Human Capital and Income Distribution in Malaysia: A Case Study

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Malaysia has achieved a remarkably high economic growth as a result of strong government policy and political stability. The national vision to achieve the status of newly industrialized nation by year 2020 seemed to be realized. However, achieving high economic growth alone cannot guarantee a decent life of the society if there is large income gap between them. Based on the historical data, the trend of income inequality in Malaysia has been unstable since independence even though human capital development has been expanding over time. This paper aims to identify the role of human capital in explaining income distribution in Malaysia. The analysis is based on 4,003 household data collected through a survey conducted in 2007-2008 throughout the Peninsular Malaysia. The study constructs Gini coefficient by various segments like ethnics, regions and strata to look at patterns of income distribution. In addition, other measurements of income distribution such as income ratio and income percentage will also be used in the analysis. A regression model will be specified to estimate the role of human capital on income distribution. In the model, household income ratio will be used as dependent variable whilst household characteristics including human capital achievement, location and regions will act as independent variables.

I. Introduction

The role of human capital on economic growth and development is becoming more important. It is believed that more educated population will bring a significant positive impact on social, political and economic performances. Generally speaking, an increase in human capital achievement amongst the population will stimulate economic growth and reduce incidence of poverty. Furthermore, human capital will lead

to a more civilised society through knowledge, information and good culture practices. Therefore, it is necessary for a country to continuously invest in human capital to enhance and maintain the quality of its human resource.

In Malaysia budget allocation for human capital investment through education, training and health is considerably high. For example, between the 2000-2003 periods, percentage expenditure for education and training were more than 20% of the total government expenditure. Even though years after 2003 witnessed a drop in this percentage, it was never been lower than 12% (Economic Report, various years).

One of the major aspects of economic development is to achieve a more equal income distribution amongst the various segments of the society. Yet, in Malaysia despite of achieving a considerably high economic growth, poverty and income distribution are still be the major concern. High economic growth does not guarantee equal income distribution because the later need government interference and cannot merely leave to the market forces. This is because people do not have equal chance in owning and exploring resources. Even though with good government policy, issue of income inequality will still persist if such policy is ineffective. For example, if the programmes that are designed for the poor do not reach the target groups.

The objective of this paper is to discuss income distribution by various segments like ethnic and strata using several indicators like Gini coefficient, income ratio and income percentage. Apart from this, this paper also aims to analyse the role of human capital achievement on income distribution in Malaysia.   The analysis is based on 4003 household's data collected in 2007/2008 in Peninsular Malaysia.

This article is organized as follows. In section 2, we discuss literature review and in section 3, we explore research background like human capital achievement, trend of income distribution and trend of poverty. While in section 4 we explain the methodology and model specification. Section 5 explains the results from the study and lastly section 6 summarizes the results and conclusion.

2. Literature Review

Schultz (1960) and Becker (1964) argued that human capital variables have positive relationship with earnings through productivity enhancement. Since earnings constitute a major portion of income, the distribution of income will be more equal when educational opportunity is equally distributed. Becker (1964) limits human capital components into four to include education, training, health and migration. But these components have been changing overtime to suite with current environment. For example, variables like knowledge, skills and information are added to the components (Becker, 1993; Fedderke et al, 1999 & Djamaludin Ancok; 2007).

It is long been recognized that human capital is one of the factors that can raise people's income, hence, lessen income inequality. The power of human capital to raise individual' earnings has been pointed out by the founder of Human Capital Theory, Schultz (1960) and Becker (1964). This argument subsequently supported by other researchers and most studies strongly show significant and positive relationship between human capital attainment and earnings or income (Denison, 1967); Barro, 1990; Mankiw et al., 1992; De Gregario, 1992; Otani & Villanueva, 1993; Hanson & Knowles, 1997; Murthy and Chien, 1997; Barro & Lee, 1996 & Pritchett, 1996). They also agree that when human capital attainment especially education is equally distributed amongst the society, then income distribution will be more equal (Hammermesh, 1984).

Most previous studies show a positive relationship between income distribution and human capital. For example, Podder (2003) studies the role of human capital in determining earnings inequality in Australia between 1997 and 1998. Using Mincer quadratic earnings equation, he finds that inequality is associated with the presence of discrimination. Grimm (2004) uses micro simulation dynamic model to analyse impact of educational development in Cote d' Ivoire on household income. He finds a positive relationship between these two variables, whereby income distribution and poverty depend very much on returns to education and demand for labour. In another study, Arabsheibani,

Carneiro and Hanley (2003) find that an increase in rate of returns to education will reduce income inequality.

A study by Behr, Christofides and Neelakantan (2004) using data from the United States Census Biro from 1970 to 2000 shows that education reduces inequality of the 50 states. Ferreira and de Barros (2000) studies education and income distribution in Brazil using data from 1976 to 1996 and utilizing simulation method. The result shows that a decrease in returns to education and experience will increase poverty. In contrast, an increase in education level and equality in income distribution as well as dependency ratio will decrease poverty.

There are also studies that try to identify the determinants of income distribution. For example, Rahmah and Poo Bee Tin (2002) using the Malaysian data of the 1970-2000 period study the determinants of income distribution. They find that foreign direct investment, unemployment rate and foreign labour have a positive significant relationship with Gini coefficient. This indicates that an increase in those variables will reduce income inequality. While GDP growth, manufacturing employment and transfer payment are negatively associated with income inequality. Lin (2007) analyses the education expansion, educational inequality and income inequality in Taiwan from 1976 to 2003. He finds that, Taiwan has experienced a decrease in education inequality and an increase in mean year of schooling. This subsequently contributes to lower income inequality in Taiwan.

3. Human Capital, Income Distribution and Poverty in Malaysia

Education and training are two major components of human capital. In Malaysia, enrolment at tertiary level of education increases during 2000-2010 periods. At the certificate level, total enrolment increased from 105,570 in 2000 to 132,880 in 2005. The number is expected to increase further to 284,770 in 2010. Other education levels show a similar trend. When comparing enrolment in the public tertiary institution with the private institution, the data shows that enrolments in the public institutions is higher except at the certificate and diploma level (refer to Table I).

Table 1: Enrolment in Tertiary Education Institution by Education Level 2000 – 2010

Education Level	Number of Student								
	2000			2005			2010		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Certificate	23,816	81,754	105,570	37,931	94,949	132,880	141,290	143,480	284,770
Diploma	91,398	117,056	208,454	98,953	131,428	230,381	285,690	188,680	474,370
Bachelor Degree	170,794	59,932	230,726	212,326	110,591	322,917	293,650	134,550	428,370
Master	24,007	2,174	26,181	34,436	4,202	38,638	111,550	5,770	117,320
Ph.D	3,359	131	3,490	6,742	140	6,882	21,410	270	21,630
Total	313,374	261,047	574,421	390,388	341,310	731,698	853,590	472,750	1,326,340

Source: Malaysia, 2006

Training is another aspect of human capital that gains much attention from the Malaysian government. Training programme is associated with employee's skill improvement and hence, stimulate productivity growth. During the Ninth Malaysia Plan (9MP), the government has introduced double shift training programmes aiming to increase training opportunity amongst the school-leavers and increase the supply of skilled human-resources (Malaysia, 2006). The establishment of 20 new skill training institutions and upgrading 10 training institutions resulted in 38,765 supply of new workforce from the public sector and 33,111 from the private sector in 2005 (Malaysia, 2006).

Apart from upgrading the educational attainment among the society, the government has designed various programmes for poverty reduction and income distribution. In terms of poverty reduction, the programmes are quite successful in uplifting the households above the poverty line. Table II shows the poverty rate and hardcore poverty from year 1980 to 2007. In 1980, the poverty rate was 32.1 percent with lower poverty rate achieved in the urban area. Poverty rate had continuously decreased and reached 3.6 percent in 2007. While the hardcore poverty rate declined from 6.9 percent in 1985 to 0.7 percent in 2007. The percentage of hardcore poverty in urban and rural area had declined from 2.4 percent and 9.3 percent to 0.3 percent and 1.4 percent respectively in 1985 and 2004.

Table 2 : Poverty Rate and Hardcore Poverty

Level of Poverty	Percent						
	1980	1985	1990	1995	1999	2004	2007
Poverty Rate	32.1	20.7	17.1	9.6	8.5	5.7	3.6
Urban	16.3	8.5	7.5	4.1	3.3	2.5	2.0
Rural	39.5	27.3	21.8	16.1	14.8	11.9	7.1
Hardcore Poverty Rate	-	6.9	4.0	2.2	1.9	1.2	0.7
Urban	-	2.4	1.4	0.9	0.5	0.4	0.3
Rural	-	9.3	5.2	3.7	3.6	2.9	1.4

Source : Malaysia, 2000; Malaysia, 2006

Table III presents the poverty rate and hardcore poverty by ethnic group from 1999 to 2004. The hardcore poverty rate for Bumiputera in the urban area remains at 0.7 percent from 1999 to 2004. This rate is lower than in the rural area at 4.4 percent in 1999 and 3.3 percent in 2004. As a whole, the hardcore poverty for Bumiputera decreased from 2.9 percent in 1999 to 1.9 percent in 2004. The hardcore poverty for the Chinese has been reduced but remains the same for the Indian during the same period.

Table 3 : Hardcore Poverty and Poverty Rate by Ethnic Group 1999 and 2004

	1999 (Percent)			2004 (Percent)		
	Bumiputera	**Cina**	**Indian**	**Bumiputera**	**Cina**	**Indian**
Hardcore Poverty	**2.9**	**0.2**	**0.3**	**1.9**	**0.1**	**0.3**
Urban	0.7	0.1	0.2	0.7	*neg[1]*	0.2
Rural	4.4	0.4	0.5	3.3	0.3	0.5
Overall Poverty	**12.4**	**1.2**	**3.5**	**8.3**	**0.6**	**2.9**
Urban	5.1	0.8	2.4	4.1	0.4	2.4
Rural	17.5	2.7	5.8	13.4	2.3	5.4
Poverty Gap	3.3	0.2	0.7	2.1	0.1	0.6

Note : 1 Less from 0.05 percent
Source : Malaysia, 2006

One of the indicators for income distribution is share of income by certain group of households. During the Ninth Malaysian Plan, the household share of income for 40 percent lowest income group decreases from 14.0 percent in 1999 to 13.5 percent in 2004. While for the top 20 percent income group, it increases from 50.5 percent to 51.2 percent during the same period. The Gini coefficient also shows a more

unequal trend of income distribution which increased from 0.452 in 1999 to 0.441 in 2007 (Malaysia, 2006). The household monthly real mean income for Bumiputera increased from RM1,984 in 1999 and RM2,522 in 2004. The Chinese household real mean monthly income is the highest. The real mean monthly household income in the urban areas in 1999 is RM3,103 and in the rural area it is RM1,718. It increases to RM3,956 and RM1,875 in 2004 respectively for the urban and the rural area(refer Table IV).

Table 4 : Average Monthly Gross Household Income and Gini Coefficient by Ethnic Group and Strata, 1999 And 2007

Ethnic Group and Strata	At Current Prices (RM			Gini Coefficient		
	1999	2004	2007	1999	2004	2007
Bumiputera	1,984	2,711	3,156	0.433	0.452	0.430
Chinese	3,456	4,437	4,853	0.434	0.446	0.432
Indian	2,702	3,456	3,799	0.413	0.425	0.414
Others	1,371	2,312	3,651	0.393	0.462	0.545
Malaysia	**2,472**	**3,249**	**3,686**	**0.452**	**0.462**	**0.441**
Urban	3,103	3,956	4,356	0.432	0.444	0.427
Rural	1,718	1,875	2,283	0.421	0.397	0.388

Source: Malaysia, 2006

Figure I below shows trend of Gini coefficient between 1957/58 and 2007 period. The Gini coefficient for 1957/58, was 0.41 and increased to 0.53 in 1976. After 1976 it continuously decreased until 1990 and followed unstable trends after that period. The Gini coefficient for 2007 was 0.441 and this is the latest figure available.

Figure 1: Gini Coefficient from 1957/58 to 2007
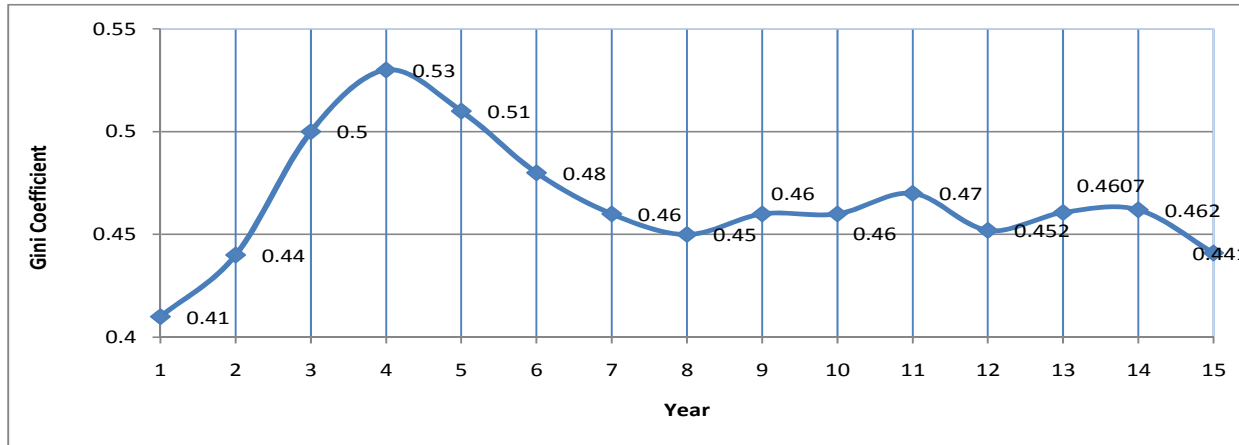
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Year	1957/58	1967/68	1970	1976	1979	1984	1987	1990	1993	1995	1997	1999	2002	2004	2007

Note: 1957/58 – 1987: Peninsular Malaysia
Source: Sodgrass, 1980
        Anand, 1983
        Malaysia (1981, 1984, 1989, 1991, 1993, 1996, 1999, 2001, 2006, 2008)

4. Methodology and Model Specification
Data Collection

Data was collected through a field survey conducted in 2007/2008 for the whole Peninsular Malaysia using a set of questionnaire. The group stratified sampling method is used to get the sample size by regions, states, location and ethnicity. The household population is obtained from Census of Population and Housing in Malaysia (Malaysia, 2001) and population composition is based on the Ninth Malaysia Plan (Malaysia, 2006). The original plan was to get 5,000 households but only 4,003 households were successfully interviewed.

The role of human capital on household income ratio is analysed using a multiple regression model. The independent variables include human capital variables like education, training, working experience and other variables like health, demography, job category and job sector. The estimation model can be written as follow,

$$IR_i = \beta_0 + \beta_1 MYSWP + \beta_2 MTTWP + \beta_3 MEXP \beta_4 MLWP$$
$$+ \beta5_5 MAWP + \beta_6 DU + \beta_7 DM + \beta_8 DC$$
$$\beta_8 DKM + \beta_9 DS + \mu$$

Where,
IR = percentage of household income
MYSWP = Mean year of schooling for working household
MTTWP = Mean period of training for working household
MEXP = Mean working experience for working household
MLWP = Mean score of healthy lifestyle for working household
MAWP = Mean days absence from work for working household
DU = location dummy, coded 1 if urban, 0 otherwise l
DM = ethnic dummy, coded 1 if Malay, 0 otherwise
DC = ethnic dummy, coded 1 if Chinese, 0 otherwise
DKW = knowledge workers dummy, coded 1 if household headed works in the category of senior officer and manager; professional; technician and assistant professional, 0 otherwise
DS = sector dummy, coded 1 if household headed is involved in service sector, 0 otherwise
μ = error term

5. Profile of Respondents and Estimation Results

Table V shows profile of the households in this study. A total of 2,749 households (68.7%) live in the urban area while 1,254 (31.3%) live in rural area. Most households are concentrated in the central and north regions. More than half of the households from all races live in the urban area.

Table 5 : Distribution of Household by Region, Location and Ethnicity

Region	Urban				Rural			
	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total
North	444 (67.3) [23.6]	170 (25.8) [25.4]	46 (7.0) [23.0]	660 (100.0) [24.0]	318 (77.4) [33.8]	70 (17.0) [28.9]	23 (7.0) [23.0]	411 (100.0) [32.8]
South	378 (70.8) [20.1]	121 (18.1) [19.2]	35 (6.6) [17.5]	534 (100.0) [19.4]	184 (74.8) [19.6]	49 (19.9) [20.2]	13 (5.3) [18.1]	246 (100.0) [19.6]
Central	892 (67.2) [47.5]	330 (49.3) [48.4]	105 (7.9) [52.5]	1327 (100.0) [48.3]	135 (72.6) [14.4]	39 (21.0) [16.1]	12 (6.5) [16.7]	186 (100.0) [14.8]
East	165 (72.4) [8.8]	49 (7.3) [7.5]	14 (6.1) [7.0]	228 (100.0) [8.3]	303 (73.7) [32.2]	84 (20.4) [34.7]	24 (5.8) [33.3]	411 (100.0) [32.8]
Total	1879 (68.4) [100.0]	670 (24.4) [100.0]	200 (7.3) [100.0]	2749 (100.0) [100.0]	940 (75.0) [100.0]	242 (19.3) [100.0]	72 (5.7) [100.0]	1254 (100.0) [100.0]

Note: ( ) percent of the total amount, [ ] percent within ethnicity
Source: Field survey, 2007/2008

The study reveals that the majority of households regardless of ethnicity work in the services sector followed by the manufacturing sector. As predicted, an involvement of the Malay households in the agriculture sector is higher than the other races (refer Table VI).

Table 6 : Distribution of Working Household by Sector

Sector	Urban				Rural			
	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total
Service	2634 [78.5]	811 [77.5]	233 [73.7]	3678 [78.0]	986 [57.1]	274 [71.5]	70 [56.9]	1330 [59.5]
Manufacturing	518 [15.4]	152 [14.5]	53 [16.8]	723 [15.3]	228 [13.2]	45 [11.7]	24 [19.5]	297 [13.3]
Agriculture	74 [2.2]	14 [1.3]	12 [3.8]	100 [2.1]	400 [23.1]	50 [13.1]	24 [19.5]	474 [21.2]
Mining	8 [0.2]	0 [0.0]	1 [0.3]	9 [0.2]	1 [0.1]	1 [0.3]	0 [0.0]	2 [0.1]
Construction	120 [3.6]	69 [6.6]	17 [5.4]	206 [4.4]	113 [6.5]	13 [3.4]	5 [4.1]	131 [5.9]
Total	3354 [100.0]	1046 [100.0]	316 [100.0]	4716 [100.0]	1728 [100.0]	383 [100.0]	123 [100.0]	2234 [100.0]

Source: Field survey, 2007/2008

Most of the working households work in a service related jobs and sales. Of the total households in the urban area, 28.8 percent are involved in the service related sector whereas within the ethnicity, the percentage of involvement are 42.1 percent of the Chinese, 33.1 percent of the Indians and 24.1 percent of the Malays. A similar structure is observed in the rural area whereby the services being the most important sector. It is shown that the percentage of the Malays in the rural that involved in the agriculture and fishery related works are higher than the Chinese and the

Indian. In contrast, the Chinese and Indian have greater involvement in the business sector compared to the Malays (refer Table VII).

Table 7 : Distribution of Working Household by Occupational Category

Occupational Category	Urban				Rural			
	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total
Senior Officer & Manager	260 [7.9]	86 [8.2]	11 [3.4]	357 [7.7]	65 [3.9]	13 [3.4]	0 [0.0]	78 [3.6]
Professional	683 [20.7]	195 [18.6]	57 [17.8]	935 [20.1]	186 [11.1]	28 [7.3]	10 [8.0]	224 [10.2]
Technician & Associate Professionals	297 [9.0]	87 [8.3]	22 [6.9]	406 [8.7]	126 [7.5]	17 [4.5]	6 [4.8]	149 [6.8]
Clerical Employees	474 [14.4]	72 [6.9]	28 [8.8]	574 [12.3]	134 [8.0]	23 [6.0]	9 [7.2]	166 [7.6]
Service & Selling Staff	795 [24.1]	441 [42.1]	106 [33.1]	1342 [28.8]	385 [22.9]	172 [45.0]	40 [32.0]	597 [27.3]
Agriculture & Fishery Worker	62 [1.9]	14 [1.3]	7 [2.2]	83 [1.8]	355 [21.1]	46 [12.0]	21 [16.8]	422 [19.3]
Craft & Trade Related Worker	33 [1.0]	8 [0.8]	1 [0.3]	42 [0.9]	17 [1.0]	12 [3.1]	2 [1.6]	31 [1.4]
Plant, Machine & Installation Operator	376 [11.4]	54 [5.2]	50 [15.6]	480 [10.3]	171 [10.2]	25 [6.5]	19 [15.2]	215 [9.8]
Elementary Occupational	312 [9.5]	91 [8.7]	38 [11.9]	441 [9.5]	243 [14.4]	46 [12.0]	18 [14.4]	307 [14.0]
Total	3292 [100.0]	1048 [100.0]	320 [100.0]	4660 [100.0]	1682 [100.0]	382 [100.0]	125 [100.0]	2189 [100.0]

Source: Field survey, 2007/2008

Distribution of Household Income

Table VIII shows mean household income ratio that reflects the distribution of household income in thee sample. The mean rural household income is lower than the urban as shown by the ratio of 0.6378. The mean household income for the less-developed region is 78.35 percent of the developed region. While the mean household income for the North and the South is almost equal with the ratio of 0.9723. It is also observed that the mean household income of the Malays is higher than that of the Indian but lower than the Chinese.

Table 8 : Mean Household Income Ratio by Location, Region, Economic Status, Ethnicity and Gender

	Mean Household Income Ratio
Location	
Rural-Urban	0.6378
Economic Status	
Less Developed – Developed	0.7835
Region	
East – Central	0.5789
North – Central	0.8535
South – Central	0.8778
East – South	0.6596
North – South	0.9723
East – North	0.6784
Ethnicity	
Malay – Chinese	0.8210
Indian – Chinese	0.7278
Malay – Indian	1.129
Head of Household	
Female – Male	0.7626

Source: Field survey, 2007/2008

Table IX shows the percentage of income owned by the group of households. It is shown that the 20 percent highest income group receive 44.1 percent of total income. While the percentage income received by the 40 percent middle and 40 percent lowest income groups are 38.9 percent and 17.0 percent respectively. This demonstrates inequality in income distribution.

Table 9: Percentage of Household Income by Group

Group of Household	Percentage of Income (%)
20 percent highest	44.1
40 percent middle	38.9
40 percent lowest	17.0

Source: Field survey, 2007/2008

Table 10 shows Gini coefficient by gender, ethnicity, location and region. The overall Gini coefficient is 0.384. Income distribution is more unequal amongst the male headed households as compared to the females headed households as indicated by the Gini coefficient. Income distribution also seems to be more unequal amongst the Malays, the rural areas and the Central region. The most unequal income distribution is found to be in the East region with Gini index of 0.417. The rural area also records high Gini index of 0.402. This demonstrates that income distribution is more unequal for the lower income groups that may due to more unequal jobs distribution.

Table 10 : Gini Coefficient by Gender, Ethnicity, Location and Region

	Total Household	**Gini Coefficient**
Gender		
Man	3,775	0.3822
Woman	227	0.3263
Ethnicity		
Malay	2,819	0.3862
Chinese	912	0.3648
Indian	272	0.3734
Location		
Urban	2,749	0.3584
Rural	1,254	0.4021
Region		
North	1,071	0.3685
South	780	0.3692
Central	1,513	0.3628
East	639	0.4167
Overall	4002	0.3838

Note : N = 4002 (Missing Value =1)

Formula for Gini Coefficient: $G = \sum P_i Q_{i+1} - \sum P_i Q_{i-1}$

Source : Field survey 2007/2008

Human Capital and Income Distribution

Results from estimation of regression model show that all independent variables significantly determine household percentage income. The result shows that human capital variables like education, training, experience and healthy lifestyle are significant and positively related to households percentage income; hence reducing income inequality amongst the households. The result also demonstrates that the urban households have higher percentage income compared to the rural. The

percentage income of the Malays and Chinese are also significantly higher than the Indians. When two other variables are added to the model, the significant levels of the variables are still remained. Head of household who are involved in the service sector and are knowledge workers receive higher percentage income (refer Table XI).

Table 11: Estimation Result of Regression Model

Independent Variable	1	2
Constant	-.033 (-11.787)***	-.024 (-8.013)***
(a) Human Capital		
Year of schooling of working Household (**MYSWP**)	.003 (20.007)***	.002 (12.922)***
Training period of working Household (**MTTWP**)	.006 (8.537)***	.005 (6.322)***
Working experience of working household (**MExp**)	.000 (6.962)***	.000 (5.377)***
Lifestyle of working household (**MLWP**)	.002 (4.522)***	.002 (4.165)***
(b) Demographic & Ethnicity		
Urban/Rural (**DU**)	.006 (7.656)***	.005 (6.035)***
Malay (**DM**)	.002 (1.850)*	.002 (1.302)
Chinese (**DC**)	.008 (6.095)***	.008 (5.538)***
(c) Sector and Occupational Category		
Services Workers (DS)		.001 (1.983)**
Knowledge Workers (DKW)		.009 (10.724)***
Adjusted R^2	0.190	0.217
R^2	0.192	0.219
Overall F	125.498***	106.455***
N	3709	3424

Note: *** Significant at 1% significance level

    **   Significant at 5% significance level

     *   Significant at 10% significance level

6. Conclusion

The Malaysian economy has steadily grown at remarkably high rate since independence except for few periods during economic turbulence. Nevertheless, income distribution has still become the main issue and agenda in Malaysian economic development. Studies in the past were rarely focussing on determinants of income distribution but rather looking merely at the trend of income inequality using the government official data. This study attempts to identify determinants of income inequality in particular the human capital variables using primary data. Apart from this, several indicators of income inequality are calculated like mean ratio, income percentage, Lorenz curve and Gini coefficient.

The results from this study confirm the pattern of income distribution in Malaysia that was generated from the official data. What is more important is the study shows that all cooperated human capital variables significantly determine the percentage of household income which reflects income distribution. Other variables like demography and ethnicity also important when analysing income distribution. It is shown that the urban area and the Chinese gain higher income as compared respectively to the rural, the Malays and the Indians.

Based on the results from this study, we suggest that enhancement in human capital attainment amongst the household members must be done continuously. One of the measures is life-long education. Another important aspect is to educate the household members with a healthy life style that will subsequently contribute to household income. One of the major findings from the study is that the urban dwellers and the Chinese benefit more from the Malaysian economic growth. This is very much associated with their involvement in more productive activities like the business and service related activities. Therefore, other segment of the society like the rural and non-Chinese households must get involved in higher value added activities.

The services sector seems to generate higher household income as indicated by the regression result. This indicates the capability of this sector to generate higher value-added activities and this is in tandem with increasingly important of this sector in the Malaysian economy.

The ability of knowledge workers to gain higher income is undoubted. This is very much associated with their higher skill and productivity. Therefore, enhancing human capital attainment through education and training amongst the household members is very much needed if they want to be knowledge workers which subsequently will raise households income and lessen the income inequality.

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