

Human Resource Management System and Internet Technology Revolution in Malaysia

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Abstract

This study tested the Human Resource Management System model in 2612 small and medium scale companies in Malaysia by selecting the sample by random sampling method using an online interview system. We examine four aspects of management, namely income, human capital investment, technology investment, investment in operational aids using the quantitative descriptive method of the ordinary least square model. We find that there is a positive relationship between investment in human capital, technology and operational aids and income.

Keywords: Technology, Human Capital, Malaysia

Background

The internet revolution since its birth in 1990 has continued to develop and penetrate various fields, including human resource management (Guttmann, 2016). Not only the internet but the supporting components of the internet have also developed for the better, starting from personal computers, laptops, iPhones to smartphones, all interacting as one unit. This continues to develop and makes it easier for humans to work, including managing human resources so that Machine-To-Machine (M2M) or computer to computer communication is formed.

The internet transcends national borders, which allows companies to connect with their employees anywhere and anytime (Anton-Haro & Dohler, 2017). This extraordinary technological development was transformed into an information technology-based human resource management system. The sophistication of the internet revolution is being adopted and is very supportive of business. Especially businesses in large companies that are very fast embracing technology. Not only large scale companies, micro small and medium scale companies also have an impact on micro, small and medium enterprises.

This study examines the uptake of technology or technology inclusion in micro, small and medium scale companies in developing countries, namely Malaysia. Malaysia is economically supported by micro, small and medium enterprises so the growth and development of micro, small and medium enterprises are very important for Malaysia.

Literature Review

The industrial revolution has been going on for hundreds of years. The industrial revolution occurs due to technological developments and technological inclusion (Veblen, 2017). 1784 is widely believed by experts to be the beginning of the industrial revolution where Henry Cort succeeded in perfecting the Thomas Newcomen steam engine. The steam engine is a sophisticated technology at that time where a steam engine is a machine that has developed since that year and facilitates human work and encourages the industrial revolution (Milward & Saul, 2013). The money machine led to an industrial revolution in the textile sector, and various factories were established in the world massively. In the early 20th century, electrical technology was discovered and there was a revolution in the use of electricity in the industry since 1870 (Spielvogel, 2011). Technology has continued to develop after the discovery of electricity. The computer was invented in the 1960s, the computer was born from the previous industrial revolution and the use of electricity in industry. Computers are a series of various revolutions and technological developments which are very influential technologies until this time. Computers became the forerunner to the development of programming languages and the use of computers and programming languages in the industry until the 1990s. The internet is found and continues to develop today in business and industry (Neri, 2020).

The industrial revolution occurred in Europe since the invention of the steam engine (Evans & Rydén, 2017). Where previously the European community lived by farming, most of which were farmers. At that time, there was no large-scale machinery or industry like today. It was until the Middle Ages that there were significant changes in the industry there (Delbeke & Vis, 2019). Before the steam engine or industrial revolution was invented, European society relied on manual tools to complete its work, including agricultural activities. There was no large-scale industry at the time, and trade between villages was also sporadic. The Industrial Revolution changed many things in the life of European society and spread throughout the world. Historically, the industrial revolution developed from the invention of the manual machine and developed mechanically and then began to lead to automatic equipment. It is unclear when the industrial revolution started. However, history records the invention of the mechanical loom and the steam engine, which led to massive industrial changes on earth (Sage, 2011).

In the 1712s, Thomas Newcomen invented a steam engine that helped miners pump water faster, but the steam engine was less than perfect and fuel-intensive (Noble et al, 2013). In 1784, Henry Cort succeeded in perfecting the Thomas Newcomen steam engine (Byrn, 2020), and James Watt created a new engine called the Beelzebub in 1781 (Willems, 2018). Steam engines popular in mining developed their use in cotton mills, which later replaced horsepower and water in the textile industry. Since then, the invention of new industrial machines has emerged until now. Since the industrial revolution, industrial and technological developments have continued to develop rapidly. In 1990 internet-based websites were found and developed rapidly until now (Khan & Ally, 2015). Information systems continue to be built, including information systems in terms of human resource management. Or a human resource management system based on information technology. This is very efficient, and of course, information technology has penetrated various lines of business. In the perspective of equations and solow growth theory, technology can improve human performance so that it can have an impact on increasing the company's output and income with the function $Y = f(C, T, L)$ where Y is production output, C is financial. Capital, T is the mastery of technology and manpower or human resources.

Research methods

We tested the Human Resource Management System model for 2612 small and medium scale companies in Malaysia, with the sample selection using the online interview method random sampling method. We examine four aspects of management: income, human capital investment, technology investment, and investment in operational aids using the quantitative descriptive method of the ordinary least squares model. We formulate all data into a regression formula as follows:

$$Y_t = C_t + \beta_1 HCI_{t1} + \beta_2 TI_{t2} + \beta_3 OI_{t3} + e_t$$

Where,

Y = Income

HCI = Human capital investment

IT = Technology Investment

OI = Investing in operational aids

e = error term

Results and Discussion

The estimation results are as follows:

$$Y = 0.421121 + 0.432124 * HCI + 0.212241 * TI + 0.412412 * OI$$

From the OLS estimation results, human capital investment (HCI) affects the income of micro, small and medium enterprises in Malaysia by 0.432124 on the calculated scale. If human capital investment (HCI) increases by 1%, then operating income (Y) will also increase by 0.432124%. Technological investment has a positive effect along with other variables. Table 1 illustrates the estimation results as follows:

Table 1. Estimation Results

Dependent variable IFDM			
Variable	Coefficient	t-Statistic	Prob.
C	0.421121	0.213120	0.0006
HCI	0.432124	0.412227	0.3113
TI	0.212241	0.700118	0.1422
OI	0.412412	0.321111	0.1211
R-squared	0.822021	Mean dependent var	31.14074
Adjusted R-squared	0.812111	S.D. dependent var	24.5223
S.E. of regression	70.3122	Sum squared resid	6.02141
F-statistic	32.2610	Durbin-Watson stat	0.31012
Prob(F-statistic)	0		

The estimation results and table 1 show that investment in human resources, investment in technology, and investment in operational aids increases operating income. This is in line with the equations and solow growth theory.

Conclusion

Investment in human capital, investment in technology and investment in operational aids have a positive effect on the income of small and medium enterprises in Malaysia. This proves that human resource development within the framework of human capital investment supported by investment in technology and work equipment can boost human performance which has an impact on increasing company revenues. This also applies to micro, small and medium enterprises in Malaysia.

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