STRATEGIC PERFORMANCE MEASURES, INNOVATIVENESS, ENTREPRENEURSHIP, AND STRATEGIC OUTCOMES

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ABSTRACT

This study investigates the extent to which strategic performance measures (SPM) could enhance innovativeness and entrepreneurship by studying middle level of management in Indonesian financial institutions. The study analysed 157 data points using smartPLS. The study found that SPM leverages differentiation strategy only through innovativeness, rather than through entrepreneurship. This study also suggests that financial institutions in Indonesia should focus on innovativeness to differentiate themselves from their rivals, rather than trying to undercut rivals in price. Low-cost schemes cannot benefit those firms without innovativeness.

Keywords: *Entrepreneurship, innovativeness, strategic outcomes, strategic performance measures*

PENGUKURAN KINERJA STRATEGIK, INNOVASI, KEWIRAUSAHAAN, DAN KELUARAN STRATEGIK

ABSTRAK

Tujuan penelitian menginvestigasi seberapa besar sistem pengukuran kinerja dapat meningkatkan inovasi dan kewirausahaan. Pada penelitian ini saya menggunakan survey studi pada manager level menengah di lembaga keuangan di Indonesia. Penulis menganalisis 157 responden menggunakan SmartPLS. Penulis menemukan bahwa sistem pengukuran kinerja dapat meningkatkan strategi berbasis differensiasi melalui inovasi dibandingkan dengan kewirausahaan. Penelitian ini menyarankan bahwa lembaga keuangan di Indonesia sebaiknya fokus pada innovasi untuk menghasilkan diferensiasi produk dalam berkompetisi dengan pesaing dibandingkan kempetisi pada harga murah. Strategi menggunakan harga lebih rendah tidak memberikan manfaat lebih bagi perusahaan dalam berinovasi.

Kata Kunci: Kewirausahaan, inovasi, keluaran strategik, pengukuran kinerja strategik

INTRODUCTION

Due to the rapid developments in global competition and technology, a company must introduce significant new products and services in order to maintain its competitive advantage(Akroyd and Maguire, 2011). Indeed, the way for an organization to sustain competitive advantage is by supporting its own entrepreneurs and innovators. The role of management is simply to support innovation and entrepreneurship (Davila and Foster, 2008; Davila, Foster, and Li, 2009a; Davila, Foster, and Oyon, 2009b).

Currently, management control systems involve resource-based theories (Davila et al., 2009b; Henri, 2006), a recent phenomenon (Davila and Foster, 2008). Although, previous studies about the relationship between SPM and strategic objective shows a significant contribution in the field, very few study links those to the RBV theory. Henri (2006, p. 530) suggested in his statement "Despite considerable interest in the relationship between management control systems (MCS) and strategy, the MCS literature has devoted scant attention to the RBV". Morever, links between management control systems and entrepreneurship on the one hand, and innovation on the other, receive little attention from researchers in the field of management accounting (Davila et al., 2009b). Therefore, this study seeks to explore the effect of innovativeness and entrepreneurship on the relationship between management control systems and strategic outcomes. More specifically, the current study applies one element of management control: *performance measurement system* (PMS) .

PMS plays a critical role in sustaining excellent competitive and strategic outcomes. Some proponents claim that innovation and entrepreneurship are the two elements that most often lead to superior performance (Hult, Ketchen Jr, and David, 2001; Hurley and Hult, 1998). For example, an organization that has a strong entrepreneurship orientation may discover new opportunities to exploit existing resources (Alvarez and Busenitz, 2001; Wiklund and Shepherd, 2003).

Simons (1995) notes that PMS can stimulate managers to search for new opportunities and gain information to be creative (Simons, 1995). I investigate the effect of PMS on entrepreneurship and innovation.Using Two recent studies of the Indonesian service sector data, Yuliansyah, Rammal, and Rose (2016) and Yuliansyah, Gurd, and Mohamed (2017), this study contributes to the extent to which PMS links with entrepreneurship and innovation (1) in the service sector and (2) in Asian countries in the last 20 years. In addition, practical contribution of the study is that SPM can help organisation to build their entrepreneurship and innovativeness culture to improve an organisational performance through creating of strategic outcomes.

We believe that SPM can enhance strategic outcomes (Baird, 2017; Pollanen, Abdel-Maksoud, Elbanna, and Mahama, 2017; Yuliansyah, Gurd, and Mohamed, 2017; Yuliansyah and Khan, 2015a) through entreprenueship and innovativeness(Davila and Foster, 2008; Davila et al., 2009a; Davila et al., 2009b).strategic performance measures (SPM) can motivate managers to seek new markets, a task requiring entrepreneurial skills. This approach needs strong leadership (Dess, Lumpkin, and Covin, 1997; Miller, 1983).The approach is effective for both goods and services (Hunt and Morgan, 1996). I propose the following hypotheses:

H_1: There is a positive relationship between SPM and innovation.

H_2: There is a positive relationship between innovation and strategic outcomes

Hurley and Hult (1998), Hunt and Morgan (1995), Hunt and Morgan (1996) and Hult, Hurley, and Knight (2004) place the most importance on innovation to improve company performance. Innovative employees survive and succeed by solving problems and meeting challenges (Hult et al., 2004). In addition, innovation lets the company maintain prices because it is more in demand than its competitors (Hult et al., 2004; Webster, 2004). Specifically, Sher and Lee (2004) speak of (1) reduced operating costs, (2) shortened lead-time, and (3) product differentiation. Bisbe and Otley (2004) note that PMS can support individual innovation. Henri (2006b) agrees. Akroyd and Maguire (2011) make it clear that SPM reduces uncertainty during the process of innovation.

Yuliansyah and Razimi (2015)'s study of companies listed on the Indonesian stock exchanges finds that PMS fosters innovation. In addition, Cardinal (2001)'s study of pharmaceutical companies finds a positive relationship between performance control and innovation. I propose the following hypothesis:

H_3: There is a positive relationship between SPM and entrepreneurship

H_4: There is a positive relationship between entrepreneurship and strategic outcomes.

Chenhall (2005) explicitly examines the relationship between SPM and strategic outcomes. He shows that SPM helps managers to create long-term sustainable competitive advantages with both product differentiation and lower costs of doing business. One of the biggest advantages of SPM is that it measures how well a business systematically implements its strategy (Grafton, Lillis, and Widener, 2010). In addition, broader information (both financial and non-financial) illuminates a wider range of strategies. For example, if an organization wants to focus on lowering costs, the financial PMS is effective (Govindarajan, 1988), However, if an organization desires to focus on differentiation, a non-financial PMS is more appropriate (Perera, Harrison, and Poole, 1997) because it can be used, for example, to measure customer satisfaction. Lillis and Veen-Dirks (2008) show that using both financial and non-financial PMS at the same time facilitates joint strategic decisions on both low-cost and differentiation strategies. Thus, based on the above information, I propose Hypothesis 5:

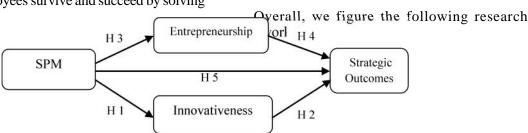H_5: There is a positive relationship between SPM and strategic outcomes

Overall, we figure the following research work

Figure 1. A research framewok of the study

RESEARCH METHOD

To collect data on Indonesian financial institution managers, I obtain details of these companies from the central bank of Indonesia and, for finance and insurance companies, from the Indonesian Capital Market Supervisory Agency's website. A two-step pilot study precedes the main survey, for these reasons: 1) to ensure that the questions are clear and easily understood by the respondents, (2) to identify and rectify any problems with the questions, and (3) to ensure that the questions in translation convey the same meaning as the original (O'Connor, Vera-Muñoz, and Chan, 2011, p. 251). The first step is, of course, to translate the questions from English into Indonesian. The second step is to administer the questionnaire to a representative selection of respondents, and the last phase is to confirm its validity and reliability.

With that encouragement, I send a total of 710 questionnaires to 355 organisations and receive 176 responses, from which 158 are usable (22.25%), a good response for this type of research. Table 1 illustrates the demography of respondents that was taken from Yuliansyah, Rammal, and Rose (2016) and Yuliansyah et al. (2017).

Table 1.
Demographic information of respondents

		n	Cumulative	%	Cumulative (%)
Gender	Men	92	92	58.2	58.2
	Women	66	158	41.8	100
Age	< 35	51	51	32.3	32.3
	36-40	42	93	26.6	58.9
	41-45	37	130	23.4	82.3
	>46	28	158	17.7	100
Division	Accountingand finance	51	51	32.3	32.3
	General	24	75	15.2	47.5
	Human resources	44	119	27.8	75.3
	Marketing	15	134	9.5	84.8
	Others	24	158	15.2	100
Type of Business	Banking	56	56	35.4	35.4
	Financing	32	88	20.3	55.7
	Insurance	57	145	36.1	91.8
	Others	13	158	8.2	100

Source: Result of data, 2011

Thirteen questions about SPM are developed by Yuliansyah et al. (2017), and are based on Explanatory Factor Analysis (EFA). They fall into two categories: 1) Strategic and operational linkages (SOL) and 2) Internal aspects of employees (IAE). Respondents indicate their performance characteristics using a seven-point Likert scale anchored by 1 (not important) and 7 (very important).

Entrepreneurship is developed by Naman and Slevin (1993) and Hult (1998). This instrument is used by Hult et al. (2001), and Henri (2006a). Based on the EFA test, this construct also has two dimensions: 1) Proactiveness and 2) Risk-taking. Respondents describe their company using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

The 5-item scale of innovativeness iis developed by (Burke, 1989), by Hult and Ketchen Jr (2001), and by (Henri, 2006, 2010). Respondents describe their company using a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree).The strategic outcomes instrument is originally by Porter (1990). However, I use one adapted from Auzair and Langfield-Smith (2005). Respondents evaluate their organization using a seven-point Likert scale anchored by 1 (not at all) and 7 (strongly important).

RESULTS AND DISCUSSION

I choose structural equation modelling (SEM) because it '*provides the researcher with an opportunity to adopt a more holistic approach to model building*' (Smith and Langfield-Smith, 2004, p. 59-60). More specifically, this study uses the component-based approach PLS rather than covariance-based structural equating modelling (CBSEM) such as AMOS and LISREL. The PLS software tool is used because the package has several advantages: 1) the minimum sample size requirement is small (Chin, 1998; Chin, Marcolin, and Newsted,

2003; Chin, Peterson, and Brown, 2008; Faizan, Mostafa, Marko, M., and Kisang, 2018; Franziska, R., M., and Christopher, 2016; Gefen and Straub, 2005; Gudergan, Ringle, Wende, and Will, 2008; Hair, Ringle, and Sarstedt, 2011) compared to using AMOS, whose recommended minimum sample size is 200(Tomarken and Waller, 2005; Urbach and Ahlemann, 2010). 2) because SPM is a self-developed instrument, PLS is appropriate for examining variables that have not been used in a prior study (Chin, 1998; Chin et al., 2003; Chin et al., 2008; Faizan et al., 2018; Franziska et al., 2016; Gefen and Straub, 2005; Gudergan et al., 2008; Hair et al., 2011).

In management accounting literature the PLS is in wide use by scholars (e.g. Hall, 2008, 2011; Hartmann and Slapnièar, 2009, 2012; Naranjo-Gil and Hartmann, 2007; Yuliansyah and Khan, 2015a; Yuliansyah and Khan, 2017; Yuliansyah and Khan, 2015b; Yuliansyah and Razimi, 2015). To test the SEM, Hulland (1999) suggests two sequential phases: the measurement model and the assessment structural model. The following sections discuss those models.

There are two main assessments in the measurement model: reliability and validity. The measurement reliability was conducted by testing individual items using Cronbach's alpha and composite reliability. Reliability is "satisfactory" if it is higher than 0.7 and it is "acceptable" if it is higher than 0.6 (Chin, 1988). Table 3 summarizes Cronbach's alpha and shows composite reliability ranging between 0.750 and 0.940. Thus, reliability is well above satisfactory.

Table 2.
Measurement Model (n=158)

	Original Sample	Sample Mean	Standard Error	T Statistics
SOL -> Entre1	0,459	0,441	0,132	3,470
SOL -> Entre2	0,458	0,448	0,121	3,779
SOL -> Inno	0,493	0,474	0,121	4,071
IAP -> Entre1	0,013	0,043	0,121	0,107
IAP -> Entre2	-0,042	-0,022	0,114	0,372
IAP -> Inno	0,107	0,132	0,117	0,910
Entre1 -> LC1	0,208	0,200	0,130	1,594
Entre1 -> Diff	0,087	0,093	0,095	0,913
Entre2 -> LC1	0,074	0,078	0,115	0,640
Entre2 -> Diff	0,095	0,092	0,088	1,072
Inno -> LC1	0,157	0,156	0,132	1,189
Inno -> Diff	0,274	0,275	0,104	2,639
SOL -> LC1	0,326	0,313	0,143	2,282
SOL -> Diff	0,471	0,467	0,097	4,844
IAP -> LC1	0,075	0,097	0,125	0,602
IAP -> Diff	0,179	0,187	0,102	1,760

Source: Result of data, 2011

Validity is tested by analysing convergent validity and discriminant validity. Convergent validity ensures (1) that observable indicators measure the latent variable, (2) that the indicators are significantly fit, and (3) that they are highly correlated. It is tested using the average variance extracted (AVE) and is "adequate" if the AVE is higher than 0.5 (Fornell and Larcker, 1981; Henseler, Ringle, and Sinkovics, 2009). As seen in Table 3, all AVEs of all the constructs exceed 0.5. That is, all the constructs are adequate in term of convergent validity.

Table 3.
AVE, composite reliability and Cronbach's alpha

	AVE	Composite Reliability	R Square	Cronbachs Alpha
Strategic and operational linkages (SOL)	0,663	0,940		0,927
Internal aspects of employees (IAE)	0,676	0,912		0,882
Proactiveness	0,532	0,849	0,220	0,778
Risk-taking	0,633	0,873	0,181	0,807
Innovativeness	0,562	0,863	0,336	0,805
Low-cost strategy	0,800	0,889	0,256	0,750
Differentiation strategy	0,591	0,920	0,495	0,900

Source: Result of data, 2011

Another validity test is discriminant validity. The discriminant validity is measured in two ways: the Fornell-Larcker measure and cross-loading(Fornell and Larcker, 1981). The Fornell-Larcker criterion can be comparing the the square root of the AVE of latent variables. In addition, good dicriminant validity when the value of the square root of the AVE along the diagonal is greater than correlations between constructs. Table 4 shows that discriminant validity is satisfactory.

Table 4.
Discriminant validity of latent variables correlations

Latent variables	Correlations						
	SOL	**IAE**	**Pro-activeness**	**Risk-taking**	**Inno**	**Low-cost**	**Diff**
SOL	0,814						
IAE	0,770	0,822					
Pro-activeness	0,469	0,367	0,73				
Risk-taking	0,425	0,310	0,628	0,795			
Innovativeness	0,575	0,486	0,725	0,609	0,75		
Low-cost	0,384	0,326	0,448	0,369	0,452	0,894	
Differentiation	0,609	0,542	0,523	0,471	0,615	0,452	0,769

Source: Result of data, 2011

Furthermore, discriminant validity measurement using cross loading requires that factor loadings should be above 0.5 (Al-Gahtani, Hubona, and Wang, 2007; Hulland, 1999) and higher than any other constructs (Barclay, Higgins, and Thompson, 1995; Urbach and Ahlemann, 2010). As shown in Table 5, discriminant validity using cross loading is adequate.

Table 5.
Cross loadings

	SOL	**IAE**	**Entre1**	**Entre2**	**Inno**	**Low-cost**	**Diff**
SOL1	0,747	0,574	0,258	0,239	0,399	0,252	0,452
SOL2	0,820	0,588	0,302	0,308	0,449	0,294	0,436
SOL3	0,740	0,536	0,365	0,294	0,376	0,300	0,381
SOL4	0,838	0,652	0,326	0,309	0,430	0,332	0,464
SOL5	0,868	0,682	0,459	0,430	0,555	0,357	0,542
SOL6	0,845	0,630	0,434	0,409	0,514	0,272	0,533
SOL7	0,808	0,652	0,437	0,383	0,511	0,354	0,552
SOL8	0,837	0,679	0,424	0,348	0,471	0,323	0,563
IAE1	0,625	0,755	0,206	0,161	0,278	0,134	0,362
IAE2	0,641	0,831	0,212	0,278	0,372	0,262	0,392
IAE3	0,637	0,880	0,271	0,222	0,370	0,249	0,466
IAE4	0,624	0,806	0,454	0,354	0,524	0,374	0,501
IAE5	0,645	0,833	0,282	0,203	0,380	0,248	0,464
ENTRE1	0,378	0,314	0,788	0,427	0,605	0,287	0,505
ENTRE2	0,306	0,247	0,751	0,548	0,574	0,315	0,440
ENTRE3	0,225	0,132	0,669	0,574	0,483	0,247	0,331
ENTRE4	0,393	0,320	0,625	0,295	0,500	0,356	0,229
ENTRE5	0,389	0,297	0,800	0,477	0,524	0,417	0,376
ENTRE6	0,395	0,303	0,565	0,819	0,560	0,315	0,398
ENTRE7	0,300	0,212	0,533	0,779	0,507	0,313	0,413
ENTRE8	0,249	0,190	0,397	0,747	0,435	0,217	0,302
ENTRE9	0,385	0,267	0,482	0,833	0,428	0,313	0,371
INNO1	0,491	0,471	0,553	0,435	0,801	0,368	0,487
INNO2	0,196	0,127	0,324	0,287	0,549	0,246	0,123
INNO3	0,499	0,410	0,587	0,480	0,686	0,324	0,616
INNO4	0,471	0,385	0,600	0,502	0,865	0,383	0,472
INNO5	0,381	0,306	0,619	0,524	0,806	0,351	0,425
SO1	0,332	0,271	0,378	0,328	0,398	0,886	0,372
SO2	0,354	0,310	0,421	0,332	0,411	0,902	0,434
SO3	0,516	0,492	0,309	0,225	0,415	0,493	0,737
SO4	0,351	0,329	0,271	0,250	0,376	0,244	0,663
SO6	0,488	0,386	0,314	0,289	0,390	0,266	0,670
SO7	0,404	0,328	0,453	0,428	0,465	0,304	0,753
SO8	0,482	0,432	0,572	0,569	0,637	0,437	0,840
SO9	0,442	0,453	0,383	0,367	0,463	0,347	0,827
SO10	0,513	0,436	0,344	0,227	0,397	0,241	0,781
SO11	0,533	0,461	0,494	0,453	0,572	0,399	0,853

Source: Result of data, 2011

The evaluation of the structural model can be carried out by calculating means of the R^2 of for dependent variables and path coefficient tests. In Camisón and López (2010), the threshold level of 0.1 for R^2 is acceptable. By their criterion, my R^2 of the endogenous constructs is over the threshold.

Table 6.
The result of PLS structural model: path coefficient, t-statistics and R^2

Dependent variables	Independent variables					R^2
	Strategic and operational linkages	Internal aspect of employees	Proactiveness	Risk-taking	Innovation	
Pro-activeness	0,459	0,013				0,152
Risk-taking	0,458	-0,042				0,469
Innovation	0,493	0,107				0,156
Low-cost strategy	0,119	0,059	0,208	0,074	0,157	0,473
Differentiation strategy	0,253	0,153	0,087	0,095	0,274	

Source: result of data, 2011

Hypothesis 1 postulated a positive relationship between SPM and innovation. Table 5 indicates that strategic and operational linkages have a strong relationship with innovation (β=0.493, t = 4.071, p < 0.01). In contrast, internal aspect of employees has no relationship with innovation (β=0.107, t = 0.910, p < 0.1). Thus, Hypothesis 1 is partly supported. I claim that when an organisation develop SPM, it can enhance innovation. This study supports Bisbe and Otley (2004) mentioned that a performance measurement systems can increase innovation.

Hypothesis 2 states that there is a positive relationship between innovation and strategic outcomes. I find that innovation has no effect on low-cost strategy (β=0.157, t = 1.189, p < 0.1) but it has a strong effect on differentiation strategy (β=0.274, t = 2.639, p < 0.01). Hypothesis 2 is partly supported. In previous studies, innovation is a way how an organisation can compete with its rivals by offering new and/or developed products/services. It is not like in manufacturing industry, in financial institution, firm explore to find new how to achive an excellent service. Thus, our study supports Yuliansyah, Rammal and Rose (2016) that innovation in service sector can support differentiation strategy, not for low-cost strategy.

Hypothesis 3 proposes that SPM has a positive effect on entrepreneurship. My results indicate that strategic and operational linkages has a positively associated with proactiveness (β=0.459, t = 3.470, p < 0.01) and Risk-taking (β=0.458, t = 3.779, p < 0.01). Additionally, another dimension of SPM, internal aspect of employees, has no effect on entre 1 nor on entre 2 either. Thus, according to the results, Hypothesis 3 is partly supported.

Hypothesis 4 claims a positive relationship between entrepreneurship and strategic outcomes. The findings suggest that proactiveness has a positive effect on low-cost strategy (β=0.208, t = 1.594, p < 0.1) rather than on differentiation strategy (β=0.087, t = 0.913, p < 0.1). Furthermore, Risk-takinghas no relationship with either low-cost or differentiation strategies, (β=0.074, t = 0.640, p < 0.1) and (β=0.095, t = 1.072, p < 0.1) respectively. Hypothesis 4, like the others, is partly supported.

Hypothesis 5 says that there is a positive relationship between SPM and strategic outcomes. My results show that strategic and operational linkages have no effect on low cost strategy (β=0.119, t = 0.931, p < 0.1); they do, however, have a strongly positive association with differentiation strategy (β=0.253, t = 2.401, p < 0.01). Similarly, internal aspect of employee has also no effect on low-cost strategy (β=0.059, t = 0.515, p < 0.1) but it has a weak relationship with differentiation strategy (β=0.153, t = 1.488, p < 0.1). Thus, Hypothesis 5 is also partly supported.

CONCLUSION

The study seeks to investigate the effect of strategic performance measures on strategic outcomes through entrepreneurship and innovativeness. The link between SPM and entrepreneurship and innovativeness to leverage business performance is often studied in the management accounting literature. I believe that SPM has a significant role in stimulating individual skills.

Most Indonesian financial institutions are headquartered in Jakarta. My respondents are middle
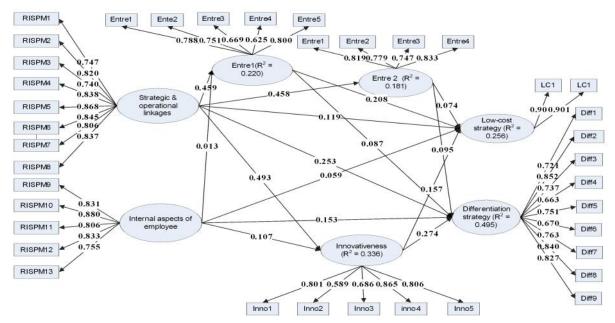
Figure 2. PLS Model with Significant Path Coefficients

managers in the headquarters office, because middle managers receive all executive instructions and interpret those instructions to lower level management. Hence, middle level managers have more knowledge of organisational goals.

From my very satisfactory total of 157 usable data points, I find that SPM has a significant role in stimulating entrepreneurship and innovativeness. However, not all dimension of entrepreneurship and innovativeness improves strategic outcomes unless innovativeness links to differentiation strategy. Overall, this study indicates that SPM enhances differentiation strategy only through innovativeness and not through entrepreneurship.

I predict that (1) differentiation is the key to sustainability in Indonesian financial institutions (Yuliansyah et al., 2016), and (2) that trust and excellent service are the ultimate predictor of success, especially for financial institutions which have relatively little difference in their 'product', financial services. This study implies that financial institutions in Indonesia may focus on differentiation strategy to compete with rivals. In contrast, competition on price provides no advantage for any firm.

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