA = 0.121. All fit indices were more than adequate to conclude that four observed variables: strategic capacity, business-orientation, technical skill, and social skill can be good representatives to measure BPMA.

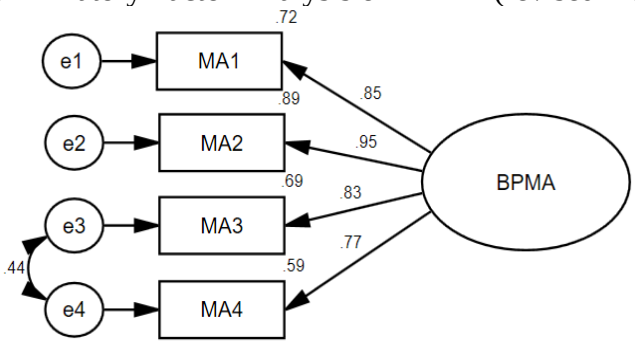
Table 2

The details of model adjustment from the initial hypothesized model into the fit model

Model	Consideration of the modification indices	MI	χ^2	df	p-value	χ^2 /df	RESEA
	Initial model		31.303	2	.000	15.651	.271
1	E4 <--> E3	16.460	3.933	1	.047	3.933	.121

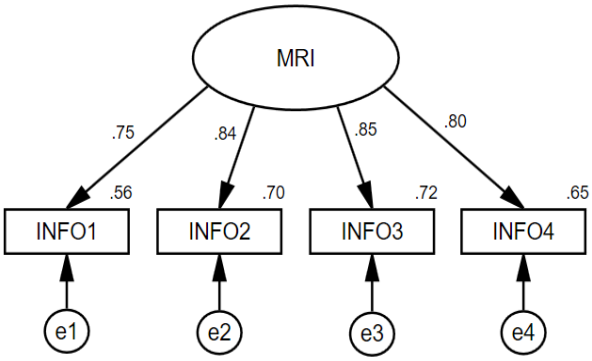
Figure 2

Confirmatory Factor Analysis of BPMA (revised model)



4.2.2 According to the results of the second CFA, the CFA model of MRI variable as in Figure 3 suggested that the hypothesized model appears to be a good fit to the empirical data. The fit index is satisfactory ($\chi^2 = 1.336$, df = 2, p-value = 0.513, $\chi^2/df = 0.668$, CFI = 1.000, IFI = 1.002, GFI = 0.997, RMSEA = 0.000). This result demonstrated that four observed variables: information for strategic planning, information for risk management and business decision-making, information for measuring performance, and information for strategic control can be good representatives to measure MRI.

Figure 3
Confirmatory factor analysis of MRI (adjusted)

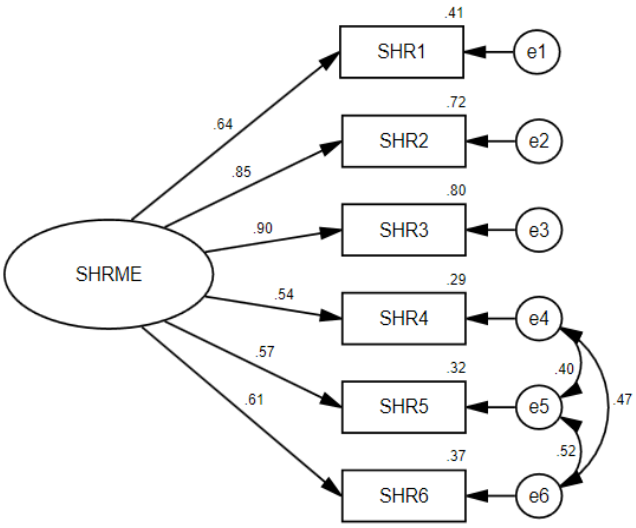


4.2.3 According to the third analysis results, the re-specified CFA model of SHRM effectiveness variable as in Table 3 and Figure 4 showed that the hypothesized model fit the empirical data. The fit index yielded χ^2=2.077, df=6, p-value=0.913, χ^2 /df =0.346, CFI=1.000, IFI=1.007, GFI=0.99, RMSEA=0.000. The fit index was satisfactory, thereby indicating that six observed variables: participation and empowerment of employees, teamwork, flexible workforce planning and deployment, management succession and development, workforce productivity, and employee and manager communications can be good representative measures of SHRM effectiveness.

Table 3
The details of model adjustment from the initial hypothesized model into the fit model

Model	Consideration of the modification indices	MI	χ^2	df	p-value	χ^2/df	RESEA
	Initial model		96.557	9	.000	10.729	.221
1	E5 <--> E6	33.442	54.421	8	.000	6.803	.170
2	E4 <--> E6	17.885	33.740	7	.000	4.820	.138
3	E4 <--> E5	20.085	2.077	6	.913	.346	.000

Figure 4
Confirmatory Factor Analysis of SHRM effectiveness (adjusted)



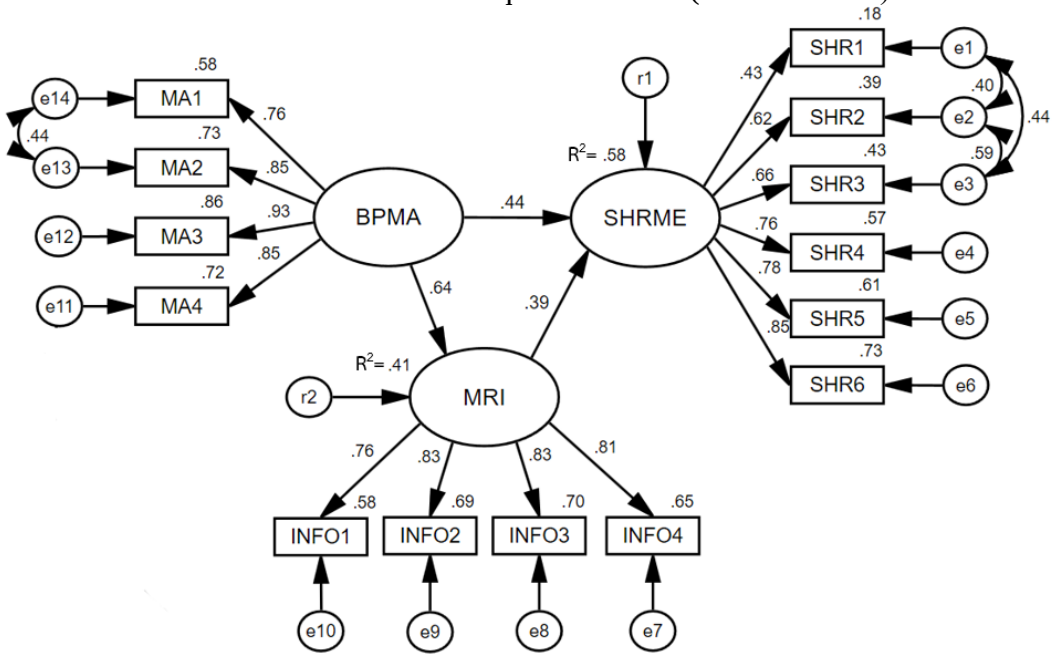
4.3 Structural Equation Modeling (SEM)

SEM, in this research, was employed to examine the fit of the causal model of factors influencing SHRM effectiveness to the empirical data. The result showed that the fit indices of re-specified model were satisfactory (χ^2=88.364, df =69, p-value=0.058, χ^2/df =1.281, CFI=0.990, IFI=0.990, GFI=0.943, RMSEA=0.037), thereby demonstrating that the hypothesized model appears to be a good fit to the data. The re-specified model was presented in Figure 5 and the detail of model adjustment was presented in Table 4.

Table 4
The details of adjusted the initial hypothesized model into the fit model

Model	Consideration of the modification indices	MI	χ^2	df	p-value	χ^2/df	RESEA
	Initial model		232.266	74	.000	3.139	.103
1	E2 <--> E3	48.833	171.677	73	.000	2.352.	.082
2	E13 <--> E14	17.917	144.351	72	.000	2.005	.071
3	E1 <--> E3	10.548	120.130	70	.000	1.716	.060
4	E1 <--> E2	18.277	88.364	69	.058	1.281	.037

Figure 5
Results for the structural equation model (revised model)



N=212; χ^2= 88.364, df = 69; p = .058, χ^2/df = 1.281; GFI = 0.943; RMSEA = 0.037; IFI = 0.990; CFI = 0.990

Also, the results from the SEM showed the direct effect, indirect effect, and the total effect of variables in the causal model by analyzing path coefficient statistics (standardized regression coefficient). The result suggested that BPMA and MR could explain SHRM effectiveness at 58% (R2=0.58). There were significant positive direct effects of BPMA on SHRM effectiveness (0.443, p<0.01) and MRI (0.64, p<0.01), thus **supporting hypotheses H1 and H2** respectively. The associations between MRI and SHRM effectiveness was a significant positive direct effect (0.39, p<0.01). **H3 was hence supported**. Finally, there was statistically significant positive indirect effect of BPMA on SHRM effectiveness by

transmission MRI (0.695, p<0.01), **H4 was thus supported**. These relationships are presented in Figure 5 and Table 5. In sum, the results indicated the existence of an intervening variable of MRI, which increased a strong relationship between BPMA and SHRM effectiveness.

Table 5
An effect between the variables in a causal model of factors influencing strategic human resource management effectiveness

Effect	Hypothesis	Structural Path Relationship	t-value	p-value (p < .01)	Standardized Regression Coefficient			(Hypothesis Test)
					Direct	Indirect	Total	
Direct Effect	H1	BPMA → SHRME	4.100***	0.000	0.443	-	0.443	Accept
Direct Effect	H2	BPMA → MRI	8.038***	0.000	0.640	-	0.640	Accept
Direct Effect	H3	MRI → SHRME	3.728***	0.000	0.394	-	0.394	Accept
Indirect Effect	H4	BPMA → MRI → SHRME	-	0.000	0.443	.252	0.695	Accept

5. CONCLUSION AND DISCUSSION

The purpose of this research is to (1) study factors related to SHRM effectiveness including BPMA and MRI, and (2) analyze the causal relationship between BPMA and MRI influencing SHRM effectiveness. In order to respond to the objectives, the resource-based view theory was applied to develop the causal relationship model and used confirmatory factor analyses (CFA) and structural equations modelling (SEM) technique to analyzed the data.

Results of the CFA indicated that BPMA and MRI were confirmed in the measurement portion of the model because these two-factor models appear to be a good fit to the empirical data. The result of CFA suggests the use of four observed variables to measure BPMA. This empirical finding implied that sufficient characteristics of BPMA should be focusing on strategic analysis, risk and business management, technical skill, and social skill to give advice on strategy and achieve organizational goals. Consistent with management accounting literature arguing that the important roles of BPMA are (1) highly involved in the formulation of business strategy (Byrne & Pierce, 2007; Cadez & Guilding, 2008; Hartmann & Maas, 2011), (2) taking a more active role in business process and risk management to provide future-oriented information, identify and analyze key risk indicators (Järvenpää, 2007; Goretzki, Strauss & Weber, 2013; Pietrzak & Wnuk-Pel, 2015; Rieg, 2018), (3) focusing mostly on technical skills such as using MAS in an interactive way to gain innovative outcomes (Haustein et al., 2014; Chenhall & Moers, 2015; Pasch, 2019), and (4) greater involvement as a coordinator across functions and between top management and operational actors (Cadez & Guilding, 2008). Moreover, the result of CFA also suggests the use of four observed variables to measure MRI which is comprised of information associated with strategic planning, business decision-making (including risk identification), measuring performance, and strategic control. This finding fit to prior studies that MRI as accounting information increases the ability of managers decision making to accomplish their activities related to strategic management and business orientation (Burns & Baldvinsdottir, 2005; Veed & Kouhy, 2005), and also helping to forecast future events and confirm past events, and enterprise risk management (Alothaim, 2017; Williams & Seaman, 2002).

The results of SEM indicated that the hypothesized model fit the empirical data, and all variables in the model could explain SHRM effectiveness at 58%. The results also indicated a significant positive direct effect of BPMA on SHRM effectiveness and MRI, while MRI had a

positive direct effect on SHRM effectiveness. These findings revealed that BPMA help HR managers achieve their strategic management by fulfilling capacity with a rich understanding of strategy and operations in the organizations and provide valuable insights to help risk management (Byrne & Pierce, 2007; Goretzki, Strauss & Weber, 2013; Pietrzak & Wnuk-Pel, 2015). In this capacity, BPMA is able to diagnose each situation to determine how to act appropriately in HRM strategy (Baxter & Chua, 2009; Jönsson, 2009). In addition, this capacity is also able to help management accountants analyze and interpret relevant information that is necessary to make optimal risk evaluation and decisions to accomplish departmental performance objectives (Vedd, 2005; Yazdifar & Tsamenyi, 2005; Järvenpää, 2009; Weber, 2011). Moreover, the results suggested that factor has maximum direct effect and total effect to SHRM effectiveness as BPMA. There is statistically significant positive indirect effect of BPMA on SHRM effectiveness by transmission MRI with a path coefficient equal to 0.695. This strong positive indirect effect of BPMA on SHRM effectiveness revealed that providing information via BPMA is more advantageous. Consistent with prior studies that, in the SHRM process, management accountants played a key role in providing relevant information (both financial and non-financial) for strategic planning, risk management and business decision-making, measuring performance, and strategic control (Burns & Baldvinsdottir, 2005; Vedd & Kouhy, 2005). While the development of the role of management accountants strengthen their capacity in providing relevant, strategic, and future-oriented information (Yazdifar & Tsamenyi, 2005; Järvenpää, 2009; Weber, 2011; Pietrzak & Wnuk-Pel, 2015). Thus, greater emphasis in management accountants' business partner role will contribute more relevant information for SHRM decision making, which then facilitates the achievement of SHRM effectiveness.

6. CONTRIBUTIONS

The results of this research provided both theoretical and managerial contributions as follows.

6.1 Theoretical contributions

Firstly, this research contributes to the management accounting literature by examining the causal relationship between the BPMA, MRI, and SHRM effectiveness and showing that the BPMA is being seen as a consultant within an organization providing crucial information during the formulation of human resource strategies and significant in the implementation of said decisions and strategies of the HM managers.

Secondly, this study adds to the literature by providing insights into the development of the management accountants' role with some business partner characteristics and the types of accounting information which are beneficial to enhance SHRM effectiveness.

6.2 Managerial contributions

Firstly, the findings from this research have practical consequences for firms when transitioning management accountants in traditional roles into a business partner role. For instance, supporting important topics for the training of management accountants, including strategic management accounting, working as an integral management team member with a facilitating role, and management accounting technologies.

Secondly, the findings also have implications for suggesting management accountants in providing crucial information to make effective HR decisions. The crucial accounting information (both financial and non-financial) must be involved in strategic planning, business decision-making and risk identification, measuring performance, and strategic control. For example, information for strategic planning (ie., forecasting HR budget, setting HR target, developing performance indicators, competitive analysis). Information for business decision-making and risk identification (ie., key risk indicators, future-oriented information that enables both management and employees to take corrective actions throughout the business process). Information for measuring performance (measuring HR outcomes ie., labor costs, training and development costs, absenteeism rates, turnover rates, and hiring costs). Information for controlling (ie., monitoring) and comparing actual achievement against targets and analyzing the reasons for any variances for HR managers.

7. LIMITATION AND DIRECTION FOR FUTURE RESEARCH

Even if the results and conclusions presented in this research are based on a single case study, the validity of the results can be strengthened by subjecting it to a broader empirical examination. Gathering more in-depth information to identify additional moderator variables of the relationship between BPMA and SHRM effectiveness can be more helpful in explaining the influence of management accountant roles in the organization beyond the causal relationship model as presented in this research. Since the automotive part industry has exclusive rights to foreigners shareholders holding more than half of all issued shares, future research might consider the institutional drivers such as top management policies or foreign ownership as the moderator variable. Besides, the results of this research rely on survey data. It is not clear how the construct measurement of the BPMA and MRI would have changed if other situations change. Thus, more encompassing in-depth data collection can also help identify optimal items for each construct measurement and deep understanding of the subject phenomena.

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