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EDITORIAL PREFACE

The Journal of the Asian Academy of Applied Business (JAAAB) is a refereed academic journal jointly published by the Asian Academy of Applied Business (AAAB) and Universiti Malaysia Sabah. AAAB is a non-profit, academic-based association which focuses on research and development activities particularly in the areas of business, economics and management. Apart from journal publication, AAAB is also actively involved in holding academic conferences through the biennial "International Conference of the Asian Academy of Applied Business", of which, the last conference was successfully held in Guangzhou, China on 21st to 23rd September 2015. The next AAAB Conference has been scheduled on 20th to 22nd December, 2017 in Kota Kinabalu, Sabah, Malaysia.

JAAAB encourages international scholars and professionals to submit their papers that would contribute to the advancement of knowledge in different areas of business and economics including management, marketing, finance, accounting, business laws and information systems. Articles suitable for publication include those based on applied research and theoretical; and any articles dedicated to the understanding and improvement of business strategies and practices in ASEAN economies. This fourth issue of the JAAAB contains eight papers which covers business, management, finance, human resource and international business related topics.

On behalf of the Editorial Committee, I wish to extend my gratitude to all the reviewers for their constructive comments on the papers. Special thanks to the Editorial Committee members, all the UMS publication Unit for their effort in producing this edition.

Finally, we thank all the authors for their effort in contributing and sharing their knowledge and research findings in this journal. We hope there will be more contributions from other scholars around the region.

Prof. Dr Syed Azizi Wafa Syed Khalid Wafa
President, AAAB

CONTENTS

AN EMPIRICAL ANALYSIS OF EDUCATION EXPENDITURE, HEALTH CARE EXPENDITURE AND ECONOMIC GROWTH IN MALAYSIA 1
Wong Sing Yun & Remali Yusoff

PENGARUH KOMITMEN AFEKTIF, KALKULATIF DAN NORMATIF TERHADAP KEPERCAYAAN PENGGUNA KOSMETIK HALAL 13
Roslinahwati Abdul Rajak & Suddin Lada

REVISITING LONG-RUN DYNAMICS OF THE DETERMINANTS OF PUBLIC EDUCATION EXPENDITURE IN MALAYSIA 29
Wong Sing Yun & Remali Yusoff

KAITAN ANTARA KEPIMPINAN, PRESTASI KERJA, KEPUASAN KERJA DAN NIAT MELETAKKAN JAWATAN DALAM KALANGAN KAKITANGAN AKADEMIK POLITEKNIK DI MALAYSIA 45
Syarifah Hanum Ali, Arsiah Hj Bahron & Stephen L. Sondoh Jr @ Jude

IDENTIFICATION OF LEAST CONGESTED AND SHORTEST DISTANCE PATH IN TRAFFIC NETWORK 83
Ting Kien Hua & Noraini Abdullah

THE IMPACT OF HUMAN RESOURCE STRATEGY TO KNOWLEDGE PROCESS IN THE MALAYSIAN ELECTRICAL AND ELECTRONICS FIRMS 97
Yousif Mamoun, Syed Azizi Wafa & Ramraini Ali Hassan

OPEN MARKET REPURCHASES AND STOCK PRICE INFORMATIVENESS: EVIDENCE FROM MALAYSIA STOCK MARKET 107
Chong Meng Chee & Nazrul Hisyam Ab Razak

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AN EMPIRICAL ANALYSIS OF EDUCATION EXPENDITURE, HEALTHCARE EXPENDITURE AND ECONOMIC GROWTH IN MALAYSIA

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ABSTRACT

This paper aims to empirically analyze the relationship between the education expenditure, healthcare expenditure and economic growth in Malaysia over the period of 1980 to 2012. The main interest of this study will be to review and address the mixed results presented by past researches regarding the relationship between education and healthcare expenditure towards economic growth. The relationship between the variables will be empirically examined for both the short-run and long-run by employing the Johansen Co-integration Technique and Vector Error Correction Model (VECM). The existence of a long-run relationship between the public education spending, healthcare expenditure and economic growth was well indicated. It was therefore ascertained that the public spending on education and healthcare sectors are very much a long-run phenomenon as it only generates return over an extended period of time.

Keywords: education expenditure, healthcare expenditure, economic growth, Johansen Co-integration, Error Correction Model

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INTRODUCTION

Health and education are important factors that contribute to the development of human capital. A healthy and educated workforce will be able to produce more output. The development of human capital will subsequently help to boost a country's economic growth. Matsushita, Siddique, and Giles (2006) state that there is a general consensus supported empirically and theoretically that improvement in the human capital will contribute to economic growth. Gupta, Clements and Tiongson (1998) state that public spending on education and health produces positive impacts on human capital formation, thus helps to boost a country's economic growth while promoting equity and reducing poverty. This implies that investments in sectors of healthcare and education will contribute to a nation's economic development.

Historical data has shown that the Malaysian Government has funded more than 95 per cent of primary and secondary education levels (Ministry of Higher Education, 2009). Meanwhile, tertiary education has also received attention from the government. Figure 1 shows the public expenditures allocated for the education sectors from the year 1980 to 2012 (Economic Planning Unit, 2013). Historical data shows that the spending on education has been relatively low in the past especially in the year 80's. However, the public expenditure on education increases during the year 1994 until 2002. This could imply the government's increasing concern in this sector. Despite the fluctuation of the expenditures experienced from the year 2003 to 2010, the federal government expenditure was much higher compare to the early 80's.

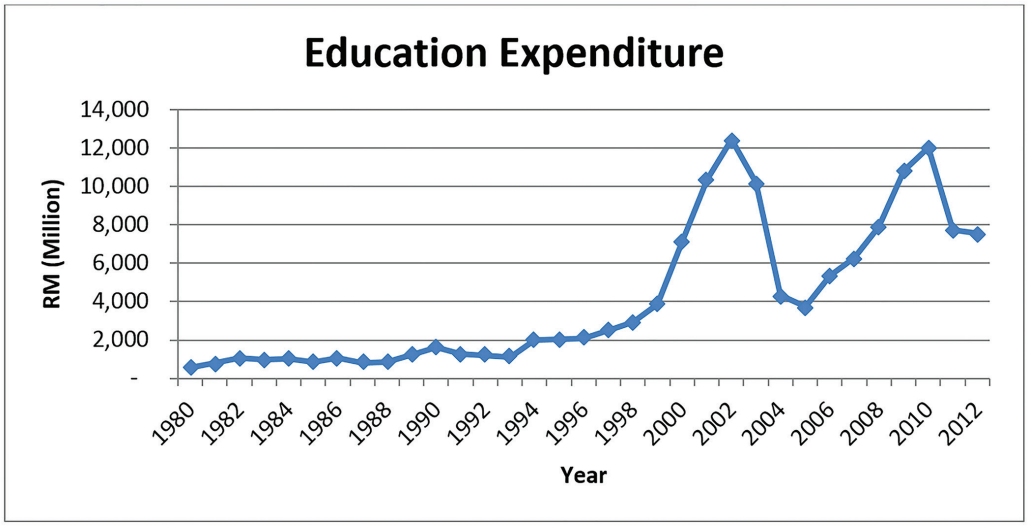

Figure 1 Public expenditures in the education sector from the year 1980 – 2012

Similarly, the healthcare sector was also funded by the Malaysian Government throughout the years. According to Rajah Rasiah, Nik Rosnah Wan Abdullah, and Makmor Tumin (2011), the

launching of New Economic Policy (NEP) in 1971 has witness an immense public expenditure on expanding the healthcare services to rural locations and poor states. Figure 2 displayed the historical data of government expenditure in the healthcare sector from the year 1980 to 2012 (Economic Planning Unit, 2013). Beginning in the early 80's, the federal government spending in the health sector was relatively low. However, it can be seen clearly from Figure 2 that the expenditure on healthcare sector has increased to a level much higher compared to the early 80's.

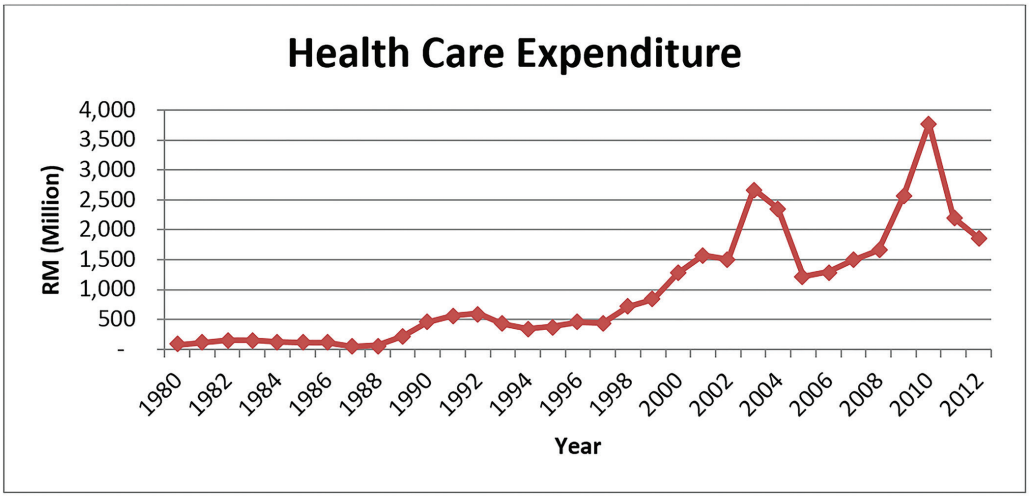

Figure 2 Public expenditures in healthcare sector from the year 1980 – 2012

There had been many researches that were conducted in the past to investigate the role of education and health in a country's production level. However, the empirical results from the past researches were found to be distinct from one another and of a mixed interpretation. In Malaysia, some past studies have been conducted concerning education expenditure and healthcare expenditure. According to Noraina and Nur Azura (2010), public social expenditure on education and healthcare is essential to the development of Malaysia's economics. However, Abdul Jabbar Abdullah (2013) disputed that education is not generating a higher economic growth but instead is negatively affecting the economy. Chor (2010) supported the conventional rationale that health expenditure will lead to the increase of productivity and subsequently to the economic growth. Djafar (2009), Gounden (1967), and Asghar, Hussain, and Rehman, (2012) concluded that there is no significant relationship between the education expenditure, healthcare expenditure or both expenditures on economic growth. This study will be interested in investigating the mixed findings provided by past studies concerning the relationship between the education expenditure, healthcare expenditure and economic growth. An empirical analysis will be performed on the time series data in Malaysia by applying the Johansen Co-integration test and Vector Error Correction Model (VECM) technique.

This paper will be organized in the following: Section 1 begins with a brief introduction to the study. Section 2 describes the literature review on the previous researches that were related to this study. Apart from that, Section 3 will discuss the data that will be analyzed in the study. Next, Section 4 explains the theoretical model that is being employed in the study. Section 5 provides description and discussion on the methodology of the study. Meanwhile, Section 6 reveals the result on the empirical study conducted. Finally, Section 7 will provide a conclusion on the study conducted.

LITERATURE REVIEW

Many past studies had been performed on determining the relationship between education expenditure, healthcare expenditure and economic growth. Most of the past researches supported the theoretical thinking that the increase of expenditure in education and healthcare sectors will boost the nation's economic growth. However, some studies argued by revealing a negative relationship between the variables. In another case, some studies depicted an insignificant relationship between the variables.

Mohd Yahya, Fidlizan, Mohd Fauzi and Azila (2012) discovered a long-run relationship between government education expenditure and economic growth in Malaysia. Musila and Belassi (2004) revealed that education expenditure has a significant positive impact on economic growth both in the long run and short run. In another study by Omojimite (2010), the co-integration relationship was found between public education expenditures and economic growth. However, some studies discovered an insignificant relationship between the variables in the short-run. Tilak (1989) revealed that the GNP per capita and public education expenditure are not significantly related in Latin America and Caribbean.

Akram, Ihtsham and Khan (2008) established a significant relationship between health variables and economic growth in the long run but not in the short run. Elmi and Sadeghi (2012) found out that the health spending and economic growth of developing countries studied hava a co-integrated relationship in the long run. Meanwhile, a study by Bukenya (2009) did not reveal the long run relationship between healthcare expenditure and economic growth (as measured by the gross state product) in the US states except for the state of Georgia. Odubunmi, Saka, and Oke (2012) proved the existence of long run relationship between healthcare expenditure and economic growth in Nigeria. Nevertheless, the findings by Apergis and Padhi (2013) did not revealed a clear indication of the relationship between public spending on healthcare sector and economic growth for 26 Indian States. Another study by Reeves, Basu, McKee, Meissner, and Stuckler (2013) exhibited that the investment in health contributes to economic growth of 25 EU countries both in the long run and short-run. Faraq et al. (2012) found out that the health spending was not very responsive and sensitive to the income growth.

Rahmah and Selvaratnam (1999) showed the presence of a strong significant relationship between the human capital variables of education and health with economic growth. Muhammad and Rukhsana (2012) empirically investigated the presence of a long-run relationship and triangular causality between the real GDP per capita, per capita education expenditures and per capita health expenditures in Pakistan over the period of 1972 to 2009. The result of their study signified the existence of a long-run relationship between the variables of real GDP per capita, per capita health expenditures and per capita education expenditures. On the other hand, a study by Rahman (2011) indicated a significant positive relationship between health expenditure, education expenditure and economic growth in Bangladesh. Another study by Noraina and Nur Azura (2013) revealed the co-integrating relationship between economic growth and public social services expenditure (which include education expenditure and healthcare expenditure) with human capital indicators in Malaysia. This implied that the increase of public expenditures in education and healthcare will in turn generate higher growth of the economy.

METHODOLOGY

In this study, the data for the variables of gross domestic product (GDP), education expenditure (EDU), healthcare expenditure (HEA), labour force participation rate (LBR) and gross fixed capital formation (GFC) will be used. The data for the respective variables was obtained from the world development indicators (World Bank, 2014) and Economic Planning Unit (EPU, 2013) over the period of 1980 until 2012.

THEORETICAL MODEL

The model of this study will be based on the following production function:

$$Y_t = f(A_t, L_t, K_t) \tag{1}$$

Whereby; Y_t = total output, A_t = total factor productivity, L_t = labour and K_t = capital stock

The Log-Linear regression model developed based on the production function is as follow:

$$In\ GDP = \beta_0 + \beta_1\ In\ EDU + \beta_2\ In\ HEA + \beta_3\ In\ LBR + \beta_4\ In\ GFC + \varepsilon_t \tag{2}$$

Whereby; *GDP* = Real Gross Domestic Product, *EDU* = Public Expenditure on Education, *HEA* = Public Expenditure on Healthcare, *LBR* = Labour Force Participation Rate, *GFC* = Gross Fixed Capital Formation and ε_t = Error Correction Term.

RESEARCH METHODS

In this study, unit root test such as the Augmented Dickey-Fuller (ADF) test and Philip-Perron (PP) test will be conducted to investigate whether the data is stationary or not. The integration test is conducted to avoid spurious regression. It is important that the data is found to be stationary so that the Johansen Co-integration test can be carried out. Next, the lag length selection test is conducted to find out the appropriate lag length that can be used in Johansen Co-integration test. It is fundamental to choose the suitable lag length so that the analysis will be consistent with the real economy. Having established that the variables are stationary, the Johansen Co-integration test can then be conducted to find out the long run relationship between the variables. Provided the variables are co-integrated, the Vector Error Correction Model (VECM) is applied to examine the short-run relationship between the variables.

RESULTS

Estimation Results Based on Johansen Co-Integration Test

The unit root test is used to examine the time series data on both at level and first differences by carrying out the Augmented Dickey Fuller (ADF) and Phillips Perron (PP) test. The Augmented Dickey Fuller (ADF) and Philip-Perron (PP) test result showed that all the variables were stationary after the first difference. This implied that the variables are integrated of order I (1). Table 1 illustrates the Augmented Dickey Fuller (ADF) result. Meanwhile, Table 2 shows the Philip-Perron (PP) result.

Table 1 Augmented Dickey Fuller (ADF) test result

Augmented Dickey Fuller (ADF) Test				
Variable	Level		First Difference	
	Intercept	Trend and Intercept	Intercept	Trend and Intercept
LNGDP	−1.013113	−1.172681	−4.559265*	−4.564542*
LNEDU	−0.775484	−3.328250***	−4.248613*	−4.169137**
LNHEA	−0.884554	−3.718921**	−4.272216*	−4.188076**
LNLBR	−3.345650**	−4.952245*	−8.280137*	−8.187709*
LNGFC	−0.988856	−1.682581	−3.973163*	−3.877977**

*Significant at 1% significance level, **Significant at 5% significance level, *** Significant at 10% significance level

Table 2 Philip-Perron (PP) test result

Phillips Perron (PP) Test				
Variable	Level		First Difference	
	Intercept	Trend and intercept	Intercept	Trend and intercept
LNGDP	−0.971279	−1.364033	−4.567684*	−4.573509*
LNEDU	−1.246583	−2.205881	−4.185404*	−4.047444**
LNHEA	−1.331825	−2.518709	−3.949278*	−3.858175**
LNLBR	−4.569539*	−4.952245*	−8.497616*	−8.187709*
LNGFC	−0.988856	−1.915017	−3.911085*	−3.809640**

*Significant at 1% significance level, **Significant at 5% significance level, *** Significant at 10% significance level

Next, the lag length selection estimated based on the unrestricted Vector Autoregressive (VAR) model is carried out. It is crucial to be carried out to determine the optimal lag length that should be used in the Co-integration test. Table 3 shows the VAR lag order selection criteria.

Table 3 VAR lag order selection criteria

VAR Lag Order Selection Criteria						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	167.3422	NA	1.95e-11	−10.47369	−10.24240	−10.39830
1	312.1644	233.5842*	8.76e-15*	−18.20416	−16.81643*	−17.75179*
2	337.5192	32.71583	9.81e-15	−18.22704*	−15.68287	−17.39771

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

From the result computed, it is revealed that Akaike's Information Criterion (AIC) value suggested the lowest value compared to the other criterions. Hence, the lag order 2 is selected as suggested by Akaike's Information Criterion (AIC). Johansen Co-integration test is then conducted using lag order 2 to investigate the long-run relationship between the variables. Table 4 and Table 5 depict the result of the Johansen Co-integration test which proved the existence of long-run relationship between the education expenditure, healthcare expenditure and economic growth. Both of the Johansen Co-integration test (Trace) and Johansen Co-integration test (Max Eigenvalue) results rejected the null hypothesis of no co-integration at 5 per cent level of significance. Thus, implying the existence of long-

run relationship between the variables real Gross Domestic Product (GDP), education expenditure (EDU), healthcare expenditure (HEA), labour force participation rate (LBR) and gross fixed capital formation (GFC).

Table 4 Johansen Co-integration test (Max Eigenvalue)

Johansen Co-integration Test (Max Eigenvalue)				
Hypothesized No. of CE(s)	**Eigenvalue**	**Max Eigen statistic**	**0.05 Critical value**	**Prob.****
None*	0.783855	45.95417	33.87687	0.0012
At most 1*	0.632714	30.04844	27.58434	0.0236
At most 2	0.362418	13.50219	21.13162	0.4072
At most 3	0.247444	8.528389	14.26460	0.3275
At most 4*	0.124329	3.982953	3.841466	0.0460

Max-eigenvalue test indicates 2 co-integrating eqn(s) at the 0.05 level
* Denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) *p*-values

Table 5 Johansen Co-integration test (Trace)

Johansen Co-integration Test (Trace)				
Hypothesized No. of CE(s)	**Eigenvalue**	**Trace statistic**	**0.05 Critical value**	**Prob.****
None*	0.783855	102.0161	69.81889	0.0000
At most 1*	0.632714	56.06198	47.85613	0.0070
At most 2	0.362418	26.01353	29.79707	0.1283
At most 3	0.247444	12.51134	15.49471	0.1340
At most 4*	0.124329	3.982953	3.841466	0.0460

Trace test indicates 2 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) *p*-values

Table 6 Normalized cointegrating coefficients

Normalized Cointegrating Coefficients				
Dependent Variable	**Independent variables**			
LNGDP	**LNEDU**	**LNHEA**	**LNLBR**	**LNGFC**
Coefficient	0.666897	−0.563013	−10.97664	−0.899941
Standard Error	(0.14210)	(0.14923)	(3.25619)	(0.20288)
t-statistic value	[4.69315]*	[−3.77279]*	[−3.37101]*	[−4.43583]*

*Significant at 5% significance level

The normalized cointegrating coefficients as illustrated by Table 6 revealed the presence of significant positive relationship between LNEDU and LNGDP. This means that the education expenditures had a positive effect on economic growth in the long run. Such finding was consistent with the past researches of Mohd Yahya et al. (2012), Govindaraju, Rao, and Anwar (2011). However, a negative sign is found for the LNHEA cointegrating coefficient. Such a negative coefficient indicates that healthcare expenditure has a significant but negative relationship with economic growth. This negative finding could suggest a poor utilization of the public expenditure on healthcare sector.

Estimation Results Based on Vector Error Correction Model (VECM)

The Vector Error Correction Model (VECM) was employed to find out the short-run relationship between the variables. Table 7 illustrates the result of the Vector Error Correction Model (VECM). The findings revealed that the coefficients of the lagged independent variables are insignificant (since the result showed all the coefficients of the lagged variables are insignificant). Therefore, this means that all of the independent variables do not have any significant impacts on the economic growth in the short run. As such, it can be concluded that there is no short run relationship between the variables of education expenditure, healthcare expenditure, labour force participation rate, gross fixed capital formation and the real gross domestic product.

Table 7 Vector Error Correction Model (VECM)

Vector Error Correction Model				
Dependent Variable: D (LNGDP) **D (LNGDP) = f(D (LNEDU), D (LNHEA), D (LNLBR), D(LNGFC))**				
Variable	**Coefficient**	**Standard Error**	**t-statistic**	**P-Value**
Error Correction Term (−1)	0.112034	0.10405	1.07669	0.2967
Error Correction Term (−2)	−0.066910	0.03360	−1.99115	0.0628
D(LNGDP(−1))	−0.186000	0.61411	−0.30288	0.7657
D(LNGDP(−2))	−1.019038	0.57785	−1.76350	0.0958
D(LNEDU(−1))	−0.003859	0.03642	−0.10595	0.9169
D(LNEDU(−2))	0.046686	0.03979	1.17344	0.2568
D(LNHEA(−1))	0.013950	0.02739	0.50937	0.6170
D(LNHEA(−2))	−0.038310	0.03199	−1.19770	0.2475
D(LNLBR(−1))	−0.737796	0.53219	−1.38633	0.1836
D(LNLBR(−2))	−0.212835	0.44057	−0.48309	0.6352
D(LNGFC(−1))	0.123101	0.15395	0.79963	0.4350
D(LNGFC(−2))	0.200688	0.12843	1.56267	0.1366
C	0.046928	0.02160	2.17302	0.0442

CONCLUSION

In conclusion, this study proved the existence of long-run relationship between gross domestic product (GDP), education expenditure and healthcare expenditure. However, a significant relationship between the variables was not found in the short run. The Johansen Co-integration test also revealed that the education expenditure has a positive impact on the economic growth in the long run. Therefore, one can conclude that the public expenditure on education is only effective in generating economic growth in the long run but not in the short run. Meanwhile, co-integrating equation indicated that the healthcare expenditure has a negative impact on GDP in the long run. This implied that the government healthcare spending is not very effective and efficient in enhancing the economic growth of the country. Such negative effects may be due to poor allocation and utilization of the public healthcare expenditure which ended up producing a negative impact on economic development. Thus, one can summarize that the government expenditure on the education and healthcare sectors will only generate effects towards the economic growth in the long run. Therefore, policy makers would need to revise and introduce policies that can provide better education and healthcare facilities to the public in the long term. A better education and healthcare facilities will help the development of human capital and enhancing the economic growth.

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PENGARUH KOMITMEN AFEKTIF, KALKULATIF DAN NORMATIF TERHADAP KEPERCAYAAN PENGGUNA KOSMETIK HALAL

THE EFFECTS OF AFFECTIVE, CALCULATIVE AND NORMATIVE COMMITMENTS ON HALAL COSMETIC USERS' TRUST

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ABSTRAK

Berlandaskan kepada kewajipan mendapatkan produk halal bagi pengguna Islam, perkembangan semasa industri halal masa kini tidak lagi hanya tertumpu kepada produk makanan semata-mata. Ianya telah menjangkaui pelbagai produk yang lain terutamanya produk kosmetik. Walaupun, tanpa komitmen yang tinggi terhadap penghasilan dan pembuatan sesuatu produk oleh pengeluar, contohnya komitmen agama (syariah), maka hasrat untuk mendapatkan produk halal menjadi sia-sia. Di samping itu, komitmen dan kepercayaan pengguna terhadap produk kosmetik halal ini boleh terjejas dengan wujudnya isu kandungan bahan diragui dan berbahaya yang dikesan dalam pembuatan kosmetik. Oleh yang demikian, melalui pendekatan kuantitatif kajian ini cuba untuk meneroka peranan yang dimainkan oleh tiga elemen (afektif, kalkulatif dan normatif) penting di dalam komitmen dan kesannya terhadap kepercayaan pengguna.

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Kajian ini mendapati bahawa komitmen afektif dan komitmen kalkulatif mempunyai pengaruh yang signifikan terhadap kepercayaan pengguna. Namun, komitmen normatif tidak mempunyai pengaruh. Dapatan kajian ini kelak akan menyumbang kepada penambahbaikan kerangka kerja kajian sedia ada di samping membantu pengeluar untuk strategi peningkatan komitmen dan kepercayaan pengguna.

Kata kunci: komitmen afektif, komitmen kalkulatif, komitmen normatif, kepercayaan pengguna, kosmetik halal

ABSTRACT

Based on the obligation to obtain halal products for Muslim consumers, the current development of the halal industry is no longer just focused on food products alone. It has gone beyond many other products especially cosmetic products. However, without a high commitment for the production and manufacture of a product by the manufacturer, for example religious commitment (*sharia*) hence the desire to get halal products become in vain. In addition, consumer commitment and trust towards halal cosmetics can be affected by the issue of dubious and suspicious matter content harmful detected in the manufacture of cosmetics. Therefore, through the quantitative approach of this study attempts to explore the role played by three elements (affective, calculative, and normative) are important in commitments and its impact on consumer trust. This study found that affective commitment and calculative commitments have significant influence over consumer trust. However, normative commitments do not have influence. The findings of this study will further contribute to improvement existing research framework besides assisting producers for strategy increased commitment and consumer trust.

***Keywords*:** affective, calculative, and normative commitment, consumer trust, halal cosmetic

PENGENALAN

Perkembangan industri halal masa kini ini turut seiring dengan perkembangan populasi dunia, terutamanya peningkatan penduduk Islam di seluruh dunia. Perkembangan ini turut memberi gambaran jelas bahawa penghasilan dan penjualan produk halal amat diperlukan untuk memenuhi permintaan dan keperluan masyarakat Islam dunia. Perubahan ini juga telah memberi kesedaran kepada pengguna Islam untuk turut sama mementingkan status halal pada produk bukan makanan seperti kelengkapan harian, farmaseutikal, kosmetik dan juga perkhidmatan (Aziz, Amin, & Isa, 2010; Abu Bakar, 2010; Hanzaee & Ramezani, 2011; Rahim, Shafii, & Shahwan, 2013). Berikutan peningkatan populasi penduduk Islam di dunia ini secara tidak langsung permintaan pengguna terhadap produk halal bukan makanan turut meningkat

dan kini nilainya telah mencecah AS$683 bilion (Ramli, 2015). Namun demikian, berdasarkan kajian oleh Perbadanan Pembangunan Industri Halal (HDC) permintaan ini hanya dapat dipenuhi pada kadar 20% bersamaan dengan nilai AS$136 bilion. Malahan, bilangan pembekal bagi keluaran produk halal juga amat kecil dan tidak dapat memenuhi permintaan (BERNAMA, 2015, Mei 28). Namun, pengguna Islam global telah membelanjakan sebanyak AS$46 bilion iaitu sebanyak 6.78% daripada perbelanjaan global penduduk Islam untuk membeli kosmetik halal (Thomson Reuters & Dinar Standard, 2015). Data ini menunjukkan bahawa pengguna Islam global telah mula membeli kosmetik halal dan membuktikan bahawa pengguna kosmetik halal mempunyai komitmen yang tinggi untuk mendapatkan produk yang selamat dan berkualiti seperti yang disyariatkan oleh agama Islam. Kepercayaan ini dipengaruhi oleh jaminan keselamatan dan kualiti produk kosmetik halal yang dijanjikan oleh pengeluar (Rahayu, 2016). Namun, komitmen dan kepercayaan ini boleh terjejas dengan wujudnya isu kandungan bahan diragui dan berbahaya yang dikesan dalam pembuatan kosmetik (Abd Mutalib, 2016).

Berdasarkan kajian terdahulu, kepercayaan pengguna terhadap konsep halal adalah bersifat universal, komprehensif dan tidak lagi bersifat keagamaan semata-mata (Sawari & Ghazali, 2014). Malah, kajian hubungan antara komitmen dan kepercayaan pengguna terhadap produk juga telah dikaji secara meluas dalam perhubungan pemasaran. Namun, kajian sebelum ini tidak menyentuh secara mendalam komponen-komponen penting dalam aspek komitmen pengguna. Di samping itu, amat sedikit kajian yang memfokuskan pengaruh komitmen mengikut komponen secara terperinci bagi produk kosmetik halal (Sumaedi, Juniarti, & Bakti, 2015; Fatima, Razzaque, & Di Mascio, 2016). Hal ini sangat penting kerana hanya pengguna yang benar-benar komited sahaja akan berusaha untuk mendapatkan kosmetik halal di pasaran, seterusnya mempengaruhi kepercayaan mereka terhadap kosmetik halal tersebut. Kajian ini sangat bermanfaat bagi pemasar tempatan kerana setiap komponen komitmen mempunyai pengaruh yang berbeza terhadap kepercayaan pengguna.

Untuk memenuhi jurang penyelidikan yang dikenal pasti, objektif kajian ini adalah untuk menilai pengaruh setiap komponen komitmen iaitu komitmen afektif, komitmen kalkulatif dan komitmen normatif dan hubungannya terhadap kepercayaan pengguna. Kajian seumpama ini sangat penting tetapi malangnya kurang diberi perhatian oleh pengkaji lepas terutamanya kajian pasaran di Malaysia, sedangkan produk kosmetik telah terjual hampir di seluruh pelusuk negara. Hasil kajian ini akan menyumbang kepada penambahbaikan kerangka kerja kajian sedia ada di samping membantu pengeluar untuk strategi peningkatan komitmen dan kepercayaan pengguna. Struktur kertas kajian ini adalah seperti berikut. Bermula dengan sub-topik pengenalan, huraian terhadap isu-isu dan latar belakang kajian dibuat, dan diikuti dengan objektif dan kepentingan kajian. Seterusnya, dipersembahkan pula kajian literatur dan pembangunan hipotesis yang kemudiannya diikuti dengan metodologi dan dapatan kajian. Kertas kajian ini akan diakhiri dengan kesimpulan dan cadangan penyelidikan masa depan bagi menyimpulkan keseluruhan kajian.

KAJIAN LITERATUR

Kepercayaan Pengguna

Menurut Rousseau, Sitkin, Burt, dan Camerer (1998), "kepercayaan adalah wilayah psikologi yang merupakan perhatian untuk menerima apa adanya berdasarkan harapan terhadap tingkah laku yang baik dari orang lain". Manakala, Zaheer dan Zaheer (2006) pula menyatakan bahawa kepercayaan dibina sebelum pihak-pihak tertentu saling mengenal satu sama lain melalui interaksi atau transaksi. Sementara itu, Adji (2014) menyatakan bahawa kepercayaan perlu diperhatikan apabila terjadi hubungan antara pembeli dan penjual. Ini kerana, kepercayaan merupakan cerminan daripada kompetensi penjual. Kompetensi penjual ini seterusnya menjadi tanggungjawab penjual dalam menyediakan produk yang berkualiti memandangkan penjual telah mendapat kepercayaan pengguna. Hubungan kepercayaan dan produk kosmetik halal pula dilihat sebagai satu hubungan yang terjalin atas dasar keyakinan, integriti, berniat baik bahawa produk komestik tersebut benar-benar memenuhi kehendak syarak (Astrila, 2014; Yunianto, Saleh, & Mulyani, 2016; Hendrayana & Santika, 2013). Dalam masa yang sama, pengguna telah bersedia menerima risiko yang mungkin berlaku ke atas transaksi pembelian yang dijalankan (Susanti & Hadi, 2013; Yunianto *et al.*, 2016).

Komitmen Pengguna

Komitmen pengguna didefinisikan sebagai pendirian yang abadi atau keinginan atas fakta-fakta jenama atau fakta-fakta syarikat atau janji dan ikrar untuk memelihara hubungan yang telah terjalin (Lacey, 2007). Manakala, Nofriana (2013) menjelaskan bahawa komitmen merupakan konstruk yang penting dalam menentukan kejayaan sesuatu hubungan antara pembeli dan penjual. Sementara, komitmen pengguna pula didefinisikan sebagai satu perasaan emosional yang mendalam untuk mempertahankan hubungan dalam jangka masa panjang dengan penjual. Ini kerana, pengguna akan dapat mencari kepuasan dan kepercayaan terhadap penjual produk (Suratman, 2016; Nofriana, 2013; Morgan & Hunt, 1994). Ini bermakna, komitmen pengguna boleh dikatakan sebagai perasaan dan keinginan pengguna untuk mempertahankan dan memanjangkan hubungannya dengan penjual produk. Tambahan pula, menurut Allen dan Meyer (1990) dalam pembentukan nilai-nilai komitmen, komitmen tersebut boleh terdiri daripada komitmen afektif, komitmen kalkulatif dan komitmen normatif.

Komitmen Afektif

Komitmen afektif merupakan satu hubungan emosional antara pekerja dan organisasi (Indriyanto, 2013). Namun dari sudut jual beli barangan, Čater dan Čater (2010) mendefinisikan komitmen afektif sebagai komitmen pelanggan dengan pembekal perkhidmatan dari segi emosi yang merangkumi perasaan positif, kegembiraan dan kesaksamaan di antara mereka. Berdasarkan definisi di atas, bolehlah dijelaskan bahawa komitmen afektif sebagai satu

hubungan yang berbentuk emosional, iaitu satu perasaan cinta pengguna terhadap penjual dan secara sukarela ingin mempunyai hubungan dengan penjual (Suratman, 2016; Sumaedi *et al*., 2015; Nofriana, 2013). Beberapa kajian empirikal yang lepas telah menunjukkan bahawa komitmen afektif mempunyai pengaruh yang signifikan terhadap kepercayaan. Antaranya adalah, pelanggan atas talian (Li & Chang, 2016), perbankan Islam (Fullerton, 2011; Sumaedi *et al*., 2015), dan urusniaga perbankan (Fatima *et al*., 2016).

Oleh yang demikian, hipotesis berikut dibangunkan dalam mengenal pasti pengaruh komitmen afektif terhadap kepercayaan pengguna kosmetik halal.

H1: *Komitmen afektif mempunyai hubungan yang signifikan terhadap kepercayaan pengguna.*

Komitmen Kalkulatif

Čater dan Čater (2010) mendefinisikan komitmen kalkulatif sebagai hubungan antara pembeli dan pembeli yang dinilai berdasarkan pertimbangan ekonomi menerusi perkiraan untung atau rugi apabila hubungan mereka diteruskan atau dikekalkan. Dalam komitmen kalkulatif, pengguna akan mempunyai *switching cost* untuk bertukar produk yang lain jika produk tidak memenuhi keperluan pengguna (Suratman, 2016; Sumaedi *et al*., 2015; Nofriana, 2013). Komitmen kalkulatif dilihat sebagai kesungguhan pengguna dalam mempertahankan hubungan dengan penjual disebabkan oleh manfaat ekonomi yang diperoleh pengguna ketika menggunakan produk. Hubungan antara komitmen kalkulatif dan kepercayaan pengguna dijelaskan oleh beberapa pengkaji lepas (i.e. Sumaedi *et al*., 2015; Fatima *et al*. (2016). Pendapat mereka berbeza dengan menjelaskan bahawa komitmen kalkulatif tidak mempunyai hubungan yang signifikan terhadap kepercayaan (Sumaedi *et al*., 2015), manakala Fatima *et al*. (2016) mendapati wujudnya hubungan yang signifikan terhadap komitmen kalkulatif pengguna. Berdasarkan perbincangan di atas, hipotesis berikut dibangunkan dalam mengenal pasti pengaruh komitmen kalkulatif terhadap kepercayaan pengguna kosmetik halal.

H2: *Komitmen kalkulatif mempunyai hubungan yang signifikan terhadap kepercayaan pengguna.*

Komitmen Normatif

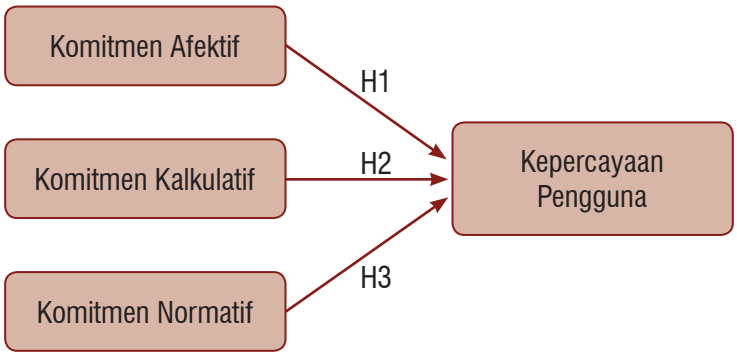
Komitmen normatif boleh ditafsirkan sebagai komitmen yang berkaitan dengan norma-norma sosial, tanggungjawab moral dan tanggungjawab satu pihak kepada satu pihak yang lain (Sumaedi *et al*., 2015). Dengan kata lain, komitmen normatif merupakan perasaan tanggungjawab pengguna terhadap produk tersebut (Sumaedi *et al*., 2015; Nydia, 2012). Sementara itu, dalam komitmen normatif, pengguna merasa wajib untuk terus menggunakan produk (Nydia, 2012). Sebagaimana dalam bidang perbankan Islam seperti dalam kajian

Sumaedi *et al*. (2015), komitmen normatif juga merupakan komitmen yang berpotensi mempunyai kaitan dengan kosmetik halal. Ini kerana, produk kosmetik halal tidak hanya menawarkan produk kosmetik yang halal tetapi juga menawarkan hubungan keagamaan yang membolehkan pengguna merasa berdosa akibat daripada tidak menggunakan produk kosmetik yang halal (Sumaedi *et al*., 2015; Fullerton, 2011). Namun, komitmen normatif merupakan nilai komitmen yang jarang dikaji secara empirikal (Sumaedi *et al*., 2015; Fatima *et al*., 2016; Fullerto, 2012). Tambahan pula, didapati bahawa kajian lepas mempunyai penjelasan yang berbeza terhadap isu ini (Fullerton, 2011; Sumaedi *et al*., 2015; Li & Chang, 2016; Fatima *et al*., 2016). Berdasarkan keperluan tersebut, hipotesis berikut dikemukan:

H3: *Komitmen normatif mempunyai hubungan yang signifikan terhadap kepercayaan pengguna.*

Metodologi

Reka bentuk kajian ini adalah bersifat diskriptif yang menggunakan pendekatan kuantitatif. Manakala, borang soal selidik akan digunakan untuk proses pengumpulan data. Sementara, ujian rintis digunakan untuk proses penambahbaikkan isi kandungan borang soal selidik. Manakala, kaedah *Partial Least Square* (*Smart PLS v.2.0*) pula akan digunakan untuk menganalisis data. Berikut adalah rajah yang menunjukkan cadangan rangka kerja kajian.



Sumber: Diadapatasi daripada kajian Adji (2014) dan Sumaedi *et al*. (2015)

Rajah 1 Cadangan rangka kerja kajian

Pada permulaannya jumlah sampel yang dicadangkan adalah 137. Namun, untuk mengurangkan margin kesilapan dan meningkatkan ketepatan dalam ukuran, maka kajian ini menggandakan jumlah tersebut menjadi 270 responden semuanya. Keputusan ini sesuai dengan saranan Hair, Black, Babin, Anderson dan Tatham (2006). Semua responden yang dipilih melalui teknik *judgemental sampling* di sekitar Wilayah Persekutuan Labuan. Individu yang dipilih mestilah yang termasuk dalam kategori yang telah ditetapkan lebih awal iaitu pernah membeli dan

menggunakan kosmetik halal tanpa mengira jantina, umur, bangsa dan agama mereka. Oleh kerana kajian ini telah mengadaptasi kajian lepas, maka proses *face validity* dan ujian rintis dijalankan untuk memastikan borang soal selidik yang diedarkan adalah sesuai dan boleh dipercayai. Jadual 1 merupakan konstruk-konstruk yang terlibat dalam kajian ini.

Jadual 1 Konstruk kajian

No.	Konstruk	Jumlah item	Sumber
1	Kepercayaan Pengguna (KP)	8	McKnight *et al*., (2002); Mulya (2014); Adji (2014)
2	Komitmen Afektif (KA)	9	Chuang & Tai (2016); Sumaedi *et al*. (2015); Indriyanto (2013); Čater & Čater (2010); Setiawan (2007)
3	Komitmen Kalkulatif (KK)	5	Chuang & Tai (2016); Sumaedi *et al*. (2015); Indriyanto (2013); Čater & Čater (2010); Setiawan (2007)
4	Komitmen Normatif (KN)	5	Li & Chang (2016); Chuang & Tai (2016); Sumaedi *et al*. (2015); Indriyanto (2013); Čater & Čater (2010); Setiawan (2007)

DAPATAN KAJIAN

Profil Responden

Sebanyak 270 responden mengambil bahagian dalam kajian ini (rujuk Jadual 2). Berdasarkan maklum balas yang dikumpulkan, 72.2% responden adalah wanita dan baki 27.8% adalah lelaki. Daripada 270 orang responden, 81.9% pernah menggunakan kosmetik halal, sementara 18.1% lagi tidak pernah menggunakan kosmetik halal. Kebanyakan responden berusia antara 16 – 25 tahun sebanyak 33.7%, 26 – 35 tahun (25.9%), 36 – 45 tahun (24.1%), 46 – 55 tahun (11.9%) dan 56 tahun ke atas (4.4%). Majoriti responden adalah terdiri daripada mereka yang beragama Islam sebanyak 65.9%, Kristian (19.3%), Buddha (7.8%), Hindu (5.9%) dan yang menganuti agama lain sebanyak 1.1%. Sebilangan kecil responden berbangsa India dan Cina masing-masing dengan 7.4%, diikuti dengan lain-lain bangsa sebanyak 26.7% dan bangsa Melayu sebanyak 53.7%. Responden yang terlibat adalah terdiri daripada mereka yang mempunyai sijil SPM (23.7%) dan STPM (19.3), ijazah sarjana muda (18.9%), diploma (16.7%), lain-lain kelulusan (9.3%), ijazah sarjana (6.3%) dan SRP/PMR (5.9%). Kebanyakan responden merupakan pelajar sebanyak 28.9% dan 20.7% bekerja sebagai kakitangan kerajaan, 18.1% sebagai kakitangan swasta dan 7.8% bekerja dalam lain-lain bidang, 11.5% bekerja sendiri dan 10.4% merupakan suri rumah, dan bakinya 2.6% merupakan pesara. Sebanyak 42.2% responden mempunyai pendapatan antara RM2,001 – RM5,000, 39.3% responden tidak mempunyai pendapatan, 7% responden masing-masing mempunyai pendapatan antara

RM1,201 – RM2,000 dan melebihi RM5,000, 2.6% responden mempunyai pendapatan antara RM1,001 – RM1,200 dan hanya 1.9% responden yang mempunyai pendapatan kurang daripada RM1,000.

Jadual 2 Ringkasan profil responden ($N = 270$)

Profil	Kekerapan	Peratus (%)
Jantina		
Lelaki	75	27.8
Wanita	195	72.2
Umur		
16 – 25 tahun	91	33.7
26 – 35 tahun	70	25.9
36 – 45 tahun	65	24.1
46 – 55 tahun	32	11.9
56 tahun ke atas	12	4.4
Agama		
Islam	178	65.9
Kristian	52	19.3
Buddha	21	7.8
Hindu	16	5.9
Lain-lain	3	1.1
Bangsa		
Melayu	145	53.7
Cina	33	12.2
India	20	7.4
Lain-lain	72	26.7
Tahap Pendidikan		
SRP/PMR	16	5.9
SPM	64	23.7
STPM	52	19.3
Diploma	45	16.7
Ijazah sarjana muda	51	18.9
Ijazah sarjana	17	6.3
PhD	0	0
Lain-lain	25	9.3
Pekerjaan		
Kakitangan kerajaan	56	20.7
Kakitangan swasta	49	18.1
Bekerja sendiri	31	11.5
Pesara	7	2.6
Suri rumah	28	10.4
Pelajar	78	28.9
Lain-lain	21	7.8

Pendapatan Bulanan		
Tiada Pendapatan	106	39.3
Kurang dari RM1,000	5	1.9
RM1,001 – RM1,200	7	2.6
RM1,201 – RM2,000	19	7.0
RM2,001 – RM3,000	33	12.2
RM3,001 – RM4,000	61	22.6
RM4,001 – RM5,000	20	7.4
Lebih daripada RM5,000	19	7.0
Adakah anda pernah menggunakan kosmetik yang mempunyai logo halal?		
Pernah	221	81.9
Tidak pernah	49	18.1

Analisis Kebolehpercayaan

Jadual 3 merupakan ringkasan keputusan nilai alfa Cronbach. Analisis kebolehpercayaan dijalankan untuk menilai konsistensi pengukuran antara item. Berdasarkan Nunnally dan Berstein (1994), nilai kebolehpercayaan yang diterima adalah 0.7. Hasil analisis menunjukkan bahawa nilai alfa Cronbach melebihi 0.7. Namun, item komitmen afektif (AC6, AC7, AC8, dan AC9) dan kepercayaan pengguna (T1, T6, dan T8) dipadam kerana tidak memenuhi pematuhan faktor minimum 0.7. Secara keseluruhan, pengukuran kebolehpercayaan konstruk ini boleh dipercayai.

Jadual 3 Keputusan analisis kebolehpercayaan

Konstruk	Nilai Alfa Cronbach (α)	Bilangan item
Komitmen Afektif (KA)	0.884	5(4)
Komitmen Kalkulatif (KK)	0.860	5(0)
Komitmen Normatif (KN)	0.899	5(0)
Kepercayaan Pengguna (KP)	0.931	5(3)

Dengan menggunakan nilai *cut-off* untuk beban pada 0.5 sebagai signifikan (Hair *et al*., 2010), kita dapat memberi keterangan mengenai seberapa baik keputusan yang diperoleh dari penggunaan ukuran yang bersesuaian dengan teori mana ujian itu direka (Sekaran & Bougie, 2010). Untuk kesahihan konstruk, beban dan beban silang akan digunakan untuk menilai sama ada terdapat masalah dengan item tertentu. Oleh itu, jika sebarang item mempunyai beban lebih tinggi daripada 0.5 pada dua atau lebih faktor, maka ia akan dianggap mempunyai beban silang yang ketara. Dari Jadual 4 dapat dilihat bahawa semua item berada di atas beban 0.5 (KA: 0.7525 – 0.8955; KK: 0.7446 – 0.8425; KN: 0.7496 – 0.9014; KP: 0.7594 – 0.9433).

Secara keseluruhan, semua item yang mengukur konstruk tertentu dimuatkan dengan beban yang tinggi dan dimuatkan dengan beban yang lebih rendah pada konstruk yang lain sehingga mengesahkan kesahan konstruk.

Kesahan Konstruk

Jadual 4 Keputusan beban faktor

Konstruk	Komitmen Afektif (KA)	Komitmen Kalkulatif (KK)	Komitmen Normatif (KN)	Kepercayaan Pengguna (KP)
AC1	**0.8334**	0.2536	0.5185	−0.2263
AC2	**0.7737**	0.1640	0.5594	−0.1914
AC3	**0.8955**	0.2746	0.5559	−0.2806
AC4	**0.8729**	0.2960	0.5668	−0.2346
AC5	**0.7525**	0.0357	0.4364	−0.2928
CC1	0.2638	**0.8173**	0.1106	0.4194
CC2	0.3644	**0.7446**	0.1789	0.2621
CC3	0.1662	**0.8138**	−0.0123	0.4106
CC4	0.2075	**0.7645**	0.0863	0.3713
CC5	0.0876	**0.8425**	−0.0808	0.6087
NC1	0.5298	0.0043	**0.8414**	−0.2262
NC2	0.5844	−0.0034	**0.9014**	−0.2301
NC3	0.5276	−0.0027	**0.8758**	−0.2119
NC4	0.5461	0.0968	**0.8427**	−0.1872
NC5	0.4790	0.1268	**0.7496**	−0.1453
T2	−0.3273	0.4874	−0.2627	**0.9050**
T3	−0.3322	0.5047	−0.2557	**0.9433**
T4	−0.2608	0.4872	−0.2092	**0.8834**
T5	−0.2759	0.5102	−0.2275	**0.9339**
T7	−0.1183	0.4652	−0.0906	**0.7594**

Nilai tebal adalah beban bagi item yang melebihi nilai disyorkan sebanyak 0.5

Kesahan konvergen merupakan penelitian terhadap tahap persetujuan antara pelbagai item dalam mengukur konsep yang sama. Nilai kesahan konvergen diukur menggunakan beban faktor, kebolehpercayaan komposit (CR) dan varians purata yang diekstrak (AVE) (Hair *et al*., 2010). Keputusan pengukuran model (rujuk Jadual 5) menunjukkan nilai beban faktor bagi semua item adalah melebihi nilai yang disyorkan iaitu 0.5. Nilai CR mengukur sejauh mana indikator konstruk menunjukkan laten telah membentuk susunan konstruk antara nilai 0.897 hingga 0.948 (rujuk Jadual 5). Kesemua nilai CR ini melebihi nilai 0.7 seperti yang dicadangkan oleh Hair *et al*. (2010). Nilai AVE pula mengukur varians yang diekstrak oleh indikator relatif

ketika mengukur ralat. Nilai AVE (rujuk Jadual 5) berada dalam lingkungan 0.635 dan 0.787 yang juga melebihi nilai 0.5. Nilai AVE hendaklah lebih besar daripada 0.5 untuk mengesahkan penggunaan konstruk (Barclay *et al*., 1995). Secara keseluruhan, keputusan ini menunjukkan pengukuran model menggunakan empat (4) konstruk ini adalah sah berdasarkan anggaran parameter dan kepentingan statistik masing-masing (Chow & Chan, 2008; Hair *et al*., 2014). Secara keseluruhan, model pengukuran ini menunjukkan kesahan konvergen yang memadai.

Kesahan Konvegen

Jadual 5 Keputusan pengukuran model

Konstruk Model	Item Pengukuran	Beban Faktor	Kebolehpercayaan Komposit (CR)	Varians Purata Diekstrak (AVE)
Komitmen Afektif (KA)	AC1	0.8334	0.915	0.684
	AC2	0.7737		
	AC3	0.8955		
	AC4	0.8729		
	AC5	0.7525		
Komitmen Kalkulatif (KK)	CC1	0.8173	0.897	0.635
	CC2	0.7446		
	CC3	0.8138		
	CC5	0.7645		
	CC6	0.8425		
Komitmen Normatif (KN)	NC1	0.8414	0.924	0.711
	NC2	0.9014		
	NC3	0.8758		
	NC4	0.8427		
	NC5	0.7496		
Kepercayaan Pengguna (KP)	T2	0.9050	0.948	0.787
	T3	0.9433		
	T4	0.8834		
	T5	0.9339		
	T7	0.7594		

Kesahihan Diskriminan

Kesahihan diskriminasi dijalankan untuk memastikan konstruk yang dibina mempunyai hubungan yang kuat dengan indikator masing-masing (Hair *et al*., 2014). Kesahihan diskriminasi akan mengukur tahap perbezaan antara item dan konstruk atau konsep yang berbeza dengan mengkaji korelasi antara konstruk yang mungkin bertindih. Item yang

dimuatkan perlu lebih kuat pada konstruk dalam model, varians purata yang diekstrak antara setiap konstruk serta antara konstruk masing-masing, dan pengukurannya perlu lebih besar daripada varians purata yang diekstrak antara konstruk dan konstruk lain (Compeau *et al*., 1999). Seperti yang ditunjukkan dalam Jadual 6, korelasi kuasa dua untuk setiap konstruk adalah kurang daripada varians purata yang diekstrak oleh indikator yang mengukur konstruk, membuktikan kesahan diskriminasi yang mencukupi. Secara keseluruhan, model pengukuran ini menunjukkan kesahihan diskriminasi.

Jadual 6 Kesahihan diskriminasi konstruk

Konstruk	KA	KK	KN	KP
Komitmen Afektif (KA)	**0.684**			
Komitmen Kalkulatif (KK)	0.242**	**0.635**		
Komitmen Normatif (KN)	0.632**	0.0426**	**0.711**	
Kepercayaan Pengguna (KP)	−0.303**	0.552**	−0.241**	**0.787**

** Korelasi adalah signifikan pada aras 0.01 (2-tailed)

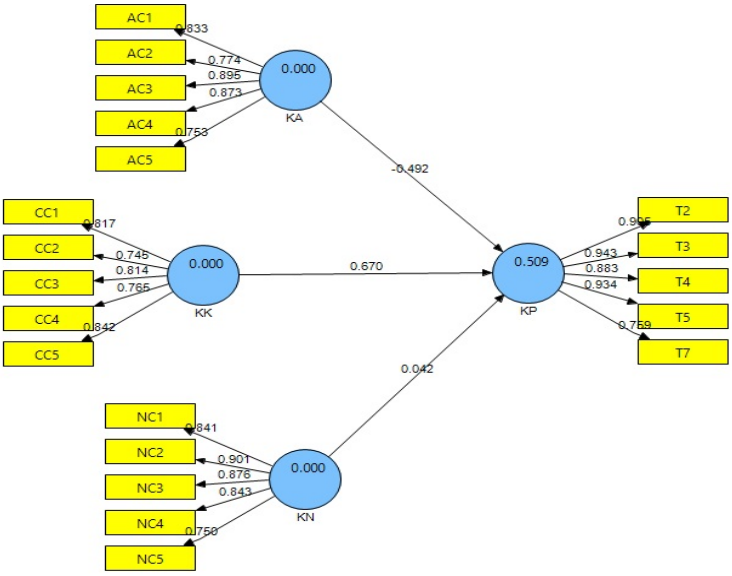
Ujian Hipotesis

Jadual 7 dan Rajah 2 menunjukkan keputusan ujian hipotesis kajian. Jadual 6 menunjukkan komitmen afektif ($\beta = -0.492$, $p = 0.01$) dan komitmen kalkulatif ($\beta = 0.670$, $p = 0.01$) mempunyai hubungan yang signifikan terhadap kepercayaan pengguna, manakala komitmen normatif ($\beta = 0.042$, $p = 0.01$) didapati tidak mempunyai hubungan yang signifikan terhadap kepercayaan pengguna. Keputusan ujian ini menyokong hipotesis H1 ($t = 2.096$) dan H2 ($t = 4.267$) dan menolak hipotesis H3 ($t = 0.205$). Selain itu, nilai R^2 dalam Rajah 2 adalah sebesar 0.509 yang menunjukkan hanya 50.9% varian dalam kepercayaan pengguna dapat dijelaskan oleh komitmen afektif, komitmen kalkulatif dan komitmen normatif. Komitmen kalkulatif merupakan komitmen yang paling mempengaruhi kepercayaan pengguna.

Jadual 7 Pekali Lintasan dan Ujian Hipotesis

Hipotesis	Hubungan	Pekali Lintasan	Nilai-t	Keputusan
H1	KA → KP	−0.492	2.096	Disokong**
H2	KK → KP	0.670	4.267	Disokong**
H3	KN → KP	0.042	0.205	Tidak Disokong

*** Korelasi adalah signifikan pada aras 0.01 (2-tailed)*



Rajah 2 Keputusan Analisis Pekali Lintasan

Keputusan ujian ini menggambarkan semakin tinggi komitmen kalkulkatif semakin tinggi kepercayaan pengguna. Bermakna, semakin tinggi kos pembelian ditanggung pengguna jika bertukar kosmetik halal, maka semakin komited pengguna menggunakan kosmetik halal yang sedia ada. Dengan kata lain pengguna di Labuan begitu mementingkan perkara dan faktor yang berkaitan kewangan dan kos. Pengguna akan terus mempercayai kosmetik halal apabila telah menerima manfaat yang lebih besar berbanding kos pembelian yang dibelanjakan. Disamping itu, kesukaran mendapatkan kosmetik halal di pasaran tempatan dan tahap kesedaran yang rendah terhadap penggnaan kosmetik halal dilihat sebagai penyebab kepada tidak signifikannya komitmen normatif terhadap kepercayaan pengguna di sekitar Labuan. Kesedaran yang rendah telah menyebabkan mereka mengabaikan aspek agama (halal) dalam pemilihan dan penggunaan kosmetik halal.

KESIMPULAN

Kajian ini menyokong pandangan konvensional mengenai pengaruh konstruk tidak bersandar daripada komitmen afektif, kalkulatif dan normatif terhadap kepercayaan pengguna kosmetik halal di Wilayah Persekutuan Labuan. Ia menilai sejauh mana komponen-komponen komitmen ini dapat mempengaruhi kepercayaan pengguna kosmetik halal. Kertas ini juga mengkaji kebaikan pengukuran yang dinilai dengan melihat keabsahan dan kebolehpercayaan yang dijalankan menggunakan pendekatan PLS. Keputusan menunjukkan bahawa pengukuran yang dijalankan menunjukkan kesahihan konvergen dan diskriminasi. Malahan, nilai-nilai alfa Cronbach dan nilai kebolehpercayaan komposit adalah selaras dengan kriteria yang ditetapkan oleh kajian terdahulu. Oleh itu, pengukuran dalam model yang ditunjukkan sebagai boleh dipercayai.

Penemuan kajian ini mengesahkan bahawa komitmen kalkulatif mempengaruhi kepercayaan pengguna secara positif. Ini bermakna, pengguna mempunyai kepercayaan pengguna terhadap kosmetik halal yang dihasilkan. Pengguna berasa mempunyai tanggungjawab moral dan mematuhi tuntutan agama untuk terus menggunakan kosmetik halal kerana mempercayai pengeluar produk (Astrila, 2014; Čater & Zabkar, 2009). Kepercayaan pengguna ini dapat mengurangkan ketidakpastian pengguna kosmetik halal walaupun mungkin wujud bahan yang berbahaya (Li & Chang, 2016). Namun demikian, pengguna turut menggunakan kosmetik halal yang lain kerana mereka mempunyai kemampuan (Sumaedi *et al*., 2015). Keputusan ini menyokong penemuan Li dan Chang (2016), Fullerton (2011), dan Čater dan Čater (2010).

Sebaliknya, kajian ini menemukan bahawa komitmen afektif mempunyai hubungan yang negatif terhadap kepercayaan pengguna. Keadaan ini berlaku apabila pengguna bukan sahaja menjimatkan wang untuk satu produk kosmetik tetapi juga untuk kosmetik yang lain (Sumaedi *et al*., 2015). Akibatnya, perasaan cinta dan bangga pengguna tidak dapat dibentuk, walaupun pengguna mempercayai kosmetik halal yang dihasilkan oleh pengeluar. Keputusan ini menyokong keputusan kajian Sumaedi *et al*. (2015). Penemuan kajian ini juga mendapati komitmen kalkulatif merupakan komitmen yang paling mempengaruhi kepercayaan pengguna. Ini bermakna, pengguna lebih komited menggunakan dan mempercayai kosmetik halal yang dapat memberikan manfaat dan menjimatkan perbelanjaan mereka, berbanding dengan rasa cinta dan tuntutan agama ketika membeli dan menggunakan produk kosmetik.

Kajian ini mengkaji model yang dicadangkan menjelaskan fenomena setiap komponen komitmen dan kepercayaan pengguna kosmetik halal. Selain itu, kajian ini juga hanya melibatkan saiz sampel yang kecil. Malahan, komitmen normatif tidak mempunyai hubungan yang signifikan terhadap kepercayaan pengguna. Oleh itu, kajian lanjut pada masa akan datang boleh mengadaptasi model kajian ini dengan saiz sampel yang lebih besar dan melibatkan produk halal yang lain. Kajian komitmen normatif terhadap kepercayaan pengguna penting kerana komitmen normatif boleh menjelaskan adakah tuntutan agama sebenarnya yang mendasari niat pengguna untuk terus menggunakan kosmetik halal (Sumaedi *et al*., 2015; Fullerton, 2011).

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REVISITING LONG-RUN DYNAMICS OF THE DETERMINANTS OF PUBLIC EDUCATION EXPENDITURE IN MALAYSIA

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ABSTRACT

The main purpose of this paper is to revisit the long-run dynamics on the Malaysia's public education expenditure determinants during the period of 1982 to 2016. This study will also attempt to discuss some of the relevant theories that are able to explain and characterized the pattern of the Malaysia's public education expenditure. A relatively recent developed estimation technique, ARDL bound testing was employed to estimate the long-run relationship between the public education expenditure and its determinants. The results based on the ARDL bound testing approach concluded that a stable, long run co-integrated relationship exists between public education expenditure and its determinants: real gross domestic product (GDP), unemployment rate (UNEM), inflation rate (INF) and working age population (POP2). Furthermore, the result highlighted the relevancy and suitability of Keynesian Counter Cyclical theory, Economic-Demography theory and Peacock-Wiseman in explaining the pattern of Malaysia's public education expenditure. In addition, bilateral causality was found between public education expenditure and real GDP. Similarly, a two-way causal relationship was also found between tax revenue and public education spending. Finally, this study suggests that policy makers should pay more attention to the economic situations and the demands from the society when formulating future policies or allocations.

Keywords: education expenditure, ARDL bound testing, determinants, long-run dynamics

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INTRODUCTION

Education is considered as a vital aspect of social development and economic growth for every society, providing beneficial impact on economic future and social well-being of all individuals. United Nations (2003) reported that education yielded enormous motivation to the development of countries of the world, by providing opportunities for individuals to achieve their potential and contribute meaningfully to the society. Through education, individuals can make better decisions and will be empowered to take on national development. Society will not be able to consider itself as truly developed without its citizens being educated.

Increase of education will make an important contribution to societies' economic growth and to the individuals' income. Malaysia government has sustained a high level of investment in its education sector since gaining independence in 1957. During the early of 1980, the investment by Malaysian government had reached the highest in East Asia as reported by education review. However, a closer inspection of the education allocation showed that there was a clear fluctuation of the public education spending with declining expenditure observed in 2011.

Our focus on education expenditure can be justified on the following number of grounds. First, the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) score during the year 2009 showed that Malaysia's performance was not quite satisfactory. The PISA score obtained in the year of 2009 were rather disappointing with Malaysia taking up the rank of the bottom third of the 74 participating countries (Ministry of Education Malaysia, 2013). As such, there is a need to examine the pattern of the public education expenditure and to determine its factors.

Secondly, the importance of education is globally recognized with many past studies encouraging the increase of education funding. It had been proven by many researches the presence of positive and beneficial effect of public education expenditure on the individual's social well-being and national economic growth. Hence, a heavier emphasize should be placed upon the allocation of government education expenditure. Furthermore, increased global competition has forced policymakers to pay more attention to funding for education in Malaysia (Govindaraju, Rao, & Anwar, 2011).

The study build upon a number of established economic theories will serve as basis to empirically investigate the determinants of public education expenditure. Analysis of the government spending on education will provide better knowledge and understanding of the concerning issue. Identification of the public education expenditure's determinants will generate profound findings that may be useful for the policy makers to develop an effective education policy in the future. In addition, the theories found that truly reflected the behaviours of the Malaysia government education expenditure policy will significantly add to the literature.

This paper will be organized in the following: Section 1 begins with a brief introduction on the study. Section 2 describes the literature review on the past researches that were related to this study. Meanwhile, Section 3 will discuss on the data that will be analysed in the study. Next, Section 4 explains on the theoretical model that is being employed in the study. Section 5 provides description and discussion on the methodology of the study. On the other hand, Section 6 reveals the result on the empirical study conducted. Finally, Section 7 will provide a conclusion on the study conducted.

LITERATURE REVIEW

In the first stage of the literature review, this paper will attempt to highlight the positive impacts of public education expenditure on economic growth and the overall social well-being. Numerous studies conducted over various countries had concluded unanimously that the a higher education expenditure will lead to enhance human capital productivity, increase of individual's income, reducing poverty rates and bringing to a better social well-being of all individuals.

Dewitt (1965) highlighted the crucial role of education as an investment which brings to the improvement of productivity through skill of work force, professional competence, and organization human activities. According to Dewitt (1965), investment in people creates human capital which was an embodiment of resources devoted to produce, maintain, and increasing the capabilities of human beings as participants in the social mode of production. Human resources will be the key to economic development. Without human resources development, the society will not be able to develop technology, political or social institutions, cultural welfare or its economy.

Expenditure on education was widely recognized by economists as a method of investing in human capital that contributed to the future levels of income. Woodhall (1967) reviewed the economic returns of education produced positive effect on lifetime earnings and occupation. The investment of education is believed to generate economic growth making it necessary for governments to make detailed projections of the future scale of the education system.

A more educated individual will be able to earn well above the average earnings. Schooling will raise earnings and productivity by providing knowledge, skills and analytical thinking (Becker, 1992). The growth of per capita incomes in many countries during nineteenth and twentieth century is partly due to the expansion of scientific and technical knowledge that raises the productivity of labour and other inputs in production (Becker, 1992).

Gupta, Verhoeven, and Tiongsan (1999) supported the proposition that a greater public expenditure on education generate positive impacts on the education attainment measures. The overall education spending was statistically significant to the gross enrolments. They further suggest that policy makers would need to pay greater attention on the allocations if

education expenditure is to boost economic growth and promote the well-being of the poor. The allocations in terms of their size and efficiency are important drivers that need to be considered in order to promote equity.

Sylwester (2002) attempted to analyse whether higher devotion of resources to education sector may reduce the income inequality within a country. By conducting the least square regression test on a cross section data of countries, it was evident that the public education expenditures appear to cause a decline of the level of income inequality. In other words, the education expenditure will be able to close the income disparity exist in the society. Hence, it can be concluded from this study that the support on education expenditure is likely to enhance the human capital which in turn spur the economic growth.

A number of studies conducted within the context of Malaysia depicted that the government education spending had been producing desirable positive effects. Govindaraju et al. (2011) concluded in their study that the government spending in education will enhance Malaysia's GDP growth in the long run. Based on the bivariate model, they found that the aggregate government spending Granger causes the real GDP. In this study, the authors investigate the time series data in Malaysia over the period of 1970 to 2006. They used both the bivariate and multivariate models to study the relationship between the government spending on education and GDP.

Similarly, Mohd Yahya, Fidlizan, Mohd Fauzi, and Azila (2012) explored the long-run relationship and causality between government expenditure in education and economic growth in Malaysia over the period of 1970 to 2010. Their empirical results illustrated positive co-integration between economic growth and variable of capital fixed formation, labour force participation and government expenditure on education. Besides that, their study also showed that economic growth Granger cause the education expenditure variable and vice versa in the short-run. Thus, confirming the existence of a long-run relationship between education expenditure and economic growth.

Lai and Yussof (2014) examined the long-run relationship between human capital accumulation and economic growth in Malaysia from 1981 to 2010. The findings of their autoregressive distributed lag (ARDL) model revealed that there is significant long-run relationship between education level and economic growth. The result of their study indicated that labour with high level education had positive effect towards GDP, while labour with low level education attainment had insignificant positive impact on GDP. This implied that labour force with high education level attainment had positive contribution to economic growth. Hence, the study was concluded by suggesting a higher investment in education to boost the development of Malaysia as a high income country.

With a large number of studies generating positive results of the public education expenditure in creating high productive workforce, studies that investigate the determinants of public education expenditure becomes highly relevant and necessary. The studies on the determinants of public education expenditure will be able to provide an ideal framework that helps in determining the

indicators that should be incorporated when deciding on the education allocation. Thus, in the second stage of this literature review, exposition and review will be done on the papers that discussed on the variables that determine the public education spending.

Gu (2012) examined a multivariate spatial autoregressive model of public education expenditure determinants in China. The findings of the study revealed that economic level determines the education expenditure level significantly. Other determinants such as proportion of non-agricultural population, immigrant population from other provinces and children population does not had a linear relationship with the education expenditure.

Sagarik (2012) analysed the determinants of public education expenditure in Thailand within a multi-dimensional approach. A multidimensional framework was constructed on a number of established theories to determine the important determinants that influence public education expenditure in Thailand. Findings from this research indicated that inflation is negatively related to the total educational expenditure. Meanwhile, insignificant relationship was found to exist between unemployment and education expenditure.

Chatterji, Mohan, and Dastidar (2014) studied the determinants of public education expenditure across Indian States from the year 2001 to 2010. Their study had revealed that the economic variables such as tax revenue and grants from central government exerted positive impact on education expenditure. On another note, a negative relationship is found between child population and education expenditure. Bischoff and Prasetyia (2015) carried out a study on the determinants of local public expenditures on education for the Indonesian districts between year 2005 and 2012. The result from their study had found out that education expenditure increases with a larger share of children as contradicted to Chatterji et al. (2014).

Meanwhile, Poterba (1997) postulated elderly population was found to be having negative relationship on the public education expenditure. Poterba (1997) argued that elderly population do not favour education expenditure, hence, resulting in a negative association. Ukwueze (2015) employed the short-run error correction model, long-run static equation and ordinary least square regression technique on the Nigeria data from 1961 to 2012 to determine factors that affect the public expenditure size. The results revealed that the size of revenue, national income rate of growth and private investment had significant impact on the size of the government expenditure both in the short run and long run. Factors such as external debts and domestic debts indicated significant influence on the size of government expenditure in the short run only.

Based on the literature review, it appears that the significant positive contribution of education expenditure on economic growth and the social well-being was well established. Hence, justifying the emphasis placed on the need to increase the public education expenditure. As such, there is a need to address the key determinants and theories that can explain the behavioural pattern of the Malaysia's education expenditure. The existing literature reviews on the determinants of education expenditure was still rather less, especially within the context of Malaysia. Hence, this paper will also attempt to address the research gaps of these existing literatures.

METHODOLOGY

This paper will focus on investigating the long run dynamics of the determinants of public education expenditure through Granger Causal analysis. In addition, this paper will be an extension of our past paper (Wong & Yusoff, 2018) by incorporating the Economic-Demography Theory and Peacoc-Wiseman Theory in the study of the determinants of Malaysian education expenditures from 1982 to 2016. As in Wong and Yusoff's(2018), a relatively new approach of ARDL bound testing has been employed to determine the key factors influencing the public education expenditures. By integrating the relevant theories from the literature, a suitable model with variables adjusted to the situation in Malaysia was developed. The variables identified for this study include the independent variables of real gross domestic product, unemployment rate, inflation rate, tax revenue, public debt, population sizes for different cohorts and dependent variable of public education expenditure. The secondary data of the variables were obtained from the Economic Planning Unit, Malaysia Statistical Department, and World Bank.

THEORETICAL MODEL

Before developing the empirical model of the study, the existing theories obtained from the literature was discussed. The discussion will justify the need to use these theories into developing a relevant empirical model.

Economic-Demographic Theory

The economic demographic theory focuses on the importance of the socioeconomic environment factors in shaping public expenditure. Under this theory, the public expenditure or public policy was considered as the political system that is expected to be responsive to the socioeconomic environment or demands of the society. This simply means that the environment or factors in a particular system are considered as the determinants of certain policies. The concept of system implies a set of institutions and activities in society that function to transform demands into authoritative decisions which required support of the whole society (Dye, 1973). The public education expenditure is modelled into the proposed concept of system theory. In accordance to the concept of system model, policy makers would need to pay careful attention to the forces or demands in its environment, as these factors would affect the public policy. Following the proposition by Sagarik (2012), any crucial factors in the system should be taken into account in the attempt to analyze the changes in public education expenditure.

Keynesian Counter-Cyclical Theory

According to the Keynesian Counter-Cyclical theory, any decision to increase or decrease the allocation of government expenditure will depend on the economic conditions of the society. Any changes to the society's economic situation will lead to another change of the public expenditure allocation. The Keynesian Counter-Cyclical theory further advocated that the government played a major role to enhance the economy by tax cut or increasing the public expenditure through expansionary fiscal policy. Under the expansionary fiscal policy, government expenditure programme was stimulated during economic recession in the hope of increasing the aggregate demand. Meanwhile, the public expenditure will be reduced when the economy is on the rise. The increased of government expenditure during economy recession was to inject more money into the economy to stimulate the aggregate demand expansion and economy growth. In another instance, a higher budgetary expenditure will be allocated when the country experienced high unemployment. However, it is still remain unclear if the following theory will applied directly to Malaysia's education expenditure. For example, an economic downturn may not directly lead to education institutions closure.

Peacock-Wiseman Theory

Peacock and Wiseman (1961) explained that the behaviour of public expenditures over any period depends on factors that can differ in influence and importance from one time to another. Their study anchored on the Displacement Theory explained that the public expenditure does not increase in a straight and continuous manner, but rather in a step-like pattern to accommodate social upheavals. The unanticipated social disturbance brings to the need of increasing public expenditure which now would require higher taxation. The movement of the government expenditure from low level to higher level spending resulted in the displacement effect. The tolerance of the citizens on the higher taxation imposed during times of crisis will still persist even after the crisis ended. This would results in a permanent shift of the trend following the social disturbance. Following Peacock and Wiseman analysis of the time pattern of public expenditures, it will be interesting to investigate whether the education expenditure is affected by the time of economic crisis. Factors such as population upsurge or that of the increasing price level may tend to increase the cost of public activities raising the public expenditure.

EMPIRICAL MODEL

The empirical model developed for this study was motivated by Okafor and Eiya (2011) and Sagarik (2012). This model was employed to empirically analyze the economic and demographic determinants of the public education expenditure as in our previous paper (Wong & Yusoff, 2018).

$$EDU_t = f(GDP_t, UNEM_t, INF_t, TAX_t, DEBT_t, POP1_t, POP2_t, POP3_t) \quad (1)$$

Where:

= Public Expenditure on Education at time *t* (RM Million)
= Real Gross Domestic Product growth rate (%)
= Unemployment Rate (%)
= Inflation Rate (%)
= Tax Revenue at time *t* (RM Million)
= Public Debt at time *t* (RM Million)
= Population ages 0 to 14
= Population ages 15 to 64
= Population ages 65 and above

For the purpose of regression and estimation, the model in this research will developed into the log-linear form and is specified as follow:

$$\ln EDU_t = \beta_0 + \beta_1 GDP_t + \beta_2 UNEM_t + \beta_3 INF_t + \beta_4 \ln TAX_t + \beta_5 \ln DEBT_t + \beta_6 \ln POP1_t + \beta_7 \ln POP2_t + \beta_8 \ln POP3_t + \varepsilon_t \quad (2)$$

Where:

= Public Expenditure on Education at time *t* (RM Million)
= Real Gross Domestic Product growth rate (%)
= Unemployment Rate (%)
= Inflation Rate (%)
= Tax Revenue at time *t* (RM Million)
= Public Debt at time *t* (RM Million)
= Population ages 0 to 14
= Population ages 15 to 64
= Population ages 65 and above
= Error Term at time *t*

RESEARCH METHODS

Unit root test will be first conducted to investigate whether the data is stationary or not. The test is conducted to avoid spurious regression. Lag length selection test is followed next to find out the appropriate lag length that can be used in ARDL Bound Testing approach. As in Wong and Yusoff (2018), this paper adopted the relatively recent developed ARDL bound testing approach to examine the long run relationship for public education expenditure and its determinants. Unlike the Engle-Granger and Johansen-Juselius Cointegration tests, ARDL Bound Testing approach can be implemented even when the variables in the model are of mixed order of integration I(0) and I(1). In addition, ARDL Bound Testing approach was considered to be more robust when applied on small sample data.

RESULTS

Estimation Results Based on ARDL Bound Testing Approach

The unit root test is used to examine the time series data on both levels and first differences by carrying out the Augmented Dickey Fuller (ADF) and Phillips Perron (PP) test. The Augmented Dickey Fuller (ADF) and Philip-Perron (PP) test results showed that the variables were of mixed order of integration I(0) and I(1). Table 1 illustrated the Augmented Dickey Fuller (ADF) result. Meanwhile, Table 2 showed the Philip-Perron (PP) result.

Table 1 Augmented Dickey-Fuller (ADF) test result

Augmented Dickey-Fuller (ADF) Test				
Variable	Level		First Difference	
	Intercept	Trend and Intercept	Intercept	Trend and Intercept
LNEDU	−1.665734	−1.878210	−4.019243*	−4.077466**
GDP	−4.662843*	−4.718834*	−7.479796*	−7.349714*
UNEM	−4.104694*	−4.081727**	−4.631867*	−4.553312*
INF	−4.687023*	−4.589514*	−5.275477*	−5.192888*
LNTAX	−0.634133	−4.162475**	−4.204515*	−4.129920**
LNDEBT	0.190717	−1.414864	−4.636494*	−4.663650*
LNPOP1	−0.614135	−3.283629***	−4.038305*	−3.992080**
LNPOP2	0.842240	−0.002555	−8.640937*	−3.972737**
LNPOP3	−1.580103	−3.832019**	−4.241152*	−4.407884*

*Significant at 1% significance level, **Significant at 5% significance level, *** Significant at 10% significance level

Table 2 Phillips Perron (PP) test result

Phillips Perron (PP) Test				
Variable	Level		First Difference	
	Intercept	Trend and Intercept	Intercept	Trend and Intercept
LNEDU	−1.387722	−1.419961	−3.789019*	−3.820630**
GDP	−4.679070*	−4.718834*	−17.76575*	−17.84715*
UNEM	−1.782147	−2.651450	−4.631867*	−4.553312*
INF	−4.711439*	−4.625832*	−9.074482*	−8.937915*
LNTAX	−0.628564	−2.403621	−4.301160*	−4.211465**
LNDEBT	0.116207	−1.414864	−4.570787*	−4.913593*
LNPOP1	−0.555813	−1.948861	−4.102117*	−4.069134**
LNEDU	−1.387722	−1.419961	−3.789019*	−3.820630**
GDP	−4.679070*	−4.718834*	−17.76575*	−17.84715*

*Significant at 1% significance level, **Significant at 5% significance level, *** Significant at 10% significance level

Next, the lag length selection estimated based on the unrestricted Vector Autoregressive (VAR) model is carried out. It is crucial to be carried out to determine the optimal lag length that should be used in the Co-integration test. The following Table 3 showed the VAR lag order selection criteria.

Table 3 VAR lag order selection criteria

VAR Lag Order Selection Criteria						
Lag	Log L	LR	FPE	AIC	SC	HQ
0	15.75130	NA	0.038047	−0.450087	−0.029728	−0.315610
1	22.78009	9.371720*	0.025645	−0.852006	−0.384940	−0.702588
2	25.12126	2.965481	0.023671*	−0.941417*	−0.427645*	−0.777057*
3	25.47570	0.425330	0.024998	−0.898380	−0.337901	−0.719078
4	25.47570	1.66e-07	0.027099	−0.831713	−0.224528	−0.637470
5	25.62543	0.159714	0.029169	−0.775029	−0.121137	−0.565843

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

According to the VAR lag order selection criteria as shown in Table 4, the lag length $p = 2$ was selected for the model. The minimum Akaike's Information Criterion (AIC) suggested the lag order 2 for the model.

Table 4 ARDL Bounds Test for cointegration

Test statistic	Value	Significance level	Bound critical values	
			I(0)	I(1)
F-Statistic	10.12218*	10%	1.85	2.85
		5%	2.11	3.15
		2.5%	2.33	3.42
		1%	2.62	3.77

*Significant at 1% significance level

The computed *F*-statistic of 10.12218 was greater than the upper bound critical value at 1 per cent level of significance. Thus, the null hypothesis of no co-integration is rejected at 1 per cent level of significance. The existence of long-run relationship among the variables was confirmed. The empirical results of the long-run model are presented in the following Table 5.

Table 5 Long-Run Coefficients Estimates of ARDL (1, 2, 2, 2, 2, 0, 1, 2, 0) model
Dependent Variable: LNEDU

Independent Variables	Coefficient	T-Statistic	Probability
GDP	−0.128573*	−5.053811	0.0003
UNEM	0.174543***	1.946343	0.0754
INF	0.177549**	2.382193	0.0346
LNTAX	0.304742	0.353236	0.7300
LNDEBT	0.995010	1.374961	0.1943
LNPOP1	−8.592410	−0.536184	0.6016
LNPOP2	189.2219*	3.157208	0.0083
LNPOP3	14.96697	0.972278	0.3501
C	−8.378472	−1.489292	0.1622

*Significant at 1% significance level, **Significant at 5% significance level, *** Significant at 10% significance level

The long-run model of the corresponding ARDL (1, 2, 2, 2, 2, 0, 1, 2, 0) can be written as follow:

$$LNEDU_t = -0.128573\ GDP_{t-1} + 0.174543\ UNEM_{t-1} + 0.177549\ INF_{t-1} + 0.304742\ \ln TAX_{t-1} + 0.995010\ \ln DEBT_{t-1} - 8.592410\ \ln POP1_{t-1} + 189.2219\ \ln POP2_{t-1} + 14.96697\ \ln POP3_{t-1} \quad (3)$$

Estimation of the ARDL long-run model revealed that real gross domestic product growth rate (GDP), unemployment rate (UNEM), inflation rate (INF) and population growth of ages 15 – 64 (LNPOP2) significantly affect the public education expenditure in the long run. Real gross domestic product growth rate (GDP) has negative significant effect on the public education expenditure. This indicates that the decline of real gross domestic product leads to a higher government spending in education. At times of economic downturn, policy makers will formulate policies and increase government spending to re-stimulate the economy. The responsiveness of public education expenditure to the time of economic crises was consistent with Peacock-Wiseman theory. Meanwhile, unemployment rate has a positively significant impact on the public education expenditure. Increase of unemployment rate leads to higher education expenditure in the long run. These findings showed that Keynesian Counter Cyclical theory clearly characterized and explain the pattern of the Malaysia's public education expenditure in the long run.

The result from this study further reported that inflation rate (INF) was positively significant to the government education spending. Our result was consistent with Imana (2017) that demonstrated inflation rate with a positive effect on public education expenditure. High inflation rate causes prices hike of commodities and services, thus making parents unable to afford tertiary education fees and other education costs. As such, government needs to intervene by apportioning more funds to education framework to prevent Malaysia citizens left behind from education access. The significant effects of the economic variables on the public education expenditure provided support to the Economic-Demographic Theory. The Economic-Demographic Theory which had placed the importance of economic environment factors in shaping public expenditure. The only demography variable that showed significant result in the long run was the population cohort of age 15 – 64. This specific working age cohort showed a statistically significant and positive effect on the public education expenditure. This result highlighted that the working age population which stood as the highest proportion of the overall population had a positive effect on the allocation of public education expenditure. In the long run, the government tends to focus on developing a massive productive human capital resource. This working age population will contribute directly to the human capital production as they can easily enter the labour market upon graduation.

Meanwhile, other variables such as tax revenue, public debt, child population (age 0 – 14) and elderly population growth (age greater than 64) failed to deliver significant results. Changes to these variables did not show any significant long run impact on the allocation of public education expenditure. This implied that these variables were not incorporated into consideration by policy makers when deciding allocation. The insignificant result of the children

population and elderly population also showed that education allocation failed to respond to the change of these particular age cohorts. Hence, suggesting that policy makers had failed to take account of the schooling age population when planning public education expenditure. An increasing schooling age population failed to be matched with a corresponding increase to the public education expenditure. Elderly population did not negatively affect the public education expenditure as suggested by Poterba (1997). The changes of elderly population did not directly caused the expected re-allocation of expenditure from education sector to the health care sector.

The Dynamics of Long Run Causality

Granger causality test based on VECM was estimated to determine the long run causality between public education expenditure and its determinants. The following Table 6 illustrated the nature and direction of the long run dynamics of the specific variables.

Table 6 Long run causality dynamics

Direction of Causality	Chi-Square Statistics	*p*-value	Long Run (ECT-1)
GDP causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes GDP	13.65342***	0.0913	Significant at 10% significance level
UNEM causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes UNEM	9.168659	0.3283	Insignificant
INF causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes INF	9.215033	0.3245	Insignificant
TAX causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes TAX	15.71263**	0.0467	Significant at 5% significance level
DEBT causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes DEBT	3.212833	0.9203	Insignificant
LNPOP1 causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes LNPOP1	11.82500	0.1592	Insignificant
LNPOP2 causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes LNPOP2	2.448259	0.9641	Insignificant
LNPOP3 causes LNEDU	34.03729*	0.0000	Significant at 1% significance level
LNEDU causes LNPOP3	4.800685	0.7787	Insignificant

*Significant at 1% significance level, **Significant at 5% significance level, *** Significant at 10%

The Granger Causality test result implied the existence of long run Granger causality that runs from the real gross domestic product, unemployment rate, inflation rate, tax revenue, public debt, population (age 0 – 14), population (age 15 – 64), and population (age ≥ 65) to the dependent variable of education expenditure. The chi-square value statistic was found to be statistically significant when public education expenditure act as the dependent variable. This significant value of the Chi-Square statistic = 34.05729 exhibited long run causality that runs from real GDP growth rate, unemployment rate, inflation rate, tax revenue, public debt, and population of different cohorts to public education expenditure. Therefore, we can conclude that long run causality between public education expenditure and its determinants holds in Malaysia. Our Granger causality test result was in line the proven existence of long run co-integration between variables found by ARDL bound testing approach.

A significant long-run causality relationship was also observed from public education expenditure to real GDP growth rate at 10% significance level. In addition, significant long-run causality was also found from public education expenditure to tax revenue at 5% significance level. This suggested that there is bidirectional Granger causality between real GDP growth rate and public education expenditure in the long run. It means that the any changes to the public education expenditure will lead to change in real GDP growth rate and vice versa. The long run causality empirical result also showed that there was feedback effect between public education expenditure and tax revenue. As such, indicated that bidirectional causal relationship was established between tax revenue and public education expenditure. This causality evidence pointed out that any change to the tax revenue produce significant effect on the public education expenditure and reverse causation applies as well.

CONCLUSION

The real gross domestic product growth rate (GDP), unemployment rate (UNEM), inflation rate (INF) and working age population (POP2) were identified as the long run determinants of public education expenditure in Malaysia (Wong & Yusoff, 2018). The ARDL bound testing revealed significant negative relationship between real gross domestic product growth rate (GDP) and public education expenditure (EDU). On another note, a positive result was also recorded between unemployment rate (UNEM) and public education expenditure (EDU). These findings reflected that the Keynesian Counter Cyclical theory holds for the public education expenditure in Malaysia. In times of economic boom or economic crisis, public expenditure will respond by increasing the size of the allocation. In other words, economic situation or fluctuation will determine the level of public spending. The adjustment of government expenditure made by policy makers at times of economic crisis showed the suitability of Peacock-Wiseman used in explaining the pattern of Malaysia's education allocation Inflation rate has positive significant effect on the public education expenditure. Increase inflation caused a relatively higher cost for education. This will necessitate the government to intervene by allocating more expenditure to the now higher cost education sector. Meanwhile, the working age population (age 15 – 64) (LNPOP2) was the only demography variable that was found to be significantly

positive in the long run. This advocated that the increase of the working age population (age 15 – 64) (LNPOP2) encourage a greater investment from the government to create more productive human capital. The establishment of the economic and demography factors as the determinants of public education expenditure followed the proposition of Economic-Demography Theory.

Granger Causality test in our study clearly established a bidirectional causal relationship between government education spending and economic growth. This suggests that the growth of public education spending will likely lead to the growth of real GDP. Vice versa, the growth of real GDP Granger causes and leads changes to the growth of public education expenditure. Similarly, a two-way causal that runs between public education expenditure and tax revenue was proven. The bidirectional causal relationship signified that the changes in public education expenditure will lead to changes in tax revenue and vice versa. This means that the higher tax revenue collected by the government, the higher will be the tendency of the government to raise the public education expenditure. Likewise, increase in public education expenditure will project future positive income growth for the individuals. In return, Government would be able to collect more taxes from the now highly-income earning citizens.

Based on the findings from our study, the following policy implications are recommended. Firstly, the empirical findings showed that the public education expenditure was sensitive to the economic variables of gross domestic product growth rate (GDP), unemployment rate (UNEM), and inflation rate (INF) in the long run. Hence, government will be able to regulate their budgetary allocation by controlling these economic variables in the country. Secondly, government would need to increase the responsiveness of their public education expenditure to the demands of the society. Public policy making with regards to public education expenditure will also need to be more responsive to the economic conditions or any economic fluctuations so as to produce positive outcomes.

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HUBUNGAN ANTARA KEPIMPINAN, PRESTASI KERJA, KEPUASAN KERJA DAN NIAT MELETAKKAN JAWATAN DALAM KALANGAN KAKITANGAN AKADEMIK POLITEKNIK DI MALAYSIA

RELATIONSHIP BETWEEN LEADERSHIP, JOB PERFORMANCE, JOB SATISFACTION AND INTENTIONS TO QUIT AMONG POLYTECHNIC ACADEMIC STAFF IN MALAYSIA

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ABSTRAK

Penyelidikan ini telah mengamati respons daripada kakitangan akademik politeknik di Malaysia. Penyelidik melakukan kajian ini untuk melihat peranan pemimpin terhadap niat meletakkan jawatan. Penyelidik telah mengajukan beberapa persoalan kajian. Pertama, mengenal pasti hubungan yang signifikan dalam Kepimpinan Memperkasa Gelagat yang mempengaruhi tindak balas psikologi (kepuasan kerja dan prestasi kerja). Kedua, mengenal pasti hubungan yang signifikan terhadap tindak balas psikologi dalam mempengaruhi Niat Meletakkan Jawatan. Ketiga, menentukan kesan faktor pengantaraan terhadap Kepimpinan Memperkasa Gelagat dan Niat Meletakkan Jawatan adalah tindak balas psikologi. SPSS21 dan SmartPLS3 digunakan untuk menganalisis data yang diperoleh daripada 376 responden yang menjawab borang soal selidik yang diedarkan. Penyelidik telah membentuk kaedah

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kajian iaitu pemboleh ubah tidak bersandar adalah Kepimpinan Memperkasa Gelagat, tindak balas psikologi sebagai faktor pengantaraan dan niat meletakkan jawatan pekerja pemboleh ubah bersandar. Kepimpinan Memperkasa Gelagat mempunyai hubungan signifikan dengan Kepuasan Kerja dan Prestasi Kerja. Secara keseluruhannya, tindak balas psikologi mempunyai hubungan signifikan dengan niat meletakkan jawatan. Bagi kesan pengantaraan, Kepuasan Kerja dan Prestasi Kerja merupakan faktor pengantaraan bagi Niat Meletakkan Jawatan di antara Kepemimpinan Memperkasa Gelagat dan Niat Meletakkan jawatan. Hasil kajian ini pasti dapat memberi impak kepada pentadbiran politeknik di Malaysia sebagai petunjuk untuk melakukan penambaikan untuk mencapai tujuan yang diinginkan.

Kata kunci: kepimpinan memperkasa gelagat, kepuasan kerja, prestasi kerja dan niat meletakkan jawatan

ABSTRACT

This research studied the response among polytechnics academic staff in Malaysia. The researchers conducted a study to view the relationship of the role of leader on the intention to quit. The researchers proposed a number of research questions. First, identify the significant relationships in Leadership Empowering Behaviour in influencing the psychological reactions (job satisfaction and job performance). Second, identify the significant relationships on psychological reactions (job satisfaction and job performance) in influencing the Intentions to Quit. Third, to determine the effect of mediation factors on Leadership Empowering Behaviour and Intentions to Quit is psychological reactions (job satisfaction and job performance). SPSS21 and SmartPLS3 have been used in this study to analyse the data obtained from 376 respondents who had answered the questionnaire. The researchers developed a study method, Leadership Empowering Behaviour as an independent variable, psychological reactions as mediating factors and the intention to quit as a dependent variable. Leadership Empowering Behaviour has a significant relationship to Job Satisfaction and Job Performance. Overall, psychological reactions have a significant relationship to the intentions to quit factors. Psychological reactions (job satisfaction and job performance) are a mediation factor between Leadership Empowering Behaviour and Intention to Quit. The results of this study can definitely give an impact to the administration of polytechnics in Malaysia as an indicator for making improvements towards achieving the desired objectives.

***Keywords*:** leadership empowering behaviour, job satisfaction, job performance, intention to quit

PENDAHULUAN

Sejak 2 Januari 2008, Jabatan Pengajian Politeknik (JPP) telah menukar tampuk pentadbiran dari Kementerian Pendidikan ke Kementerian Pengajian Tinggi. Pada 16 September 2009, JPP telah melalui penstrukturan semula. Perubahan ini bertujuan untuk menghasilkan sumber

daya manusia yang inovatif dan kemahiran bekerja yang berkualiti. Dato' Haji Imran bin Idris, bekas Ketua Pengarah JPP ketika itu mengatakan organisasi ini perlu komited untuk menyediakan perkhidmatan berkualiti, cekap dan mesra pelanggan ke tahap tinggi objektiviti, integriti kerahsiaan, dan profesionalisme melalui saluran interaktif untuk meningkatkan prestasi mereka lebih baik (BLPK, 2010). Politeknik di Malaysia terus mengorak langkah untuk maju dan bersaing dengan dunia global. Walau bagaimanapun, kajian ini merungkai masalah yang mungkin tidak diambil serius oleh pihak pengurusan sumber manusia iaitu Niat Meletakkan Jawatan dalam kalangan pekerja.

Faktor utama yang diperhatikan oleh kajian ini adalah kepimpinan. Peranan pemimpin adalah penting dalam membentuk pengalaman kerja pekerja dalam memupuk sikap pekerja, dan seterusnya kesetiaan mereka kepada organisasi (Klerk & Stander, 2014; Chan & Mak, 2014). Jika perasaan dimiliki organisasi wujud, ini akan membawa kepada motivasi untuk lebih komited dan mempengaruhi niat untuk meletakkan jawatan (Albrecht & Andreetta, 2011). Perasaan dimiliki oleh organisasi juga meningkatkan kepuasan dan prestasi kerja (Schyns & Wolfram, 2008; Buech, Michel, & Sonntag, 2010).

Faktor psikologi yang menjadi faktor pengantaraan kajian ini adalah prestasi kerja dan kepuasan kerja. Dasar dan amalan motivasi dijalankan oleh sesuatu organisasi perlu bagi menggalakkan tingkah laku yang diinginkan oleh individu, pasukan atau tingkah laku organisasi (Campbell, Campbell, & Chia, 1996; T. M. Peterson, 2007; Reis & Peña, 2001; Van Knippenberg, 2000). Manakala bagi prestasi kerja, cabang psikologi yang berkaitan dengan tempat kerja juga membentuk sebahagian daripada pengurusan sumber manusia. Pencapaian adalah kriteria penting untuk hasil organisasi dan kejayaan (Rotenberry & Moberg, 2007). Kepuasan kerja pula adalah merujuk kepada reaksi emosi positif individu untuk kerja tertentu. Ia adalah reaksi afektif terhadap pekerjaan akibat daripada perbandingan seorang itu terhadap hasil sebenar dengan individu yang dikehendaki, yang dijangka, atau berhak (Oshagbemi, 1999). Ini adalah kerana ketidakpuasan terhadap kerja akan meningkatkan ketidakhadiran dan lantik henti (Chen, Yang, Shiau, & Wang, 2006; Droussiotis & Austin, 2007; Toker, 2011). Oleh yang demikian, kepuasan kerja tidak boleh diabaikan, tetapi hanya segelintir organisasi mengambil serius mempertimbangkan kepuasan kerja (Munhurrun, Naidoo, & Bhiwajee, 2009).

Kajian ini adalah untuk mencari punca timbulnya niat meletakkan jawatan dalam kalangan kakitangan akademik politeknik di Malaysia. Kajian menguji perhubungan dan Kepimpinan Memperkasa Gelagat sebagai pemboleh ubah bersandar. Manakala tindak balas psikologi iaitu Kepuasan Kerja dan Prestasi Kerja sebagai pemboleh ubah pengantaraan, Niat Meletakkan Jawatan sebagai pemboleh ubah bersandar. Oleh itu, tujuan kajian ini adalah untuk mengkaji perkaitan kepimpinan dalam mempengaruhi niat meletakkan jawatan dalam kalangan kakitangan akademik politeknik di Malaysia.

PENYATAAN MASALAH

Sejak tahun 1969, politeknik di Malaysia terus mengorak langkah untuk maju dan bersaing dengan dunia global. Walau bagaimanapun, berdasarkan dapatan data pergerakan pekerja politeknik Malaysia, terdapat 4.48 peratus pekerja (333 orang) yang meletakkan jawatan (termasuk pencen awal sebelum tamat tempoh perkhidmatan) dan 1.001 peratus pekerja (75 orang) yang bercuti tanpa gaji dari jumlah keseluruhan 7,426 orang (e-SIS, 2016). Sebelum ini, pada 2 Januari 2008, Jabatan Pengajian Politeknik (JPP) telah menukar tampuk pentadbiran dari Kementerian Pendidikan ke Kementerian Pengajian Tinggi pada ketika ini penstrukturan semula reka bentuk pekerjaan tenaga pengajar politeknik dan kolej komuniti mengalami perubahan yang signifikan dalam aspek kerja mereka. Mereka yang dilantik sebelum 2 Januari 2008 telah diberi pilihan untuk terus kekal di bawah Kementerian Pendidikan Malaysia (KPM) untuk menjadi guru yang terlatih, dengan skim gaji DG (Skim Perguruan). Manakala yang menerima penstrukturan semula akan menggunakan skim gaji DH (Skim Pendidikan Tinggi) dan tempatkan di bawah Kementerian Pengajian Tinggi (KPT). Akibat daripada penstrukturan ini, terdapat ketidakpuasan di kalangan tenaga pengajar dan mengambil keputusan meninggalkan organisasi (BLPK, 2010; Syarifah Hanum, 2012). Setiap organisasi menghadapi lantik henti pekerja, sebahagian daripada mereka meninggalkan organisasi secara sukarela, lantik henti menyebabkan organisasi menanggung kos peletakan jawatan, pengambilan, pemilihan dan lain-lain (Iqra, Momina, Sikander, & Muhammad, 2014; Waldman, Kelly, Arora, & Smith, 2004; Addae, Parboteeah, & Davis, 2006). Apabila pekerja tidak berpuas hati dengan pekerjaan dan organisasi tidak mempercayai pekerja mereka, niat pekerja untuk meletak jawatan akan menjadi lebih besar, mereka akan meninggalkan organisasi serta tempoh kerja mereka akan menjadi lebih kecil (Jeffrey, 2007). Niat meletakkan jawatan adalah sangat penting kepada organisasi kerana boleh mempengaruhi kestabilan dan produktiviti serta melibatkan kos yang tinggi (Firth, Mellor, Moore, & Loquet, 2004; Siong, Mellor, Moore, & Firth, 2006).

PERSOALAN KAJIAN

Dalam kajian ini, penyelidik telah mewujudkan beberapa soalan seperti berikut:

1. Adakah terdapat perhubungan yang signifikan Kepimpinan Memperkasa Gelagat dalam mempengaruhi tindak balas psikologi iaitu Kepuasan Kerja dan Prestasi Kerja?

2. Adakah terdapat perhubungan yang signifikan tindak balas psikologi iaitu Kepuasan Kerja dan Prestasi Kerja dalam mempengaruhi Niat Meletakkan Jawatan?

3. Adakah faktor pengantaraan Kepimpinan Memperkasa Gelagat terhadap Niat Meletakkan Jawatan adalah tindak balas psikologi iaitu Kepuasan Kerja dan Prestasi Kerja?

OBJEKTIF KAJIAN

Tujuan kajian ini adalah untuk membuat penelitian terhadap Kepimpinan Memperkasa Gelagat dalam mempengaruhi Niat Meletakkan Jawatan dalam kalangan kakitangan akademik politeknik di Malaysia. Pihak JPP boleh melihat hasil kajian ini untuk membuat penambahbaikan atau mengekalkan aspek-aspek tertentu yang dianggap mencapai matlamat organisasi. Berikut adalah beberapa tujuan kajian ini dilakukan:

1. Bagi mengenal pasti perhubungan yang signifikan Kepimpinan Memperkasa Gelagat dalam mempengaruhi tindak balas psikologi iaitu Kepuasan Kerja dan Prestasi Kerja.

2. Bagi mengenal pasti perhubungan yang signifikan tindak balas psikologi iaitu Kepuasan Kerja dan Prestasi Kerja dalam mempengaruhi Niat Meletakkan Jawatan.

3. Bagi mengenal pasti kesan faktor pengantaraan Kepimpinan Memperkasa Gelagat terhadap Niat Meletakkan Jawatan adalah tindak balas psikologi iaitu Kepuasan Kerja dan Prestasi Kerja.

SKOP DAN SAMPEL KAJIAN

Populasi kajian ini diambil dari kalangan kakitangan akademik politeknik di Malaysia yang terdiri daripada 7,426 orang (e-SIS, 2016). Bagi mendapatkan saiz sampel yang dikehendaki, penyelidik telah menggunakan kaedah pensampelan kebarangkalian yang dilaksanakan dengan memilih subjek sampel secara rawak berstrata (*stratified*). Politeknik di Malaysia terbahagi kepada tiga iaitu politeknik Premier, Konvensional dan METrO (*Maximising Education and Training Opportunities*). Di mana, bagi setiap kelompok ini hanya kakitangan akademik sahaja yang diambil dan diberikan borang soal selidik. Setiap data pemilihan sampel dari setiap kumpulan politeknik berdasarkan maklumat kakitangan yang diperoleh dari bahagian sumber manusia Jabatan Pengajian Politeknik yang terdiri daripada kakitangan akademik yang menyandang Pegawai Pendidikan Pengajian Tinggi (PPPT) yang dipilih adalah di kalangan mereka yang menyandang jawatan Gred DH29, DH31/32, DH33/34, DH41/42, DH43/44, DH47/48, DH51/52 dan DH53/54. Berdasarkan jumlah populasi seramai 7,426 orang, saiz sampel yang boleh digunapakai berdasarkan jadual penentuan saiz sampel Jadual Krejcie dan Morgan (1970) jumlah sampel adalah di antara 364 ke 367 orang (Sekaran & Bougie, 2009). Bagi mendapatkan saiz sampel yang dikehendaki, penyelidik telah menggunakan kaedah pensampelan kebarangkalian yang dilaksanakan dengan memilih subjek sampel secara rawak berstrata (*stratified*) dengan nisbah 3:2:1.

KEPIMPINAN MEMPERKASA GELAGAT

Kepimpinan adalah sifat seseorang ketua yang berupaya mempengaruhi, memotivasikan, dan membolehkan orang lain untuk menyumbang ke arah keberkesanan dan kejayaan organisasi di tempat mereka bekerja berdasarkan matlamat dan visi yang ditetapkan (Robbins & Judge, 2015).

Menurut Srivastava, Bartol dan Locke, (2006), pelbagai tingkah laku kepimpinan telah dikaji, tetapi pemimpin memperkasa gelagat telah telah memberi impak yang penting. Enam dimensi kepimpinan memperkasa gelagat yang diperkenalkan oleh Konczak, Stelly dan Trusty (2000), adalah seperti berikut: *Delegation of authority* (pengagihan kuasa) di mana pemimpin memperkasa, berkongsi maklumat dan pengetahuan dengan pengikut bagi membolehkan mereka menyumbang sepenuhnya dan membuat keputusan yang berkualiti dan berharga kepada organisasi (Hakimi, Van Knippenberg, & Giessner, 2010). *Accountability for outcomes* (Akauntabiliti hasil kerja) pemimpin memberi tumpuan kepada pengagihan semula kuasa dan memberi tanggungjawab baharu kepada pengikut, mereka bertanggungjawab ke atas hasil kerja (Hakimi *et al*., 2010; Konczak *et al*., 2000). *Self-directed decision making* (sifat kendiri membuat keputusan) digambarkan sebagai membenarkan dan melibatkan orang bawahan untuk mengambil bahagian dalam proses penyelesaian masalah (Konczak *et al*., 2000; Van Dierendonck & Dijkstra 2012), dan membolehkan mereka berasa lebih kuasa (Mills, Fleck, & Kozikowski, 2013). *Information sharing* (perkongsian maklumat) ialah di mana pengurus berkongsi maklumat dengan pekerja dan pekerja juga berkongsi maklumat antara satu sama lain (Arnold, Arad, Rhoades, & Drasgow, 2000; Konczak *et al*., 2000; Pearce & Sims, 2002). *Skill development* (pembangunan kemahiran) dan *coaching* (kejurulatihan) untuk prestasi yang inovatif, di mana pemimpin mewujudkan peluang untuk latihan dan meningkatkan kemahiran orang bawahan (Konczak *et al*., 2000; Pearce & Sims, 2002). Cameron, Mora, Leutscher dan Calarco (2011) juga mengatakan pembangunan modal insan juga dikenal pasti sebagai salah satu amalan positif yang perlu diamalkan bagi organisasi yang efektif.

NIAT MELETAKKAN JAWATAN

Niat meletakkan jawatan adalah peramal yang kuat tingkah laku masa depan pekerja dan lantik henti sebenar (Carmeli & Weisberg, 2006; Harter, Schmidt, & Hayes, 2002; Park & Kim, 2009). Terus kekal atau meninggalkan organisasi adalah merupakan sebahagian daripada set keputusan tingkah laku pekerja dan cabaran berterusan pengurus sumber manusia (Mano-Negrin, 2001). Setiap organisasi menghadapi lantik henti pekerja, sebahagian daripada mereka meninggalkan organisasi secara sukarela, lantik henti menyebabkan organisasi menanggung kos perletakan jawatan, pengambilan, pemilihan dan lain-lain (Iqra *et al*., 2014; Waldman *et al*., 2004; Addae *et al*., 2006). Apabila pekerja tidak berpuas hati dengan pekerjaan dan organisasi tidak mempercayai pekerja mereka, niat pekerja untuk meletak jawatan akan menjadi lebih besar, mereka akan meninggalkan organisasi serta tempoh kerja mereka akan menjadi lebih kecil (Jeffrey, 2007). Bukti empirikal menyokong penuh pendirian bahawa niat untuk meletak

jawatan yang kuat dan konsisten yang berkaitan dengan peletakkan jawatan secara sukarela (Dalessio, Silverman, & Schuck, 1986; Griffeth & Hom, 1988; Mathieu & Zajac, 1990). Para penyelidik telah mendapati niat meletak jawatan atau kekal sebagai peramal yang paling kuat daripada peletakan jawatan sebenar (Hendrix, Robbins, & Summers, 1999; Mowday, Porter, & Steers, 1982). Niat meletakkan jawatan adalah sangat penting kepada organisasi kerana boleh mempengaruhi kestabilan dan produktiviti serta melibatkan kos yang tinggi (Firth *et al*., 2004; Siong *et al*., 2006). Memahami dan menguruskan faktor-faktor yang mempengaruhi lantik henti pekerja dan kos yang berkaitan boleh memberi manfaat kepada organisasi (Du Plooy & Roodt, 2010).

Kajian Bothma dan Roodt (2013) telah membuktikan terdapat enam skala bagi mengukur niat meletakkan jawatan iaitu *Alienation* (Pengasingan), *Helping Behaviour* (Sikap Tolong-menolong), *Burnout Inventory* (Inventori Burnout), *Work Engagement* (Keterlibatan Kerja), *Task Performance* (Prestasi Tugasan) dan *Work-based Identity* (Tugasan Berdasarkan Identiti). *Alienation* (Pengasingan) di tempat kerja merujuk pekerja yang mungkin tidak dapat memenuhi keperluan sosial mereka (Nasurdin, Ramayah, & Kumaresan , 2005) dan mereka mempunyai bentuk jurang antara persepsi keadaan kerja yang objektif dan kepentingan tertentu mereka seperti nilai, cita-cita, dan kemahuan (Mendoza & Lara, 2007). *Helping Behaviour* (Sikap Tolong-menolong) merujuk kepada tindakan sukarela bertujuan untuk membantu yang lain, dengan ganjaran dianggap atau diabaikan. *Helping Behaviour* (Sikap Tolong-menolong) adalah sejenis tingkah laku prososial (tindakan sukarela bertujuan untuk membantu atau memberi manfaat kepada individu lain atau kumpulan individu seperti perkongsian, menasihatkan, menyelamatkan dan membantu) (Eisenberg & Mussen, 1989; Siegler, 2006). Manakala menurut Podsakoff, MacKenzie, Paine dan Bachrach (2000), membantu tingkah laku merangkumi pelbagai konseptualisasi seperti pemurah, pendamai, ketua sorak dan menolong interpersonal. *Burnout Inventory* adalah sejenis tekanan psikologi. *Burnout* pekerjaan atau *Burnout* kerja dicirikan oleh keletihan, kekurangan semangat dan motivasi, perasaan ketidakberkesanan, dan juga mungkin mempunyai dimensi kekecewaan hasilnya mengurangkan keberkesanan di tempat kerja (Ruotsalainen, Verbeek, Mariné, & Serra, 2014). *Task Performance* (Prestasi Tugasan) boleh ditakrifkan sebagai keberkesanan kerja kepada penyandang pekerjaan iaitu melaksanakan aktiviti-aktiviti yang menyumbang kepada teras teknikal organisasi sama ada secara langsung, melaksanakan sebahagian daripada proses teknologi, atau secara tidak langsung dalam penyediaan tugas dengan bahan-bahan atau perkhidmatan yang diperlukan (Borman & Motowidlo, 1993). *Work Engagement* (Keterlibatan Kerja) adalah "pemanfaatan diri ahli organisasi untuk peranan kerja mereka: dalam keterlibatan, seseorang individu menjalankan kerja dan menyatakan diri mereka dari segi fizikal, kognitif, emosi dan mental semasa memainkan peranan" (Kahn, 1990). *Work-based Identity* (Tugasan Berdasarkan Identiti) merujuk kepada kerja berasaskan konsep kendiri yang merupakan gabungan daripada organisasi, pekerjaan, dan identiti lain yang membentuk peranan seorang yang mengamalkan kerja dan cara berkelakuan apabila melakukan tugas masing-masing (Charon, 1992). Mereka adalah penting kerana identiti "mencadangkan apa yang perlu dilakukan, berfikir dan rasa" (Ashforth & Kreiner, 1999).

KEPUASAN KERJA

Kepuasan kerja atau kepuasan pekerja telah ditakrifkan dalam pelbagai cara. Kepuasan kerja merujuk kepada reaksi emosi positif individu untuk kerja tertentu. Ia adalah reaksi afektif terhadap pekerjaan akibat daripada perbandingan seorang itu terhadap hasil sebenar dengan individu yang dikehendaki, dijangka, atau berhak (Oshagbemi, 1999). Ada yang percaya ia hanya bagaimana perkaitan kerja seseorang itu dengan kerja masing-masing, dalam erti kata lain, sama ada suka atau tidak dengan tugas, sifat kerja dan pengawasan (Spector, 1997). Para penyelidik juga telah menyatakan bahawa langkah-langkah kepuasan kerja berbeza dari segi pendirian seseorang mengukur perasaan tentang kerja (kepuasan kerja afektif) (Thompson & Phua, 2012) atau kognisi tentang kerja (kepuasan kerja kognitif) (Moorman, 1993). Kepuasan kerja boleh diklasifikasikan sebagai sama ada intrinsik atau ekstrinsik (Ivancevich, Konopaske, & Matteson, 2008). Sumber intrinsik bergantung kepada ciri-ciri individu orang itu, seperti sikap. Sumber ekstrinsik adalah keadaan, dan bergantung kepada alam sekitar, seperti iklim tempat kerja. Teori yang bergantung kepada sumber-sumber luaran yang lebih biasanya diterima pakai oleh ahli ekonomi, walaupun dengan merujuk kepada istilah yang berbeza, manakala sumber intrinsik adalah lebih umum berkaitan dengan lain-lain sains sosial (Luchak, 2003).

Kepuasan Kerja diukur menggunakan *Job Descriptive Index* yang dibangunkan oleh Smith, Kendall, dan Hulin (1969). *Job Descriptive Index* dipilih kerana telah menunjukkan kajian yang luas, boleh dipercayai dan ukuran yang sah bagi kepuasan kerja. *Job Descriptive Index* telah direka untuk mengukur kepuasan melalui 5 aspek iaitu pekerjaan, gaji, kenaikan pangkat, penyeliaan dan rakan sekerja.

PRESTASI KERJA

Prestasi kerja adalah menilai sama ada seseorang melakukan pekerjaan yang baik. Prestasi kerja adalah sebahagian daripada psikologi industri dan organisasi (cabang psikologi yang berkaitan dengan tempat kerja), juga membentuk sebahagian daripada pengurusan sumber manusia. Prestasi kerja telah ditakrifkan sebagai nilai keseluruhan dijangka daripada tingkah laku pekerja dijalankan sepanjang tempoh satu set masa (Motowidlo, Borman, & Schmidt, 1997). Pencapaian adalah kriteria penting untuk hasil organisasi dan kejayaan (Rotenberry & Moberg, 2007). Perbezaan antara prestasi dan motivasi adalah prestasi yang merujuk kepada hasil penilaian gelagat seseorang dalam menentukan buruk dan baik mereka dalam melaksanakan sesuatu tugas, manakala motivasi pula merupakan salah satu faktor yang terlibat dalam prestasi kerja seseorang pekerja (George & Jones, 2007). Kepuasan kerja juga merupakan sebahagian daripada prestasi kepuasan kerja namun masih bergantung pada tahap hasil intrinsik dan ekstrinsik (Ivancevich *et al*., 2008).

Prestasi kerja adalah salah satu elemen yang paling penting dalam penyelidikan tingkah laku organisasi itu dan telah dianggap sebagai petunjuk penting bagi organisasi yang berkesan. Oleh itu, kejayaan sesebuah organisasi adalah bergantung kepada prestasi yang baik daripada pekerjanya (Colquitt, LePine, & Wesson, 2010). Prestasi Kerja diukur menggunakan *Role-Based Performance Scale* yang dibangunkan oleh Welbourne, Johnson dan Amir (1997). *Role-Based Performance Scale* dipilih kerana telah menunjukkan kajian luas yang boleh dipercayai dan ukuran yang sah bagi prestasi kerja. *Role-Based Performance Scale* telah direka untuk mengukur prestasi kerja melalui 5 aspek iaitu pekerjaan, kerjaya, innovator, semangat berpasukan dan organisasi.

KERANGKA TEORITIKAL

Teori Kepimpinan Memperkasa Gelagat (*Leadership Empowerment Behaviour*) diguna pakai sebagai pemboleh ubah tidak bersandar bagi kerangka kajian ini yang terbahagi kepada enam dimensi yang diperkenalkan oleh Konczak *et al*., (2000), iaitu: *Delegation of authority* (Pengagihan kuasa), *Accountability for outcomes* (Akauntabiliti hasil kerja), *Self-directed decision making* (Kendiri membuat keputusan), *Information sharing* (Perkongsian maklumat), *Skill development* (Pembangunan kemahiran) dan *Coaching* (Kejurulatihan). Apabila pekerja mendapat sokongan daripada pemimpin, terdapat kecenderungan untuk mengambil berat tentang membuat kesilapan dan mempunyai tanggungjawab terhadap kerja (Bordin, Bartram, & Casimir, 2007). Seseorang pekerja memerlukan hala tuju lebih daripada sokongan memperkasakan gelagat (Blanchard, Carlos, & Randolph, 1999). Seorang pemimpin adalah penggerak kepada sesuatu organisasi. Oleh itu, seseorang ketua atau pemimpin harus mengenal pasti hasil kerja, menyediakan pelan tindakan, berkongsi maklumat, memberi contoh teladan yang boleh dipercayai dan memberikan maklumat yang membolehkan pekerja untuk mencapai kesimpulan sendiri. Menurut Patrick dan Laschinger, (2006) tahap maklum balas daripada pemimpin ada hubung kait dengan kukuh dengan persepsi pekerja terhadap sokongan organisasi. Aspek yang paling penting yang membezakan hubungan ketua dan pekerja adalah tahap sokongan emosi, tanggungjawab membuat keputusan dan cabaran tugas yang diberikan (Liden, Sparrowe, & Wayne, 2000).

Jika perasaan pekerja atau orang bawahan dilayan dan terlibat dalam membuat keputusan dapat membina reputasi dalaman yang baik, komunikasi secara profesional perlu diterapkan oleh pemimpin organisasi di semua peringkat dan melibatkan mereka dalam strategik, interaktif, memperkasa gelagat, demokrasi serta mewujudkan *relational-oriented* bagi tingkah laku kepimpinan transformasi dalam komunikasi (Men & Stacks, 2013). Pemimpin yang mempunyai sokongan boleh mengukuhkan hubungan positif antara kepimpinan transformasi dan pekerja serta meningkatkan tahap kreativiti yang sebelum ini telah terlepas pandang (Cheung & Wong, 2011). Penyelidikan sebelumnya menyatakan kepuasan kerja dan komitmen afektif akan dianggap sebagai latar belakang daripada peletakan jawatan (Griffeth, Hom, & Gaertner, 2000). Niat untuk kekal atau meninggalkan pekerjaan yang kini telah diiktiraf

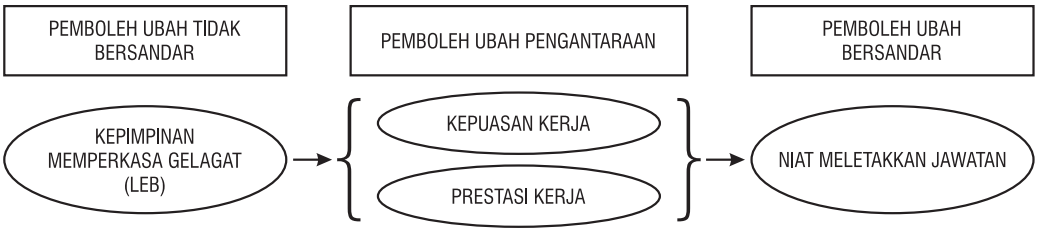
secara meluas sebagai muktamad serta langkah kognitif dalam proses membuat keputusan peletakan jawatan sukarela (Lambert, Hogan, & Barton, 2001). Kajian Jones, Kantak, Futrell, dan Johnston (2001) telah menunjukkan kesan langsung dan tidak langsung tingkah laku kepimpinan terhadap kepuasan kerja, mempengaruhi niat untuk meninggalkan dan peletakan jawatan yang sebenar. Malah, kepuasan kerja didorong oleh sikap terhadap kerja dan tugas-tugas seperti kualiti atas sokongan penyelia (Van Dick *et al*., 2004). Dalam kajian Dewettinck dan Ameijde (2011) mendapati hubungan langsung yang kuat antara tingkah laku memperkasakan kepimpinan dan sikap pekerja, kajian menunjukkan pentingnya peranan pemimpin secara langsung membentuk sikap pekerja, terutamanya kepuasan kerja bagi sesebuah organisasi bagi memudahkan perubahan. Peranan penting pemimpin dalam membentuk pengalaman kerja pekerja dalam memupuk sikap pekerja, dan seterusnya kesetiaan mereka kepada organisasi (Klerk & Stander, 2014; Chan & Mak, 2014). Jika perasaan dimiliki kepada organisasi membawa kepada motivasi untuk lebih komitmen akan wujud dan mempengaruhi niat untuk letak jawatan (Albrecht & Andreetta, 2011). Perasaan dimiliki oleh organisasi juga meningkatkan kepuasan dan prestasi kerja (Schyns & Wolfram, 2008; Buech et al., 2010). Oleh itu, pemboleh ubah niat meletakkan jawatan diambil sebagai pemboleh ubah bersandar.

Manakala bagi kepuasan kerja, *Teori Range of Affect* oleh Edwin R. Locke (1976) dibentuk sebagai pemboleh ubah pengantaraan iaitu model kepuasan kerja yang menekankan kepuasan ditentukan oleh perbezaan antara “apa yang mahu dalam pekerjaan” dan “apa yang ada dalam pekerjaan”. Manakala pendekatan *dispositional* mencadangkan bahawa individu yang berbeza dalam kecenderungan mereka untuk berpuas hati dengan pekerjaan mereka, dalam erti kata lain, kepuasan kerja adalah sedikit sebanyak yang sifat individu (Staw, Bell, & Clausen, 1986). Pendekatan ini menjadi penjelasan yang ketara kepuasan kerja berdasarkan bukti bahawa kepuasan kerja cenderung untuk menjadi stabil dari semasa ke semasa dan di seluruh kerjaya dan pekerjaan (Staw & Cohen-Charash, 2005). Seorang individu yang tidak memenuhi tanggungjawab akan merasakan rasa kebimbangan dan menyesal kerana tidak menunjukkan prestasi yang baik. Mereka juga akan berasa rasa kecil kerana tidak dapat mencapai harapan dan aspirasi mereka.

Seterusnya bagi prestasi kerja, pengkaji telah merujuk Teori Matlamat Pencapaian (*Goal Setting Theory*) dan penyelidikan lepas mencadangkan bahawa prestasi kerja dan kepuasan kerja bergantung kepada orientasi matlamat pekerja (Van Yperen & Janssen, 2002). Orientasi matlamat dipercayai untuk mewujudkan rangka kerja dengan persepsi kognitif yang berbeza iaitu cara individu mendekati, mentafsir dan bertindak balas kepada situasi pencapaian (Van Yperen, 2003). Pekerja yang berorientasikan matlamat boleh cenderung untuk kerap berbincang dan belajar cara untuk menangani masalah yang timbul dan peluang apabila melakukan pekerjaan mereka dari penyelia, tindakan ini boleh membantu pekerja untuk berjaya mencapai matlamat untuk meningkatkan keupayaan dan kemahiran (Janssen & Van Yperen, 2004). Oleh itu, pekerja dan penyelia saling bergantung pada satu sama lain atas sokongan dan kesetiaan, berkongsi maklumat penting dan sumber tingkah laku, mempercayai, hormat, dan tanggungjawab (Graen & Uhl-Bien, 1995; Howell & Hall-Merenda, 1999). Setiap pekerja yang mewujudkan hubungan sosial yang unik dengan penyelia, dan kualiti pertukaran pendapat

dengan penyelia mempunyai hubungan positif dengan prestasi kerja dan tugas sikap (Janssen & Van Yperen, 2004; Fluegge-Woolf, 2014). Prestasi pengikut lebih dipengaruhi oleh kualiti hubungan dari penyelia berbanding dengan hubungan penyelia terima dari pengikut (Chen, Lam, & Zhong, 2010; Sue-Chan, Chen, & Lam, 2011). Di sebabkan itu, sesuatu organisasi mengiktirafkan peranan pengurus atau pengurus sebagai pembimbing dalaman (Latham, Almost, Mann, & Moore, 2005). Bimbingan sangat penting kerana boleh meningkatkan kemahiran interpersonal (Kearns, 2006). Oleh itu, tingkah laku pemimpin dan bimbingan ditakrifkan sebagai membantu pekerja untuk membangun diri bagi melaksanakan strategi peningkatan prestasi dan pertumbuhan peribadi (Bakker & Demerouti, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009; Hackman & Wageman, 2005; Sue-Chan *et al*., 2011). Teori prestasi ini diguna pakai bagi perhubungan di antara setiap pemboleh ubah yang dibentuk dalam kajian ini bagi menerangkan faktor pengantaraan.

Hasil daripada teori-teori yang dirujuk pengkaji telah merangka kerangka teoritikal kajian bagi membentuk hipotesis kajian. Rajah 1 adalah ilustrasi penyelidik bagi kerangka teoritikal kajian ini.



Rajah 1 Kerangka teoritikal kajian

HIPOTESIS

Berdasarkan kerangka teoritikal kajian di atas perhubungan pemboleh boleh diringkaskan seperti di bawah:

Kepimpinan Memperkasa Gelagat dan Kepuasan Kerja

Hipotesis 1: *Kepimpinan Memperkasa Gelagat mempunyai hubungan yang positif dengan Kepuasan Kerja*

Dari pemerhatian kajian lepas, kepimpinan telah didapati secara positif dapat dikaitkan dengan kepuasan kerja (Liden, Wayne, Hao Zhao, & Henderson, 2008). Sekiranya pekerja percaya dengan kewibawaan seseorang pemimpin memberi kesan terhadap kepuasan kerja (Costigan, Ilter, & Berman, 1998; Dirks & Ferrin, 2002; Iverson, McLeod, & Erwin, 1996; Spence-Laschinger, Finegan, & Shamian, 2001; Bartram & Casimir, 2007). Dalam kajian

Jones *et al*. (2001) telah menunjukkan kesan langsung dan tidak langsung tingkah laku kepimpinan terhadap kepuasan kerja. Malah, kepuasan kerja didorong oleh sikap terhadap kerja dan tugas-tugas seperti kualiti atas sokongan penyelia (Van Dick *et al*., 2004). Dalam kajian Dewettinck dan Ameijde, (2011) mendapati hubungan langsung yang kuat antara tingkah laku memperkasakan kepimpinan dan sikap pekerja, kajian menunjukkan pentingnya peranan pemimpin dalam langsung membentuk sikap pekerja, terutamanya kepuasan kerja bagi sesebuah organisasi bagi memudahkan perubahan. Peranan penting pemimpin dalam membentuk pengalaman kerja pekerja dalam memupuk sikap pekerja, dan seterusnya kesetiaan mereka kepada organisasi (Klerk & Stander, 2014; Chan & Mak, 2014). Ini adalah kesetiaan akan wujud jika perasaan dimiliki oleh organisasi, secara langsung meningkatkan kepuasan (Schyns & Wolfram, 2008; Buech *et al*., 2010).

Kepimpinan Memperkasa Gelagat dan Prestasi Kerja

Hipotesis 2: *Kepimpinan Memperkasa Gelagat mempunyai hubungan yang positif dengan Prestasi Kerja*

Dari pemerhatian kajian lepas, kepimpinan telah didapati secara positif dapat dikaitkan dengan prestasi pekerja (Liden *et al*., 2008; Zaccaro, Rittman, & Marks, 2001). Ketua pasukan atau penyelia yang memperkasakan kepemimpinan mempunyai hubungan yang positif dengan pembangunan kepimpinan bersama, seterusnya memberi impak positif kepada prestasi (Fausing, Joensson, Lewandowski, & Bligh, 2015; Tuuli, Rowlinson, Fellows, & Liu, 2012; Lee, Lee, & Park, 2014). Pengurus atau pemimpin dapat meningkatkan prestasi organisasi melalui amalan tingkah laku seseorang pemimpin, secara tidak langsung dapat melahirkan kepercayaan pengikut dalam kepercayaan dengan maklumat yang disampaikan oleh ketua (Joseph & Winston, 2005; Errol & Bruce, 2005). Malah *Skill development* (Pembangunan kemahiran) dan *Coaching* (Kejurulatihan) untuk prestasi yang inovatif, di mana pemimpin mewujudkan peluang untuk latihan dan meningkatkan kemahiran orang bawahan (Konczak *et al*., 2000; Pearce & Sims, 2002). Penilaian penyeliaan merupakan faktor utama prestasi ke tahap yang lebih tinggi kepercayaan organisasi (Daley & Vasu, 1998). Menyokong kenyataan ini, di antara prestasi dan kepercayaan dengan mengambil kira integriti dan konsisten apabila pemimpin membina kepercayaan dalam organisasi dengan menjadikan kedudukan mereka lebih jelas, kedudukan, dan konsisten melaksanakan arah tertentu (Northouse, 2001; Bartram & Casimir, 2007; Toor & Ofori, 2009). Malah, dalam kajian Spreitzer, Suzanne, De Janasz, dan Quinn (1999), Leavy (2005), Slåtten, Göran Svensson, dan Sværi (2011), dan Raffay (2011) mendapati bahawa penyelia yang mengamalkan memperkasa kepimpinan kepada orang bawahan mereka sebagai lebih inovatif, mempengaruhi pihak atasan dan memberi inspirasi. Terlalu sedikit memperkasakan gelagat pekerja ini membawa kesan yang negatif atau terhad – atau tiada langsung – kepada individu dalam peranan dan prestasi kerja (Wong Humborstad, Nerstad, & Dysvik, 2014).

Kepuasan Kerja dan Niat Meletakkan Jawatan

Hipotesis 3: *Kepuasan Kerja mempunyai hubungan yang negatif dengan Niat Meletakkan Jawatan.*

Berdasarkan sorotan kajian lepas, para penyelidik juga telah menyatakan bahawa langkah-langkah kepuasan kerja berbeza dari segi pendirian seseorang mengukur perasaan tentang kerja (kepuasan kerja afektif) (Thompson & Phua, 2012) atau kognisi tentang kerja (kepuasan kerja kognitif) (Moorman, 1993). Berdasarkan pendapat Joo (2010), lantik henti adalah disebabkan jika pekerja tidak berpuas hati dengan dasar-dasar seluruh organisasi; apabila mereka menerima tahap yang komitmen yang lebih dari organisasi; dan budaya pembelajaran organisasi dan kualiti perhubungan pemimpin dan pekerja.

Prestasi Kerja dan Niat Meletakkan Jawatan

Hipotesis 4: *Prestasi Kerja mempunyai hubungan yang negatif dengan Niat Meletakkan Jawatan*

Pelaburan dalam sistem kerja prestasi tinggi akan meningkatkan pengekalan pekerja atau mengurangkan lantik henti secara sukarela (Guthrie, 2001; Selden, Schimmoeller, & Thompson, 2013). Komitmen pekerja merupakan salah satu daripada konstruk yang paling kerap dikaji dalam kajian hubungan pekerja kerana kesan komitmen di tempat kerja kepada individu, tahap pencapaian penting kepada organisasi, seperti niat peletakan jawatan dan prestasi (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Komitmen secara umumnya berkaitan dengan penerusan dalam sasaran kerja dan mempunyai hubungan negatif dengan niat peletakan jawatan dan tingkah laku (Bentein, Vandenberg, Vandenberghe, & Stinglhamber, 2005; Griffeth *et al*., 2000). Kebosanan adalah tindak balas psikologi kepada tekanan di tempat kerja (Leiter & Maslach, 2005). Ini secara tidak langsung membawa kepada prestasi kerja berkurangan, rasa tidak puas hati terhadap kerja, tumpuan kerja beralih ke arah lain, komitmen terhadap organisasi yang lebih rendah, dan peningkatan ketidakhadiran dan niat perletakan jawatan (Bhanugopan & Fish, 2006; Lewin & Sager, 2007; Podsakoff, LePine, & LePine, 2007; Shani & Pizam, 2009; Shirom, 2003; Yagil, 2006).

Kesan Faktor Pengantaraan Terhadap Kepimpinan Memperkasa Gelagat dan Niat Meletakkan Jawatan

Hipotesis 5: *Kepuasan Kerja merupakan faktor pengantaraan di antara hubungan Kepimpinan Memperkasa Gelagat dan Niat Meletakkan Jawatan*

Hipotesis 6: *Prestasi Kerja merupakan faktor pengantaraan di antara hubungan Kepimpinan Memperkasa Gelagat dan Niat Meletakkan Jawatan*

Hipotesis 5 dan 6 menunjukkan perhubungan pemboleh ubah pengantaraan di antara pemboleh ubah tidak bersandar dan pemboleh ubah bersandar. Pembentukan hipotesis ini berdasarkan sorotan kajian lepas. Kepimpinan Memperkasa Gelagat yang dikaji dalam kajian ini iaitu Pengagihan Kuasa, Akauntabiliti Kuasa, Kendiri Membuat Keputusan, Perkongsian Maklumat, Pembangunan Kemahiran dan Kejurulatihan mempunyai hubungan yang signifikan dengan Motivasi Kerja, Kepuasan Kerja dan Prestasi kerja (Srivastava *et al*., 2006; Konczak *et al*., 2000; Hakimi *et al*., 2010; Van Dierendock & Dijkstra, 2012; Mills *et al.*, 2013; Arnold *et al*., 2000; Pearce & Sims, 2002). Seterusnya kedua faktor kepuasan kerja dan prestasi kerja juga mempengaruhi Niat Meletakkan Jawatan. Seperti yang telah dibincangkan dalam Hipotesis 1 dan 2, Kepimpinan Memperkasa Gelagat faktor pemboleh ubah tidak bersandar akan memberi kesan kepada kepuasan kerja dan prestasi kerja. Manakala bagi Hipotesis 3 dan 4 juga telah membincangkan berdasarkan sorotan kajian lepas berkaitan faktor pengantaraan dipengaruhi oleh Niat Meletakkan Jawatan. Pengkaji juga menetapkan dua faktor pengantaraan berdasarkan kajian lepas yang menggunakan antara dua faktor pengantaraan bagi penambahan kepada pemboleh ubah tidak bersandar (Syarifah Hanum, 2012). Manakala pengkaji juga mengambil rujukan lain bagi membentuk kerangka teorikal lebih relevan dan boleh diterima pakai iaitu (Robbins & Judge, 2015; Srivastava *et al*., 2006; Konczak *et al*., 2000).

DAPATAN

Penyelidik menggunakan kaedah kuantitatif bagi menganalisis data yang diperoleh daripada borang soal-selidik yang diedarkan kepada sampel yang terpilih. Penyelidik menggunakan SPSS 21 dan SmartPls 3 bagi menganalisis data. Setelah itu, proses pemasukan data dilakukan sebanyak 376 borang soal selidik yang layak untuk digunakan untuk kajian ini. Jadual 1 menunjukkan kekerapan responden yang terlibat dalam kajian ini.

Jadual 1 Profil responden

Pemboleh Ubah	Kekerapan (*N*=376)	Peratusan(%)
Politeknik Berkhidmat		
Politeknik Premier	**67**	**17.8**
Politeknik Konvensional	**291**	**77.4**
Politeknik METro	**18**	**4.8**
Jantina		
Lelaki	**137**	**36.4**
Perempuan	**239**	**63.6**
Umur		
20 – 30 tahun	**37**	**9.8**
31 – 40 tahun	**213**	**56.6**
41 – 50 tahun	**100**	**26.6**
51 – 60 tahun	**26**	**6.9**

Status Perkahwinan		
Bujang	**48**	**12.8**
Berkahwin	**320**	**85.1**
Duda/Janda	**8**	**2.1**
Tahap Pendidikan Tinggi		
Diploma	**13**	**3.5**
Sarjana Muda	**184**	**48.9**
Sarjana	**165**	**43.9**
PhD	**14**	**3.7**

Jadual 2 Kod-kod pemboleh ubah

Pemboleh Ubah	Kod
Kepemimpinan Memperkasa Gelagat	KMG
Pengagihan Kuasa	KPK
Akauntabiliti	KAK
Keputusan Kendiri	KKK
Perkongsian Maklumat	KPM
Pembangunan Kemahiran	KBK
Kejurulatihan	KK
Prestasi Kerja (PK)	
Pekerjaan	PP
Kerjaya	PK
Inovator	PI
Semangat Berpasukan	PSB
Organisasi	PO
Kepuasan Kerja (KK)	
Gaji	KG
Pekerjaan	KPkj
Pangkat	KPgkt
Penyeliaan	KPsn
Rakan Sekerja	KRS
Niat Meletakkan Jawatan (NMJ)	
Pengasingan	NMJA
Sikap Tolong Menolong	NMHB
Inventori Burnout	NMBO
Keterlibatan Kerja	NMWE
Prestasi Tugasan	NMTP
Tugasan Berdasarkan Identiti	NMWB

Bagi konstruk peringkat kedua, kajian ini menggunakan kaedah Komponen Hierarki (*Hierarchical Components Approach*). Kaedah ini juga dikenali sebagai Kaedah Indikator Berulang (*Repeated Indicator Approach*) (Wold, 1982). Kaedah ini adalah kaedah yang paling popular bagi menganggarkan konstruk peringkat tinggi dengan menggunakan perisian SmartPLS. Pengkaji yang lepas telah menggunakan kaedah ini adalah De Battisti, Gilardi, Siletti, dan Solari (2014) dan Becker, Klein, dan Wetzels (2012). Faktor peringkat kedua adalah diukur secara langsung kesemua faktor peringkat pertama (Wetzels, Odekerken-Schroder, & van Oppen, 2009). Kesemua indikator bagi setiap konstruk di ulang pada konstruk peringkat kedua.

Dalam kajian ini, kesemua pemboleh ubah latent dimodelkan sebagai langkah formatif. Bagi menilai langkah-langkah formatif, beberapa pengukuran kriteria statistik telah dicadangkan oleh Hair, Hult, Tomas, Ringle, dan Sarstedt (2013) iaitu:

1. Menilai kesahan konvergen model pengukuran formatif *path coefficient* mestilah lebih besar dari 0.7. Walau bagaimanapun, 0.6 masih diterima jika itu kajian penerokaan semula jadi.

2. Multikolinearan bagi setiap indikator iaitu nilai *Variance Inflation Factor* (VIF) mestilah tidak melebihi daripada 0.5.

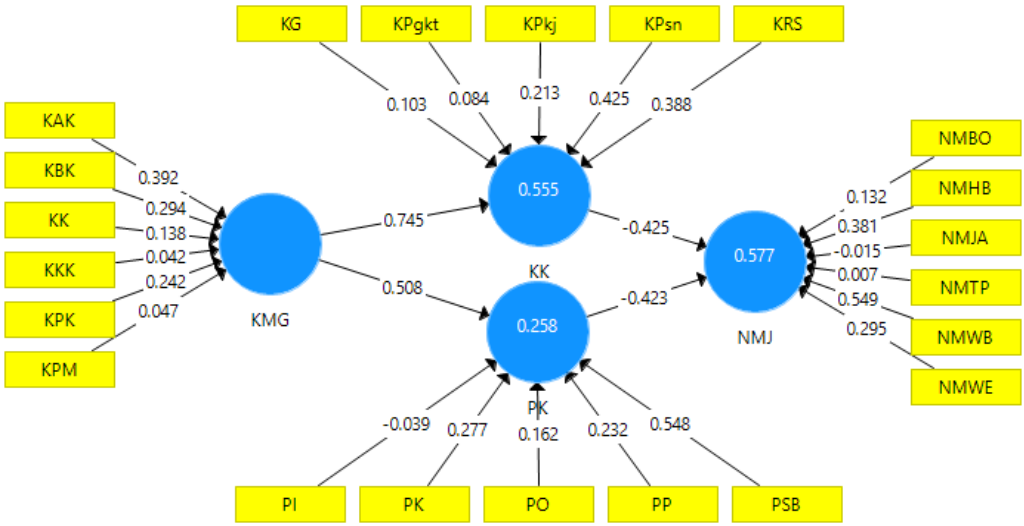
3. Menilai kesignifikan dan perkaitan penunjuk formatif. Hasil dari *bootstrapping* mesti menunjukkan bahawa *outer weigh*t dari setiap petunjuk formatif adalah signifikan. Jika penunjuk adalah tidak signifikan, penunjuk masih boleh dikekalkan atas dasar kandungan kesahan (*outer loading*). Sebaliknya, penyelidik boleh membuang petunjuk formatif apabila *outer loading* adalah < 0.5 dan tidak signifikan.

Jadual 3 Ringkasan keputusan pengukuran bagi kontruk formatif

Kontruk	Item	Kesahan Konvergen	Pemberat	VIF	Pemberat *t*-value	Muatan *t*-value	Pemberat *p*-value	Muatan *p*-value
Kepimpinan Memperkasa Gelagat	KAK	0.706	0.392	2.468	3.034**	20.763**	0.001	0.000
	KBK		0.294	3.951	2.758**	27.506**	0.003	0.000
	KK		0.138	2.775	1.255	17.214**	0.105	0.000
	KKK		0.042	4.211	0.752	23.896**	0.226	0.000
	KPK		0.242	3.411	2.663**	31.979**	0.004	0.000
	KPM		0.047	4.025	0.027	21.443**	0.489	0.000
Kepuasan Kerja	KPgkt	0.669	0.084	3.522	1.471	25.264**	0.071	0.000
	KPkj		0.213	2.729	3.389**	20.900**	0.000	0.000
	KPsn		0.425	2.824	4.448**	25.574**	0.000	0.000
	KRS		0.388	1.502	4.082**	12.765**	0.000	0.000
	KG		0.103	1.554	1.745	11.994**	0.041	0.000
Prestasi Kerja	PI	0.658	-0.039	2.053	0.302	7.989**	0.382	0.000
	PK		0.277	2.421	2.764**	16.091**	0.003	0.000
	PO		0.162	2.628	1.553	15.085**	0.061	0.000
	PP		0.232	1.540	3.718**	11.014**	0.000	0.000
	PSB		0.548	2.653	4.898**	23.628**	0.000	0.000
Niat Meletakkan Jawatan	NMBO	0.759	0.132	1.311	2.608**	3.852**	0.005	0.000
	NMHB		0.381	1.227	3.746**	7.368**	0.000	0.000
	NMJA		-0.015	1.431	0.531	5.633**	0.298	0.000
	NMTP		0.007	1.877	0.966	10.597**	0.167	0.000
	NMWB		0.549	1.908	6.919**	23.491**	0.000	0.000
	NMWE		0.295	1.899	3.852**	19.503**	0.000	0.000

Bagi pengukuran pengesahan formatif, pengesahan konvergen menggunakan analisis *redundancy* yang telah dicadangkan oleh Chin, (1988). Berdasarkan Jadual 3, Niat Meletakkan Jawatan *path coefficient* pengukuran formatif adalah 0.759 lebih besar dari 0.7 (Hair *et al*., 2013). Nilai path coefficient bagi Kepimpinan Memperkasa Gelagat, Kepuasan Kerja dan Prestasi Kerja adalah 0.706, 0.669 dan 0.658. Di mana, nilai 0.6 masih diterima jika itu kajian penerokaan semula jadi (Hair *et al*., 2013). Kesemua penilaian multikolinearan bagi setiap indikator iaitu nilai *Variance Inflation Factor* (VIF) tidak melebihi daripada 0.5. Oleh itu, kesimpulanya kolineariti tidak melepasi tahap kritikal bagi setiap kontruk formatif (Hair *et al*., 2013). Akhir sekali, menilai kesignifikan dan perkaitan penunjuk formatif. Hasil dari *bootstrapping* mesti menunjukkan bahawa *outer weight* dari setiap petunjuk formatif ada signifikan dan tidak signifikan. Menurut Hair *et al*., (2013) jika penunjuk adalah tidak signifikan,

penunjuk masih boleh dikekalkan atas dasar kandungan kesahan (*outer loading*) adalah signifikan maka tiada item yang dimansuhkan. Oleh itu, dapat disimpulkan bahawa kepadanan pengukuran dicapai bagi kesemua konstruk kajian. Kerangka model pengukuran konstruk peringkat kedua ditunjukkan pada Rajah 2.



Rajah 2 Kerangka model pengukuran konstruk peringkat kedua

PENILAIAN MODEL STRUKTUR

Kesan Langsung (*Direct Effect*)

Setelah analisis terhadap model pengukuran dilakukan, model struktur dinilai pada bahagian ini iaitu bagi melihat kesan langsung. Menurut Duarte dan Raposo (2010), model struktur mewakili hipotesis-hipotesis kajian yang terbina daripada hubungan di antara pembolehubah-pembolehubah pendam di dalam model kajian. Penilaian kepada model struktur dilakukan dengan menganalisis hubungan langsung pembolehubah-pembolehubah kajian. Analisis *bootstrap* dilakukan bagi menilai laluan pekali yang secara statistiknya adalah signifikan. Menurut Sharma dan Kim (2013), *bootstrapping* bermaksud satu kaedah *non-parametric* dalam statistik inferens yang tidak membuat sebarang andaian pengagihan (*distributional assumptions*). Peletakan 500 sampel semula adalah cadangan yang biasa dilakukan apabila menggunakan kaedah *bootstrapping* bagi menganggar sesuatu parameter (Chin, 1998). Oleh itu, kaedah *bootstrapping* di dalam kajian ini menggunakan 500 sampel semula bagi menguji signifikan pekali regresi.

Jadual 4 Rumusan laluan pekali dan ujian hipotesis bagi hubungan langsung

Hipotesis	Hubungan	Beta	SE	*T*-Value	*P*-Values	Keputusan
H1	(KMG ≥ KK)	0.745**	0.039	18.996	0.000	Disokong
H2	(KMG ≥ PK)	0.508**	0.066	7.752	0.000	Disokong
H3	(KK ≥ NMJ)	−0.425**	0.079	5.396	0.000	Disokong
H4	(PK ≥ NMJ)	−0.423**	0.074	5.679	0.000	Disokong

Nota: *t*-values > 1.65*($p<0.05$); *t*-values > 2.33** ($p<0.01$)

Berdasarkan Jadual 4 nilai R^2 bagi Kepuasan Kerja adalah sebanyak 0.555 yang menunjukkan bahawa sebanyak 55.5% varians di dalam Kepimpinan Memperkasa Gelagat. Penilaian lanjut menunjukkan bahawa R^2 adalah signifikan dan nilai R^2 adalah besar. Menurut panduan penilaian R^2 oleh Cohen (1988), di mana 0.02 – 0.12 adalah lemah, 0.13 – 0.25 adalah sederhana, dan 0.26 dan ke atas adalah besar. Bagi Kepimpinan Memperkasa Gelagat, mempunyai hubungan yang positif yang signifikan dengan Kepuasan Kerja (KK) iaitu $\beta = 0.745$, $P<0.01$. Manakala bagi nilai R^2 bagi Prestasi Kerja adalah sebanyak 0.258 yang menunjukkan bahawa sebanyak 25.8% varians di dalam Kepimpinan Memperkasa Gelagat. Kepimpinan Memperkasa Gelagat mempunyai hubungan yang signifikan dengan Prestasi Kerja (PK) iaitu $\beta = 0.508$, $P<0.01$. Akhir sekali bagi nilai R^2 bagi Niat Meletakkan Jawatan adalah sebanyak 0.577 yang menunjukkan bahawa sebanyak 57.7% varians di dalam Prestasi Kerja dan Kepuasan Kerja. Kepuasan Kerja (KK) juga mempunyai hubungan yang signifikan dengan Niat Meletakkan Jawatan (NMJ) iaitu $\beta = -0.425$, $P<0.01$. Seterusnya Prestasi Kerja (PK) mempunyai hubungan yang signifikan dengan Niat Meletakkan Jawatan (NMJ) iaitu $\beta = -0.423$, $P<0.01$.

MENGUJI KESAN PENGANTARAAN (*MEDIATING EFFECT*)

Hipotesis 5 – 6 memfokuskan kepada menguji kesan pengantaraan Kepimpinan Memperkasa Gelagat terhadap Niat Meletakkan Jawatan. Bagi menguji kesan pengantaraan pengkaji menggunakan keadah *bootstrapping* bagi kesan tidak langsung yang dicadangkan oleh Preacher dan Hayes (2008). Di dalam keputusan yang ditunjukkan pada *path coefficient* dalam *default report*, pengiraan dilakukan bagi mendapatkan kesan tidak langsung, ralat piawai, nilai *t*, dan selang keyakinan bagi aras rendah dan aras tinggi bagi menunjukkan kesan pengantaraan. Terdapat dua langkah yang dicadangkan oleh Hayes (2009) iaitu: (1) Masukkan model kajian ke dalam SEM bagi mendapatkan anggaran kesan *X* kepada *M*, dan *M* kepada *Y* bagi membina pengantaraan. Pengantaraan adalah signifikan jika kedua-dua pekali adalah signifikan. Jika salah salah satu tidak signifikan, maka tiada pengantaraan dan analisis seterusnya dihentikan. (2) Pengiraan *t-value* melalui prosedur *non-parametric bootstrapping* bagi menguji kesan pengantaraan (*bootstrap-t*).

Jadual 5 Rumusan keputusan kesan pengantaraan

Hipotesis	Hubungan	Aliran *a*	Aliran *b*	Kesan Tidak Langsung	SE	*t*-value	Selang Keyakinan		Keputusan
							95% LL	95% UL	
H5	KMG≥KK≥NMJ	0.745	−0.425	−0.317	0.01809	−17.502	−0.352	−0.281	Disokong
H6	KMG≥PK≥NMJ	0.508	−0.423	−0.215	0.01265	−16.989	−0.240	−0.190	Disokong

Nota: *t*-values > 1.65*($p<0.05$); *t*-values > 2.33** ($p<0.01$)

Berdasarkan rumusan keputusan pengantaraan pada Jadual 5 hipotesis H5 dan H6 memenuhi syarat yang diperlukan untuk membina satu hubungan pengantaraan iaitu terbukti bahawa terdapat hubungan tidak langsung yang signifikan. Analisis *bootstrapping* menunjukkan kesan tidak langsung KK bagi KMG terhadap NMJ menunjukkan nilai $\beta = -0.317$ yang signifikan dengan nilai $t = -17.502$. Nilai selang keyakinan (95% LL $= -0.352$ dan 95% UL $= -0.281$) didapati tiada melintangi nilai 0. Maka dapat disimpulkan bahawa kesan pengantaraan adalah signifikan bagi H5. Manakala kesan tidak langsung PK bagi KMG terhadap NMJ menunjukkan nilai $\beta = -0.215$ dengan nilai signifikan nilai $t = -16.989$. Nilai selang keyakinan (95% LL $= -0.240$ dan 95% UL $= -0.190$) didapati tidak melintangi nilai 0. Maka dapat disimpulkan bahawa kesan pengantaraan adalah signifikan bagi H6.

PERBINCANGAN

Di dalam kajian ini pengukuran Kepimpinan Memperkasa Gelagat penyelidik telah menggunakan instrumentasi yang telah digunakan oleh penyelidik asal Konczak *et al*. (2000). Manakala, Kepuasan Kerja penyelidikan ini mengguna pakai item yang digunakan oleh kajian lepas Lo, Ramayah, dan Lim (2013). Dari pemerhatian kajian lepas, kepimpinan didapati secara positif dapat dikaitkan dengan kepuasan kerja (Liden *et al*., 2008). Sekiranya pekerja percaya dengan kewibawaan seseorang pemimpin memberi kesan terhadap kepuasan kerja (Costigan *et al.*, 1998; Dirks & Ferrin, 2002; Iverson *et al.*, 1996; Spence-Laschinger *et al.*, 2001; Bartram & Casimir, 2007). Dalam kajian Jones *et al*. (2001) telah menunjukkan kesan langsung dan tidak langsung tingkah laku kepimpinan terhadap kepuasan kerja. Malah, kepuasan kerja didorong oleh sikap terhadap kerja dan tugas-tugas seperti kualiti atas sokongan penyelia (Van Dick *et al*., 2004). Dalam kajian Dewettinck dan Ameijde (2011) mendapati hubungan langsung yang kuat antara tingkah laku memperkasa kepimpinan dan sikap pekerja. Kajian menunjukkan pentingnya peranan pemimpin dalam langsung membentuk sikap pekerja, terutamanya kepuasan kerja bagi sesebuah organisasi bagi memudahkan perubahan. Peranan penting pemimpin dalam membentuk pengalaman kerja pekerja dalam memupuk sikap pekerja, dan seterusnya kesetiaan mereka kepada organisasi (Klerk & Stander, 2014; Chan & Mak, 2014). Kesetiaan akan wujud jika perasaan dimiliki oleh organisasi, secara langsung meningkatkan kepuasan (Schyns & Wolfram, 2008; Buech *et al*., 2010).

Hasil dapatan kajian ini menunjukkan hubungan yang signifikan antara Kepimpinan Memperkasa Gelagat dan Kepuasan Kerja. Oleh itu, hipotesis H1 telah diterima dan disokong. Korthuis-Smith (2002) mendapati bahawa kepimpinan penyertaan, arahan, keputusan orang bawahan, sokongan organisasi, dan maklum balas prestasi dan peluang peningkatan yang sangat berkaitan dengan dimensi kepercayaan. Di mana teori kepercayaan menerangkan dengan jelas peranan kepercayaan penting dalam keberkesanan organisasi (Nyhan & Marlowe, 1997; Shockley-Zalabak, Ellis, & Winograd, 2000). Kepercayaan juga memberi kesan terhadap kepuasan kerja, komitmen organisasi, niat meletakkan jawatan, kepercayaan maklumat yang diberikan oleh peneraju dalaman, dan komitmen kepada keputusan (Costigan *et al.*, 1998; Dirks & Ferrin, 2002; Iverson *et al.*, 1996; Spence-Laschinger *et al.*, 2001; Bartram & Casimir, 2007). Dimensi kepercayaan mungkin wujud di antara pemimpin dan pekerja dalam kalangan kakitangan akademik di Malaysia hingga menyebabkan kepuasan mempunyai hubungan yang positif dengan Kepimpinan Memperkasa Gelagat.

Hasil dapatan kajian ini menunjukkan hubungan yang signifikan antara Kepimpinan Memperkasa Gelagat dan Prestasi Kerja. Oleh itu, hipotesis H2 telah diterima dan disokong. Dari pemerhatian kajian lepas, kepimpinan telah didapati secara positif dapat dikaitkan dengan prestasi pekerja (Liden *et al*., 2008; Zaccaro *et al*., 2001). Ketua pasukan atau penyelia yang memperkasa kepemimpinan mempunyai hubungan yang positif dengan pembangunan kepimpinan bersama, seterusnya memberi impak positif kepada prestasi (Fausing *et al.*, 2015; Tuuli *et al.*, 2012; Lee *et al.*, 2014). Pengurus atau pemimpin dapat meningkatkan prestasi organisasi melalui amalan tingkah laku seseorang pemimpin, secara tidak langsung dapat melahirkan kepercayaan pengikut dalam kepercayaan dengan maklumat yang disampaikan oleh ketua (Joseph & Winston, 2005; Errol & Bruce, 2005). Malah *Skill development* (pembangunan kemahiran) dan *Coaching* (kejurulatihan) untuk prestasi yang inovatif, di mana pemimpin mewujudkan peluang untuk latihan dan meningkatkan kemahiran orang bawahan (Konczak *et al*, 2000; Pearce & Sims, 2002). Penilaian penyeliaan merupakan faktor utama prestasi ke tahap yang lebih tinggi kepercayaan organisasi (Daley & Vasu, 1998). Menyokong kenyataan ini, di antara prestasi dan kepercayaan dengan mengambil kira integriti dan konsisten apabila pemimpin membina kepercayaan dalam organisasi dengan menjadikan kedudukan mereka lebih jelas, kedudukan, dan konsisten melaksanakan arah tertentu (Northouse, 2001; Bartram & Casimir, 2007; Toor & Ofori, 2009). Malah, Spreitzer *et al.* (1999), Leavy (2005), Slåtten *et al*. (2011) dan Raffay (2011) dalam kajian mereka mendapati bahawa penyelia yang mengamalkan memperkasa kepimpinan kepada orang bawahan mereka sebagai lebih inovatif, mempengaruhi pihak atasan dan memberi inspirasi. Sorotan kajian lepas menyokong hasil dapatan kajian ini iaitu kenyataan Wong Humborstad *et al*., 2014 bahawa terlalu sedikit memperkasakan gelagat pekerja ini membawa kesan yang negatif atau terhad – atau tiada langsung – kepada individu dalam peranan dan prestasi kerja. Peranan pemimpin dalam memperkasa gelagat pekerja memberi impak kepada prestasi pekerja.

Dalam kajian ini, pengukuran Kepuasan Kerja penyelidikan ini mengguna pakai item yang digunakan oleh kajian lepas Lo *et al*., (2013). Manakala Niat Meletakkan Jawatan pula item yang digunakan dalam kajian ini telah dibentuk oleh pengkaji berdasarkan pengukuran yang digunakan oleh pengkaji lepas iaitu dari kajian Bothma dan Roodt (2013). Hasil dapatan kajian ini menunjukkan hubungan yang signifikan antara Kepuasan Kerja dan Niat Meletakkan Jawatan. Oleh itu, hipotesis H3 telah diterima dan disokong.

Ini secara tidak langsung telah menyokong kajian-kajian lepas para penyelidik yang menyatakan bahawa langkah-langkah kepuasan kerja berbeza dari segi pendirian seseorang mengukur perasaan tentang kerja (kepuasan kerja afektif) (Thompson & Phua, 2012) atau kognisi tentang kerja (kepuasan kerja kognitif) (Moorman, 1993). Jika pekerja bersetuju untuk pekerjaan yang dilakukan dan mempunyai kemampuan yang diperlukan, maka sesuatu pekerjaan harus meningkatkan kepuasan dan kualiti pengeluaran dan mengurangkan ketidakhadiran dan lantik henti (Bennett, 1978). Berdasarkan pendapat Joo (2010), lantik henti adalah disebabkan jika pekerja tidak berpuas hati dengan dasar-dasar seluruh organisasi; apabila mereka menerima tahap yang komitmen yang dari organisasi; dan budaya pembelajaran organisasi dan kualiti perhubungan pemimpin dan pekerja. Seperti apa yang dinyatakan oleh Bingham (1978), kebosanan dan ketidakhadiran ini adalah bermula dari reka bentuk pekerjaan. Oleh itu, majikan, kerajaan dan kesatuan pekerja harus perlu peka dengan kepuasan pekerja terutama dari aspek pembayaran gaji semasa pelaksanaan pengayaan kerja (Walsh, 1974). Model Ciri-ciri Pekerjaan juga ada menyatakan jika kepuasan kerja yang tinggi dengan pekerjaan ketidakhadiran dan lantik henti adalah rendah (Ivancevich *et al*., 2008; Gary & Rastogi, 2005; Cooper, 1973).

Hasil dapatan kajian ini menunjukkan hubungan yang signifikan antara Prestasi Kerja dan Niat Meletakkan Jawatan. Oleh itu, hipotesis H4 telah diterima dan disokong. Justeru itu, dapatan ini telah menyokong penyelidikan-penyelidikan lepas melalui Sistem Kerja Prestasi Tinggi (HPWS) muncul sepanjang dekad yang lalu, yang telah menunjukkan bahawa satu sistem bersepadu amalan sumber manusia boleh memberi kesan kepada prestasi organisasi, komitmen pekerja, dan lantik henti pekerja secara sukarela (Chi & Lin, 2011; Datta, Guthrie, & Wright, 2005; Subramony, 2009; Way, 2002; Wright & Boswell, 2002). Sistem kerja prestasi tinggi merujuk kepada satu set pakej amalan sumber manusia yang dipercayai mempengaruhi pengetahuan, motivasi, dan penglibatan pengaruh pekerja (Chi & Lin, 2011; Wu & Chaturvedi, 2009). Amalan-amalan ini biasanya termasuk pengambilan dan pemilihan gaji, latihan dan pembangunan, pengurusan prestasi, dan perkongsian maklumat (Way, 2002; Wu & Chaturvedi, 2009; O'Halloran, 2012). Perkembangan Sistem kerja prestasi tinggi boleh dipengaruhi oleh faktor persekitaran, seperti sektor di mana organisasi beroperasi dan saiz dan kematangan sesebuah organisasi. Pengurusan sumber manusia politeknik Malaysia dalam Hala Tuju Transformasi Politeknik 2009 jelas menunjukkan amalan organisasi yang komited untuk menyediakan perkhidmatan berkualiti, cekap dan mesra pelanggan ke tahap tinggi objektiviti, integriti kerahsiaan, dan profesionalisme melalui saluran interaktif untuk meningkatkan prestasi mereka lebih baik (BLPK, 2010, 2013). Malah amalan ini menurut Guthrie (2001) dan Selden *et al*., (2013) melabur dalam sistem kerja prestasi tinggi akan meningkatkan pengekalan pekerja atau mengurangkan lantik henti secara sukarela.

Manakala faktor pengantaraan bagi dapatan kajian bahagian ini adalah berkaitan kepuasan kerja. Hipotesis yang diuji adalah Hipotesis 5: Kepuasan Kerja merupakan faktor pengantaraan di antara hubungan Kepimpinan Memperkasa Gelagat (LEB) dan Niat Meletakkan Jawatan. Hasil dapatan kajian ini menunjukkan hipotesis H5 mempunyai kesan pengantaraan yang signifikan. Oleh itu, hipotesis H5 telah disokong dan diterima bagi kajian ini.

Dapatan kajian lepas telah menyokong dapatan bahawa kepuasan kerja merupakan faktor pengantaraan di antara hubungan Kepimpinan Memperkasa Gelagat (LEB) dan Niat Meletakkan Jawatan. Kajian lepas telah menyokong dapatan ini iaitu kepimpinan telah didapati secara positif dapat dikaitkan dengan kepuasan kerja (Liden *et al*., 2008). Sekiranya pekerja percaya dengan kewibawaan seseorang pemimpin memberi kesan terhadap kepuasan kerja (Costigan *et al.*, 1998; Dirks & Ferrin, 2002; Iverson *et al.*, 1996; Spence-Laschinger *et al.*, 2001; Bartram & Casimir, 2007). Dalam kajian Jones *et al*., (2001) telah menunjukkan kesan langsung dan tidak langsung tingkah laku kepimpinan terhadap kepuasan kerja. Malah, kepuasan kerja didorong oleh sikap terhadap kerja dan tugas-tugas seperti kualiti atas sokongan penyelia (Van Dick *et al*., 2004). Dalam kajian Dewettinck dan Ameijde (2011) mendapati hubungan langsung yang kuat antara tingkah laku memperkasa kepimpinan dan sikap pekerja, kajian menunjukkan pentingnya peranan pemimpin dalam membentuk sikap pekerja, terutamanya kepuasan kerja bagi sesebuah organisasi bagi memudahkan perubahan. Peranan penting pemimpin dalam membentuk pengalaman kerja pekerja dalam memupuk sikap pekerja, dan seterusnya kesetiaan mereka kepada organisasi (Klerk & Stander, 2014; Chan & Mak, 2014). Kesetiaan akan wujud jika perasaan dimiliki oleh organisasi, secara langsung meningkatkan kepuasan (Schyns & Wolfram, 2008; Buech *et al*., 2010).

Ini jelas diterangkan dalam teori kepercayaan menerangkan dengan perjelasan peranan kepercayaan penting dalam keberkesanan organisasi (Nyhan, 2000; Shockley-Zalabak *et al*., 2000). Kepercayaan juga memberi kesan terhadap kepuasan kerja, komitmen organisasi, niat meletakkan jawatan, kepercayaan maklumat yang diberikan oleh peneraju dalaman, dan komitmen kepada keputusan (Costigan *et al.*, 1998; Dirks & Ferrin, 2002; Iverson *et al.*, 1996; Spence-Laschinger *et al.*, 2001; Bartram & Casimir, 2007). Jika dimensi kepercayaan ini wujud menurut kajian Shahidul, Rubiná, Yukl, dan Prussia (2013) dan Toor dan Ofori (2009) yang menunjukkan bahawa organisasi yang dipimpin oleh pemimpin yang beretika dan memperkasakan gelagat lebih cenderung untuk mengekalkan hubungan positif dengan pekerja memberi faedah kepada kepercayaan dan kesetiaan mereka. Dalam kajian Jones *et al*. (2001), telah menunjukkan kesan langsung dan tidak langsung tingkah laku kepimpinan terhadap kepuasan kerja, yang kedua dalam mempengaruhi niat untuk meninggalkan dan perletakkan jawatan yang sebenar. Malah, kepuasan kerja didorong oleh sikap terhadap kerja dan tugas-tugas seperti kualiti atas sokongan penyelia (Van Dick *et al*., 2004). Dalam kajian Dewettinck dan Ameijde (2011) mendapati hubungan langsung yang kuat antara tingkah laku memperkasa kepimpinan dan sikap pekerja, kajian menunjukkan pentingnya peranan pemimpin dalam langsung membentuk sikap pekerja, terutamanya kepuasan kerja bagi sesebuah organisasi bagi memudahkan perubahan.

Manakala faktor pengantaraan bagi H6 iaitu Prestasi Kerja merupakan faktor pengantaraan di antara hubungan Kepimpinan Memperkasa Gelagat (LEB) dan Niat Meletakkan Jawatan. Hasil dapatan kajian ini menunjukkan hipotesis H6 mempunyai kesan pengantaraan yang signifikan. Oleh itu, hipotesis H6 telah disokong dan diterima bagi kajian ini.

Berdasarkan dapatan kajian lepas, pengurus atau pemimpin dapat meningkatkan prestasi organisasi melalui amalan tingkah laku seseorang pemimpin, secara tidak langsung dapat melahirkan kepercayaan pengikut dalam kepercayaan dengan maklumat yang disampaikan oleh ketua (Joseph & Winston, 2005; Errol & Bruce, 2005). Ini disokong dengan kajian Liden *et al*., (2008) dan Zaccaro *et al*., (2001) bahawa kepimpinan telah didapati secara positif dapat dikaitkan dengan prestasi pekerja. Ketua pasukan atau penyelia yang memperkasakan kepemimpinan mempunyai hubungan yang positif dengan pembangunan kepimpinan bersama, seterusnya memberi impak positif kepada prestasi (Fausing *et al.*, 2015; Tuuli *et al.*, 2012; Lee *et al.*, 2014). Malah *Skill development* (pembangunan kemahiran) dan *coaching* (kejurulatihan) untuk prestasi yang inovatif, di mana pemimpin mewujudkan peluang untuk latihan dan meningkatkan kemahiran orang bawahan (Konczak *et al.*, 2000; Pearce & Sims, 2002). Penilaian penyeliaan merupakan faktor utama prestasi ke tahap yang lebih tinggi kepercayaan organisasi (Daley & Vasu, 1998). Menyokong kenyataan ini, di antara prestasi dan kepercayaan dengan mengambil kira integriti dan konsisten apabila pemimpin membina kepercayaan dalam organisasi dengan menjadikan kedudukan mereka lebih jelas, kedudukan, dan konsisten melaksanakan arah tertentu (Northouse, 2001; Bartram & Casimir, 2007; Toor & Ofori, 2009). Malah, Spreitzer *et al.* (1999), Leavy (2005), Slåtten *et al*. (2011), dan Raffay (2011) dalam kajian mereka mendapati bahawa penyelia yang mengamalkan memperkasa kepimpinan kepada orang bawahan mereka sebagai lebih inovatif, mempengaruhi pihak atasan dan memberi inspirasi. Terlalu sedikit memperkasakan gelagat pekerja ini membawa kesan yang negatif atau terhad – atau tiada langsung – kepada individu dalam peranan dan prestasi kerja (Wong Humborstad *et al*., 2014). Ini telah menyokong dengan dapatan kajian lepas yang menyatakan Sistem Kerja Prestasi Tinggi (HPWS) telah menunjukkan bahawa satu sistem bersepadu amalan sumber manusia boleh memberi kesan kepada prestasi organisasi, komitmen pekerja, dan lantik henti pekerja secara sukarela (Chi & Lin, 2011; Datta *et al*., 2005; Subramony, 2009; Way, 2002; Wright & Boswell, 2002). Malah kajian Guthrie (2001) dan Selden *et al*. (2013) menunjukkan kesan yang signifikan dalam mengamalkan sistem kerja prestasi tinggi akan meningkatkan pengekalan pekerja atau mengurangkan lantik henti secara sukarela.

IMPLIKASI PRATIKAL

Selain daripada sumbangan dari segi teoritikal, kajian ini juga memberikan beberapa implikasi kepada golongan yang terlibat dalam pengurusan dan pendidikan di politeknik Malaysia iaitu ketua jabatan, ibu bapa, pelajar dan kakitangan akademik politeknik Malaysia. Perkara ini penting kerana daripada hasil dapatan kajian ini penggubalan dapat dibuat dan membentuk perancangan pembangunan oleh diuruskan oleh Jabatan Pengajian Politeknik Malaysia**.**

Ketua jabatan atau pemimpin dalam sesuatu organisasi memainkan peranan yang penting dalam membentuk hasil kerja, budaya kerja, hala tuju organisasi dan kejayaan organisasi. Di mana seseorang pemimpin perlu ada sifat kepimpinan. Kepimpinan adalah sifat seseorang ketua yang berupaya mempengaruhi, memotivasikan, dan membolehkan orang lain untuk menyumbang ke arah keberkesanan dan kejayaan organisasi di tempat mereka bekerja berdasarkan matlamat dan visi yang ditetapkan (Robbins & Judge, 2015). Menurut Blanchard *et al*., (1999), seseorang pekerja memerlukan hala tuju lebih daripada sokongan memperkasakan gelagat. Seorang pemimpin harus mengenal pasti hasil kerja, menyediakan pelan tindakan, berkongsi maklumat, memberi contoh teladan yang boleh dipercayai dan memberikan maklumat yang membolehkan pekerja untuk mencapai kesimpulan sendiri. Tahap maklum balas daripada penyelia ada hubung kait dengan kukuh dengan persepsi pekerja terhadap sokongan organisasi (Patrick & Laschinger, 2006). Aspek yang paling penting yang membezakan hubungan ketua dan pekerja adalah tahap sokongan emosi, tanggungjawab membuat keputusan dan cabaran tugas yang diberikan (Liden *et al*., 2000). Apabila pekerja mendapat sokongan dari penyelia, mereka kurang cenderung untuk mengambil berat tentang membuat kesilapan dan mempunyai tanggungjawab terhadap kerja (Bordin *et al*., 2007).

Malah menurut kajian (Shahidul *et al*., 2013; Toor & Ofori, 2009) menunjukkan bahawa organisasi yang dipimpin oleh pemimpin yang beretika dan memperkasakan gelagat lebih cenderung untuk mengekalkan hubungan positif dengan pekerja memberi faedah kepada kepercayaan dan kesetiaan mereka. Pengurus boleh meningkatkan prestasi organisasi melalui amalan tingkah laku kepimpinan yang meningkatkan kepercayaan pengurusan dan organisasi (Errol & Bruce, 2005). Suasana kerja yang dibuat oleh pengurus menyumbang secara langsung kepada orang bawahan terhadap perasaan harga diri dan kepercayaan pada diri sendiri dalam menentukan masa depan (Deci, Connell, & Ryan, 1989). Faktor yang menentukan pandangan pekerja terhadap organisasi itu adalah perasaan mereka mereka dilayan dan terlibat dalam membuat keputusan, untuk membina reputasi dalaman yang baik, komunikasi secara profesional perlu diterapkan oleh pemimpin organisasi di semua peringkat dan melibatkan mereka dalam strategik, interaktif, memperkasa gelagat, demokrasi dan mewujudkan *relational-oriented* bagi tingkah laku kepimpinan dalam komunikasi (Men & Stacks, 2013).

Organisasi menghadapi cabaran untuk memenuhi keperluan dan mendapat kelebihan tenaga kerja yang lebih tinggi dengan pelbagai rangkaian pengetahuan untuk ditawarkan (Pearce & Manz, 2005; Leavy, 2005). Akibatnya, kelaziman dan penggunaan pasukan sekerja telah meningkat seiringan dengan memberi tumpuan kepada faktor-faktor yang membolehkan peningkatan prestasi pasukan kerja (Burke, DiazGranados, & Salas, 2011; Morgeson, DeRue, & Karam, 2010). Kepimpinan adalah salah satu penyumbang penting kepada prestasi kerja (Zaccaro *et al*., 2001). Walau bagaimanapun, dalam usaha untuk memanfaatkan kelebihan kerja berpasukan kemunculan kepimpinan amat penting dalam sesuatu pasukan kerja (Barry, 1991). Perkongsian ilmu adalah satu proses pasukan ditakrifkan sebagai perkongsian ahli pasukan idea tugas yang berkaitan, maklumat dan cadangan antara satu sama lain (Tiwana & McLean, 2005). Manakala kapasiti penyerapan adalah keupayaan untuk mengiktiraf nilai maklumat baru dan pengetahuan, dengan cara mengasimilasikan dan dilaksanakan (Nemanich *et al*., 2010).

Ketua pasukan atau penyelia yang memperkasa kepemimpinan mempunyai hubungan yang positif dengan pembangunan kepimpinan bersama, seterusnya memberi impak positif kepada prestasi (Fausing *et al.*, 2015; Tuuli *et al*., 2012; Lee *et al*., 2014). Malah, Spreitzer *et al*. (1999), Leavy (2005), Slåtten *et al*. (2011) dan Raffay (2011) dalam kajian mereka mendapati bahawa penyelia yang mengamalkan memperkasa kepimpinan kepada orang bawahan mereka sebagai lebih inovatif, mempengaruhi pihak atasan dan memberi inspirasi. Kajian Hoch (2012) mendapati bahawa organisasi perlu memudahkan kepimpinan bersama yang mempunyai kaitan yang positif dengan inovasi. Terlalu sedikit memperkasakan gelagat pekerja ini membawa kesan yang negatif atau terhad – atau tiada langsung – kepada individu dalam peranan dan prestasi kerja (Wong Humborstad *et al*., 2014. Peranan penting pemimpin dalam membentuk pengalaman kerja pekerja dalam memupuk sikap pekerja, dan seterusnya kesetiaan mereka kepada organisasi (Klerk & Stander, 2014; Chan & Mak, 2014). Jika perasaan dimiliki terhadap organisasi wujud, ini akan membawa kepada motivasi untuk lebih komitmen wujud dan mempengaruhi niat untuk letak jawatan (Albrecht & Andreetta, 2011). Perasaan dimiliki oleh organisasi juga meningkatkan kepuasan dan prestasi kerja (Schyns & Wolfram, 2008; Buech *et al*., 2010).

Niat meletakkan jawatan adalah peramal yang kuat tingkah laku masa depan pekerja dan lantik henti sebenar (Carmeli & Weisberg, 2006; Harter *et al*., 2002; Park & Kim, 2009). Setiap organisasi menghadapi lantik henti pekerja, sebahagian daripada mereka meninggalkan organisasi secara sukarela, lantik henti menyebabkan organisasi menanggung kos perletakan jawatan, pengambilan, pemilihan dan lain-lain (Iqra *et al*., 2014; Waldman *et al*., 2004; Addae *et al*., 2006). Apabila pekerja tidak berpuas hati dengan pekerjaan dan organisasi tidak mempercayai pekerja mereka, niat pekerja untuk meletak jawatan akan menjadi lebih besar, mereka akan meninggalkan organisasi serta tempoh kerja mereka akan menjadi lebih kecil (Jeffrey, 2007).

Hasil dapatan kajian ini juga dapat melihat tahap keseriusan niat meletakkan jawatan pekerja di kalangan kakitangan akademik di politeknik Malaysia. Penyelidikan lepas menunjukkan bahawa keadaan kerja yang buruk, seperti beban kerja antara penyebab niat meletakkan jawatan meningkat (Castle, 2006). Lantik henti adalah dari kemarahan yang berkaitan emosi terhadap organisasi (Brief & Weiss, 2002; Fineman, 2000). Kemarahan berlaku bila polisi pekerja itu percaya bahawa dasar organisasi, prosedur, atau keputusan organisasi telah memberi impak negatif. Apabila membuat keputusan organisasi adil, pekerja mempamerkan pelbagai sikap dan tingkah laku yang berkaitan dengan kerja yang positif, termasuk lebih kepuasan kerja, penilaian yang lebih baik daripada penyelia dan organisasi, penerimaan yang lebih besar dan pematuhan keputusan, dan prestasi kerja yang lebih tinggi (Colquitt *et al.*, 2001). Keadilan organisasi secara konsisten memberi impak kepada keputusan pekerja berkaitan dengan niat meletakan jawatan. Bagi Abubakr dan Hanan (2011), menunjukkan bahawa niat meletakkan jawatan boleh dikurangkan dengan menangani masalah dengan prosedur organisasi dan memperbaiki hubungan pekerja oleh penyelia. Di sini jelas menunjukkan keadilan organisasi bukan sahaja mempengaruhi kepuasan kerja dan prestasi kerja tetapi mempengaruhi niat pekerja untuk kekal atau meninggalkan organisasi. Ini secara tidak langsung memberi manfaat kepada pengurus dan pembuat dasar dalam organisasi.

Oleh itu, pengurus sumber manusia harus berusaha untuk menganjurkan kursus latihan yang sistematik dan khusus, terutamanya yang berkaitan dengan kemahiran profesional, untuk meningkatkan keupayaan pekerjaan pekerja (Lee Hansen, 2002; Cheng & Waldenberger, 2013). Campur tangan pengurusan sumber manusia terhadap kepentingan pembangunan pekerja sebagai yang memberi kesan kepada tingkah laku pekerja telah secara meluas diterima umum (Grawitch, Trares, & Kohler, 2007; Wali Rahman & Zekeriya Nas, 2013; Cheng & Waldenberger, 2013). Berdasarkan pendapat Joo (2010), lantik henti adalah disebabkan jika pekerja tidak berpuas hati dengan dasar-dasar seluruh organisasi; apabila mereka menerima tahap yang komitmen yang dari organisasi; dan budaya pembelajaran organisasi dan kualiti perhubungan pemimpin dan pekerja. Ini jelas menunjukkan amalan pengurusan sumber manusia seperti pembangunan pekerja mungkin menyumbang kepada sikap tempat kerja dan tindakan (Omer, Qaisar, Mahmood Kiyani, Khalil-Ur-Rehman, & Aamer 2011). Ini disokong oleh Gustafson (2002), Hossam (2014), S. L. Peterson (2007), Jacobs dan Roodt (2007), Tuzun dan Kalemci (2012) dan Tymon Jr., Stumpf, dan Smith (2011) adalah penting bagi pengurus untuk membangunkan persekitaran satu pasukan di tempat kerja untuk meningkatkan kesetiaan pekerja, akhirnya mengurangkan lantik henti pekerja.

KEKANGAN/BATASAN DARI PENYELIDIKAN

Terdapat beberapa batasan dalam kajian ini. Antara batasan kajian ini adalah penyelidik hanya mengambil empat faktor sahaja iaitu Kepimpinan (Kepimpinan Memperkasa Gelagat), Balas Psikologi (Kepuasan Kerja dan Prestasi kerja), Niat Meletakkan Jawatan. Berdasarkan faktor-faktor ini kepimpinan merupakan pemboleh ubah bersandar, kepuasan kerja dan prestasi kerja sebagai pemboleh ubah pengantaraan atau mediator, niat meletakkan jawatan sebagai pemboleh ubah bersandar. Oleh itu, sorotan kajian dan dapatan kajian hanya berkisar tentang faktor-faktor yang diambil oleh penyelidik sahaja.

Manakala populasi dan sampel pula diambil dari dalam kalangan kakitangan akademik Politeknik Malaysia. Kakitangan akademik yang menyandang jawatan Pegawai Pendidikan Pengajian Tinggi (PPPT) yang dipilih adalah di kalangan mereka yang menyandang jawatan Gred DH29, DH31/32, DH33/34, DH41/42, DH43/44, DH47/48, DH51/52 dan DH53/54. Populasi terdiri dari 7,426 orang (e-SIS, 2016) dan sampel pula terdiri dari 376 orang responden sahaja. Pengambil populasi dan sampel juga merupakan batasan kajian kerana hasil dapatan ini tidak boleh mengandaikan semua institusi pendidikan di Malaysia mempunyai dapatan yang sama.

Kekangan dari aspek jantina juga wujud dalam kajian ini. Berdasarkan 376 responden yang menjawab borang soal selidik seramai 137 orang responden adalah lelaki dan responden perempuan pula seramai 239 orang. Dari jumlah ini mewakili 36.4 peratus adalah responden lelaki dan 63.6 peratus responden perempuan. Dengan ini, terdapat sedikit ketidakseimbangan dari aspek jantina dalam kajian ini.

Seterusnya, adalah kebergantungan terhadap data berbentuk keratan rentas. Kajian ini menganggap bahawa sifat kajian ini tidak membenarkan untuk mengkaji kesan jangka pendek dan panjang bagi melihat punca berlakunya niat meletakkan jawatan dalam kalangan kakitangan akademik politeknik Malaysia.

CADANGAN KAJIAN PADA MASA HADAPAN

Seperti yang sedia maklum kajian ini hanya mengutarakan sembilan faktor sahaja. Penyelidik mencadangkan agar kajian pada masa hadapan dapat diaplikasikan di organisasi yang berbeza dengan saiz populasi dan sampel yang berlainan. Faktor yang dicadangkan yang boleh diaplikasikan bagi kajian akan datang. Semestinya dapatan kajian dan pandangan yang berbeza akan diperoleh. Faktor yang dicadangkan adalah tempoh perkhidmatan, tempoh perkhidmatan adalah jangka waktu tertentu untuk pekerjaan tertentu (Robbins, 2005). Menurut Robbins (2005), tempoh perkhidmatan boleh didefinisikan waktu pada pekerjaan tertentu, boleh dinyatakan bahawa bukti terbaru menunjukkan hubungan yang positif antara tempoh perkhidmatan dan produktiviti kerja. Penyelidikan yang dilakukan oleh (Byrd & Cooperman, 2010) dengan menguji hubungan antara pampasan, tempoh perkhidmatan, prestasi, dan penilaian rakan dalam pasaran dan tempoh pembayaran terhadap CEO dalam sesuatu organisasi. Secara keseluruhan hipotesis alternatif menunjukkan kesan kepada tempoh perkhidmatan yakni CEO yang setia dan lama berkhidmat menunjukkan hubungan yang positif dengan prestasi dan pampasan yang akan diperoleh dan akan melakukan khidmat dengan lebih jika pampasan yang diperoleh setimpal dengan usaha dan kesetiaan yang diberikan. Sebaliknya jika pekerja tidak berpuas hati dengan pekerjaan dan organisasi tidak mempercayai pekerja mereka, niat pekerja untuk meletakkan jawatan akan menjadi lebih besar, mereka akan meninggalkan organisasi serta tempoh kerja mereka akan menjadi lebih kecil (Jeffrey, 2007). Ini disokong dengan kajian Cotton dan Tuttle (1986) mengenal pasti tiga kategori punca-punca lantik-henti pekerja: (1) faktor yang berkaitan dengan kerja (contohnya, kepuasan kerja, gaji, prestasi, dan komitmen organisasi); (2) faktor individu (contohnya, umur, pendidikan, jantina, tempoh kerja); (3) faktor-faktor luaran (contohnya, kadar pengangguran, persepsi pekerjaan, dan kehadiran kesatuan).

KESIMPULAN

Secara kesimpulannya, kajian ini telah dapat memperjelaskan niat meletakkan jawatan yang berlaku di politeknik Malaysia. Oleh itu, kajian pihak pengurusan politeknik Malaysia iaitu Jabatan Pengajian Politeknik boleh mengguna pakai kajian ini untuk mencari idea melakukan penambahbaikan terhadap pengurusan sumber manusia atau reka bentuk pekerjaan dan sikap pemimpin bagi mencapai misi dan visi politeknik di peringkat yang lebih global. Juga perlu diingatkan ada faktor lain yang perlu diingatkan selain reka bentuk pekerjaan untuk menentukan produktiviti pekerja. Sektor pendidikan menjadi lebih besar dan lebih kompleks di pertengahan abad kedua puluh. Pengurusan mula meningkatkan kaedah untuk reka bentuk

pekerjaan dengan menggunakan pemerhatian, pengukuran, dan analisis. Pengurusan sumber manusia juga perlu ada penambahbaikan dalam membentuk kaedah kerja, dan memberikan insentif ekonomi yang lebih baik. Pihak pengurusan politeknik Malaysia perlu mempelajari kaedah kerja dengan sangat terperinci untuk mengenal pasti kaedah terbaik untuk melakukan pekerjaan tertentu.

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IDENTIFICATION OF LEAST CONGESTED AND SHORTEST DISTANCE PATH IN TRAFFIC NETWORK

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ABSTRACT

Traffic congestion, a mobility problem that exists as the traffic volume demand exceeds the capacity of the existing intersections. Conventional approaches such as building flyover and road widening might not be very effective in solving traffic congestion. Therefore, a suggested approach in this study was to change the driver's behaviour in selecting the best path. The shortest path may not be the best path. The added criterion in selecting the best path was the level of service of the path, while the included parameter that determines the level of service was the degree of saturation. Dijkstra's algorithm was applied to solve the network graph. Excel solver was used to find the solution. Percentage of difference between paths was carried out to find out the difference and significant of the paths. In conclusion, the path with combined criteria of shortest distance and least congested (degree of saturation) would be the best path, instead of solely based on the shortest distance or minimum degree of saturation.

Keywords: degree of saturation, distance, least congested, shortest path, Dijkstra's algorithm, traffic network

INTRODUCTION

Traffic congestion has been a common traffic problem for the entire world, and keeps on increasing from year to year. The World Bank estimated that traffic congestion had contributed to GDP loss of 1.1% to 2.2% a

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year in Malaysia (Morpi, 2015). There are several reasons that cause traffic congestions like bottlenecks, accidents, road conditions, road facilities, driver's driving behaviours, unrestricted owning vehicles and so forth. Traffic jam slows down traffic speed, lengthen trips time and longer queues. These phenomena are affecting the economic productivity and wastage on fuels and time (Rao & Rao, 2012). Apart from economic issues, traffic congestions are also affecting the quality of life and causing pollution to the environment. Traffic congestion used to occur during peak hours, especially from 7 a.m. to 9 a.m., and 5 p.m. to 7 p.m. respectively. This is due to people commuting to work, children going to school and others running errands during this two periods. There were other factors causing traffic congestions like accidents or road closures.

Since traffic congestions can cause so many problems, therefore city planners should come out with some ways and remedies. As there were some conventional approaches like road widening and building flyovers that might smoothen the traffic flow in a short term, but not as a permanent measure because the number of vehicles increases as population grow, as stated by Kalvin Liaw, director of Kota Kinabalu City Hall (DBKK) Traffic and Public Transport Department (Bernama, 2016). The conventional approaches are necessary to lessen the impact of traffic congestion especially at junctions, provided that land space is available. However, in the long run it will end up with no more room for infrastructure development. Apart from conventional approaches, drivers should add more criteria in selecting the best path. As usual, the shortest path is selected as the best path. However, traffic congestion in shortest path routes has caused the travel time to take even longer than the other longer distance routes. Therefore, this study has combined the criteria of distance and the level of service in selecting the best path to travel to avoid congestions.

Level of Service (LOS) is a qualitative measurement for the quality of the traffic flow (Mathew & Rao, 2006). It is closely related to service volume, the maximum number of vehicles that can be accommodated by the road or intersection. According to the Highway Capacity Manual, level of service divides the quality into six different levels which ranges from level A to level F. LOS A represents a traffic road allowing the driver to have free flow speed. On the other hand, LOS F represents the worst quality of traffic flow or congested traffic. Level of service of the road or intersection is determined by three different measures. Those three measures are capacity and degree of saturation, delay time and queue length (Rodegerdts et al., 2004). However, capacity and degree of saturation were selected and discussed in this study.

The degree of saturation is a direct measure of congestion level, and the use of this criterion for lane flow estimation implies that drivers can choose the lanes with minimum congestion levels. Degree of saturation is also referred to as the volume/capacity ratio. It represents the sufficiency of an intersection to accommodate the vehicular demand (Akcelik, 1989).

Traffic congestion is a mobility problem that causes drivers to take longer time travel to their desired destination. The shortest path is not the best path selection. Level of congestion was important to be as an added requirement to select the best path. The objective of this study is to find an alternative best path with combined parameter of degree of saturation value and

distance. In this study, the network graph will be categorized into three different types. This first network graph will be the distance parameter network graph. The second is the degree of saturation parameter network graph. The last one is the combination between distance and degree of saturation parameter network graph. Dijkstra's algorithm was applied to solve the network graph with the different parameters. Results would show that the best path with shorter distance and less congested.

LITERATURE REVIEW

Rewadkar and Ratnaparkhi (2015) had performed a study on traffic estimation and least congested alternate route-finding using GPS and non-GPS vehicles through real-time data on Indian roads. From the study, GPS devices mounted on vehicles were used to predict the traffic condition. Through the real time traffic data set in GPS, number of vehicles and vehicles' locations could be analysed. The advanced traffic management system and advanced traveller information system were used to perform accurate prediction of the current traffic. The algorithms that were applied were location-based distance calculation, vehicle tracking method and heuristic search algorithm. With the algorithms and systems, the alternate route with the least congested, shortest distance and minimal delay path would be suggested to road users.

A method of path selection in the graph was presented by Neumann (2014). In his study, the Dijkstra's algorithm was used to find additional paths among nodes in the maritime sector. Since it involved a single criterion, therefore the shortest path was not always the best alternative path. Hence, other parameters were calculated such as the average time, number of indirect vertices, and the safety factor. Multi-criteria decision making was used in this study for selecting one desirable path from several paths. Dempster-Shafer theory was a method that could be applied to combine data and evidences.

Rohila, Gouthami, and Priya (2014) applied the Dijsktra's shortest path algorithm in road network. In urban and city environments, traffic condition was unpredictable from time to time, for example accidents, weather conditions, and so forth. Therefore, solutions were needed instantly to maintain traffic flow balance. The problems revealed could be solved through shortest paths by using Dijkstra's algorithm. The traffic networks had become bigger and complex due to the advancement of technology, and the surge of population. Hence, an applet in Java programming language was implemented in this paper to solve the shortest path problem for road networks. Applet is a tool that could be further enriched and applied in more algorithms for both directed and undirected graphs.

Gupta, Mangla, K., Jha, and Umar (2016) had applied the Dijkstra's algorithm in the routing process to get the shortest path. Routing is a process to find a path from vertices in order to fulfil the objectives of data transmission. Among various routing algorithms, Dijkstra's algorithm is one of the methods applied in computer networking in Google Maps to get the

shortest possible paths. MATLAB Software is used to implement the Dijkstra's algorithm. However, the Dijkstra's algorithm does have limitations, namely longer computation time and its inability to handle negative edges of a network.

Sangaiah, Han, and Zhang (2014) presented a performance of Dijkstra and Floyd Algorithms in National City Traffic Advisory Procedures in China. The goal was to provide optimal decision and transport advisory to the passengers. Dijkstra's algorithm and Floyd algorithm were implemented in Microsoft Visual Studio to find the shortest path and the lowest cost to reach the desire destination. The time and cost parameter among the various cities in China was needed for shortest path identification. Comparing the time-cost of the selected algorithms, Dijkstra's algorithm performed better than Floyd algorithm.

METHODOLOGY

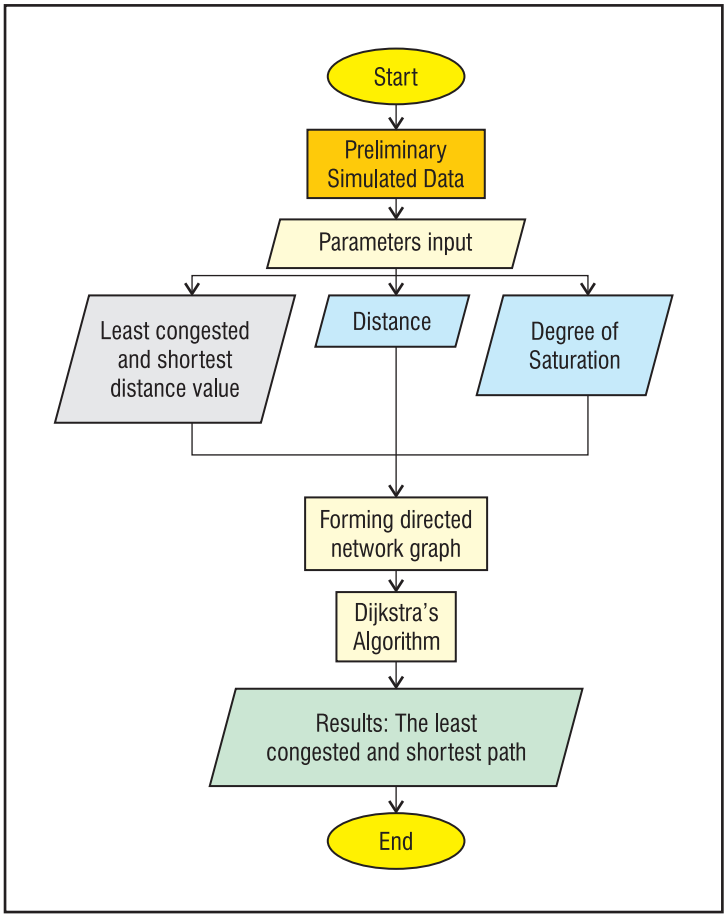

Figure 1 Flowchart

A basic flowchart showed in Figure 1. In this study, it started with preparing preliminary simulated data. From the data, there are three different parameter inputs which are distance, degree of saturation and least congested and shortest distance value (combination of distance and degree of saturation). By using those data and parameters, directed network graph was formed. Then it was solved by using Dijkstra's algorithm. The results of three different parameters were compared. The final result showed the combined parameters, the least congested and shortest path.

Definition of Network Graph

Let $G = (V, E)$ be a directed flow network graph in order to define the problem. In a network graph, there are vertices and edges. Network graph is a set of vertices that consist of element 1, 2,…, n linked by edges. Vertices or so-called nodes of the network graph are the elements of V which denoted as $v_1, v_2, \ldots, v_{n-1}, v_n \in V$. The v_1 is the source node, and v_n is the sink node, where the source node and sink node are the starting and ending, respectively. The source node acts as the supply of units produced and sink node is consuming all units it receives. The edges defined by the ordered pairs (u, v). The edges (u, v) are the element of E over these nodes of the network graph.

Conditions:

Capacity constraint :

$$\forall (u,v) \in E, 0 \leq f(u,v) \leq c(u,v)$$

All the edges (u, v) of a network are the element of E. Each non-negative flow, $f(u, v)$ through an edge must not exceed its own capacity, $c(u, v)$.

Flow conservation:

$$\forall u \in V \setminus \{s,t\} \sum_{v \in V:(v,u) \in E} f(u,v) = \sum_{v \in V:(u,v) \in E} f(u,v)$$

or

$$\forall u \in V \setminus \{s,t\} \sum_{v \in V} f(u,v) = 0$$

or

$$\forall u \in V \setminus \{s,t\} \sum_{v \in V:(v,u) \in E} f(v,u) - \sum_{v \in V:(u,v) \in E} f(u,v) = 0$$

The total weight of edges directed into the vertex equals the total weight of edges directed out of the vertex. $\sum_{v \in V:(v,u) \in E} f(v,u)$ stands for flow into u and $\sum_{v \in V:(u,v) \in E} f(u,v)$ stands for flow out of u. It is applied to the entire nodes of the network except source node, s and sink node, t which are the starting and ending node of network.

Definition of Dijkstra algorithm

Consider an arc (u, v) of length $d_{uv} > 0$. Let SD_u is equal to shortest distance from node 1 to node i. The label of node j connected with node, i is defined as the pair of element $[\mathrm{SD}_v, i] = \min_u[\mathrm{SD}_u + \mathrm{d}_{uv}, u]$.

If there is only one u connected to v, the right-hand side gives the label of v and is said to be permanent. If there are several u's connected to v, the label $[\mathrm{SD}_v + \mathrm{d}_{uv}, u]$ for a permissible value of u is called temporary, provided a shorter connection from some other permissible value of u can be found. If no shorter connection can be found, it is as before, called a permanent label. With these definitions, the method consists of the following steps:

Step 1 Label starting node, s with permanent label $[0, -]$. Set $v = 1$.

Step 2 Compute temporary labels $[\mathrm{SD}_v + \mathrm{d}_{uv}, u]$ for each node v that can be reached from node u. If node v has already the label $[\mathrm{SD}_v, w]$ through another node w such that $\mathrm{SD}_u + \mathrm{d}_{uv} < \mathrm{SD}_v$, replace $[\mathrm{SD}_v, w]$ by $[\mathrm{SD}_u + \mathrm{d}_{uv}, u]$. Otherwise $[\mathrm{SD}_u + \mathrm{d}_{uv}, u]$ is the permanent label of node v

Step 3 For $v < n$, set $v = w$ is reachable from permanently labelled nodes and go to Step 2. w stands for the adjacent node of v. If all the nodes have permanent labels and $v = n$, then Stop.

Definition of Degree of Saturation

Degree of Saturation is a traffic flow indicator with a range in between 0 to 1. The range of the degree of saturation value is between 0 and 1. The degree of saturation less than 0.85 basically indicates that the capacity is still sufficient for the traffic volume demand. However, as the degree of saturation approaches 1.0, traffic flow may not be stable, with queue and delay conditions may occur. Once the demands exceed capacity (degree of saturation more than 1.0), congested traffic, long queue and excessive delay are expected. The formula for degree of saturation showed below.

Degree of saturation = volume / capacity

Preliminary Simulated Data

Table 1 Preliminary Simulated Data

Road	Volume	Capacity	Degree of saturation	Distance (meter)	Least congested and shortest distance value
1 -> 2	1000	1400	0.71	1000	710
2 -> 4	1120	1400	0.8	1200	960
3 -> 5	1400	1800	0.78	600	468
4 -> 6	1510	1800	0.84	900	756
5 -> 6	1240	1400	0.88	700	616
1 -> 3	900	1200	0.75	1230	922.5
2 -> 5	790	1000	0.79	600	474
3 -> 4	1300	2000	0.65	900	585

'Road' in Table 1 stands for the path from node to node. The numbers 1 to 6 are the nodes or so called intersection in traffic network. 'Volume' stands for the amount of vehicle that occupies a particular path at a particular time. 'Capacity' stands for the maximum volume of vehicles that passes through the particular intersection or path. Next, degree of saturation is the volume / capacity ratio which is an indicator of the current traffic condition. 'Distance' stands for the length of the path from node to node. 'Least congested and shortest distance value' stands for the value of the combination between degree of saturation and distance. The formula is shown below.

$$\text{Least congested and shortest distance value} = \text{Degree of saturation} \times \text{Distance}$$

RESULTS AND DISCUSSIONS

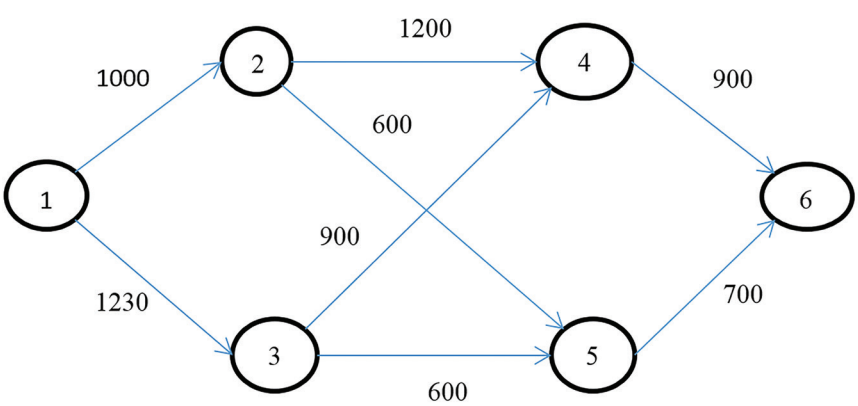

Figure 2 Distance parameter network graph

Network graph in Figure 2 with the distance parameter was formed by using the simulated data in Table 1. In Figure 2, the source node was node 1 and sink node was node 6.

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3		From	To	On Route	=	Route Distance (Meter)		Node	Net Flow	Supply/Demand	
4		1	2	1	=	1000		1	1	1	
5		2	4	0	=	1200		2	0	0	
6		3	5	0	=	600		3	0	0	
7		4	6	0	=	900		4	0	0	
8		5	6	1	=	700		5	0	0	
9		1	3	0	=	1230		6	-1	-1	
10		2	5	1	=	600					
11		3	4	0	=	900					
12											
13		SHORTEST PATH:				2300					
14											

Figure 3 Excel output (Shortest path)

In Figure 3, column F represented the distance from node to node. The objective function was the cell F13 which contained the formula of '=SUMPRODUCT (D4:D11,F4:F11)'. The cells from I4 to I6, the net flow, were the constraints cells. The 'On Route' from cell D4 to cell D11 were the variable cells. The number '1' showed in the column of 'On route' denoted for the route selected, and number '0' denoted for route unselected. Hence, the selected routes for shortest path were from 1 → 2 → 5 → 6. In the supply or demand column, that source node was set as number '1' and the sink node was set as number '−1' because both of the nodes were the starting and the ending nodes.

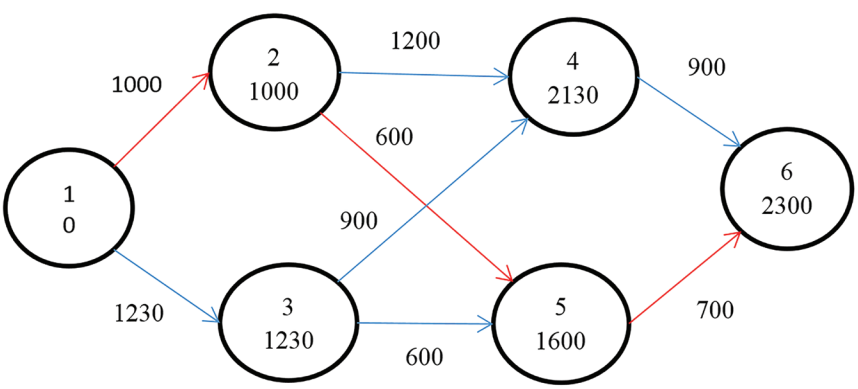

Figure 4 Output of Dijkstra's algorithm (shortest path)

From Figure 4, the path 1 → 2 → 5 → 6 was the shortest path with total 2300 metre.

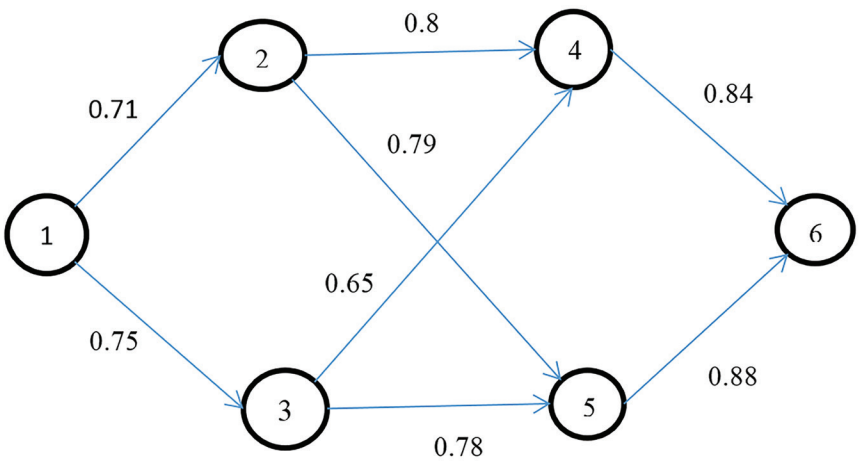

Figure 5 Degree of Saturation Parameter Network Graph

Figure 5 was a network graph with the parameter of degree of saturation. Degree of saturation is a volume to capacity ratio.

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3		From	To	Selected Path	=	Degree of Saturation		Node	Net Flow	Supply/Demand	
4		1	2	0	=	0.71		1	1	1	
5		2	4	0	=	0.8		2	0	0	
6		3	5	0	=	0.78		3	0	0	
7		4	6	1	=	0.84		4	0	0	
8		5	6	0	=	0.88		5	0	0	
9		1	3	1	=	0.75		6	-1	-1	
10		2	5	0	=	0.79					
11		3	4	1	=	0.65					
12											
13		SHORTEST PATH:				2.24					
14											

Figure 6 Excel output (The path with minimum degree of saturation)

In Figure 6, column F represented the degree of saturation from node to node. The objective function was the cell F13 which contained the formula of '=SUMPRODUCT (D4:D11,F4:F11)'. The constraints cells are cell from I4 to I6. The 'Selected Path' from cell D4 to cell D11 were variable cells. In column of 'Selected Path', the number '1' and '0' are selected route and

unselected route respectively. Hence, the path 1 → 3 → 4 → 6 is the selected route with the minimum degree of saturation. The path with minimum degree of saturation is the least congested path. The source node was set as number '1' and the sink node was set as number '−1' in the supply or demand column.

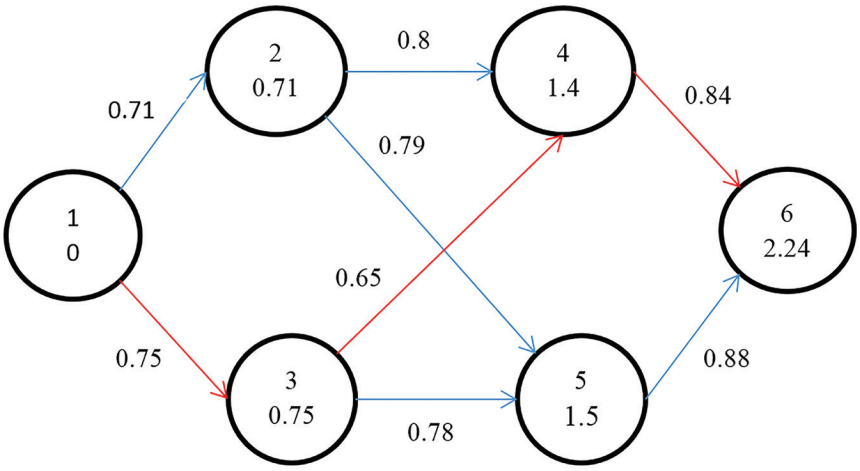

Figure 7 Output of Dijkstra's algorithm (The Least Degree of Saturation Path)

The red highlighted path in Figure 7 was the path with the least degree of saturation (the least congested) was 1 → 3 → 4 → 6.

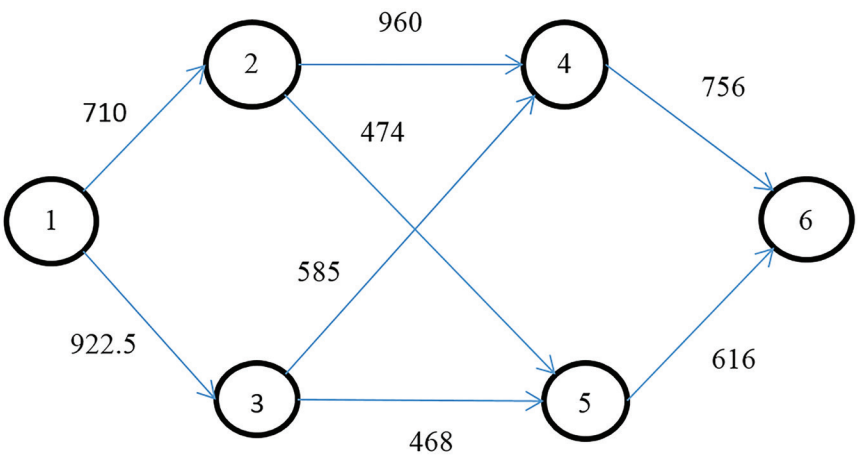

Figure 8 Least congested and shortest distance parameter network graph

In Figure 8, the combined parameters between distance and degree of saturation were used to form a new network graph as performed in Excel (Figure 9) and shown in Figure 10.

From	To	Selected Path	=	Least Congested and Shortest Distance Value
1	2	1	=	710
2	4	0	=	960
3	5	0	=	468
4	6	0	=	756
5	6	1	=	616
1	3	0	=	922.5
2	5	1	=	474
3	4	0	=	585

SHORTEST PATH: 1800

Node	Net Flow	Supply/Demand
1	1	1
2	0	0
3	0	0
4	0	0
5	0	0
6	-1	-1

Figure 9 Excel output (the path with least congested and shortest distance)

The least congested and shortest distance value from node to node was performed in Figure 9. The objective function, F13 which contained the formula of '=SUMPRODUCT (D4:D11,F4:F11)'. The net flow cells from I4 to I6 were the constraints cells. The 'Selected Path' column in Figure 9 was the variable cell. The number '1' showed in the column of 'Selected Path' denoted for the route selected, and number '0' denoted for route unselected. In the supply or demand column, that source node was set as number '1' and the sink node was set as number '−1' because both of the nodes were the starting and the ending nodes. Hence, the selected route is 1 → 2 → 5 → 6 with the minimum least congested and shortest distance value. The path with minimum least congested and shortest distance value is the best path selection which both distance and level of congestion were considered.

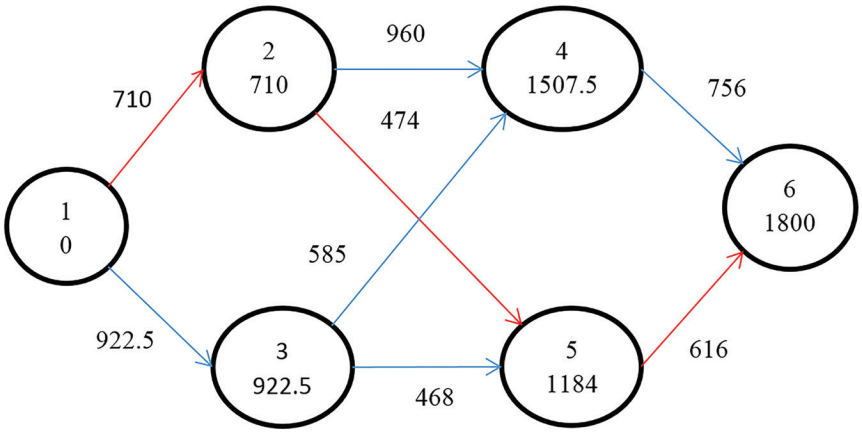

Figure 10 The network graph with the least congested and minimum distance path

In Figure 10, the alternative path with the least congested and shortest path was 1 → 2 → 5 → 6. The total distance of the alternative path was 2300 metres with the total degree of saturation of the alternative path is 2.38.

Table 2 Comparison between the distance and degree of saturation

Parameter	Path	Distance (Meter)	Degree of Saturation
Distance	Path 1: 1 → 2 → 5 → 6	2300	2.38
DOS	Path 2: 1 → 3 → 4 → 6	3030	2.24
Combined Parameter	Path 2 Selected	2300	2.38

As shown in Table 2, there were three different paths that were chosen depending on the parameters. With the distance parameter network graph, Path 1 was the selected path with the shortest distance. The path 2 was the selected path with the lowest Degree of Saturation (DOS). With the combined parameters between DOS and Distance, path 2 was selected because it achieved equilibrium between distance and DOS. In other words, drivers can decide the right path with less congested and shorter distance path to reach their desired destination. The percentage difference was then calculated as per below.

Difference between path 1 and path 2 in term of Distance Parameter

$$= \frac{3030-2300}{\frac{2300+3030}{2}} \times 100 = 27.39\%$$

Difference between path 1 and path 2 in term of DOS Parameter

$$= \frac{2.38-2.28}{\frac{2.38+2.28}{2}} \times 100 = 6\%$$

As shown above, path 1 and path 2 have a difference of 27.39%, 6% in terms of distance and DOS parameter, respectively. From the results shown above, path 1 has shorter distance of 27.39% from path 2. Even though path 2 has the advantage of 6% from path 1 in terms of DOS parameter, path 2 was selected as the best path because it has achieved equilibrium between Distance and DOS.

In summary, the shortest path was selected as the best path in Figure 4. The least congested path was selected which was shown in Figure 7. The last one is the network graph in Figure 10 showing the selection of the best path between level of congestion and distance together. From the three different network graphs, the distance parameter network graph in Figure 4 showed the selection of the shortest distance as the best path. Secondly, the degree of saturation parameter network graph in Figure 7 chose the path with less congested condition. As Neumann (2014) mentioned that shortest path cannot be the best path selection. There should be more criteria to be added in selecting the best path. For example, safety, less edges, level of congestion and so forth. As the results of this study had shown, the proposed modified parameter with network graph in Figure 10, the least congested and shortest distance network graph, achieved a balance between two important criteria to select the best path.

CONCLUSION

The shortest path was $1 \rightarrow 2 \rightarrow 5 \rightarrow 6$ but the least congested path was $1 \rightarrow 3 \rightarrow 4 \rightarrow 6$. The route with the shortest distance might not be the best path if the traffic flow was not considered. Hence, this study had combined these two parameters together to obtain a path that was the least congested and still a shorter path for the driver. With the combined parameters, this provided a balance between the degree of saturation and distance. The best path from this study was found to be $1 \rightarrow 2 \rightarrow 5 \rightarrow 6$.

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THE IMPACT OF HUMAN RESOURCE STRATEGY TO KNOWLEDGE PROCESS IN THE MALAYSIAN ELECTRICAL AND ELECTRONICS FIRMS

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ABSTRACT

The purpose of this paper is to identify the impact of human resource (HR) strategy to knowledge process in the Malaysian electrical and electronics firms. Due to the importance of electrical electronics firms to Malaysian economy, the objectives investigate the impact of human resource strategy, knowledge process in this sector. This paper conducted a quantitative approach using, a questionnaire with five points Likert scale. The respondents of this study consists of 287 managers from electrical and electronics firms across Malaysian states including Kuala Lumpur, Selangor, Penang, Johor, Kedah, and Melaka, Sabah, Sarawak. The list from the Federation of Malaysian Manufacturers (FMM) indicated that most of firms were located in these states. Statistical package for social science was used to generate the descriptive statistics besides the Partial least squares structural equation modelling (PLS SEM) as the statistical instrument to examine the measurement model and structural model. Results confirmed that, human resource strategy is significant to knowledge process (acquisition, conversion, application, protection) in the Malaysian electrical and electronics firms. Based on the results, the HR strategy adopted by a firm has a significant effect and can be a strong predictor of the knowledge. Some guidelines are suggested for top management and decision makers in electrical and electronics firms on how to encourage the application of human resource strategy

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that enhances the level of knowledge and skills, besides developing appropriate behaviour. Eventually, management and decision makers would identify the necessary steps on how to encourage and generate knowledge in their organizations.

Keywords: human resource strategy, knowledge economy, electrical and electronics firms, knowledge process

INTRODUCTION

In the era of the 'knowledge economy', knowledge is the main dominant that enables an organization to prosper and attain its results, especially when technology is deployed for higher goals (Yan Ma & Lu Sun, 2010). Firms need to develop the knowledge they currently possess together with new knowledge in order to successfully compete in global markets (Gold, Malhotra, & Segars, 2001). Large and small firms alike must deploy knowledge as a part of the knowledge economy. For instance, firms in developed countries use knowledge management to leverage their market positions and achieve competitiveness. As more countries are engaging in and becoming part of the knowledge economy, firms should focus on the sharing of knowledge and the use of new techniques for generating information and facilitating the flow of this knowledge so that it can be distributed to gain efficiency and flexibility (Cantner et al., 2009). Knowledge is widely used by organizations to develop employees' skills, enhance business processes (Edvardson, 2006). In a later discussion, Edvardson (2008) highlighted the influence of HR strategy on the knowledge process by arguing that some organizational strategies, such as HR strategy, have an effect on the knowledge process because they can develop attitudes and behaviour of the employees towards knowledge that help in the recording and storage of knowledge. Also, such strategies would help in sharing knowledge through the use of an information technology infrastructure for retrieving and reuse.

HUMAN RESOURCE STRATEGY

HR strategy deals with inventing methods for managing employees that could lead to accomplishment of organizational goals (Fomburn et al, 1982). HR strategy aims monitoring the improvement, and execution of HRM programmes. Such programmes considered as the foundation that helps organizations in displaying the management of employees, besides achieving the required objectives. HR strategy displays a part in setting the organizational long planning (Armstrong & Taylor, 2006). Different topologies of HR strategy have been mentioned in research. For example (Miles & Snow, 1984), suggests accumulator strategy, facilitator strategy, and utilizer strategy. On the other hand, Dowling and Schuler (1990) recommend facilitation strategy, accumulation strategy and utilization strategy. Miles and Snow (1984), and Dowling and Schuler, (1990) argued that, facilitation emphasis on finding new goods or new market opportunities that could be achieved by hiring creative employees who possess

the skills of collaboration. Accumulation strategy focuses on hiring talent employees. The accumulation strategy tends to hire from inside the organization, and focuses more on training and development as well as offering distinctive kinds of rewards. Finally, utilization strategy focuses only on steady markets, without much change within the firm in terms of structure or technology. Firms implementing a utilization strategy evaluate performances on an individual basis; they offer little compensation to their employees and often provide weak job security. According to Wang and Shyu (2008), in terms of strategy practices the facilitation strategy lies somewhere between the utilization and accumulation strategies. Finally, utilization strategy focuses only on steady markets, steady structure and technology.

KNOWLEDGE PROCESS

Knowledge management benefits organizations in terms of the sharing and distribution of knowledge. Knowledge processes are important foundations of organizational performance as they contribute to managing knowledge. To leverage organizational position, firms should leverage their abilities to gain and manage their new knowledge which can be used to develop organizational success (Lee & Lee, 2007). Knowledge management processes have been discussed widely in the literature, identifying the required tools for organizational success. Research has identified the link between knowledge management processes and capabilities and organizational performance (Hansen, Nohria, & Terney, 1999; Gold et al., 2001). Different types of knowledge processes have been identified in prior research for instance, Gold et al. (2001) identify: acquisition, conversion, application, and protection. Acquisition is the primary process of knowledge, when firms start seeking knowledge from inside or outside firm through the knowledge suppliers or institutions (Jimenez-Jimenez & Sanz-Valle, 2012). Conversion is the process by which knowledge is updated for being used inside an organization (Gold et al., 2001). There are different types of knowledge conversion processes, which facilitate the flow of knowledge such as integration (Grant, 1996) or distribution of knowledge (Davenport, De Long, & Beers, 1998). The application process is the real usage of knowledge and putting it into practice (Gold et al., 2001). Protection is the use of knowledge within the organization and protecting it from the illegal use outside the organization (Davenport & Klahr, 1998).

THEORETICAL FRAMEWORK

HR Strategy and Knowledge Acquisition

Hansen et al. (1999) affirmed that two types of strategies support the sharing and management of knowledge within organizations. These strategies are characterized as (1) the personalization strategy and (2) the codification strategy. The personalization strategy considers knowledge that is located in human minds. This strategy helps in distributing knowledge through face-to-face or direct communication between employees. On the other hand, codification is

knowledge that is stored in databases for individuals to use in the organization; it is accessible to all members and it is easy to retrieve. The authors also argued that the personalization strategy provides a problem-solving solution to organizations, while codification helps the organization to deploy knowledge.

H1: There is a relationship between HR strategy and knowledge acquisition

HR Strategy and Knowledge Conversion

Edvardson (2008) highlighted the influence of HR strategy on knowledge by arguing that some organizational strategies, such as HR strategy, can have an effect on knowledge. Currie and Kerrin (2003) stated that sharing of knowledge could be effected among employees or different divisions of organizations if common methods of hiring and selecting employees are implemented. On the other hand, a culture of gratitude for others' perceptions would definitely enhance the level of knowledge sharing, while the usage of a creative career would enhance knowledge sharing and build respect for others' views. However, Hansen et al. (1999) claim that personalization focuses on staff who are more creative and those who are problem solvers to analyse and spread knowledge. Personalization helps in creating a culture of sharing and experimenting among staff.

H2: There is a relationship between HR strategy and knowledge conversion

HR Strategy and Knowledge Application

Organizations focus on knowledge sharing and exchange to enhance employees' skills and abilities. Consequently, employees are important elements in this process. Their behaviour will determine the achievement or breakdown of knowledge application (Bollinger & Smith, 2001). Tacit forms of knowledge are spread across employees through direct communication among them. Such knowledge helps in solving organizational difficulties (Clegg & Clarke, 1999). The storage and retrieval of knowledge is important and enhances an organization's response to available knowledge stored. Afterwards, knowledge will be distributed and shared which can lead to enhancement of competencies (Davenport & Klahr 1998). Therefore, Scarbrough (2003) emphasized that organizations should consciously select employees who could share knowledge to contribute towards organizational outcomes.

H3: There is a positive relationship between HR strategy and knowledge application

HR Strategy and Knowledge Protection

Nonaka, Toyama, and Konno (2000) highlighted the role of knowledge by arguing that knowledge is the most valuable possession of an organization because of its tacit and explicit character.

Therefore, such knowledge should be protected for the benefit of organization. Suffering the loss of knowledge from inside an organization can create difficulties, especially if core employees leave the organization. Other competing firms may be able to duplicate the firm's actions (Boxall, 1998). Therefore, protection processes are important to protect knowledge from outside users (Barney, 1991). Some components of technology infrastructure act as a protection to knowledge, while the behaviour of employees should also protect knowledge (Porter-Liebskind, 1996; Hansen et al., 1999).

H4: There is a positive relationship between HR strategy and knowledge protection

METHODOLOGY

This paper proposes a theoretical framework that examines the impact of human resource strategy to knowledge process in the Malaysian electrical and electronics firms. The paper conducted a quantitative approach using a questionnaire. Variables were measured based on prior studies using Likert's 5 points scale from 1 (strongly disagree) to 5 (strongly agree). Respondents have to disagree or agree with statements either negatively or positively. The first part contains general demographic information about the survey participants. The second part contains 12 questions to measure HR strategy adopted from Huang, (2001). The third part contains 26 questions to measure knowledge process (acquisition, conversion, application, protection). Questions were adopted from Gold et al. (2001), and Smith (2006).

Manufacturing firms in different Malaysian states were approached personally, including Kuala Lumpur, Selangor, Penang, Johor, Kedah, and Melaka, Sabah and Sarawak. The list from the Federation of Malaysian Manufacturers (FMM) indicated that most of the firms were located in these states. The FMM Directory was used for the study because it classifies the industries based on international standards and provides contact numbers, email addresses and names for each firm listed. The sample for this study includes electronics and electrical firms in Malaysia, either local or foreign. Based on the federation of Malaysian manufacturers directory 2013 (FMM) there are 287 electrical and electronics firms across Malaysia.

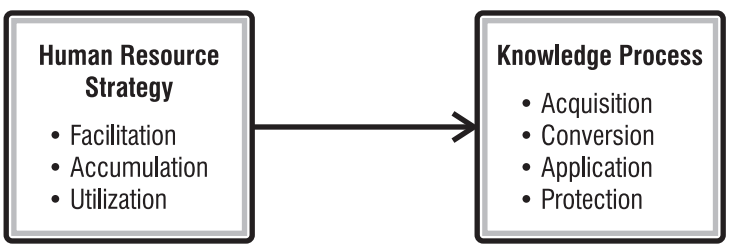

Figure 1 The relationship between HR strategy and knowledge process

RESULTS

In this paper, the Statistical Package for Social Science SPSS 22.0 was used to analyze the descriptive statistics such as mean, standard deviation of constructs and the demographic characteristics of respondents and organizations besides Smart PLS 3.0 Structural equation modelling technique was employed in this research to examine the research model (the inner model and the outer model). Mean scores for human resource strategy (utilization, facilitation and accumulation) were 3.67, 3.65, and 3.61, respectively. Regarding knowledge process, the mean scores of the sub-variables (acquisition, conversion, application and protection) were 3.89, 3.75, 3.90, and 3.80, respectively.

Table 1 Descriptive statistics of constructs

Construct	Mean	Standard deviation
Utilization	3.67	.54
Facilitation	3.65	.56
Accumulation	3.61	.61
Knowledge	3.89	.59
acquisition	3.75	.56
Knowledge	3.90	.57
conversion	3.80	.61
Knowledge application		
Knowledge protection		

VALIDITY AND RELIABILITY

Composite reliability (CR) of constructs reveals the following: Accumulation 0.846, Facilitation 0.84, Acquisition 0.922 Application 0.926, Conversion 0.888, Protection 0.91, and Utilization 0.832. The composite reliability of all constructs represents a satisfactory internal consistency, since CR is greater than 0.7. Table 2 shows item loadings, composite reliability and average variance extracted of construct. On the other hand, Average variance extracted (AVE) of the measurement model displays the following: Accumulation 0.647, Facilitation 0.515, Utilization 0.555, Acquisition 0.662, Application 0.642, Conversion 0.573, and Protection 0.592. All constructs expressed an adequate AVE score for measuring the convergent validity of the measurement model.

Table 2 Validity and reliability

Construct	Item	Loadings	CR	AVE
Accumulation	ACCMHR1	0.791	0.846	0.647
	ACCUMHR2	0.797		
	ACCUMHR3	0.824		
Facilitation	FACHR2	0.759	0.84	0.515
	FACIHR3	0.645		
	FACIHR5	0.606		
	FACIHR6	0.777		
	FACILHR4	0.782		
Acquisition	KNAC1	0.813	0.922	0.662
	KNAC2	0.856		
	KNAC3	0.838		
	KNAC4	0.806		
	KNAC5	0.76		
	KNAC6	0.807		
Application	KNAP1	0.806	0.926	0.642
	KNAP2	0.781		
	KNAP3	0.857		
	KNAP4	0.858		
	KNAP5	0.842		
	KNAP6	0.73		
	KNAP7	0.722		
Conversion	KNCO1	0.736	0.888	0.573
	KNCO2	0.793		
	KNCO3	0.826		
	KNCO4	0.779		
	KNCO5	0.793		
	KNCO6	0.589		
Protection	KNPR1	0.809	0.91	0.592
	KNPR2	0.806		
	KNPR3	0.785		
	KNPR4	0.852		
	KNPR5	0.644		
	KNPR6	0.777		
	KNPR7	0.692		
Utilization	UTHR2	0.781	0.832	0.555
	UTIHR1	0.769		
	UTIHR3	0.653		
	UTIHR4	0.768		

With regard to hypothesis, H1 (HR Strategy -> Acquisition), the results show HR strategy is positively related to knowledge acquisition, (β = 0.681, SR = 0.092, TV = 7.362). The hypothesis H1 is supported. H2 (HR Strategy -> conversion), the results show that HR strategy is positively related to knowledge conversion, (β = 0.634, SR = 0.092, TV = 6.92). The hypothesis H2 is supported. H3 (HR Strategy -> application), the results show that HR strategy is positively related to application (β = 0.687, SR = 0.093, TV = 7.402). The hypothesis H3 is supported. H4 (HR Strategy -> Protection) results show that HR strategy is positively related to knowledge protection (β = 0.648, SR = 0.088, TV = 7.362). The hypothesis H4 is supported.

Table 3 Hypothesis testing

Hypothesis		Std beta	Std error	*T*-value	Result
H1	HR Strategy -> Acquisition	0.681	0.092	7.362**	**Supported**
H2	HR Strategy -> Conversion	0.634	0.092	6.92**	**Supported**
H3	HR Strategy -> application	0.687	0.093	7.40.2**	**Supported**
H4	HR Strategy -> Protection	0.648	0.088	7.362**	**Supported**

Note: Significance level: *t*-value > 2.33** ($p<0.01$); *t*-value > 1.65* ($p<0.05$)

DISCUSSION AND CONCLUSION

The objective of this study was to identify the impact of HR strategy to knowledge process in Malaysian electrical and electronics firms. Based on the results, the HR strategy adopted by a firm has a significant effect and can be a strong predictor of the knowledge process. The direct relationships show that HR strategy has a significant impact on knowledge process (acquisition, conversion, application, protection). Hence, this paper adds to the body of knowledge by making a significant contribution to the area of HR strategy and knowledge process. The knowledge process model consists of acquisition, conversion, application, and protection. A notable outcome would be met, as the HR strategy will help enhance the level of knowledge and skills, besides developing appropriate behaviour among employees in Malaysian electrical and electronics firms.

Managers in electrical and electronics manufacturing firms should develop HR strategies that consist of (facilitation, accumulation and utilization) which are compatible with knowledge process to develop the electrical and electronics firms.

One of the limitations is the level of caution among Malaysian managers regarding surveys, especially online surveys and postal surveys, and the response was slow for this study. However, face-to-face interview also faced many delays and challenges, partly because of the wariness of managers in dealing with surveys in general and also because the potential respondents are busy people. Second, the study was limited to electrical and electronics manufacturing firms; future research could investigate the situation in other sectors of Malaysian manufacturing.

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OPEN MARKET REPURCHASES AND STOCK PRICE INFORMATIVENESS: EVIDENCE FROM MALAYSIA STOCK MARKET

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ABSTRACT

The aim of research paper is to examine the effect of stock price informativeness, which is conveyed by stock prices, on firm's open market repurchases (OMRs) activity. The finding of study is to provide evidence of presence of managerial learning whereby managers could use firm-specific stock return variation to buy back their shares via open market. Evidence is found in the subsample analysis where target sample is separated to two subsamples periods and test separately based on stock market performance. The finding of the 1st subsample (Q12008-Q42013) for OMRs activity indicates that variation of stock return and firm size significantly and positively explains OMRs activity. The finding of 1st subsample is robust in terms of random and fixed effect model. The finding implies that managers observed and learned information from firm-specific variation in stock return during financial crisis and recovery periods when performing open market repurchases.

Keywords: Open market repurchase, managerial learning hypothesis, stock price informativeness, firm-specific return variation, informed trading

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INTRODUCTION

A stock repurchase is beneficial to shareholders as firm's earning distributed by fewer shares to shareholders as if owning a bigger stake of ownership in a firm without having to buy more stock. Although earnings per share does not increase in lockstep with share prices, they are closely related, which has helped to sustain the stock market rally going even in a slow-growth environment. Since the past few decades, research work has been devoting to observe and examine post-repurchase performance, reaction or response of stock price as well as stock price behavior after the firm stock repurchase. Based on repurchase literature and empirical evidence, firm repurchase or buyback stock for several motives: signaling undervaluation, price support and others. Furthermore, several research hypotheses such as cash flow hypothesis, signaling theory and market-timing theory are discussed in repurchase literature and tested empirically on stock repurchases. Particularly, the presence of market-timing theory is evidenced in some research findings (Brockman & Chung, 2001; Chan, Ikenberry, & Lee, 2007; A. Dittmar & Field, 2015; Yook, 2010), nevertheless it is still controversial on the presence of market-timing skills on repurchase as no such evidence found in some empirical research (Ginglinger & Hamon, 2007).

Though insider possessing more information than outsider that being well-accepted in finance literature, another growing strand of literature assert that outsiders possess information that manager do not and manager learn that information (Chen, Goldstein, & Jiang, 2007; Durnev, Morck, & Yeung, 2004; Dye & Sridhar, 2002; Foucault & Fresard, 2012; Fresard, 2012; Luo, 2005). Investment bankers, fund managers, investment analyst, industrial experts and financial news journalists may be superior than firms at analyzing and interpreting publicly-available information in multi-perspectives, often more superior to firms by looking things at broader view and producing useful private information from analysis. Furthermore, advancement of information technology and system make financial database available and accessible for analysis and research, is a catalyst for producing useful information.

Stock prices can carry private information, as highlighted by (Q. Chen et al., 2007), that owned by market traders on the products demand, the investment opportunities, the competitive environment firms operates, and the effects of the past decisions made by managers. The information mechanism underlying managerial learning derives from the well-established idea that diverse pieces of information aggregated and transmitted into stock prices via the trading activities of a myriad of different investors and speculators (Fresard, 2012). Thus, managers can obtain novel information on from their observation of the level and dynamics of the firm's valuation on secondary financial markets (Bond, Edmans, & Goldstein, 2012). Not denying that investors and market traders may have lack of detailed information, such as business model, strategy, innovation and technology used. Still, stock market may deliver information impounded in stock price that is auxiliary to the information held by the firm's managers. Thus, stock market is not simply an exchange in that it could influence decision making in the real side of the economy via an informational channel.

The usefulness of information content of stock price and the managerial learning hypothesis has become an intriguing research area and start to draw research attention. In fact, a recent strand of empirical evidence supports managerial learning hypothesis that indicate manager learn information from stock price when making investment decision (Ben-Nasr & Alshwer, 2016; Q. Chen et al., 2007) and corporate finance decision (Kalok Chan & Chan, 2014; De Cesari & Huang-Meier, 2015). Luo (2005) opined that the presence of managerial learning hypothesis is not only applied in merging and acquisition but also other corporate finance decision such as stock repurchase, stock issuance, corporate strategy change and the appointment of top managers. Based on that reasoning, it leads the researchers to suspect that success of managerial market-timing in repurchase could be associated with information learned from the stock price.

A question whether of how the information content of stock price (in other words, stock price informativeness) would affect managerial market-timing of repurchase has never been studied thus far. This paper intends to review how stock price informativeness (SPI) affect corporate finance decision and discuss the potential effect of SPI to stock repurchase. To the best of our knowledge, this empirical paper is the first to discuss potential relationship between SPI and firm stock repurchase. Contribution of this review paper is twofold. Firstly, it documents an insight on how manager exploit the information they learn from the stock market when decide on repurchase, this paper adds to the growing literature on managerial learning. Secondly, the informational role played by stock price on firm stock repurchase determine when manager should buyback or not, this paper helps to bridge this gap theoretically. By developing strong theoretical knowledge, this paper supports future empirical research to empirically assess managerial learning hypothesis that applied in firm stock repurchase. Such evidence is very crucial to managers and practitioners as it will have a great implication on the improvement managerial market-timing skill in their stock repurchase using informational content of stock price.

If variation of firm's stock return is useful to learn in the context of stock repurchase, one may ask: could managers learn and use information conveyed by firm's stock prices to take advantage of stock market? The rationale of firm performing stock buyback instead of cash dividend based on information-signalling hypothesis, documented mostly in finance literature, is that stock repurchase is perceived as a signal to manager's belief that firm's stock is undervalued. However, it could be also due to different motives such as stabilizing stock price, altering capital structure and cumulating shares for employee stock option plan. Furthermore, how do managers know the current stock price is lower enough to perform stock repurchase even though they know the stock is currently undervalued? The market-timing hypothesis contends that managers purchase stock when they own more favourable information than when not buying stock. We do not oppose that hypothesis, instead the researchers address the issue of poor managerial timing on repurchase. Leading to key question of whether private information is useful to tell managers the right time to repurchase. The research paper intends to extend and complement the existing literature on private information conveyed by stock

prices toward OMRs, that has essentially overlooked its possible role play as determinant of OMRs, by testing with stock price non-synchronicity developed by Roll (1988) – a measure of private information.

The main research objective of this paper is to examine the effect of SPI on open market repurchases (OMRs) activity. The finding of this study is expected to be useful in managerial market timing ability whereby managers could use private information conveyed stock price to decide their open market repurchase. With the market timing ability presented in OMRs, managers could repurchase shares at lower prices at which increasing firm value and shareholders' wealth. The article is designed the following sections; the second will describe literature review and research framework. The data collection procedure and the methodology discussion will be explained in Section Three. The next part includes the empirical results in addition to the discussion of the finds. Final section will explain the conclusions of the study.

LITERATURE REVIEW

Empirical evidence of Market-Timing of Repurchases

Brockman and Chung (2001) examine in managerial timing ability hypotheses in open market repurchases (OMRs) and find that managers could time open market repurchase (OMRs) via private information which is gauged by widening bid-ask spread. Ginglinger & Hamon (2007) find that stock repurchase significantly reduce liquidity of the market based on reduced bid-ask spread after repurchase (support liquidity hypothesis and hence reject the market-timing hypothesis). Opposing to the finding of Brockman and Chung, (2001); Ginglinger and Hamon (2007) claim that share repurchase largely reflect contrarian trading rather than market timing. Lie (2005) documented evidence of operating performance improvement in post-actual repurchase suggesting that actual repurchases, and not announcements itself, foretell firm's future performance improvements. Chan et al. (2007) report evidence of abnormal stock performance following buyback announcements. Evidenced by Bozanic (2010), that the amount of share repurchase is negatively related to the stock return of the previous month but is positively related to that of the following three months. Yook (2010) finds strong evidence that repurchase shares actually experience significant long-term abnormal returns. Those empirical evidences of post-buyback performance are supporting the notion that managers possess timing ability.

Review on Informational Content

Stock returns fundamentally reflect to new market-level and firm-level information capitalized into stock prices. French and Roll (1986) and Roll (1988) suggest that a significant portion of stock return variation is not attributable to general market and industry movements

and suggests that these residual movements represent the impounding of firm-specific information into prices. A process of incorporating information into stock price is continuous from time to time. Roll (1988) shows firm-specific variation is largely unrelated with public announcement but due to trading by investors with private information. The less firm-specific impounded into the firm's stock price, the lower firm-specific variation of stock price leads to higher correlation between stock returns and market returns, thereby indicating higher level of stock price informativeness (SPI), in other words higher stock price synchronicity. If the more reflective of stock price to firm-specific information firm's stock price will have less synchronous movements (high level of SPI). SPI or stock return non-synchronicity is commonly referred to the amount of firm-specific information impounded in stock prices, supported by considerable empirical researches in finance (Bai, Hu, Liu, & Zhu, 2017; Ben-Nasr & Alshwer, 2016; Kalok Chan & Chan, 2014; Crawford, Roulstone, & So, 2012; De Cesari & Huang-Meier, 2015; Ferreira, Ferreira, & Raposo, 2011; Fresard, 2012; Vo, 2017). These studies argue that firm specific return variation is a good proxy which reasonably measures the rate of private information incorporated into prices via trading.

Managerial Learning Hypothesis

An important channel for manager obtaining novel information on their firm is based on the observation of the level and dynamics of the firm's valuation on secondary financial markets (Bond et al., 2012). The managerial learning hypothesis suggests that managers can learn new private information from their stock prices that helps improving their decisions efficiency (Ben-Nasr & Alshwer, 2016; Kalok Chan & Chan, 2014; Q. Chen et al., 2007; Fresard, 2012; Hayek, 1945), hence increases the value of the firm. In fact, managers use all available information, which contains their own private information and investors' private information capitalized in stock price, to decide level of investment that maximizes the expected value of their firms (Foucault & Frésard, 2012).

Review on association between stock price informativeness and corporate finance decisions

Some prominent theoretical researches embed managerial learning theory into their research theoretical framework or model to study effect of stock price informativeness (SPI) in different context of corporate finance decision making: investment (Dow & Gorton, 1997; Dow & Rahi, 2003; Foucault & Gehrig, 2008; Strobl, 2014), merger and acquisition (Luo, 2005). Together with some growing empirical evidences support the managerial learning hypothesis that managerial decisions reply in part on information conveyed in stock prices. To the best of our knowledge, only these empirical researches associating SPI with corporate finance decision are found available hitherto in finance literature, as shown in Table 1.

Table 1 Literature review matrix on the effect of stock price informativeness on corporate finance decisions

Author	Research Objective	Measure of stock price informativeness (SPI)	Findings: Effect/ relationship
Durnev, Morck, & Yeung (2004)	To find relationship between stock price informativeness (SPI) and **efficiency of corporate investment**	• Firm-specific stock return variation	**Positive**
Luo (2005)	To examine relationship between SPI and **mergers & acquisitions (M&A) decision**	• High-tech status • Bidders size	**Positive**
Chen, Goldstein & Jiang (2007)	To test effect of SPI on **investment sensitivity to stock price**	• Price nonsynchronicity • Probability of informed trading	**Strong positive**
Wang, Wu, & Yang (2009)	To find linkage between SPI and **firm level investment** in China	• Firm-specific stock return variation	**No**
Foucault & Fresard, 2012	To study effect of SPI on **investment decision** among cross listed firms	• Firm-specific stock return variation	**Positive**
Fresard, (2012)	To determine whether manager use SPI to decide on **corporate cash saving**	• Firm-specific stock return variation • Amihud Illiquidity ratio • Llorente private information trading measure	**Positive**
Chan & Chan (2014)	To analyze effect of SPI on the **pricing of seasoned equity offering (SEO)**	• Price nonsynchronicity (firm-specific stock return variation	**Negative**
Zhu, Jog, & Otchere (2014)	To test SPI (reflected by idiosyncratic volatility) and **M&A decision**	• Firm-specific stock return variation • Idiosyncratic volatility	**Positive**
De Cesari & Huang-Meier (2015)	To examine the effect on SPI on of **dividend changes**	• Firm-specific stock return variation • Amihud Illiquidity ratio • Probability of informed trading	**Positive**
Ben-Nasr & Alshwer (2016)	To investigate impact of SPI on **labor investment efficiency**	• Firm-specific stock return variation • Amihud Illiquidity ratio • Probability of informed trading	**Positive**

Observed from the review matrix above, recent researches have intended to answer whether managerial learning assists in making more informed corporate finance decision which varies ranging from investment to merger & acquisition. In term of construct, more generally, firm-specific stock return variation is adopted to measure stock price information.

With respect to investment decision, Durnev et al. show that more informative stock prices help improving investment efficiency. Similarly, Chen et al. (2007) report evidence suggesting that SPI is associated with higher investment-stock price sensitivity, hence more efficient investment. Foucault and Fresard (2012) finding, which supports managerial learning hypothesis, indicates higher investment sensitivity to stock price with its large sample of cross listing firms in United States and they address that SPI affect other corporate decisions. Nevertheless, Wang, Wu, and Yang (2009) found no relationship between SPI and investment decision yet they address their finding due to substantial government ownership in many listed firms in China that dampens free trading. In the context of M&A, positive impact of SPI found by Luo, (2005) though other proxies of gauging SPI employed, unlike the literature suggesting firm-specific stock return variation. Similar finding (positive) found in Zhu, Jog, and Otchere (2014), their finding indicate that acquirers who are informationally disadvantage are likely to take over other firm and pay higher premium.

In terms of other corporate finance decision, Fresard (2012) shows that higher SPI improves the efficiency of corporate cash savings decisions. Chan and Chan (2014) study the effect of SPI on seasoned equity offering and found negative relation between stock return synchronicity and discount of Seasoned Equity Offering (SEO). The negative relation is strongest when there is no analyst coverage, and it declines as analyst coverage increases. With respect to the effect of SPI on dividend policy, De Cesari and Huang-Meier (2015) adopt firm specific variation as a measure of private information and find positive relationship between SPI and dividend changes. Their finding suggests that managers learn new information from stock price when deciding dividend policy. Ben-Nasr and Alshwer (2016) find evidence of usefulness of SPI on labour investment efficiency. These theoretical work and empirical evidences discussed provide us some clues or insights on potential formulation of association between SPI to repurchase decisions.

Association between stock price informativeness and stock repurchase

Relating to the afore-discussed repurchase literature, this review paper would like to draw research attention on the effect of stock price informativeness (SPI) on market timing of repurchase. The researchers contend that information that managers already had will move the price as it already affected the past repurchase but not affect the current repurchase decision. Information that manager do not have (in other words, private information from firm's stock price) could affect the current repurchase decision. That argument of how timing of information affecting corporate decision is similar to the assertion by Chen, Goldstein, & Jiang (2007). Based on this reasoning, it is suspected that positive relationship between

repurchase sensitivity to firm's stock price and the amount of private information incorporated into the firm's stock price by speculators would imply that the private information in firm's stock price is new and novel to managers and that managers observe at the stock price to learn this information and adopt it in timing stock repurchase.

Coupled with some reasons that could plausibly explain how SPI can affect managerial stock repurchase in several ways: Firstly, stock prices convey private information that managers do not possess such as information about future investment and growth opportunities (Dow & Gorton, 1997), future demand of the firm's products and services, and financing opportunities (Subrahmanyam & Titman, 1999), resource allocation (Dye & Sridhar, 2002), thus all these guides manager in making repurchase decision (Luo, 2005). Secondly, more informative stock prices are associated with better external and/or internal monitoring of managers (Ferreira et al., 2011; Holmstrom & Tirole, 1993) and lower agency cost (Strobl, 2014), hence mitigate the potential overpaid in buyback or avoid unnecessary buyback. Third, lower of SPI (lower firm-specific variation of stock price) is the outcomes of more disclosures, transparency, better governance environment and a higher quality of financial reporting (Dasgupta, Gan, & Gao, 2010; Farooq & Hamouda, 2016; Hutton, Marcus, & Tehranian, 2009; Jin & Myers, 2006), which alleviate information asymmetries and improve informed trading (Fernandes & Ferreira, 2009), hence promote price correction from undervaluation and price efficiency. As the higher information asymmetry, it strengthens the sentiment-driven mispricing effect (Liang, 2016). SPI is higher in less informative environment since more private information impounded into stock price by speculators, the researchers argue that these allows managers to be superior in timing their stock repurchase. Given no research been conducted thus far, it is intriguing to have deep insight on relating SPI and managerial market timing repurchase, it would be meaningful for the future empirical research in the particular context of stock repurchases.

RESEARCH FRAMEWORK

Referring to the established finance literature that publicly-available information on variables such as debt level (Bagwell & Shoven, 1989), firm size (De Cesari, Espenlaub, Khurshed, & Simkovic, 2012), free cash flow (Chan, Ikenberry, & Lee, 2004; De Cesari et al., 2012). The recent study De Cesari & Huang-Meier (2015) find evidence of the impact of variation of firm's stock return on cash dividend. Yet, the association between the information carried by firm's stock prices and stock repurchase has received little attention, to our best knowledge and considerable ambiguity about the impact of variation of firm's stock return on stock repurchases. Due to the fact that, both public and private information can be used by managers when deciding open market stock repurchase, is neglected by existing literature. The main objective of this study is to close this gap in the literature. In other words, this study provides a vital insight into the determinants of stock repurchase by taking informed trading into account. The research framework of the study is constructed as follow:

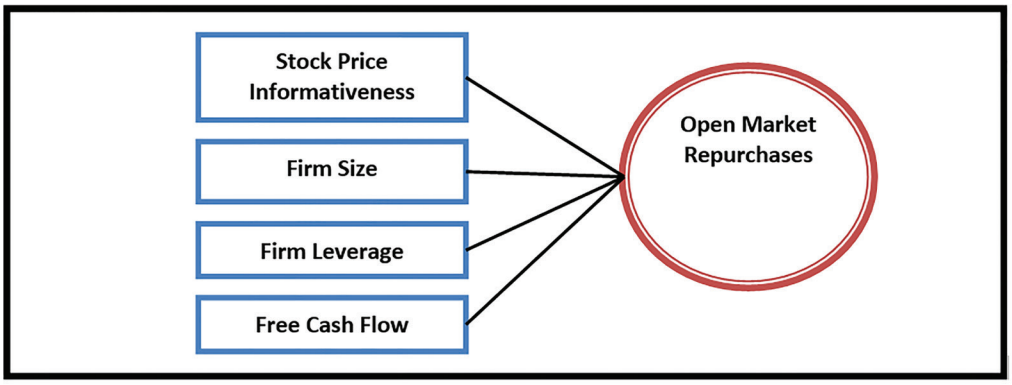

Figure 1 Research Framework

i. Open Market Repurchases

A listed firm can repurchase its own stock by distributing wealth to existing shareholders instead of paying cash dividend in exchange for a fraction of the company's outstanding equity. That is, firm cash is exchanged for a reduction in the number of shares outstanding. The company usually keeps repurchase shares as treasury stock. This paper focuses on open market repurchases as it is most common buyback approach as compared to other method such as privately negotiated repurchase and tender offer repurchase.

ii. Stock Price Informativeness

Firm-specific return variation is a measure for stock price informativeness. Suppose that managerial learning takes place based on information from variations in firm's stock return, lower variation indicates higher informed trading environment. Vice versa, higher variation shows less informed traders. Manager could exploit information of this variation when buyback firm's stock. Consider managers learn this information of variation before repurchases, a lag variable of variation of firm's stock return is applied and regressed on OMRs. The expected of relationship is unknown, but it is expected to be significant. Either positive or negative, its significance would indicate information of firm's stock return variation is useful for stock repurchase activity.

iii. Firm Size

The fair value of the stocks of small companies is probable to be less specifically known by investors than that of large and well-known company. Hence, shares of small companies are likely to be undervalued and leads to more open market repurchase activity than large companies OMRs activity. Firm size is expected to have positive effect on OMRs activity.

iv. Firm Leverage

Firm leverage simply refers to firm debt level. Higher the firm debt, higher the firm leverage. Firm leverage may influence buyback decision. Since repurchasing stock will increase leverage, firm with higher debt are less tendency to repurchase stock because higher level of

firm's leverage will increase expected bankruptcy cost (Boudry, Kallberg, & Liu, 2013). Firm with higher debt ratio would tend not to repurchase, thus it is expected to have negative impact on repurchase. Though there are not standardized measures in the literature, firm debt ratio is the commonly used in the literature.

v. Free Cash Flow

Cash-rich companies are financially very flexible and can always find available cash to repurchase stock whenever their own stocks can be purchase at cheaper price. The firm may use its cash reserve for future investment, dividend distribution, and share repurchase (Jagannathan, Stephens, & Weisbach, 2000). Higher free cash flow the firm has, managers tends to pay out this cash flow to investors in the form of repurchases to avoid agency costs (Boudry et al., 2013). Thus, it is expected to see positive relationship between free cash flow and OMRS.

DATA COLLECTION AND MEASURE OF VARIABLES

A sample of 50 Malaysia firms listed on Bursa Malaysia is manually selected. Firms that have new shares issuance or have outstanding preferred shares are excluded. Only share repurchases conducted via open market are included in the sample. A total of 908 firm-quarter observations is manually-hand-collected data from Bloomberg Database for each quarter over the period 2008–2015. Since certain firms start their repurchases at different quarter and few firms are listed within the sample period and cause some missing values in the data. Due to that, it thus results an unbalanced panel dataset.

Measure of Open Market Repurchases Activity

Most past researches adopt repurchase program announcement as the proxy for open market repurchase, literature has documented that many announced repurchase programs were not executed (Haw, Ho, Hu, & Zhang, 2011). This would cause overestimation on the OMRs. Actual shares repurchased are reflected in the firm treasury shares but repurchase literature contends that increase treasury shares may be related to common stock repurchase. Since firms with outstanding preferred shares are removed from the research sample, firm's treasury shares are still a valid measure for OMRs. Thus, firm treasury shares (TSTOCK) are employed as a proxy to OMRs activity (Firth, Leung, & Rui, 2010). Another measure for OMRs activity is the percentage change in firm treasury shares which intends to capture the impact of public and private information on change in repurchase.

Measure of Stock Price Informativeness

A commonly used measure of SPI is variation of firm-specific stock return, developed by Roll (1988). Follow Roll (1988), the measure reveals the variation in a stock return that unable to be explained by market and industry returns. For a stock i, variation of firm's stock return (denoted as SPI) can be defined as $SPI = ln((1 - R^2)/R^2)$, where R^2 is estimated from the following regression model using Ordinary Least Squares (OLS):

$$r_{i,j,t} = \alpha_i + \beta_{i,m} r_{m,t} + \beta_{i,j} r_{j,t} + \varepsilon_{i,t}$$

where $r_{i,j,t}$ is the daily stock return for firm *i* that is part of industry *j* at time t, $r_{m,t}$ represents the daily return of a stock market at time *t*, and $r_{j,t}$ is the daily return for industry/sector *j* at time *t*. Firm *i* is excluded from the market and industry indices when computing market and industry returns. The firm-specific return variation is estimated by computing the R^2 generated by the regression above based on its definition. Daily returns of the market index and daily returns of the industrial index are regressed on daily stock over a quarterly sample based on calendar date. R^2 is extracted and manually-hand-collected from each quarter-OLS to make a series of quarterly data from 2008 to 2005. The procedures are repeated for 50 firms.

Roll (1988) claims that there is a relationship between firm-specific return variation and private information. Since trades of investors are holding private information that generally cause stock price movement, and finance literature relate that information held by traders to price non-synchronicity (e.g. Durnev et al., 2004; Piotroski & Roulstone, 2004). There are substantial empirical researches give credence to the conception that firm-specific return variation is a valid measure of private information in stock prices (Durnev, Morck, Yeung, & Zarowin, 2003; Morck, Yeung, & Yu, 2000). Durnev et al. (2003) validates this measure in the most convincing way in their empirical research. Their finding reveals a negative relationship between R^2 and the strength of the relationship between current stock returns and future earnings, implying that the information conveyed by the current stock prices is more useful in anticipating future earnings when firm-specific return variation represents a larger portion of total return variation. In fact, firm-specific return variation is commonly adopted by finance researchers to gauge private information in stock prices.

Measure of Publicly Known Variables

Variables	Measure or Proxy
Firm Size	Natural logarithm of firm market capitalization (similar proxy as in De Cesari et al., 2012)
Firm Leverage	There is not a standardized measure, different measures are used in the literature. Firm leverage is defined as the ratio of long-term debt to total assets. (similar proxy to that of Bonaime, Hankins, & Jordan, 2016)

Free Cash Flow	Free cash flows (FCF) is calculated as: (Net Income + Depreciation &Amortization – Change in Net Working Capital – Capital Expenditure)/ Sales. (Similar proxy adopted in Chen & Lu, 2015)

Econometric Model

Two panel regression models are estimated:

$$OMR_{i,t} = \alpha_{i,t} + \beta_1 SPI_{i,t} + \beta_2 Size_{i,t} + \beta_3 Debt_{i,t} + \beta_4 FCF_{i,t} + \varepsilon_{i,t}$$

$$\Delta OMR_{i,t} = \alpha_{i,t} + \beta_1 SPI_{i,t} + \beta_2 Size_{i,t} + \beta_3 Debt_{i,t} + \beta_4 FCF_{i,t} + \varepsilon_{i,t}$$

Where:

Variables	Notation in model
Open market repurchase	OMR
Growth in repurchase	ΔOMR
Stock Price Informativeness	SPI
Firm Size	Size
Firm Leverage	Debt
Firm free cash flow	FCF

Firm market capitalization, a measure to firm size, has huge figures in billions, natural logarithm is therefore applied to that variable. LSPI is the lagged-one-quarter variable based on the notion that managers learn information derived by firm's stock returns before repurchase. Once all quarter-R^2 for 50 firms are extracted and computation of variation firm-specific returns is completed, panel data estimator is employed to examine the relationships among variables. The rationale of using panel data estimator is assuming heterogeneity among firms and the independent variables may be subject to firm-invariant and time-invariant that may affect stock repurchase (See: Baltagi, 2013). In other words, the independent variables vary across firm and time.

DISCUSSION ON FINDINGS

The findings are very disappointing since none of variables are significantly contributing any explanation to OMRs activity for both measures, as presented in Table 2. The variation of firm's stock return, LSPI, does not affect firm stock repurchase activity. The public information

variables do not affect firm's OMR activity. Particularly on firm size, the finding of this paper makes inconclusive comparison with past empirical findings. De Cesari et al. (2012) finding show evidence of small size firms having better timing profits in repurchase than large firms. There is however no significant relationship between firm size and firm repurchase activity found in this paper. Both leverage and free cash flow are found have no effect on: stock repurchase activity(Firth et al., 2010); decision to repurchase (a dummy variable equal to one when firm repurchased shares) (Boudry et al., 2013); relative repurchase price - timing measure (A. Dittmar & Field, 2015). Similarly, this paper finds no support for the notion that both debt and free cash flow that play significant role in determining the repurchase activity for the 50 firms in the sample. In term of firm leverage, its insignificance is in line with Chen and Lu (2015) findings.

Table 2 Finding for the main sample (Q12008 to Q42015)

Model	Dependent variable: OMR		Dependent variable: ΔOMR	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Constant	−18.0464	−0.65	−1.4845	−0.04
LSPI	0.6787	0.17	0.7963	0.14
Size	5.1630	1.16	0.0455	0.01
Debt	0.1858	0.32	−0.9682	−0.12
Fcf	−0.0037	−0.04	−0.0241	−0.19
R^2	0.0016		0.0001	
F-statistic	0.8115		0.9994	

OMR = firm's open market repurchase; ΔOMR = changes in firm's open market repurchase

Sensitivity Analysis

The data covers financial crisis periods such as US subprime mortgage crisis and European financial crisis are suspected to have big variation (volatility) in stock return since Malaysia stock market is somehow affected and stock prices were experiencing sharp decline and great fluctuation. Thus the sample is deliberately separated to two subsamples periods and test separately based on overall stock market performance. The 1st subsample covers period of 2008 – 2013 and 2nd subsample covers period of 2014 – 2015.

The finding of the 1st subsample (Q12008 – Q42013) for OMR measure of firm's open market repurchase activity, shown in Table 3, appears to be in line with past empirical findings discussed in previous section. The findings are quite robust when different model specifications like random and fixed effect model are applied, reported in Table 4. A successful rejection for H0 in Breush-Pagan LM test leads to random effect model. However, a failing rejection for H0 in Hausman test indicates that the random effect model is better than the fixed effect model.

A measure of ΔOMRs activity, which is ΔOMR, all independent variables do not significantly explain on the dependent variable.

Variation of firm's stock return is then significant and positive related to stock repurchase activity. Managers seem to learn from greater firm-specific variation in stock return and increase their repurchase activity during financial crisis and recovery period. In addition to that, managers have more chance and advantage to time repurchase as stocks are more likely to be undervalued during the downtime. (Dittmar & Dittmar (2008) claim that there will be increasing need for repurchase during uncertain periods and they find that volatility in GDP growth positively and significantly explains repurchase activity. In addition to that, firm size is found positively affects to OMR activity indicating that larger firms are buying back more shares through open market.

Table 3 Finding for the subsample (Q12008 to Q42013)

Model	Dependent variable: OMR		Dependent variable: ΔOMR	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Constant	−14.6400	−6.65**	−0.1958	−0.73
LSPI	0.5642	1.89*	0.0048	0.13
Size	3.7173	10.4**	0.0636	1.46
Debt	0.0286	0.64	−0.0064	−1.17
Fcf	−0.0077	−0.12	0.0009	1.2
R^2	0.1403		0.0075	
F-statistic	0.0000		0.2589	
Breush-Pagan LM test		6758.8***		

OMR = firm's open market repurchases; ΔOMR = changes in firm's open market repurchases ***, **, * Significance at the confidence level of 1%, 5%, 10% respectively

Table 4 Finding of Random and Fixed Effect Model for the subsample (Q12008 to Q42013)

Model	Random Effect Model		Fixed Effect Model	
	Dependent variable: OMR		Dependent variable: OMR	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Constant	−2.9477	−1.19	−2.5171	−1.74
LSPI	−0.1187	−1.74*	−0.1205	−1.76*
Size	1.7994	6.82**	1.7448	6.51**
Debt	0.0127	0.59	0.0116	0.53
Fcf	−0.0001	−0.06	−0.0001	−0.08
Hausman test	–	–	1.53	

OMR = firm's open market repurchases; ΔOMR = changes in firm's open market repurchases ***, **, * Significance at the confidence level of 1%, 5%, 10% respectively

The result of the 2nd subsample (Q12014-Q42015) for OMR measure, reported in Table 5, shows that variation of firm's stock return is no useful for managers to time repurchase. It is also vital to note that managers could still repurchase in the absence of learning information of firm's stock return variation. Intuitively, the insignificance of information of stock return variation could be partly due to that the stock market in Malaysia is experiencing upward trend after financial crisis and recovery periods. The possible explanation to that finding is that stock undervaluation is fading and dying off or stock price tends to be fair- or over-priced for that period, managers would have lack of advantage to time repurchases. Ditmar and Ditmar (2008) argue that wave of financing activity (either equity issuance or shares repurchase) are due to differing response to the economic stimulus. Specifically, economic expansion reduces the cost of equity relative to the cost of debt, inducing many firms to issue equity when stock price is higher instead of buying back shares.

Considering the economic growth and stock market performance were better during this period as compared to that of the period of the 1st subsample, managers may have reserved more cash for investments thus less cash are allocated for firm to perform repurchases. Correspondingly, firm free cash flow is found significant positive. Although the strength of relationship between firm free cash flow and repurchase activity is small, an increase in RM1 free cash flow results a rise in 0.0337 units of repurchase shares, it still indicates that firms would increase repurchase activity if firms have more free cash flow. Firm size is found positively affects to OMRs activity indicating that larger firms are more buying back more shares via open market. Another OMRs measure, ΔOMR, yields similar finding to that of the 1st subsample, all independent variables do not significantly explain on ΔOMR.

Table 5 Finding for the subsample (Q12014 to Q42015)

Model	Dependent variable: OMR		Dependent variable: ΔOMR	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Constant	−18.3297	−4.44**	−10.6446	−0.09
LSPI	0.1097	0.19	4.2288	0.26
Size	4.7721	7.03**	−2.2799	−0.12
Debt	−0.0975	−1.11	−1.5758	−0.64
Fcf	0.0337	1.78*	−0.2999	−0.56
R^2	0.0028		0.1850	
F-statistic	0.9568		0.0000	

OMR = firm's open market repurchases; ΔOMR = changes in firm's open market repurchases ***, **, * Significance at the confidence level of 1%, 5%, 10% respectively

CONCLUSION

The finding of main sample (Q12008 to Q42015), the variation of firm's stock returns, firm size, leverage, and free cash flow are found no effect on firm stock repurchase activity. The result for the measure of ΔOMR, is found that no meaningful relationships are identified among variables in main and subsample regression analysis.

In sensitivity analysis, the main sample is separated to two subsamples periods and test separately. The 1st subsample covers period of Q12008 – Q42013 and 2nd subsample covers period of Q12014 – Q42015. The finding of the 1st subsample (Q12008 – Q42013) for OMR measure indicates that variation of firm's stock repurchase and firm size are significantly and positively explaining OMRs activity. In line with past findings discussed in previous section, firm leverage and free cash flow are not significant. The finding of that subsample is robust when random and fixed effect model are applied. In addition to that random effect model is found to the best for the regression of this subsample analysis.

The result of the 2nd subsample (Q12014 – Q42015) for OMR, shows that variation of firm stock return is no useful for managers to time repurchase. Yet, firm size and free cash flow are found to be significant positive on OMRs activity. The finding of sensitivity shows that managers have more chances to time repurchase during market downtime.

Implication of Findings

There are numerous studies to confirm that managers possess market timing ability to time open market repurchases whereby increase firm value and shareholders' wealth. The findings of research paper provide evidences to validate the effect of stock price informativeness on open market repurchasing activity thereby would be useful in timing open market repurchases. The finding of this paper implies that managers should learn information conveyed by firm's stock returns, which are derived from corporate outsiders and exploit the market when the stock market is bearish and weak, where firm's stock price is likely to be undervalued, to take advantages of mispricing and undervaluation. When stock market is strong and bullish, managers may miss the chance to exploit private information for timing repurchases. During this period, decision for open market repurchases must be made prudently and practically since firms need more cash for investments in the environment of good economic growth. Managers should also need to cautious and concern having sufficient free cash flow for investments before allocating cash flow for open market repurchase.

Future Research

A relative small sample size due to manually-hand-collected data is the main limitation of this study. The data sample size can be expanded and segregate into two main groups samples as

infrequent stock repurchasers and frequent stock repurchasers in the future work to validate the finding reported in previous section. This paper relies on the existing literatures to support the presence of managerial market timing ability in repurchases. Based on that, it lends credence to this study to investigate presence of information of variation of firm's stock return on open market repurchase activity that may be useful to time repurchase. For that reason, the study can also be extended to test market timing repurchase in full-scale by relating abnormal stock return and variation of firm's stock return.

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