THE RELATIONSHIP BETWEEN EDUCATION AND TECHNOLOGICAL ADVANCEMENT IN THE DEVELOPMENT OF MANAGERS' GLOBAL MINDSET

[1]ALEXANDER WOLLENBERG, [2]KEVIN NG

[1,2]St. George's University/Department of Business and Management Studies, Grenada, West Indies,Curtin University/Curtin Business School, Singapore
E-mail: [1]awollenb@sgu.edu, [2]kevin.ng@cbs.curtin.edu.au

Abstract - The objective of this research is to find the relationship of knowledge and information in terms of education as well as technological advancement to the development of managers' global mindset. The study was conducted on Small and Medium Enterprises (SMEs) in the emerging market of Indonesia.The rationale for the study was the lack of research in this area on SMEs in emerging markets of ASEAN. The study finds that both education and technological advancement contribute significantly to the development of a global mindset among managers and workforce, affecting profitability at the company level and economic growth positively.

Index Terms – ASEAN, Emerging Markets, Global Mindset, Indonesia, SME, Technological Advancement

I. INTRODUCTION

As a result of globalisation, global mindset has increasingly become important for managers from small to large enterprisesas competition in the business environment has increased [12]. Several major factors contribute to the development of managers' global mindset including knowledge and education, skills and abilities, risk avoidance, as well as international experience [1]. This article focuses on the factors of knowledge and education and their influence on shaping managers' global mindset.

Global mindset has been increasingly attracted the attention from business practitioners as well as academic researchers in this past few decades due to globalisation. Yet researchdiscusses managers of multinational companies(MNCs) and there is a lack of focus on managers of Small Medium Enterprises (SMEs). According to [16], most SME managers have strong dedication to make their businesses globally competitive, which impliesthey haveglobalisation on their mind, and by extension a global mindset, e.g. [1] and [16]. Since Indonesia is a developing country and considered an emerging market that might become the next economic power in the near future, it is important to assess whether SME managers and CEOs have a global mindset instead of relying on their domestic market [5] and [19].

Therefore, this study aims to address above gaps by examining factors that have impacts on the development of global mindset especially in terms of knowledge and information.

II. LITERATURE REVIEW: GLOBAL MINDSET

[20] mentioned that global mindset is the ability of an individual to influence other individuals, groups or even organisations from different social, cultural and institutional backgrounds. Furthermore, [18] state thatglobal mindset is an ability to scan the world from a broad perspective, which allows managers to look for unexpected trends and opportunities that may come from the threat or opportunity of different countries in order to achieve personal and organisational objectives.[7]also argue that managers with a global mindset have better insight to recognise the firm's interdependence on the global economy although the firms activities are still in the domestic market. However, this paper embraces the wider definition of a global mindset from [24] viewing global mindset as a combination of awareness and openness to diversity of cultures and market opportunities with an inclination and capability to integrate diversity.

A. Knowledge and Information: Education

Organizations realize the importance of knowledge that managers possess as a valuable resource and thus organizationsstrive to get the best pool of talentfrom global labourmarkets so that they can get a competitive edge over their competitors through high quality human resources[15]. SMEs have the same tendency; however, their access to global talent pools is limited and so is their ability to attract global talent due to resource limitations and perceptions [25] and [27].

Apart from formal education, managers can increase and develop their global mindset through seminar and training which it can give them to listen to real business practitioners speakers and develop[12]. Education shapes managers to have a cognitive structure consisting of sense-making, system-thinking, integration, analysis and perception of national and cultural differencesso that they can make good decisions for their organizations[9]. Therefore, from the preceding discussion, wedevelop the following hypothesis:

H1: Education will have an influence to the development of managers' global mindset

B. Technological Advancement

Technological advancement and revolution have also contributed to developing a global mindset not only for managers but also for everyone affected by globalisation[10].

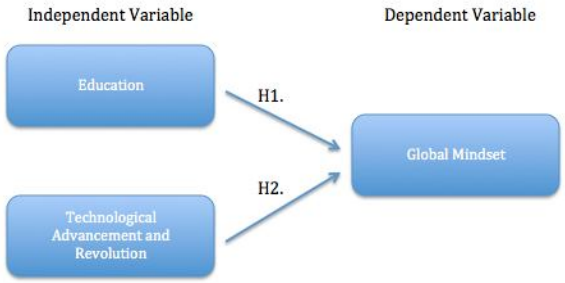
Interconnectedness enables managers to exploit opportunities in international markets to bring the company greater profitability [27]. Managers can also find a large pool of talents and cheap labour from different parts of the world through websitesand make use of them in sourcing and manufacturing strategies in order for their business to operate effectively and efficiently [25]. [26]added that the internet provides easy access to news internationally which enables managers to adjust to market conditions more quickly.

[18] mention that in explaining the forms of knowledge required to develop a global mindset, managers need to be familiar withtechnology, information systemsand telecommunications. [29] support the previous argument stating that IT helps redefine the vision of corporations due to globalisation and IT helps businesses in managing global talent in an environment of cultural diversity.From the above discussion, we can hypothesise that:

H2: Advancement of information and technological flow will have a positive impact on the development of managers' global mindset

III. THEORETICAL FRAMEWORK

In order to demonstrate a clear understanding of the relationship between variables, the proposed theoretical framework is developed as shown in Figure 1. Based on the prior literature review,we focus on investigating the correlation between knowledge and information in terms of education as well as technological advancement with the global mindset in the context of Small and Medium Enterprises (SMEs) in Indonesia.



A. Research Methodology

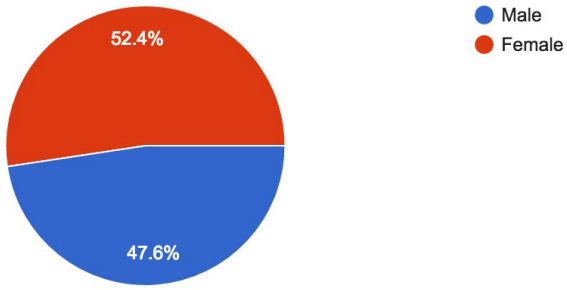
Weadopted primary data collection method in the form of structured questionnaires to investigate the relationship between independent variables towards its dependent variable. Primary data is best suited to our study due to the specific context of our study and the target of Indonesian SME managers [21]. A five-point Likert scale was used in each question of the questionnaire to obtain answers to the hypothesised relationships.

60 valid respondenses were obtained that consisted of SMEmiddle and upper management. In this data collection process, probability random sampling was used to acquire a representative sample of population and to avoid the biased in portrayal of the population. Thedata was analysed using SPSS v. 23.

IV. DATA ANALYSIS AND RESULTS

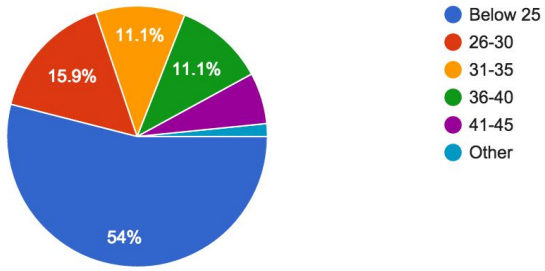
A. Respondent Characteristics

Respondents Gender:



The gender of the respondents is 52.4% Male and 47.6% male. This finding is interesting as this might be relate to gender equality in which the percentagesdo not differ too much.

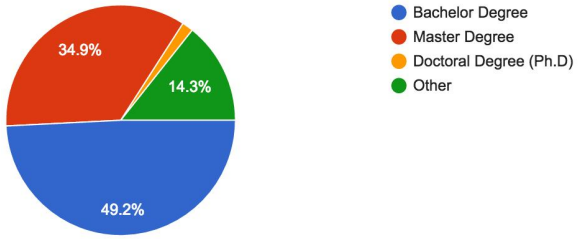
Respondents Age:



The pie chart above shows a majority of SME managers and CEO to be under the age of 25, revealing a high entrepreneurship rate among younger managers. This is due to the government encouraging young entrepreneurs to manage a company. The next respondent group iswithin the age range of 26 to 30, accounting for 15.9%, followed by the ranges of 31 to 35 and 36 to 40 years, both accounting for 11.1% and the remainder falling into the 41 to 45 year range and

above. The chart still shows that the majority of managers is above 45 years old.

Respondents Education:



The majority of respondents hold undergraduate degrees, accountng for 49.2%, which is followed by postgraduate degree or master degree at 34.9%. The smallest percentage is for Doctoral degree holders. 14.3% are others, which means they do not hold university education or refused to answer the question due to sensitivities.

B. Validity and Reliability Test

Validity and Reliability test is a crucial research tool to measure internal consistency and to determine whether the question is reliable and valid for use in order to test the independent variable[17].

Global Mindset:

Case Processing Summary

		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	.0
	Total	60	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.587	4

From the validity and reliability test in terms of global mindset, which is the dependent variable in this research, we can see that all 60 respondents have provided answers to allfour questions in measuring the variable of global mindset. However, Cronbach's alpha of this variable is relatively low at .587. According to [17], a good Cronbach's alpha should be at least .7; therefore, we can conclude that the four questions in measuring this variable might be similar.

Knowledge and Information:

Case Processing Summary

		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	.0
	Total	60	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.705	4

Furthermore, there are four questions in the knowledge and information part. Each of independent variables of knowledge and technological advancement are using two of the questions. Moreover, Cronbach's alpha showing a value of .705leads to the conclusion that those four questions are reliable and valid for use in forming the independent variable.

C. Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Draw employees from worldwide talent pool	60	1.00	5.00	3.7167	1.23634
Regard every customer worldwide is as important as domestic market customer	60	1.00	5.00	3.5333	1.40781
Select location and optimse its choice on global basis	60	1.00	5.00	3.5333	1.41980
Examine all economic regions worldwide to search potential competitors	60	1.00	5.00	3.6833	1.25538
Understand organization societal culture from various countries	60	1.00	5.00	3.7167	1.15115
Knowledge on cross-cultural issues or problem or news	60	1.00	5.00	3.3333	1.33616
Knowledge on other countries political and economic system	60	1.00	5.00	3.5333	1.34626
Up-to-date with worldwide events information	60	1.00	5.00	3.5667	1.35755
Valid N (listwise)	60				

The 5-point Likert scale in the table above shows minimum and maximum values between the ranges of 1 and5; thus, we can conclude that there is no error or mistake made by respondents in answering the question. As for the mean, questions had a tendency of being answered on an average of 3.Thus, we can conclude that those respondents might have a good understanding and are willing to develop a global mindset. Lastly, the standard deviations are between 1.1 to 1.4, which confirms a managerial tendency towards the development of a global mindset.

D. Correlation

Correlations

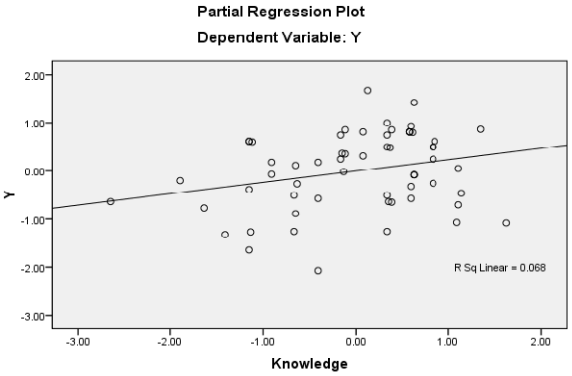
		Y	Knowledge	Technology
Y	Pearson Correlation	1	.445**	.459**
	Sig. (2-tailed)		.000	.000
	N	60	60	60
Knowledge	Pearson Correlation	.445**	1	.546**
	Sig. (2-tailed)	.000		.000
	N	60	60	60
Technology	Pearson Correlation	.459**	.546**	1
	Sig. (2-tailed)	.000	.000	
	N	60	60	60

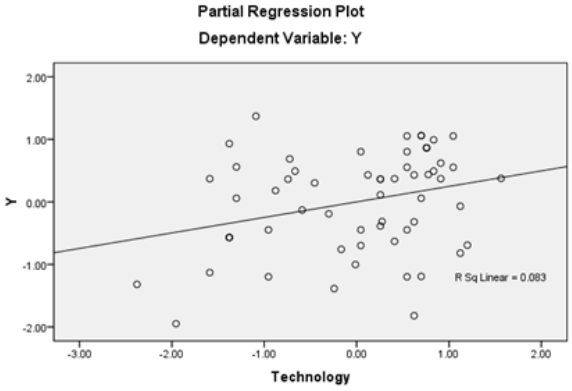
**. Correlation is significant at the 0.01 level (2-tailed).

Correlation is used to determine whether there are positive or negative correlations between two of the independent variables of education and technological advancement and also the dependent variable of global mindset.

There is positive and significant correlation between knowledge and global mindset as well as technology and global mindset (the dependent variable). The Pearson correlation indicators show significant positive correlations indicated by Sig. (2-tailed) test which is below the 0.01 level.Therefore, both knowledge and technological advancement and revolution are contributing heavily to the development of managers' global mindset.

E. Regression





Multiple linear regression is used as there are two independent variables and one dependent variable. The rising slope of the line indicates that the higher the education level the higher is the level that managers maximize the benefits of technology advancement and globalisation, implying a contribution to the development of their global mindset. Thus, it can be said that there is a positive relation between the variables.

V. DISCUSSION

A. Education (Hypothesis 1)

The correlation and multiple regression tests show that there is a positive and strong correlation between education and the development of a global mindset. The majority of respondents characteristics in terms of education stating that more than 80% have a university education (Bachelors, Post-Graduate, Doctoral), which is a high rate for a developing country. Descriptive statistics provide other evidence regarding the the first question (understanding organization culture from various countries) as well as the third question (knowledge on other countries' political and economic systems) in that both questions contributed to the construction of an independent variable of Knowledge. The mean has been 3.7 and 3.5 respectively on a five-point Likert scale, which implies that these managers and CEOsof SMEs understand that global mindset is essential in today's business environment. Our finding is in line with research by [5], who showed that education can form cultural intelligence in an individual and lead to the establishment of a global mindset.

In addition, unique evidence from Indonesia showsmanagers have also been taught in school to have high tolerance for diversity as Indonesia has many different cultures and ethnicities [14]. Therefore, it may not be difficult for Indonesian managers to face international business partners and interact with colleagues from other parts of the country.

B. Technological Advancement and Revolution (Hypothesis 2)

According to the correlation test and the upward multiple regression graph in terms of technology advancement and revolution, we can conclude that technological advancement and revolution are also contributing to the development of the managers' global mindset. Descriptive statistics in question 2 (Knowledge on cross cultural issues or problem) and question 4 (Up-to-date with worldwide events information) have shown us that managers and CEOs in Indonesia who are managing SMEs are making use of technological advancements to compare their companies to other countries. According to [23], those people who use ICT effectively have better knowledge of the global industries that they are operating in andshifts in trends so that they arebetter prepared for changes in the business environment.

In recent trends, the major government-owned telecommunication company in Indonesia has finished establishing high-speed fiber-optic internet connectionsacross all of Indonesia increasing the number of Indonesians and business connected to high-speed Internet so that all can better keep up with the impact of globalisation [4].

CONCLUSION

This article shows that education and technological advancement are the contributing factors in developing managers' global mindset. The article also encourages business practitioners, especially those who are managing SMEs in developing countries, to adopt a global mindset in doing business. As many opportunities outside their home countries exist, managers should make use of the benefits of globalisation,such as finding talent or suppliers worldwide while also understandinghow to manage stakeholders with different cultural backgrounds effectively.It is also important to note the willingness to continuous learning as acore to being global leadersinstead of being ethnocentric managers.

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