Determinants of Regional Development Disparities in Sri Lanka: An Empirical Investigation into Development Trends and Issues

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Introduction

Regional disparity is a highly discussed topic in regional development under spatially unbalanced economic development in terms of unequal resources or income distribution. According to the literature, regional disparities can be classified as social, economic and territorial disparities (Kutscherauer, 2010). Among these different classifications, economic disparity is particularly seen through regional output, employment or income which is quantitative, and with many other qualitative dimensions that are related to living standards of a regional community.

In the Sri Lankan context, the distribution of provincial per capita GDP over the last few decades reveals that inequality is considerably high. It shows that stark regional disparities remain between the Western Province and the other provinces with the former accounting for half of overall economic activity, leading by a wide margin of income share. Sri Lanka implemented the Provincial Council system in 1987 to provide greater autonomy to local governments to take necessary measures to increase the local share of the resources and thereby provincial GDP and employment. However, this measure does not seem to have addressed the main issues effectively. According to Waidyasekera (2005), the Provincial Council system has produced a Centre-biased economic system. Fiscal capacities of provinces are very unequal and there is a wide disparity between the different provincial administrations in terms of revenue performance and expenditure levels, and even in the allocation of grants.

Regional convergence and spatial distribution have gained vast interest among theoretical and empirical academic discourses (Antonescu, 2014). Rey and Montouri (2006) found strong patterns of both global and local spatial autocorrelation throughout their study period, and the magnitude of global spatial autocorrelation was also found to exhibit strong temporal co-movement with regional income dispersion. For Indonesia, Resosudarmo and Vidyattama (2006) observed that despite the existence of regional income disparity, there is conditional regional income per capita growth convergence. And saving of physical capital, trade openness and the contribution of the gas and oil sectors are the determinants of this provincial income per capita in Indonesia.

Although there are many descriptive research publications available regarding the Sri Lankan development disparities across regions, only a few studies focus on policy effectiveness and the significance of strategies implemented so far at sub-national level. This research gap is addressed in this study, and we explore the determinants of regional development disparities in Sri Lanka with more statistical precision. This study focuses on powerful regionally diverse socio economic and cultural factors as determinants of regional development dynamics in Sri Lanka. We expect the results of this research to help a better understanding of regional development imbalances and the required policy corrections.

Objectives

The main objective of this study is to investigate the determinants of regional economic development disparities in Sri Lanka. The other objective is to identify possible policy implications to mitigate the regional economic disparities.

Methodology

This study uses annual panel data for the nine provinces (Western, Central, Southern, North Western, North Central, Uva, Sabaragamuwa, Eastern, and Northern Provinces) in the country considering the period from 2010-2015. The data were extracted from annual reports of the Finance Commission of Sri Lanka, annual reports of the Labour Force Survey of the Department of Census and Statistics, Sri Lanka and annual reports of the Central Bank of Sri Lanka.

This study uses a Fixed Effect Multiple Linear Regression Model for the panel data analysis. At this stage of our model estimation, we specify the regression model based on the characterization of regional development disparities assumed to be closely associated with per capita of PGDP. This measurement in regional development analysis is supported by the literature on previous research as well (Antonescu, 2014; Wijerathna *et. al*. 2014; Cai, Fang *et. al*. 2002). The Fixed Effect Multiple Linear Regression Model can be specified as follows:

$$PGDP_{it} = \alpha_0 + \alpha_1 \mathrm{CEXP}_{it} + \alpha_2 \mathrm{REXP}_{it} + \alpha_3 \mathrm{IEDU}_{it} + \alpha_4 \mathrm{IHEL} + \alpha_5 \mathrm{IRS}_{it} + \alpha_6 \mathrm{UNEM}_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

With PGDP: per capita GDP, CEXP: Capital Expenditure (Criteria Based Grant), REXP: Recurrent expenditure, IEDU: investment in education sector (Province Specific Development Grant), IHEL: investment in health sector (Province Specific Development Grant), IRS: investment in road sector (Province Specific Development Grant), UNEM: unemployment rate, μ_i: individual specific fixed effect, ε_{it}: error term (0, σ^2). All the independent variables except UNEM are presented as absolute values (Rs. Million).

Results and Discussion

As the first step of the data analysis the pooled regression (OLS) was conducted. Since the study mainly focuses on panel data analysis, the Fixed Effect Multiple Linear Regression Model was conducted following the Hausman test. According to the results of Hausman test, the Null hypothesis is rejected at 1% significant level implying that fixed effect estimation is preferable compared to random effect estimation.

Table 1: Results of the fixed effect estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.

CEXP	29.44	11.38	2.58	0.014**
REXP	22.81	2.48	9.18	0.000*
IEDU	150.33	76.11	1.97	0.055***
IHEL	-120.27	253.09	-0.47	0.637
IRS	-223.649	124.69	-1.79	0.080***
UNEM	-16142.48	10636.57	-1.51	0.137
C	176981.30	64530.95	2.74	0.009
R-squared	0.88	Mean dependent var		359844
Adj. R-squared	0.83	S.D. dependent var		128118

The estimation results reveal that Capital Expenditure (CEXP), Recurrent Expenditure (REXP), investment in education sector (IEDU) and investment in road sector (IRS) variables affect the provincial PGDP since these independent variables are statistically significant, while other independent variables namely investment in health sector (IHEL) and unemployment rate (UNEM) are not significant. Furthermore, CEXP, REXP, IEDU are positively associated with provincial PGDP while IRS has a negative association.

Table 2: Cross-sectional effect

	Province_variables	Effect
1	Western	222768.80
2	Southern	-16452.98
3	Uwa	-26958.27
4	Central	-40715.65
5	Sabaragamuwa	-64233.33
6	North Western	-38160.82
7	North Central	-38485.49
8	Eastern	-58950.50
9	Northern	-18939.31

Results of the estimation imply that provincial capital and recurrent expenditure, investment in education sector are statistically associated with an increase in provincial per capita GDP. Moreover, these expenditures are the main determinants of the differences in provincial per capita GDP. Moreover, cross-sectional effect is also estimated in order to identify the regional disparities in terms of provincial per capita GDP. The results (see Table 2)

indicate that except for the GDP per capita of Western Province, values of per capita GDP of other provinces are less than the intercept value of per capita GDP, which implies that the income accumulation within the Western Province occurs at a higher level, while less income accumulation is taking place in other provinces in the country. This difference arises mainly due to the concentration of a large portion of leading economic activities and availability of related facilities in the Western Province compared to other provinces of the country. Thus, it directly connects to the production process and market formation. This process stimulates and leads to the creation of more income in the Western Province and unequal income distribution across provinces in the country.

Conclusion

Findings of our study show that greater income concentration is experienced in the Western province, while other provinces experience less income accumulation, which leads to adverse impacts on the development potentials of other regions. Furthermore, these results indicate that differences in provincial-wise capital and recurrent expenditure, and investment in education sector help increase the level of provincial-wise per capita GDP. The estimation results therefore, implies that if the prevailing situation is allowed to continue in the development discourse in Sri Lanka, achieving political stability would be a futile objective at the cost of enormous economic hardships to the majority in the society at national level.

If the current development policy were to achieve this objective, spatially targeted or place-based development should be prioritized. This may need tax concessions for industries to locate in lagging provinces or private-public partnerships to stimulate location of industries in such lagging regions. Since the current system of local government is complex in functional procedures and weak in capacity, the central government should take the necessary initiatives in this regard. Therefore, the lagging regions such as Northern, North Central, Uva, Sabaragamuwa and Eastern urgently need more financial allocations to upgrade social and physical infrastructure, and facilitate the livelihoods of the people.

References

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