



9TH MALAYSIA STATISTICS CONFERENCE

Department of Statistics, Malaysia

Dealing with Uncertainties: Unearthing Measures for Recovery



Labour Market Indicators in Malaysia: A study on causality relationship

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Introduction

The economy and labour market were severely impacted by the health crisis. Businesses were temporarily shut down and people have to stay at home to prevent and contain the spread of virus.

There are cases where people may have lost their jobs, suspended or cancelled hiring process, shorter or zero working hours and also unemployed persons who may stop looking for job.

This situation leads to massive increase in demand on granular information to analyse and lessen the impact of labour market due to the health crisis.

Literature Review

Andrew Machin (2003) defined vacancies as positions for which employers are actively seeking recruits from outside their business.

Jolana Skalickova and Miroslava Zavadska (2019) stated main labour market indicators are important for policy makers as there is evident connection between the variables. In the case of Czech Republic, there is a strong relationship between job vacancies and number of employed persons.

Eze Onyebuchi Michael, Atuma Emeka and Egbeoma Nwigboji Emmanuel (2016) studied on the relationship and impact of unemployment on economic growth in Nigeria.



Data Sources

- Quarterly Labour Force Survey
- Quarterly Employment Statistics
- Quarterly Gross Domestic Product

Methodology

Variables used

- Number of vacancies
- Employed persons
- Unemployed persons
- Unemployment rate
- Real gross domestic product

Tests using EViews

- Unit root test to examine stationarity
- Vector Auto Regressive model to obtain optimum lag length selection
- Granger Causality Test to examine causality between variables

Results

- 1 GDPCO were stationary at level while VAC, UNEMPR, UNEMP and EMP become stationary after first differencing at 5% and 10% critical values.

Table 1: Augmented Dickey-Fuller (ADF) Unit Root Test at Level and First Difference

Variables	Level			1 st Difference		
	ADF Statistics	5% Critical Value	10% Critical Value	ADF Statistics	5% Critical Value	10% Critical Value
Vac	-1.775068	-3.052169	-2.666593	-3.995339	-3.065585	-2.673459
Unempr	-1.433945	-3.052169	-2.666593	-3.844047	-3.065585	-2.673459
Unemp	-1.355946	-3.052169	-2.666593	-3.844047	-3.065585	-2.673459
GDPCO	-3.600862	-3.065585	-2.673459	-	-	-
Emp	-0.556565	-3.052169	-2.666593	-4.064237	-3.065585	-2.673459

- 2 The optimum lag selected by using FPE, AIC and HQ are 1. Therefore, possible model, VAR (1) is estimated using the optimal lag selected.

- 3 There are four (4) unidirectional relationship recorded p-value that is lower than 0.05 which were:

- (i) VAC and EMP;
- (ii) VAC and GDPCO;
- (iii) VAC and UNEMP; and
- (iv) VAC and UNEMPR.

This implies that it is VAC leads to EMP, GDPCO, UNEMP and UNEMPR in Malaysia.

Table 2: Lag Length Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-917.9615	NA*	8.76e+43	115.3702	115.6116*	115.3826
1	-890.5632	34.24788	7.86e+43*	115.0704*	116.5190	115.1446*

Table 3: Pairwise Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
D(VAC) does not Granger Cause D(EMP)	16	12.7078	0.0035
D(EMP) does not Granger Cause D(VAC)		0.67719	0.4254
D(VAC) does not Granger Cause GDPCO	16	6.60419	0.0233
GDPCO does not Granger Cause D(VAC)		2.77944	0.1194
D(VAC) does not Granger Cause D(UNEMP)	16	14.6188	0.0021
D(UNEMP) does not Granger Cause D(VAC)		0.61008	0.4487
D(VAC) does not Granger Cause D(UNEMPR)	16	11.7081	0.0045
D(UNEMPR) does not Granger Cause D(VAC)		0.83586	0.3772

Discussion

The findings are significant for policy makers as there is an evident connection between the main labour market indicators. Looking at the situation of Malaysia, it is noticeable that the relationship exists between vacancies with the number of employed persons, real gross domestic product, unemployed persons and unemployment rate. This means that the number of job vacancies available in the labour market significantly influenced other key indicators namely employed persons, real gross domestic product, unemployed persons and unemployment rate. Therefore, the Government should monitor the number of job vacancies offered and created by economic activity continuously and appropriate strategies may be implemented based on the information.

Conclusion

The economic disruption due to the COVID-19 pandemic led to steady redeployment of labour among economic sectors and caused changes to the labour market landscape. The impact of the pandemic among others are job losses, reduced incomes and many workers turned to informal employment. Hence, labour market continues to be a focus in the Twelfth Malaysia Plan with various initiatives and improvement plans need to be implemented to cater issued caused by the pandemic. The emphasis will be on expanding and create more job opportunities for Malaysian coupled with monitoring of labour market reform through key related variables.

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