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TREND OF LABOR FORCE PARTICIPATION IN MALAYSIA

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ABSTRACT

Labor force is one of important criterion that contributes to the success of a country. Higher education level among labor force indicates their ability to adsorb certain knowledge and skills that are needed in developing country. As Malaysia's current goal is to become a developed country and high-income nation in the near future, efficient used of labor with understanding of their current standing in skills and expertise is critical. In this study, we aim to explore the trend of labor force participation in Malaysia. Descriptive analysis was conducted to the data of number of labor force and their education attainment from 1982 5 2016, extracted from Department of Statistics Malaysia website. Further, regression analysis was employed to estimate the number of labor force and education level for the next 10 years. The finding indicates that the number of labor force with higher education level is increasing over time, while labor force with primary education decreasing, and we should expect zero labor force with no formal education from 2019 onward. This preliminary exploration on labor trend in Malaysia can improve understanding of Malaysia's current labor force to further improve education system that correspond to the job creation that of relevance in the future.

I. INTRODUCTION

Malaysia is a progressive country with strong resilience towards external shocks in recent years. Its immediate aim is to achieve the status of a high-income country with inclusion improvement (IMF, 2018). In the current report, IMF highlighted its major upside risk is on the global demand for electronics, its downside risk includes the exposures in the real estate sector, and emphasis should be given to economic growth while maintaining stability, raising productivity and investment, and further encouraging labor market reforms.

Among immediate reforms to undertake include female labor force participation, the improvement in the quality of education and the reduction in skills mismatched. With a steady growth of its real growth domestic product (GDP) of 5.8% (5.3%), the inflation rate of 3.8% (3.2%), and an unemployment rate of 3.4% (3.2%) in 2017 and 2018 (projected) respectively, Malaysia should keep its momentum in the right direction to achieve high-income status.

Though the outlook is positive moving forward, the domestic risks should not be taken lightly. Structural reform in the labor market poses internal risks when fails to be implemented, in particular when skills mismatched are not reduced, and the R&D and innovation are not improved.

The extensive improvement in the labor market can significantly raise the quality of living standard in the country (Osterman, 2014; Canning, 2011). Some associated the quality of human capital with education, in which the higher the education level and more highly skilled individuals increase their competitive advantages in the workforce (Freeman, 2010; Lepori, Seeber and Bonaccorsi, 2015; Olena, Bilan, Mishchuk and Akimov, 2021).

However, the changes in the labor market showed labor-saving technological changes

(Danziger and Ratner, 2010; Frey and Osborne, 2017) and job polarization (Goos, Manning and Salomons, 2014; Dwyer, 2013; Bárány and Siegel, 2018; Ferschli, Rehm, Schnetzer, and Zilian, 2021) are among threats that need to be addressed. Job opportunities that involved high-skills, high-wage occupations and low-skills, low-wage occupation is expanding, while opportunities for middle-skills occupation are declining (Autor, 2010; Keller and Utar, 2016).

The labor force as defined by the Department of Statistics Malaysia refers to the population in the working age group of 15 to 65 years, who are either employed or unemployed. Thus, it is important to investigate the trend in Malaysian labor force participation to better understand current and future predicaments for better coordination to achieve future success. This research will light as a guideline for the authority to have a proper plan for future job opportunities.

II. METHODOLOGY

This preliminary research study aims to explore the trend in Malaysia's labor force based on education attainment. Educational attainment refers to the highest level at which a person has completed schooling or is currently attending school in a public or private educational institution that provides formal education, formally categorize as follows:

No formal education refers to persons who have never attended school in any of the educational institutions that provide formal education.

Primary refers to those whose highest level of education attained is from Standard 1 to 6 or equivalent.

Secondary refers to those whose highest level of education attained is from Form 1 to 5 (including remove class), General Certificate of Education (GCE) O Level or equivalent. This includes basic skill programs in specific trades and technical skills institutions with a training period of at least six months.

Tertiary refers to those whose highest level of education is above Form 5.

In this article, we collected secondary data from the Department of Statistics Malaysia website. The analysis of the data includes 13 states and 3 federal territories in Malaysia, together with a number of the labor force from 1982 until 2016. A descriptive analysis was conducted to provide a clear view of the trend of labor force participation in Malaysia.

Results of the Study

From this finding, there are two distinct trends for this data:

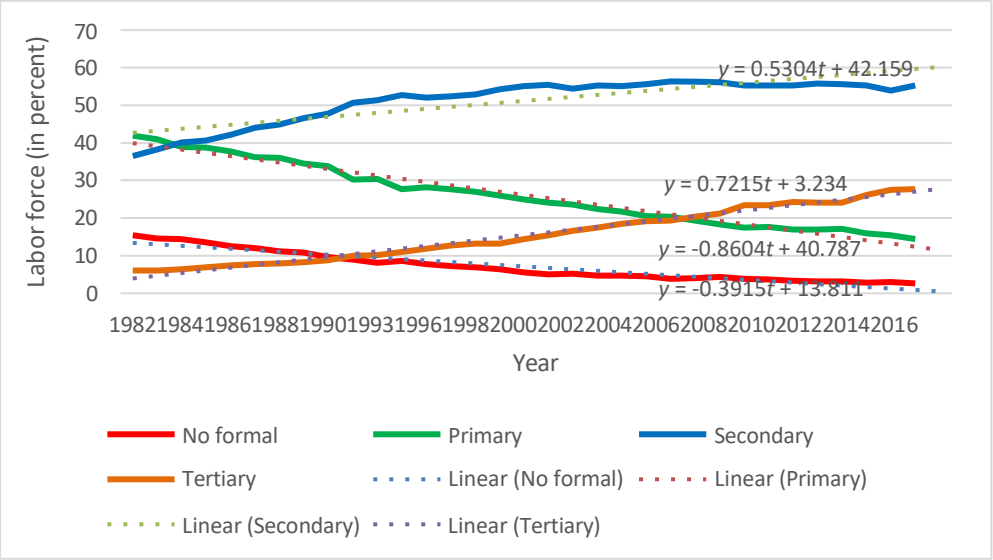
The decreasing percentage of the labor force with no formal education and primary education.

The increasing percentage of the labor force for secondary and tertiary education.

Figure 1 shows the decreasing (in percentage) trend in primary education, and consequently, the increasing (in percentage) trend of secondary and tertiary education in the labor force. While, for the labor force with secondary education, a drastic increment is visible from 1982 to 1995, with a 52% - 55% increase in percentage. However, for (provide years), the trend begins to become constant. Meanwhile, for the labor force with tertiary education, a positive increment can be seen throughout the 34 years.

As can be seen from Figure 1, a linear trend can be adopted, thus a regression analysis was employed for further analysis. The analysis shows that for every one-year increment, the tertiary labor force increased at 0.7%. However, for no formal education and primary education, for every one-year increment, the percentage of the labor force decreased by 0.3% and 0.8%, respectively. While for secondary education, the percentage increased by about 0.5% for every one-year increment. The respective equations for these situations are shown in Figure 1.

Figure 1: Labor force versus education attainment from 1982 to 2016.



The percentages of the unemployment rate versus education attainment are shown in Table 1. The rate was calculated every 5 years starting from 1985 to 2015. From this table, the percentages of the labor force with no formal education, primary, secondary, and tertiary education was compared with the percentage of unemployment rate in Malaysia. The findings show that the percentage of the unemployment rate in Malaysia in 2015 is around 3.10%. This value dropped 0.19% from the last 5 years. On the other hand, the percentage of the unemployment rate for the labor force with no formal education is higher (3.27%) than the overall percentage of the unemployment rate for Malaysia (3.10%). However, this percentage slightly decreased as compared to the percentage in 2010. A similar trend occurred for the labor force with tertiary education. The percentage increased from 3.54% in 2010 to 3.8% in 2015. These trends and patterns can be seen clearly in Figure 2 and Figure 3.

Table 1: Percentage of the unemployment rate (UR) versus education attainment

	No formal		Primary		Secondary		Tertiary		Malaysia	
	Number of unemployed persons	Unemployment rate	Number of unemployed persons	Unemployment rate	Number of unemployed persons	Unemployment rate	Number of unemployed persons	Unemployment rate	Number of unemployed persons	Unemployment rate
1985	19.2	2.36	79.3	3.41	209.4	8.59	28.2	6.81	336.7	5.62
1990	14.2	2.11	54.5	2.3	218	6.51	28.4	4.61	315.2	4.50
1995	10.8	1.6	40.9	1.88	174.4	4.19	22.1	2.53	248.1	3.14
2000	10	1.88	43.8	1.84	189.3	3.6	43.8	3.17	286.9	3.00
2005	9.5	1.99	42.2	1.97	229.6	3.96	86.9	4.36	368	3.53
2010	16.6	3.67	43.1	1.99	242.4	3.57	102.4	3.54	404.4	3.29
2015	14.6	3.27	33.8	1.52	249.6	3.19	152.1	3.8	450.3	3.10

Figure 2: Percentage of unemployment rate versus education attainment from 1985 to 2015

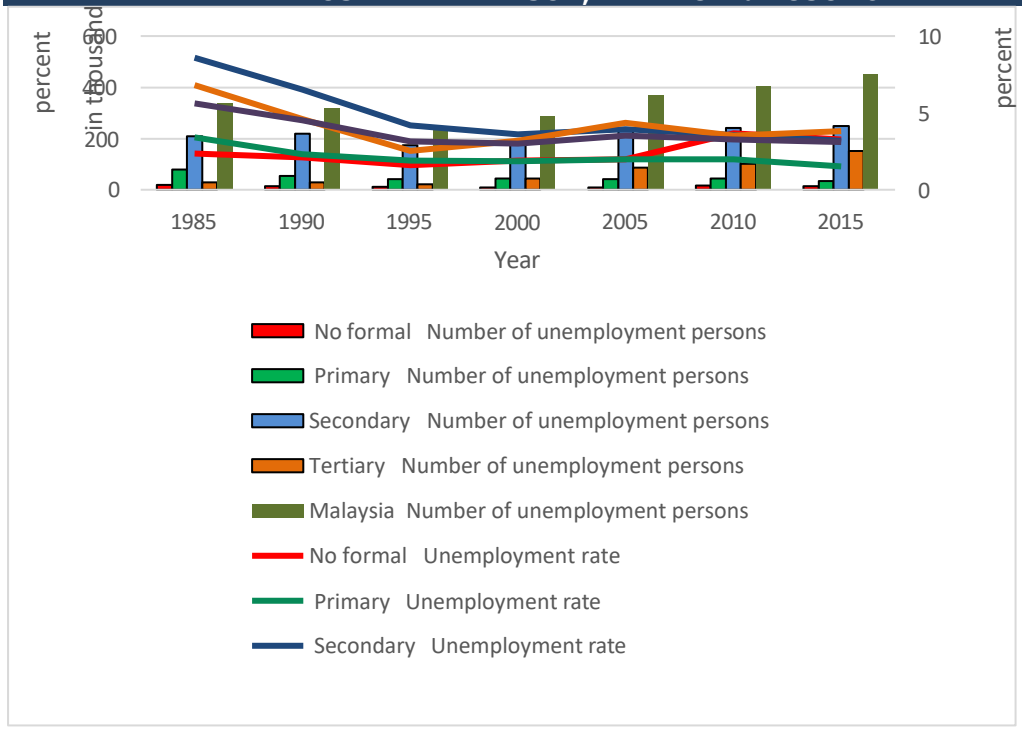
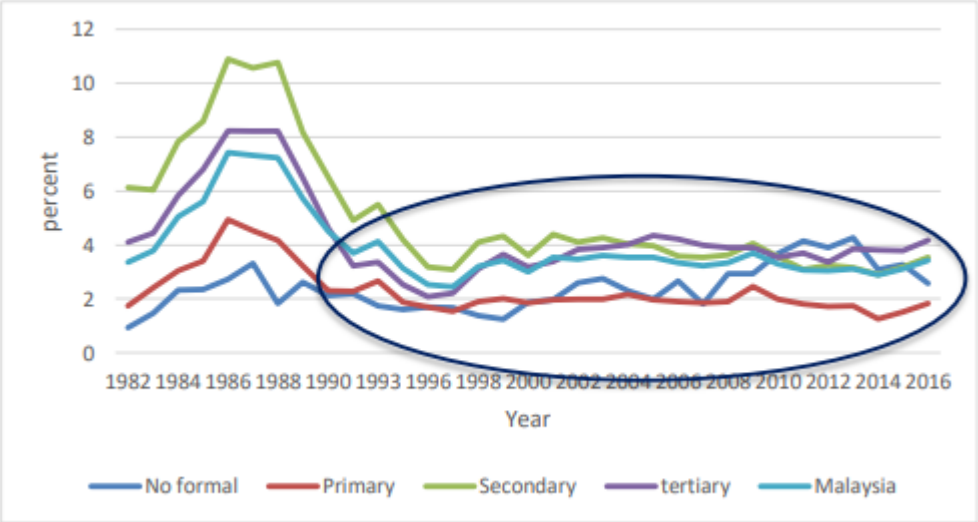


Figure 3: Unemployment rate versus education attainment from 1982 to 2016



Based on regression equations calculated and shown in Figure 1, we are able to forecast the percentage of the labor force according to their education from 2017 until 2025, as presented in Table 2. The forecasted value suggested an increasing pattern in the percentages for the labor force with secondary and tertiary education. Such a pattern suggested that more people with higher education would enter the job market in the near future. While for the labor force with primary education, a significant decrease in percentages is visible from 2017 to 2025. This model also suggested that in the year 2019 onward, there will be no more people with no formal education that will enter Malaysia's workforce.

Table 2: Forecast on labor force versus education attainment from 2017 to 2025

Year	Labor Force by Education Attainment (in %)			
	No formal	Primary	Secondary	Tertiary
2017	0.501	11.533	60.191	27.763
2018	0.110	10.673	60.721	28.485
2019	-0.282	9.812	61.252	29.206
2020	-0.673	8.952	61.782	29.928

2021	-1.065	8.092	62.312	30.649
2022	-1.456	7.231	62.843	31.371
2023	-1.848	6.371	63.373	32.092
2024	-2.239	5.510	63.903	32.813
2025	-2.631	4.650	64.434	33.535

III. CONCLUSION AND RECOMMENDATIONS

In this study, we discuss preliminarily the percentages of the labor force with different levels of education background from the year 1982 to 2016, with secondary data spanning 34 years. From the analysis, we can see that the number of laborers with higher education levels increasing over time. The estimated forecasting value for the next ten years also exhibits a decrease in the number of the labor force with primary education. This situation may be because of the rise of awareness for the young generation to have a good education before they join the work environment.

We also forecasted that by the year 2019 onwards, there is no more labor force with no formal education. This finding is consistent with Malaysia's initiative that aims to provide free primary and secondary education for its citizen. Such effort is also consistent with the drive towards building high-income earners and a developed nation. This effort will hopefully lead to a more successful country in the near future with everybody having a good living style, a healthy and happy environment.

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