

Human Capital Investment: Literature Review Analysis and a Study Case among Kadazan-Dusun of Pulutan Village, Menggatal, Kota Kinabalu, Sabah, Malaysia

Kasim Mansur, Mori Kogid and Sylvia Jessica Madais
School of Business and Economics, University Malaysia Sabah,
Locked Bag 2073, 88999 Kota Kinabalu, Sabah, Malaysia

Abstract: The development of human capital is paramount important for personal development and personal performance namely in term of productivity and quality of life. Human capital is a form of productive investment such as ability, skill, appearance and health resulting from investing in education, training and health care. The result of a case study conducted in Pulutan village, Menggatal, Kota Kinabalu specifically among the ethnic Kadazan-Dusun, revealed that the Kadazan-Dusun community in the village placed high importance to education as a form of continuous investment especially in developing human capital among their children in producing future generation who are more productive of better quality and equipped with a vision and mission. This is seen through their children's success in being able to further their studies at higher education institutes and their success in holding important positions both in the government and private sectors. Though lacking in social status in terms of their socio-economic background, this factor is not a deterrent for these community strive towards human capital development through education but rather seen more of a challenge that should be overcome by every individual in making him/her more independent and competitive.

Key words: Human capital, literature review, study case, Kadazan-Dusun Sabah, social status

INTRODUCTION

Investment in human capital plays an important role in generating economic growth, increasing competitiveness and improving the population quality of life of a country. Currently, Malaysia is heading and moving towards industrialization era more capable manpower in various new areas of industrialization is therefore needed. Consistent with the 9th Malaysia Plan (9MP) and the 2nd Long Term Perspective Plan Framework (RRJP2), the nations human resource development need to be strengthened and stabilized in order to create economic growth and trigger higher income and productivity.

Why invest in education? Education as a measurement for quantity, availability and human resource quality was the sole method which can be used to analyze the effect or human capital impact on economic growth (Benhabib and Spiegel, 1994). To many people, capital is in the form of bank account, shares, steel mill and so forth. In fact all those mentioned above is capital forms namely an asset which is income generating and other useful output in the long run. But, aside from these tangible capitals are human capitals such as education or

schooling, training and health care expenses. These factors indeed can further increase productivity, income, improve health and fitness, good habits in individuals such as being trustworthy and responsible. Hence, education and training among others are the most important factors in human capital investment.

Moreover, studies in the United States of America shows that high school and college education lead to improvement in earnings even after taking into consideration the direct costs (study fees, cost of purchasing books) and indirect costs (income received if employed) during schooling. Studies in several other countries with different cultural and economic systems also showed the same outcome namely income obtained by educated people will always be above the average income level. Furthermore, growth continuum per capita income of a country is partly dependent on scientific and technical knowledge development, which further improve labour productivity and other input in production.

In fact, economic growth is also closely connected between new knowledge and also human capital. This is obvious because there have been big advancements in education accompanied with major development in technological knowledge in all countries which have

achieved significant economic growth. Leading economic record for countries like Japan, Taiwan and a few more Asian countries for example show the importance of human capital in playing its role in leading economic growth.

According to economic dictionary (Tahir *et al.*, 1993), human capital means all productive investments in a person such ability, skill, expertise and health as a result of investment towards education, training and health care. Human capital growth, mainly in education is one of the largest sources of economic growth both in the past and in times to come. Based on some research done in the past, human capital has made larger contribution to a country's growth compared to contribution from factories and physical property. Human capital although not tangible will always be the most valuable asset of an individual.

Hence, the main objective of this study is to explore the development of human capital in education amongst the ethnic Kadazan-Dusun especially in the aspect of population profile, educational development level and other related factors in motivating them to be willing to invest in education as human capital by focusing on case studies in Pulutan village, Menggatal, Kota Kinabalu, Sabah, Malaysia.

Background of pulutan village, Kota Kinabalu, Sabah:

The state of Sabah covers an area of 72,500 km² wide enriched with various elements or natural resources with a coastline of 1,440 km in length surrounded by the South China Sea in the west, the Sulu Sea in the northeast and the Celebes Sea in the south. Dubbed the Land below the Wind, Sabah not only is rich with natural beauty but is also abundant with cultural heritage of its people. Sabah has a multi-racial population. There are at least 30 local tribes with >50 different languages and no <80 dialects (www.sabah.gov.my).

The main ethnic group of Sabah is the Kadazan-Dusun, Bajau and Murut. Other ethnic groups include the Bonggi, Bisaya, Sungai, Kedayan, Bugis, Iranun, Ida'an and Brunei. In addition to these, the Chinese community is the largest non-native group. Therefore, Sabah is enriched with a multi-racial population each with their own unique cultural background.

The Kadazan-Dusun society makes up for almost 1/3 of Sabah's population and they mostly live in open space areas in the inland. They were originally known as paddy farmers but gradually many among them have moved on to other jobs such as working as civil servants, working in the private sectors and become entrepreneurs. The Kadazan-Dusun people over the years have migrated and can now be found in all parts of Sabah.

Pulutan village which is located within the Kota Kinabalu City Council is the chosen site for this case study. The distance between Pulutan village and the Kota Kinabalu city is about 9 km. The village is well connected as there are various public transport facilities such as bus and taxi. The Kadazan-Dusun society in this village usually uses public transportation to go to Kota Kinabalu city.

During the British rule, the villagers became more active in partaking in various forms of labour because their living relied on what they harvested. During the fruit season, jackfruit is available everywhere in the village. The plant grew wildly and rapidly. When ripe, its fragrance attracted the attention including that of the British colonials who became interested to know more about the fruit. After tasting and finding out the name of the fruit, the British colonials then named the village as Pulutan. Moreover, this fruit also produces white coloured emulsion called Pulut in the Kadazan-Dusun language meaning Glutinous Rice.

Past research: Human capital is among the many important factors significant to economic growth of a country. Through quality human capital, the process of economic progress becomes easier and be better realised. This human capital quality could be seen mainly via the level of education and training as well as health. As such, within the framework to spur economic growth, there is a need to include human development regardless of ones status of a country. This is important to ensure that each citizen is productive to contribute and is not left behind. Investment in education towards human capital would largely benefit the individual and his community.

The inter-relationship between human capital and economic growth has in fact already been discussed at length in previous studies. Ramirez *et al.* (1998) for example explains that although, there are bilateral ties between human capital and economic growth, specific factors to link them still lacks in the aspect of systematic exploration. Ramirez *et al.* (1998) in his study also said that high level human capital development will affect the level of the economy through population's increase in their capacity, productivity and creativity. The population's education will determine their ability to absorb and organize all economic growth resources such as technology because with good education, technology usage or technological innovation can be utilised to its best.

In a case study conducted in Indonesia, the inter-relationship between human capital development and economic growth could be seen through the economic crisis faced by the country. Akita and

Alisjahbana (2002) explain that Jawa and Bali were two areas whose economy level declined the most. Irianjaya and Maluku, meanwhile recorded the decline onto the human capital development index. The issue arising here is about those areas having quality of human resource being able to cope better when facing an economic crisis is seen from the aspect of worsening income per capita and do those areas having high per capita income also able to continue to uphold their human capital development?

Hence, to explain this issue, Wibisono (2001) in his study has included variables such as educational attainment which is measured with successful completion educational level, life expectancy, fertility rate, infant mortality as well as rate of inflation. Through this assessment, it was found that positive influential variable towards economic growth is education, life span and infant mortality number.

According to the Indonesia Human Development Report, there indeed exist a bilateral tie between human capital development and economic growth. The case study showed that human capital in the form of education especially is the most important contributor in economic growth (Wibisono, 2001).

The role of human capital in encouraging economic progress has been acknowledged in many studies in the past. Human capital has been identified not only as a major growth determinant and a channel to ease poverty but it is also very important in building or improving the quality of human beings in general. The growth focus in MDGs or Millennium Development Goals was more concentrated at the importance in achieving clear and real progress as an indicator or human capital indicator measured through educational foundation.

Most studies have done before gave focus to the effect of education investment on the economic growth of a nation. Mankiw *et al.* (1992), Barro and Sala-I-Martin (1995) and Barro (1996a, b) in their study found that there is positive relationship between the schooling periods that is education with economic growth. At the same time, by using a more detailed filter measure on skill, a country whose literacy level is as much as 1% higher than the average experience an increase of as much as 1.5% in Gross Domestic Product growth per-capita.

In a case study in Germany, the difference in human capital financing can explain most of the productivity inequality between many areas in that country. On average, schooling considered 3/10 of productivity gap between the states and schooling or education especially plays an important role in comparing productivity of states in cities like Berlin, Bremen and Hamburg in Germany. Compared to physical capital such as machines

and the like even though it has important links with productivity, it is still not as important when compared to human capital (Barro, 1996a). As such, investment in education is seen to have an important role in contributing to the centralization of productivity level which will further lead to growth and progress of the national economy compared to investment in physical capital. Apart from that education has a rather important influence on an individual's wage. Through the same case study example, an additional year of the schooling period led to an increase of 7.8% to the average individual wage.

Human capital theory and approach to the rate of return for instance has proven that education has the ability to enhance the productivity and income of an individual and further encourage economic growth. Meanwhile, macroeconomic growth model also mention the importance of education in contributing to the economic growth of a nation. Apart from that education is also said to be having a big influence on income distribution. Several studies in Malaysia have also proven that educational attainment is among important factors which differentiate income between the races and gender.

Besides giving direct impact to economic development from the aspect of rate of return and also human capital combination and physical capital, human capital investment through education also resulted in indirect effects. These indirect effects may be seen from aspects of health and nutrition, fertility and children's schooling and cognitive development.

Based on the analysis made by the World Fertility Surveys and Demographic and Health Surveys (DHS), children in developed countries, whose parents are educated, face very low premature death risk (Hobcroft, 1993). Moreover, survey in socio-economic shows that educated parents usually will report their children's health condition to health experts. In Uganda, studies have found that an educated mother is able to understand easier and has more access to information on diseases and such information is linked to the low death rate among children (Mackinnon, 1995).

Recent study done by Mansur *et al.* (2009) found that education provides better work opportunities and thus increases the level of income of an individual. Education is perceived to be an important factor in human capital formation. In their study, 78% of the total of 189 respondents among muslim women was interviewed from selected kampongs in the district papar, Sabah perceived that education is very important. The data collected was analyzed and reported using descriptive statistics. About 42.4% respondents have obtained a diploma and degree level education. The study also showed that a total of 47.1% strongly agreed that education can influence future

income and 78.8% agreed that higher level of education leads to a higher level of income. The link between education investment among women and fertility also has a correlation. In Africa, educated women are able to get higher wages and this increase release cost from the time aspect used to upkeep their children. They also tend to have educated children and this would further increase the expenses for larger families. So, the research by DHS says that the inter-relationship between education and fertility differ according to education levels whereby there is a negative relationship for women who complete secondary school education and are fertile.

At the same time, children with educated parents would rather go to school. Through a case study done in Kenya, anyone entering school around 1960 were predicted to have 21% chance in completing their lower secondary if both their parents were uneducated. On the other hand, they will be having as much as 83% chance if either their mother or father has completed their secondary or primary school. This reflects that by giving education to one generation, it will be able to give effect on cognitive skills and health in future. Education investment is said to have a positive relationship with economic development because education facilitates people to better absorb or organize all source of economic growth nicely such as technological innovation.

Apart from that development in education is also said to affect the rate of return because it is able to increase the productivity and income of the individual which will further spur the growth of the nation's economy. Therefore, by doubling the effort to develop human capital in the society, it is able to produce productive people who can then help further in generating the progress of the country.

MATERIALS AND METHODS

The site of study is in the Menggatal district, Kota Kinabalu, Sabah. There are a number of villages in the vicinity of Menggatal such as Rampayan, Pulutan, Mensiang, Kokol, Dambai and Tebobon. However, as this study is specifically looking into the Kadazan-Dusun society, Pulutan village which purportedly has many Kadazan-Dusun residing in the village was chosen. The distance between Pulutan village to Kota Kinabalu city centre is about 12-14 km while the distance between Pulutan village and Menggatal township is between 1-6 km.

The methods used in this study include a survey using questionnaire forms and also interviews. The respondents comprised of Kadazan-Dusun tribes residing in Pulutan village, Menggatal. Based on information

obtained of Village Chief, it is estimated that Pulutan village has a total population of approximately 3500 people. About 70% of this number is Kadazan-Dusun while 20% are Chinese and the remaining 10% are Bugis and Timor. Therefore, the majority of the population is Kadazan-Dusun while others such as Bugis and Timor are workers working in farms and plantations taking care of fruits, vegetables and livestock while living in the village.

An analysis of data was made by using Statistical Package software for Social Science (SPSS). The focus of the analysis is based only on the descriptive statistic on respondents profile and other related variables.

RESULTS AND DISCUSSION

In this study, majority of the respondents are between 51-55 years old and 38-45 years old representing 37.5 and 32.5%, respectively. All the respondents are married. About 35% of the respondents have at least one child studying in a higher education institute while the remaining 65% did not have any children studying in higher education institute. Of that number, the majority of the respondents (52.5%) have children still studying in primary or secondary school level. At the same time, 35% of the respondents have children who are already working. This clearly shows that the Kadazan-Dusun society actually has improved their education level as their involvement in the employment sector is also quite encouraging.

Through observation, the majority of the respondents have an educational standard until secondary school level which is 77.5% of respondents. Most of those having secondary school education level have children studying in higher education institutes which is 22.5% and the remainder were respondents who completed their studies at the college level which is 7.5%. Most of the children of respondents who continued their studies in higher education institutes undertook degree and diploma courses which are 20 and 17.5%, respectively. Almost all the respondents' children studying in higher education institutes received loans (32.5%) and have secured jobs (20%) in either the government or private sector.

Most respondents whose children were able to continue their studies in higher education institutes have managed to secure jobs which is 20%. The majority of these children work as teachers, entrepreneurs, technicians and so forth. Meanwhile, one respondent has a child working as a state government officer and the rest have children studying in higher education institutes including those still seeking employment. This show that

the Kadazan-Dusun tribes are in fact already developed and is aware on the importance of education. Apart from that 30% of the respondents are self-employed and of that total 15% of these respondents have part time work aside from their full-time jobs. The respondents' income distribution shows that most of them (that is 57.5%) have a total income of between 600-1000 RM while only 7.5% of respondents receive income less than RM500. From the aspect of total expenditure, 80% of respondents have total expenditure between 300-800 RM per month which are spent on basic needs such as buying goods like food, clothes, payment for children's education, utility bills payment, medicines and so forth.

The number of the unemployed among respondents is 12.5%, where among these are female respondents who are full-time housewives and the remainder is yet to acquire jobs. The majority of the respondents have satisfactory basic utilities such as electricity supply, tap water and telecommunication facilities. There has also been aids and assistance received by the residents of the village. These include the Poorest Population Development Program (Program Pembangunan Rakyat Termiskin-PPRT), aid from the Federal Community Development Department (Jabatan Kemajuan Masyarakat Persekutuan-KEMAS) and also help of Farmers' Association Board (Lembaga Pertubuhan Peladang-LPP) and also the Village Safety and Development Committee (Jawatan Kuasa Kemajuan dan Keselamatan Kampung-JKKK) for problems such as paving road building of public hall and so forth all of which are for the well-being the villagers. A JKKK representative will act by delivering the villagers' complaints and problems to the local government. Aid received can be in form of financial and non-financial form. Non-financial aid include necessities such basic food, free gifts, storage water tanks, health screening and fertilizer subsidy. Such aids are distributed to be received by villagers once in 6 months.

CONCLUSION

Nevertheless, education is the most important mechanism to generate quality human capital and is able to form the society of a country with its own first-class mentality. The outcome of this research has found that the involvement of ethnic Kadazan-Dusun in the development of human capital in education might be influenced by several factors such as employment, income level, total expenditure and distance to city/town from their place of residence as well as the level of comfort of their home. Based on the findings of this study, the distance between the Kadazan-Dusun people's residences

in Pulutan village do varies. However, it can be concluded that such distance and transportation problems is not an excuse for them not to develop themselves through schooling.

In addition, large numbers of the respondents' children in the village are schooling and have succeeded in advancing their studies to the local higher education institutes as well as private institutes and have received loan assistance as well as scholarships. This shows that the government through the Education Ministry or Higher Education Ministry is actually concerned about the issue of education amongst the indigenous community of Sabah. This is evident based on the allocation in the 9th Malaysia Plan which specifically allocated RM 2.1 billion for educational development in Sabah for the same allocation in the 8th Malaysia Plan. The Education Minister, Datuk Seri Hishammuddin Tun Hussein when elaborating on high-impact projects for educational development in Sabah, especially in rural areas said that 1,926 projects valued at RM 3.06 billion is currently being implemented. Of the number, 336 projects valued at RM364 million have been completed, 523 projects totalling RM917 million are under construction and 1,067 projects worth RM1.784 billion are projects in relation to ICT development (NST, May 2008).

As such, to ensure that government's efforts and support in developing the level of education in the state of Sabah materialize the schools who are involved should play their role in imparting useful and beneficial knowledge to the younger generation so that they are ready to face future global competition. This would be vital as they are the ones who will determine the administrative pattern as well as the country's environment towards a better developed and having the competitive edge towards 2020 vision an envisage by the government of Malaysia to be a developed nation (www.moe.gov.my/kpm/imbasan.htm).

This study also found that the education levels among the Kadazan-Dusun society in Pulutan village have undergone tremendous development and there is also an increase in their awareness on the importance of education because it is only through education one will be noticed and can change their living standard. Many of the respondents' children have successfully acquired a place in higher education institutes. About 25% of respondents possessing secondary school education level have between 1-5 children studying in higher education institutes, while 10% of the educated respondents with college education and 2.5% of respondents with primary school education can afford to

send between 3-5 children study in higher education institutes. With the attainment of higher education, the productivity level of an individual increases and with it, it benefits the country through the individual's contribution towards the country's productivity as a whole. In relation to these, the rise in opportunities to further their study at a higher level, support and financial aid are also wide open.

All these are evident through the Kadazan-Dusun society's children who are advancing their studies in higher education institutes. As a result, a large number of them are able to get loan assistance and scholarships especially from National Higher Education Fund Corporation (Perbadanan Tabung Pendidikan Tinggi Negara (PTPTN)) and other agencies such as the Sabah Foundation and Sabah state government. About 30% of the Kadazan-Dusun's children received PTPTN loan, while 7.5% of the remainder obtained scholarships or loans from other agencies. In fact, it was also found that Non-Governmental bodies (NGOs), private companies or bank do offer education loan to the public especially student from rural areas.

Through, the 18 years development plan contained in the Sabah Development Corridor (SDC) launched by the Prime Minister, Datuk Seri Abdullah Ahmad Badawi, indicates a brighter economic future for the Bumiputra group in Sabah. The opportunities provided under SDC programmes would be able to produce future generations of successful bumiputra industrial entrepreneur group. Hence, through this SDC's declaration, Sabah indigenous people especially the Kadazan-Dusun society will continue to gain more knowledge and be motivated so that this state is able to produce a successful generation to represent the urban and rural areas.

Thus, investment in education is crucial to Sabah's state development progress through increasing productivity, skills and efficiency in human capital. Employment, income level, total expenditure and home comfort for the Kadazan-Dusun community in Pulutan village, Menggatal are among the factors influencing them in making greater investment in education.

In conclusion, all efforts by the government to provide facilities or better education infrastructure to all students as well as financial assistance are noble and wise. This is because human capital qualities not only rely solely on effort but need to be supported by a modern, sophisticated and conducive educational system. It is hoped that these efforts are able to create awareness to all Malaysian and not just the people of Sabah. This study

shows that the Kadazan-Dusun community at Pulutan village are aware the importance of education in developing self potential and its significant to the country's economic growth.

REFERENCES

- Akita, T. and A. Alisjahbana, 2002. Regional income inequality in Indonesia and the initial impact of the economic crisis. *Bull. Indonesian Econ. Stud.*, 38: 201-222.
- Barro, R.J. and X. Sala-I-Martin, 1995. *Economic Growth*. McGraw-Hill, New York.
- Barro, R.J., 1996a. Determinants of Economic Growth: A Cross-country Empirical Study. National Bureau of Economic Research Inc., Cambridge, Massachusetts.
- Barro, R.J., 1996b. Health, human capital and economic growth. Paper for the Program on Public Policy and Health, Pan American Health Organization and World Health Organization. Pan American Health Organization, Washington.
- Benhabib, J. and M.M. Spiegel, 1994. The role of human capital in economic development: Evidence from cross-country data. *J. Monetary Econ.*, 34: 143-173.
- Hobcroft, J., 1993. Women's education, child welfare and child survival: A review of the evidence. *Health Transit. Rev.*, 3: 159-173.
- Mackinnon, J., 1995. Health as an Informational Good: The Determinants of Child Nutrition and Mortality during Political and Economic Recovery in Uganda. CSAE, University of Oxford, Oxford, pp: 95-99.
- Mankiw, G., D. Romer and D. Weil, 1992. A contribution to the empirics of economic growth. *Q. J. Econ.*, 107: 407-437.
- Mansur, K., D.A. Abd-Rahim, B. Lim and R. Mahmud, 2009. Perception toward the importance of education among muslim women in papar, Sabah (Malaysia). MPRA Paper No. 13430. <http://mpra.ub.uni-muenchen.de/13430/>.
- Ramirez, A., G. Ranis and F. Stewart, 1998. Economic growth and human development. QEH Working Paper, No. 18. <http://economics.ouls.ox.ac.uk/12332/1/qehwps18.pdf>.
- Tahir, M.Z., M. Jusoh and M. Zainudin, 1993. *Kamus Ekonomi*. Percetakan Dewan Bahasa dan Pustaka, Kuala Lumpur.
- Wibisono, Y., 2001. Determinan pertumbuhan ekonomi regional: Studi empiris antar propinsi di Indonesia. *J. Ekonomi dan Pembangunan Indonesia*, 1: 52-83.