

State Gross Domestic Product: Factors Influencing the Economic Growth of Negeri Sembilan

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Abstract

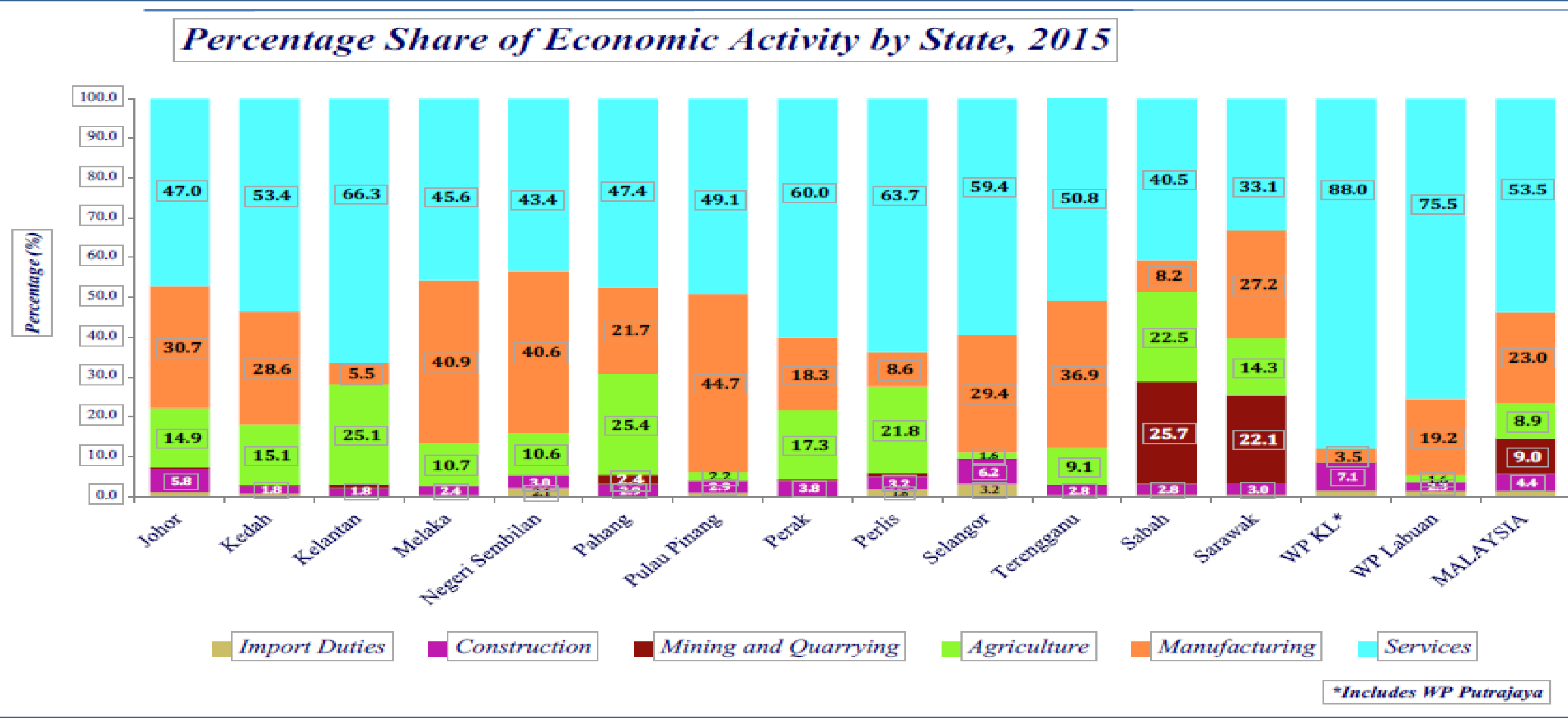
The purpose of this article is to study the factors influencing the economic growth of Negeri Sembilan. The data used in this paper focuses on regional economic growth rate of GDP, particularly in the state of Negeri Sembilan. The growth of ten years time series data from Gross Domestic Product (GDP) by State from year 2005 to 2015 were employed in this study. This paper demonstrates the regression and correlation qualitative analysis of statistics data obtaining from the Department of Statistics Malaysia using an E-Views Program. In the first phase of the study, regression analysis has been used to construct appropriate model as well as to determine the correlation among Negeri Sembilan's GDP and the main economic indicators, namely agriculture, mining and quarrying, manufacturing, construction, services and import duties.

Introduction

Negeri Sembilan is one of Malaysia's states located at [2°45'N 102°15'E](#) coordinates on the western coast of [Peninsular Malaysia](#). It covers 6,665 square kilometres land area of Malaysia with seven (7) districts namely Seremban, Port Dickson, Jempol, Jelebu, Kuala Pilah, Rembau and Tampin. The population in Negeri Sembilan is 1.0848 million which is equal to 3.5% of total population in Malaysia in year 2015. The Gross Domestic Product (GDP) per capita for Negeri Sembilan is RM 36,699 in year 2015. Furthermore, the economic growth in Negeri Sembilan was also influenced with the support from various project implementations, such as Economic Transformation Program (ETP), New Key Economic Area (NKEA), and Liberalisation impacted from the 10th Malaysia Plan towards Malaysia Vision 2020 at national level.

Objectives

The objective of this paper is to study factors that influencing the economic growth and to identify the significant economic activities that performed as the major contributor towards the state economy in Negeri Sembilan. It also aims to present some endogenous analysis of statistical data with economic growth in Negeri Sembilan as well as to provide exposure to the regional economic data user particularly statisticians and analyst.



Methods and Materials

In the first phase, this paper studied the correlation and relationship among Negeri Sembilan's GDP with the main economic components, i.e. agriculture, mining and quarrying, manufacturing, construction, services and import duties, were all applied in the Least Square Method analysis. Then, the second phase of analysis focuses on the significant variables with other related variables which consist of the consumer price index, unemployment rate and interest rate. In addition, this study has utilised Least Squares Analysis, Ordinary Correlations Analysis, descriptive analysis and linear relationship econometric model in identify the significant economic indicators to the economy. Finally, the analysis of capital investment development project approved by the [Malaysian Investment Development Authority](#) (MIDA) from year 2005 to 2015 is also shown in the line chart to support the significance of regional economic development in Negeri Sembilan.

Analysis and Finding

Chart 1 shows economic position of GDP per capita at current prices by State in Malaysia for year 2015 which consist of thirteen (13) states and two (2) federal territories (WP). According to the chart, Negeri Sembilan recorded an average GDP per capita amounting RM 36,699 and rank as the 7th among the other states.

Chart 1: The Economic Position of GDP per Capita by State in Malaysia, 2015

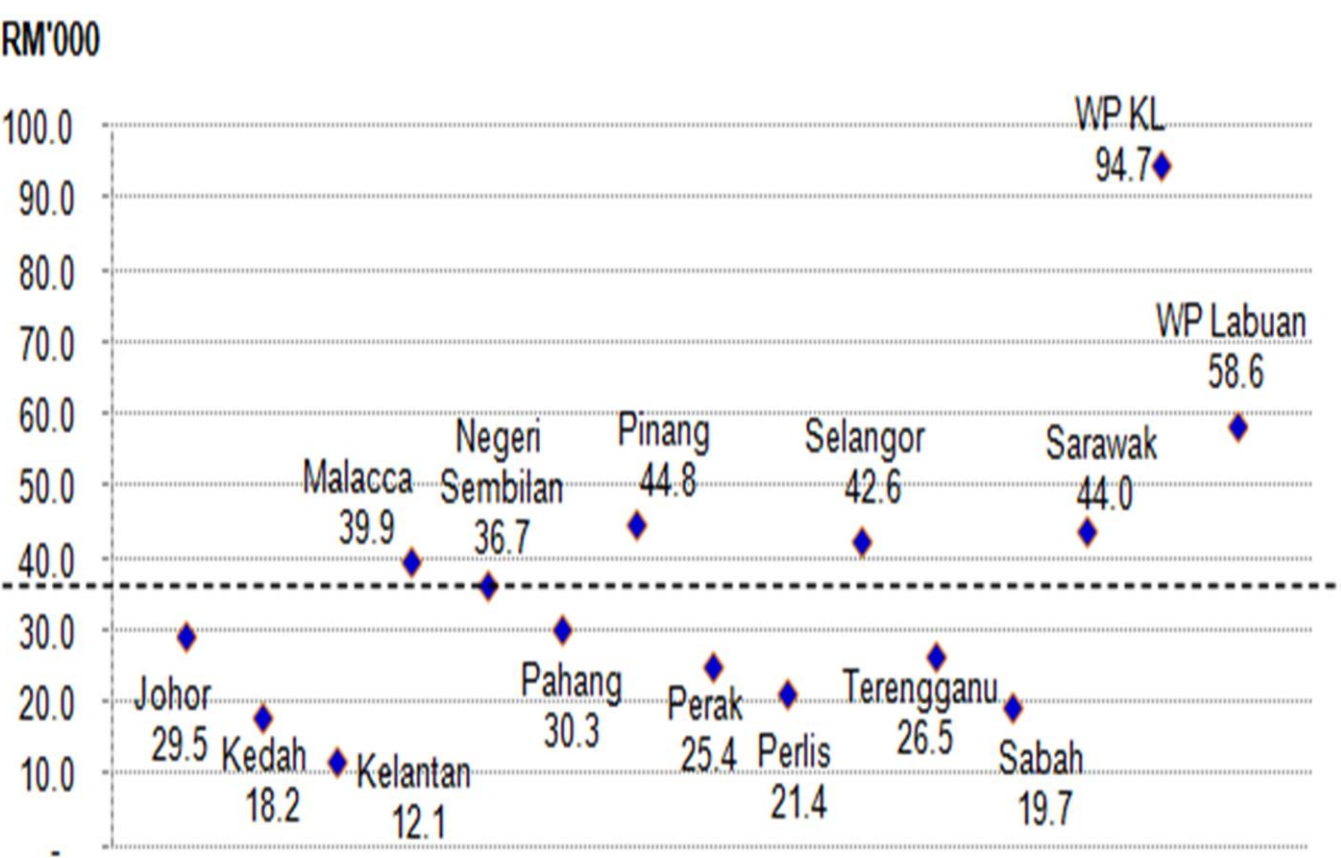
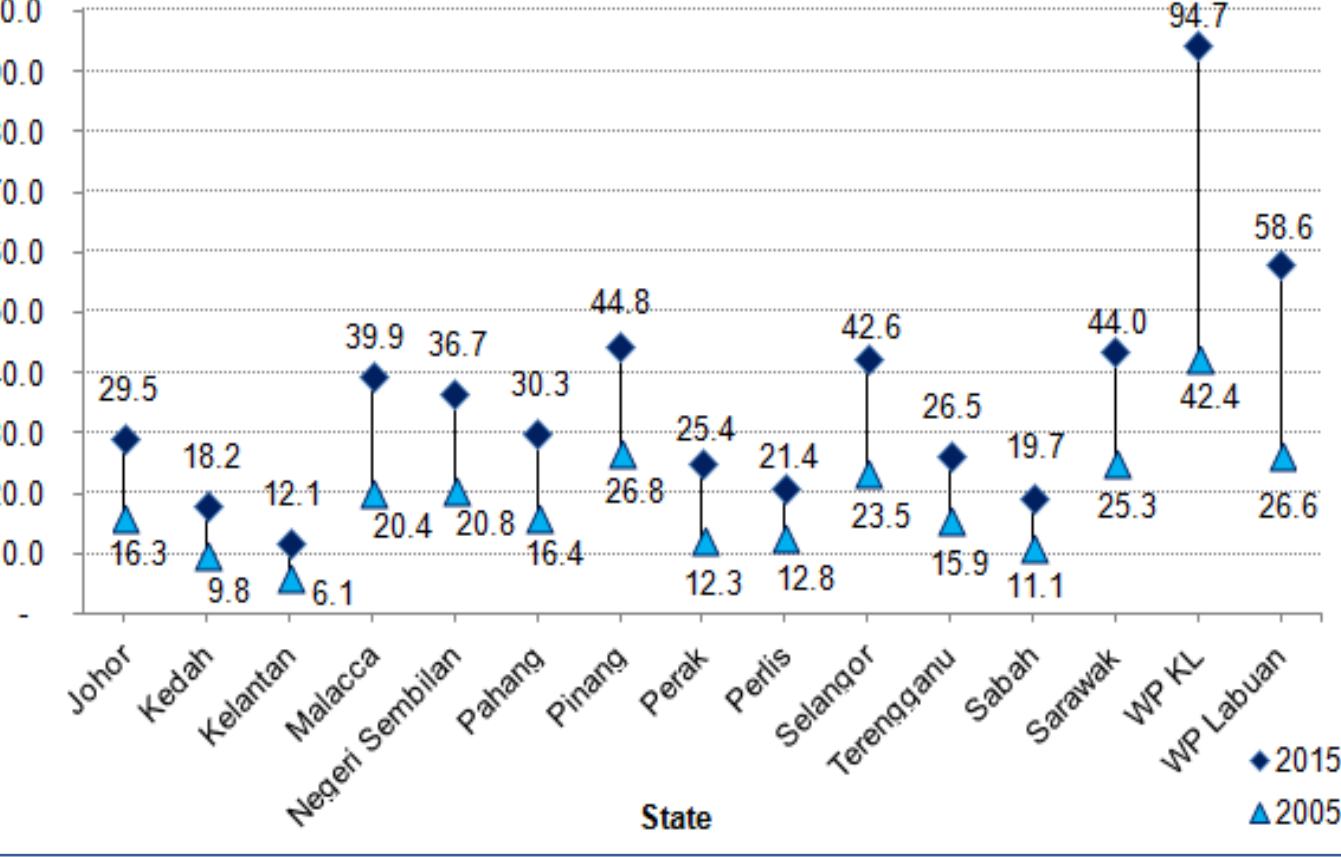


Chart 2 demonstrates the comparison for the growth of GDP per capita by State at current prices between year 2005 and 2015. Though the 10 years period, the economic performance of GDP per capita in Negeri Sembilan had increased 76.7% from RM 20,768 in year 2005 to RM 36,699 in year 2015.

Chart 2: GDP per capita at current prices by State, 2005 and 2015



The significant value of t-statistics where $t > 2$ and the significant probability value where $p < 0.05$ shown Agricultural ($t = 3.58$, $p = 0.0372$), Manufacturing ($t = 12.4$, $p = 0.0011$) and Services ($t = 6.43$, $p = 0.0076$) sectors with R-squared value 0.996173 had strong correlation towards GDP Negeri Sembilan.

Table 3: Least Squares Analysis on GDP Negeri Sembilan by Sectors

Dependent Variable: GDPNS Method: Least Squares Sample: 2006 – 2015 (percentage change) Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AGRICULTURAL	0.104297	0.029112	3.582648	0.0372
MINING QUARRYING	0.022658	0.018718	1.210498	0.3128
MANUFACTURING	0.450573	0.036297	12.41342	0.0011
CONSTRUCTION	0.019762	0.018948	1.043068	0.3736
SERVICES	0.386304	0.060057	6.432291	0.0076
IMPORT DUTIES	0.004498	0.001422	3.161868	0.0508
C	0.048582	0.548995	0.088817	0.9348
R-squared	0.996173	Mean dependent var	4.782240	
Adjusted R-squared	0.988520	S.D. dependent var	2.225952	
S.E. of regression	0.238498	Akaike info criterion	0.167118	
Sum squared resid	0.170644	Schwarz criterion	0.378928	
Log likelihood	6.164409	Hannan-Quinn criter.	-0.085236	
Prob (F-statistics)	0.001031	Durbin-Watson stat	2.135657	

The data analysis in phase two with the involvement of consumer price index, the unemployment rate and the interest rate was run as the additional variables for influencing factors. The empirical result indicated the most significant indicators that impact and influencing the economy of Negeri Sembilan is precisely driven by both services sector ($t = 3.35$, $p = 0.0442$) and manufacturing sector ($t = 3.14$, $p = 0.0517$) with the t -statistics value more than 2 and p -value respectively.

Table 4: Least Squares Analysis on GDP Negeri Sembilan by Indicators

Dependent Variable: GDPNS Method: Least Squares Sample: 2006 – 2015 (percentage change) Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AGRICULTURAL	0.059002	0.030456	1.937310	0.1481
MANUFACTURING	0.347825	0.110791	3.139471	0.0517
SERVICES	0.327433	0.097659	3.345973	0.0442
CPI	-0.042707	0.130834	-0.326418	0.7656
UNEMPLOYMENTRATE	0.004337	0.016478	0.263180	0.8095
INTEREST RATE	0.025983	0.021913	1.185751	0.3211
C	1.407554	0.538067	2.625707	0.0786
R-squared	0.988075	Mean dependent var	4.782240	
Adjusted R-squared	0.964225	S.D. dependent var	2.225952	
S.E. of regression	0.421025	Akaike info criterion	1.303780	
Sum squared resid	0.531787	Schwarz criterion	1.515590	
Log likelihood	0.481099	Hannan-Quinn criter.	1.071426	
Prob (F-statistics)	0.005616	Durbin-Watson stat	2.895859	

A regression model is constructed between the growth of GDP Malaysia and Negeri Sembilan ($GDP_{\text{Malaysia}} = 1.681080 + 0.675359 GDP_{\text{Negeri Sembilan}}$). The analysis result shows the GDP in Negeri Sembilan is significant by t -statistics = 2.2975, $p = 0.0507$. However, GDP Negeri Sembilan is moderately influencing the total economy of GDP Malaysia at national level with the magnitude of R-squared registered 0.391533.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPNS	0.675359	0.293948	2.297548	0.0507
C	1.681080	1.536680	1.093969	0.3058
R-squared	0.391533	Mean dependent var	4.910808	
Adjusted R-squared	0.322224	Durbin-Watson stat	2.304239	
S.E. of regression	1.962940	Akaike info criterion	4.363620	
Prob (F-statistics)	0.050664	Schwarz criterion	4.424137	

Conclusions

Negeri Sembilan is an open economy and is dependent on the trade investment for its economic development. Statistical data focus on the economy is proven to be input and catalyst to the advancement for the implementation of local socio-economic development programs and projects. Quality of the statistical data is also vital and important to the formation of policy for both state and the Malaysia country's development.

The indicators of regional economic development can be illustrated via the growth of GDP as well as the GDP per capita shown with other similar economic indicators or projects development.

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