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Impact of Human Capital Development on the Managerial Workforce of SMEs in Sabah, Malaysia

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ABSTRACT

Globalisation and entrepreneurship expansion have led to the emergence of Small and Medium Enterprises (SMEs) in economic development. These would contribute to a country's national income, poverty reduction, and thus increase the standard of living in underdeveloped, rural and urban areas. However, restrictions on SMEs performances, capital flows and entrepreneurship activities have not been studied extensively. The goal of this study is thus to investigate the factors affecting the performances of these SMEs. Factors under study were Entrepreneurship Orientation (EO), Human Resource Management (HRM), Marketing Orientation (MO), and Information and Communication Technology (ICT). Data were collected from 200 questionnaires distributed to the SME's services sector in Kota Kinabalu, in Sabah, Malaysia where only 129 were usable; hence, a successful response rate of 64.5%. Structural equation modelling (SEM) using partial least squares (PLS) method is conceptualized and executed. The data were analyzed and interpreted using the Statistical Package for Social Science (SPSS) version 20.0 and SmartPLS 3.0. The results found that male entrepreneurs constituted 61.2% with a low women participation of 38.8% in the SMEs managerial workforce. Potential human capital development can be focused based on age and education. Human resources management (HRM) had highly contributed to the SMEs performances with 0.928 (composite reliability) and 0.773 (path coefficient), and then followed by MO and EO. ICT was found to have a significant impact, but its hypothesis was not supported. This study thus suggested that entrepreneurial investment in ICT could further help the SME's owners or managers managed their businesses effectively and efficiently.

Keywords

Small and Medium Enterprises (SMEs), Partial Least Squares (PLS), Structural Equation Modelling (SEM), human capital development, managerial workforce.



1. INTRODUCTION

One of the most important role in generating national income is through Small and Medium Enterprises (SMEs). Despite the competitive business environment, the performances of Malaysian SMEs remained encouraging. [1] recorded that SMEs had contributed 6.3% to the GDP growth compared to 2012 with only 6%. Besides, SMEs had largely contributed by the services sector, and further supported by the construction sector. It was also recorded in 2013 that there was a growth of 6.8% value-added of SMEs in the services sector compared with only 5.9%. in 2012. Thus, this strong performance was driven by the overall services sector as well as related services sub-sectors namely, telecommunications, private education, health care, finance, insurance, professional and business services. In today's competitive business environment the economy is constantly evolving, therefore it is necessary to develop the human capital in order to face these challenges. The shortage of skilled workers in SMEs and the characteristics of SME's owners-managers might restrict them to expand their businesses.

A survey which had been conducted by SME Corporation showed that generally the respondents did not much emphasis on human capital development [2]. There were various human capital development programmes that had been implemented, such as the followings:

- National Dual Training System (NDTS)
- SME Training Needs Analysis
- HR Capabilities Building Programme for SMEs
- Entrepreneurship Development for Orang Asli Community
- *Inkubator Keusahawanan Ibu Tunggal (I-KIT)*
- SME Human Capital Development.

Thus, the objective of this study would be to investigate the factors affecting the human capital development and their impacts on SMEs in Sabah, Malaysia. This paper is divided into five sections. The first section is the overview on the importance of SMEs, section two is on the background study related to the determinants of SMEs performance. The third section is on past researches on similar studies, while the fourth section is on the methodology and the fifth section is on the research findings. The last section is the conclusions of the study.

2. BACKGROUND STUDY

Management practice is defined in terms of funding, marketing, operations and human resource [3] where sales, profit, business stability, business growth, increase in the number of employees, customers' satisfaction, increase in the value of assets and business networking were some the



SMEs business performance indicators. On the other hand, other indicators on business performances were such as Entrepreneurship Orientation (EO), Marketing Orientation (MO), Human Resource Management (HRM) and Information and Communication Technology (ICT).

Entrepreneurial Orientation (EO) was defined by [4] as a managerial attitude oriented toward the strategy-making processes that would provide organizations with a basis for entrepreneurial decisions and actions, while [5] stated that Marketing Orientation (MO) was one of the important tools in measuring SMEs business performances. However, on Human Resource Management (HRM) [6] claimed that it was important to note that unlike other resources in organization, human resources were potentially be non-obsolete, and their skills could be transferable. A research also had been done in Malaysia regarding HRM practices enhanced organizational performance of SMEs by [7]. The research had found that improved SMEs performance could be gained through HRM practices and organizational innovative capability. [8] further had found out that organizational effectiveness was enhanced through the technology adoption in SMEs where the use of technology would help SMEs to compete globally. Meanwhile, [9] found that there was a positive relationship between ICT adoption and SME's performance.

3. LITERATURE REVIEW

In recent studies, [3] had identified that entrepreneurial characteristics and management practices were important attributes for the performance of enterprises. The sample comprised of a total of 158 small enterprises under *Tunas Mekar* programme that operated in Terengganu and Kelantan, Malaysia. Of the total population, only 62 respondents responded to the survey. From the multiple regression analysis, the findings showed that there were several determinants on the performance of small enterprises. However, only three variables indicated significant relationships with the enterprise's performance, viz. entrepreneur characteristics, management practice, training and guidance. This study claimed that the relationship between entrepreneur characteristics and small businesses indirectly supported the Theory of Economic Development. Furthermore, the evidences clearly indicated that management practices especially on financial, accounting, marketing and operations were very important factors in determining the performance. Besides, this study also found that the more training programmes and guidance undertaken by an enterprise, the better would be the performance.

A study which was conducted in Bangladesh by [6] discussed the significance on Human Resources Management (HRM) of the SMEs. This study suggested that human resources were potentially be non-obsolete and



their skills were transferable across varieties of products, technologies and markets. In addition, HRM practices focused on human element activities for sustainability of an organization. Thus, it was recommended that more research on managing human resource in SMEs would be conducted. Meanwhile, [10] analyzed the strategic human resource management practices in Iranian international sector performance. Human resources planning, managing change, performance of employee, compensation, health, safety, legality, labor and industrial relations were the basic criteria which every firm had to follow. The research found that the proposed variables namely, recruitment, performance appraisal, compensation and training had a considerable positive association with the international sector performance.

Most of the SMEs were found not being able to sustain in recent competitive environment. This was due to the lack of preparedness and too dependable on government support [7]. Hence, SMEs need to implement appropriate strategies, especially on human resources management (HRM). In the Malaysian context, five basic HRM practices had been selected, namely training and development, reward system, performance appraisal, as well as communication and information sharing. In addition, [7] had highlighted that SMEs were able to obtain better performances by an effective use of their organizational resources and capabilities. This was supported by [11] where HRM practices were systematically designed towards improving the effectiveness of SME's performances.

The role of ICT can be seen its vitality via the social media where it was found to be one of the alternatives which gave direct influence in business success [12]. A case study carried out in Zimbabwe had highlighted on the several advantages to promote any business activities through the social media, namely:

- a) Gain better understanding of customer needs
- b) Increase brand awareness
- c) Create relationships between customers and suppliers
- d) Create business network
- e) Low cost of marketing strategy

On top of that, women were mentioned by [12] as the dominant group influenced the most by the social media in the buying behaviour. Hence, in today's environment, business entrepreneurs should consider to take this opportunity as one of their business strategies for success.

A practical approach was developed by [13] to improve customer's satisfaction. This was because customer's dissatisfaction could give a bad impression on an organization's image as well as its performance. There were three systems in the approach, viz. decision system, effective system



and information system. Hence, this approach could reduce any action that might lead to the loss of customer's interest, and consequently, leading to losses in profit and sales.

4. METHODOLOGY

For this study, a survey questionnaire (closed-questions) served as an instrument for data collection. A total of 200 SMEs services sector in Kota Kinabalu, Sabah were selected from SME Corporation of Malaysia. Out of 200 questionnaires distributed to the owners or managers, only 129 questionnaires were usable. This produced a response rate of 64.5%.

The data were then analyzed and interpreted using the Statistical Package for Social Science (SPSS) 20.0 and SmartPLS 3.0 software program [14]. SPSS was used to analyze the demographic profiles of the respondents, while the partial least squares-structural equation modelling (PLS-SEM) was used to investigate the factors affecting the performances of the SMEs.

The dependent and independent variables of the study were adopted and modified from previous literatures. There were seven items measured under entrepreneur orientation (EO) which were adopted from [15]. Similarly, seven items were measured under human resource management (HRM) from [16]. For market orientation (MO), following [17], only six items were measured. In addition, five information technology (ICT)'s measurements were used with single item measure for SMEs' performance had been adopted from [18].

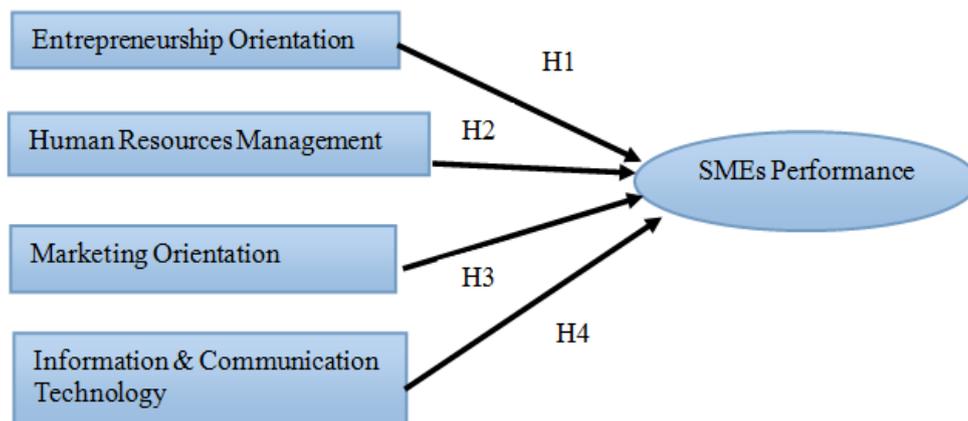


Figure 1: The Framework of Relationships between IVs and DV [19].

Figure 1 shows the framework of relationships between independent variables (IVs): Entrepreneurship Orientation (EO), Human Resource



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Management (HRM), Marketing Orientation (MO), Information and Communication Technology (ICT) towards the dependent variable (DV): the SMEs Performance. The following hypotheses were obtained:

- H1:** Entrepreneur Orientation is positively related to SMEs performance.
- H2:** Market Orientation positively related to SMEs performance.
- H3:** Human Resource Management is positively related to SMEs performance.
- H4:** Information and Communication Technology is positively related to SMEs performance.

Data Analysis Using PLS-SEM

Structural equation modeling (SEM) was a well-known research tool for theory development especially in the social and marketing studies. [20] stated that SEM was a general term to describe the validity of substantive theories with multivariate statistical models and empirical data. SEM comprised of two main approaches, namely, a co-variance based (CB-SEM) and variance-based such as partial least square (PLS-SEM). This study employed PLS-SEM for data analysis.

According to [21], PLS were defined using two sets of linear equations: inner model (structural) and outer model (measurement). The measurement discussed the relationships between latent variables. In contrast, the structural model specifies the relationships between a latent variable and its manifest variables. Moreover, the structural model can only be analyzed after the measurement model. The PLS path modeling characteristics are summarized as follows [21];

- PLS delivers latent variable scores, i.e proxies of constructs which are measured by one or several indicators.
- PLS path modeling avoids small sample sizes problems and therefore can be applied in some situations when other methods unable to do so.
- PLS path modeling can predict very complex models with several latent and manifest variables.
- PLS can handle both reflective and formative measurement models.

Table 1 summarized the validity guidelines for measurement and structural model. For this study, the measurement model was evaluated using the following analyses: internal consistency reliability, indicator reliability, convergent reliability and discriminant validity. Next, the coefficient of determination (R^2) and path coefficients were evaluated in structural model assessment. Higher (R^2) indicated the higher predictive ability and the variance explained by the independent variables.



Table 1: Validity Guidelines for PLS-SEM Analysis [22]

	Validity Type	Criterion	Guidelines
	Measurement Model	Internal consistency	CR
Indicator reliability		Indicator loadings	Item’s loading >0.7 and significant at least at the 0.05 level
Convergent validity		AVE	AVE>0.50
Discriminant Validity		Cross loading Fornell and Lacker	Item’s loading of each indicator is highest for its designated constructs. The square root of AVE of a construct should be greater than the correlations between the construct and other construct in the model
Structural Model	Model Validity	(R ²)	0.67- substantial 0.333- moderate 0.190- weak
	Model Validity	Path Coefficients	At least 0.100 and at significance of 0.05.

5. RESULTS AND DISCUSSIONS

Table 2: Demographic Profiles of the Sabah Respondents on SMEs

Category	Sabah	
	N	Percentage %
Gender		
Male	79	61.2
Female	50	38.8
Age		
21 - 35	44	34.1
36 - 45	44	34.1
46 and Above	41	31.8
Education Level		
Primary School	19	14.7
Secondary School	68	52.7
Diploma / Degree	37	28.7
Other	5	3.9

Table 2 depicted the demographic profiles of the respondents which showed that 61.2% of the owners/manager of SMEs in Kota Kinabalu, Sabah were males, while 38.8% were females. This revealed that there was



still a low participation by the women workforce eventhough great efforts to increase women participation in entrepreneurship had been made. However, recent trends had indicated that the women entrepreneurs were seemed trying to catch up with the male entrepreneurs due to their change in attitudes and paradigm shift. Hence, there was an increase from the more urbanized state of Selangor [21] where the females entrepreneurs formed only 14.4% of the managerial workforce and the males were still in dominance at 86%. This has thus indicated a dynamic participative role of women entrepreneurship since the SME annual report of [2] on the economic and human capital development of small and medium enterprises (SMEs) between Malaysia's urban (Selangor) and sub-urban areas (Sabah).

Next, this study considered the age of the SMEs respondents. In Kota Kinabalu, 34.1% of the owner-mangers were between 21-35 years and between 36-45 years, while about 31.8% of them were above 46 years and above. This study revealed that most of the SME's owners in sub-urban area were dominated by younger entrepreneurs. Besides, 14.7% of the owners were having educational qualification of primary school, with 52.7% were found with secondary school's qualification and 28.7% with Diploma/Degree qualifications. Only 3.9% with other qualifications. Thus, it can be clearly suggested that in Sabah, more initiatives and activities should be implemented especially on the human capital development.

As mentioned earlier, there were 7 items of EO, 7 items of HRM, 6 items of MO and 5 items measured under ICT. Items with indicator loadings of greater than 0.5 and significant levels of more than 0.05 would remain in the model. Hence, it could be seen from Table 3 that the items which had remained in the model were three items of EO (E3, E4, E5), four items of HRM (H4, H5, H6, H7), three items of MO (MO2, MO4, MO5) and two items of ICT (ICT4 and ICT5) that had achieved satisfaction level.

A measurement model has satisfactory internal consistency reliability when the composite reliability (CR) of each construct exceeds the threshold value of 0.7. Table 3 showed that the CR of each construct for these SMEs ranged from 0.860 to 0.928. This indicated that the items used had satisfactory internal consistency reliability.

Next, the indicator reliability was measured by examining the item loadings. A measurement model is said to have satisfactory indicator reliability when each item's loading is at least 0.7 and significant at least at the 0.05 level. As shown in Table 3, each item loading ranged from 0.790 to 0.923 except for item E5. Convergent validity is then assessed by its average variance extracted (AVE) value. Convergent validity is adequate when the constructs have AVE value of at least 0.50. From Table 3, it could be seen that all constructs had AVE ranging from 0.607 to 0.775 respectively, hence greater than 0.50.

**Table 3: Internal Consistency, Indicator Reliability and Consistency Reliability**

Model Construct	Measurement Items	Loadings	CR	AVE
Entrepreneurs Orientation (EO)	E3	0.834	0.860	0.607
	E4	0.790		
	E5	0.692		
Human Resources Management (HRM)	H4	0.894	0.928	0.684
	H5	0.918		
	H6	0.885		
	H7	0.898		
Marketing Orientation (MO)	MO2	0.820	0.906	0.707
	MO4	0.870		
	MO5	0.808		
Information & Communication Technology (ICT)	ICT4	0.802	0.911	0.775
	ICT5	0.923		

The discriminant validity is assessed by using Fornell and Larcker's criterion [24]. The square root of AVE should exceed the correlations between the measure and all the other measures, and the indicators' loadings are higher against their respective construct compared to the other constructs. These results were tabulated in Table 4. The item loadings of each indicator could be seen to be highest for its designated constructs. Hence, this study had proven that all the reliability and validity tests conducted for the measurement model had achieved satisfactory level.

Table 4: Discriminant Validity

	EO	HRM	ICT	MO	SME
EO	0.774				
HRM	0.469	0.899			
ICT	0.200	0.487	0.865		
MO	0.424	0.544	0.451	0.833	
SME	0.500	0.870	0.544	0.527	0.890

The structural model was assessed using the coefficient of determination (R^2) and the path coefficients. The R^2 value indicated the amount of variance in the dependent variable that would be explained by the independent variables. Higher (R^2) would indicate the higher predictive ability. For this study, SmartPLS algorithm was used to obtain the R^2



values, while SmartPLS bootstrapping was used to generate the t-statistics values [15]. The bootstrapping generated 500 sub-samples from 300 maximum iterations. The R^2 value for model was 0.986. Each path connecting two latent variables represented a hypothesis. Based on the t-statistics output in Table 5, the significant level of each relationship was examined with at least 0.1, positive sign direction and consist of a path coefficient value (β) ranging from 0.061 to 0.773 [25; 26]. Assessment of the path coefficients for the model showed that all the proposed hypothesis were supported except for H4, i.e. Information and Communication Technology (ICT) on the performance of SMEs in Sabah. This was expected since Sabah is still a developing state whereby there is room for improvement in the infrastructural facilities, physical development and internet accessibility. Human Resource Management (HRM) was the most significant on the SMEs performance with a path coefficient of 0.773.

Table 5: Path Coefficients

	Path Coefficients (β)	Standard Error (STERR)	t-Statistics	Supported	Hypotheses
EO => SME's Performance	0.264	0.104	2.555	YES	H1
HRM => SME's Performance	0.773	0.113	5.439	YES	H2
MO => SME's Performance	0.328	0.129	2.001	YES	H3
ICT => SME's Performance	0.061	0.327	0.616	NO	H4

6. CONCLUSIONS

The results obtained in this study show that human capital development involving Human Resources Management (HRM) has the highest significant relationship on the SMEs performance compared to the other determinants. This is supported by [7] who also claimed that improved SMEs performance can be gained from human resource management. For Malaysia to transform to the new Malaysian economic model, SMEs need to seek opportunities to upgrade themselves besides developing their organizational capabilities. This is in line with the Malaysian economic strategies to become a high-income, developed country by 2020 [1]. Women entrepreneurs in Sabah are found to have played a more promising role in managerial activities as compared to Selangor [23]. From the PLS-SEM analyses, there are positive relationships between entrepreneur orientation, human resource management and marketing orientation with respect to the performance of SMEs, except for information and communication



technology. ICT is identified as an entrepreneurial investment for SMEs to gain and exploit the positive outcomes in productivity growth, organization expansion, efficiency, effectiveness, competitiveness, etc. as confirmed by [27]. The structural model obtained demonstrated achievable satisfactory validity and reliability of the performance indicators. This study thus concludes that the SME's owners or managers are able to manage their businesses effectively and efficiently. However, there are several limitations encountered in the study. Firstly, the study is merely carried out on the service sectors only. Hence, more studies should be devoted on different sectors of the SMEs in Malaysia. Secondly, this study had used four specific independent variables only. Further research can thus be suggested to be carried out on more independent variables and/or with the inclusion of moderating variables. Finally, biasedness in answering the distributed questionnaires may occur due to the respondents' different background and managerial experience.

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