THE DETERMINANTS OF REGIONAL DEVELOPMENT DISPARITIES IN SRI LANKA: AN EMPIRICAL INVESTIGATION INTO THE REGIONAL DEVELOPMENT POLICY AND ISSUES

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Abstract

Being one of the highest countries to have recorded inequality in the case of regional development in South Asian region, Sri Lanka confronts detrimental impacts on its future development due to lack of attention of respective authorities on the issue of regional disparity. Although the Provincial Council system in Sri Lanka was initiated to provide greater autonomy to local governments to take necessary measures to increase the local share of the resources and thereby mitigate the regional disparities, the issue still remained unaddressed. Therefore, addressing this issue is timely in order to improve the efficiency of socio-economic performance and political stability. With this background, this study mainly aims to investigate the dynamics and main determinants of generating regional development disparities in Sri Lanka. The methodology of this study is mainly based on the panel data analysis following fixed effect and cross-sectional effect estimation for the period of 2010-2015. The empirical results of the study show that there is a greater income concentration on Western Province whereas the other regions perform relatively poor. According to our estimation results, the development potentials of other regions depends on provincial-wise capital and recurrent expenditure, investment in education sector for increasing provincial-wise per capita GDP. Hence, these results indicate that corrective measures for addressing regional disparities is basically based on education, capital and recurrent expenditures, but not further expansion of expenditures on administrative functions.

Keywords: Capital and Recurrent expenditure, Education Sector, Provincial Councils, Regional disparity

1. Introduction

Regional disparity is a highly discussed topic in regional development under the condition where spatially unbalanced economic development is experienced in terms of unequal resources or income distribution. Regional

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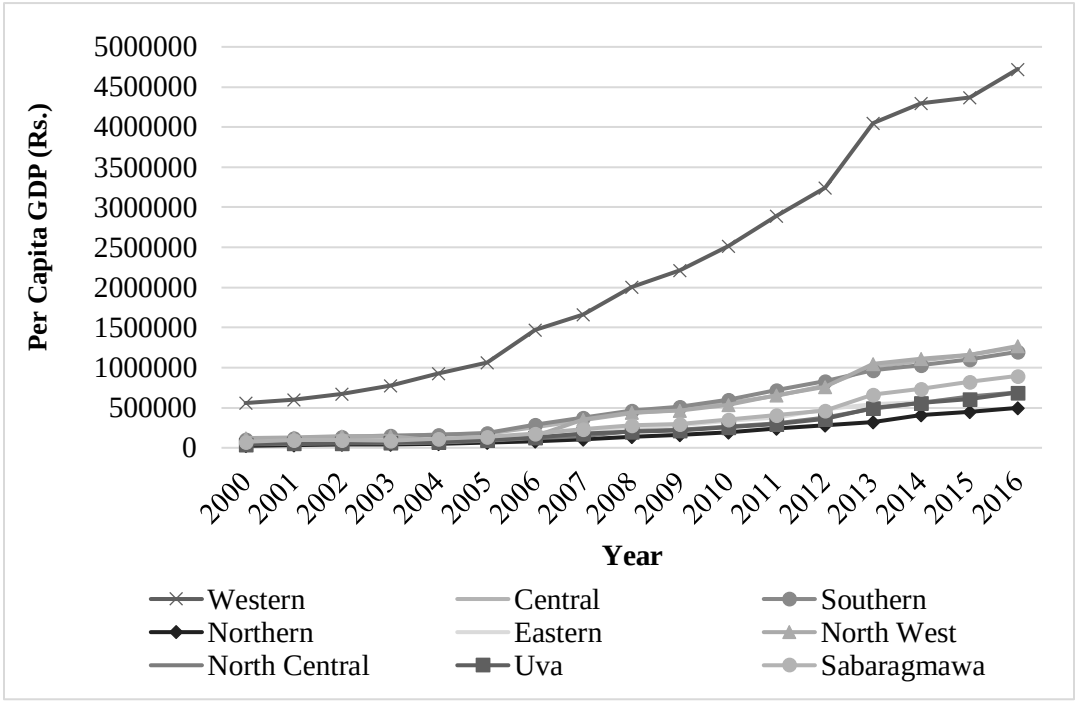
disparity may arise due to many reasons such as endowment of natural resources to a region, central government policies which focus on a few key regions while others are simply left out or missing from the main political agenda for receiving development aid. If there is widening development differences, and resulting inequality experienced in a country such tendencies are observed as the indicators of underdevelopment (Todaro & Smith, 2012). For this reason, scholars in economic development, researchers and policy makers deal with regional disparities as an important development issue, because variety of possible adverse consequences can be manifested by large scale development differences in a country.

Moreover, according to the literature, regional disparities can be classified such as socioeconomic, political, and territorial disparities etc. (Kutscherauer, 2010). Among these different classifications, economic disparities come through particularly in regional output, employment or income which is quantitative, with many other qualitative dimensions that are related to living standards of a regional community. These regional economic differences have therefore become the main driving forces that may continue to have regional cumulation of income and development potentials of prosperous regions. Further, once such differences appear, there is a dynamic process, which activates to have a divergent or convergent impact on other regions as well. Therefore, understanding the dynamics and determinants of regional development that lead to generate development disparities is an important area of study in the subject of economic development.

In the Sri Lankan context, the distribution of provincial-wise per capita GDP over the last decades revealed that inequality with respect to this indicator and regional disparities are considerably high (see Figure 1). It shows that stark regional disparities remain with Western Province, which accounts for half of economic activity, leading by a wide margin of income share.

Figure 1: **Per Capita GDP by Province in Sri Lanka (2000-2016)**



Source: Authors' own calculations using data from annual reports of Central Bank of Sri Lanka and Labour Force Survey, Department of Census and Statistics (2010-2015).

Sri Lanka has the highest levels of regional inequality in South Asia. Growth in regional inequality between regions has been increasing as more prosperous regions take advantage of the socio-economic and political changes experienced since independence (World Bank, 2004). Although Sri Lanka implemented provincial council system in 1987 expecting 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, this effort does not seem to have addressed the main issues effectively, instead still there is clear continuation of the traditional path of development leaving the main problem of distribution unaddressed. The ineffectiveness of the Provincial Council system is clearly mentioned as it appears in the following quotation:

> *"the Provincial Council system it (13th amendment) produced was Centre biased and was a hybrid system. The main fiscal sources that were devolved were relatively insignificant, producing revenue totally inadequate to meet the demands of even a considerable portion of its expenditure…. Their fiscal*

> *capacity is very unequal and there is a wide disparity between the different provincial administrations, both in terms of revenue performance, expenditure levels and even in the allocation of grants" (Waidyasekera, 2005, p. 38).*

Current situation in Sri Lanka is detrimental to future economic development prospects of many regions due to lack of attention by politicians, policy makers and development practitioners at local levels. Hence, the consequences will be costly with irreversible damages to the socioeconomic and political situation in the country. First, expanding regional development disparities can lead to create economic inefficiency due to lack of market formation process in many regions in the country. Furthermore, this level of income disparity is unfair, and it will be a binding reason to weaken social stability and solidarity between people who live in prosperous leading regions and lagging regions. Therefore, the main objective of our research paper is to investigate the dynamics and determinants of generating regional development disparities in Sri Lanka. Although this problem has been a cause and effect of many socioeconomic and political problems over the last few decades no adequate research has been conducted by economists in a systematic way to explore better results leading to effective policy making.

The next section of the article discusses the relevant literature related to the topic and then moves to methodology of the research. A cross-sectional and a time series dimension are occupied using panel data to explore the main determinants of development disparities at provincial levels in Sri Lanka. Finally results and discussion followed by conclusions and policy recommendations.

2. Literature Review

Regional development basically concerns identifying the underline causes and dynamics of how economic activities prosper differently at regional levels. In its simple form a "region" can be defined as a subset of a national economy, principally there are three basic types of regions namely homogeneous, nodal and administrative regions (Davis, 1990). Regional development is normally understood as a development process that taking place within any of these regions (Uduporuwa, 2007). According to Friedmann, (1970) regional development has some connotations to economic activities taking place in a specific location that drives by various interrelated economic, social and political processes within that spatial framework (as cited in Uduporuwa, 2007, p. 22). The theories in this subject are helpful to formulate appropriate policies and practices for identifying such development dynamics for minimizing development disparities across regions within a country.

Empowering the local government through decentralization has been a long-term trend in developed countries that generally recognized as a mechanism for addressing regional development problems. The United States, Canada, and Germany have had significant powers at the state and local level enshrined in their constitutions. European Union has been proceeding—officially, at least—on the principle of "subsidiarity," meaning that decisions are made at the most local level feasible (Todaro & Smith, 2012). In the Sri Lankan context, according to Gunaruwan and Dilhara, (2014), the Provincial Council system is still overwhelmingly dependent on Government grants, even for its recurrent expenditure requirements, after 24 years of its existence. The study revealed that the Sri Lankan process of devolution has not been founded on any enabling economic justifications and has not been able to produce any cost effectiveness that generally expected through economically rational devolution of power. Currently, the development disparities among provinces is clearly visible both in the contribution that they make to the national GDP and in terms of value addition per capita GPDP (Gross Provincial Domestic Product). The development strategies implemented since 1950s have not been effective to reduce the socioeconomic disparities in Sri Lanka. Therefore, unequal development of regions called "provinces" is problematic throughout the history of Sri Lanka (Uduporuwa, 2007).

Regional convergence and spatial distribution have gained interest vastly among theoretical and empirical academic discourses. Generally, the concept of convergence is mostly used in comparative economic analyses regarding economic integration with the purpose of identifying the evolutions of some entities (national, sectoral, regional). In the literature, three kinds of approaches of convergence can be identified namely real convergence, nominal convergence and institutional convergence. Among these, real convergence pursues eliminating gaps between regions within the development level given by the income per capita and labour productivity (Antonescu, 2014). Meanwhile, theoretical approaches on regional convergence namely; Theory of endogenous growth, New economic geography, Institutional theory have been analyzed under regional theories (Uduporuwa, 2007).

Endogenous growth theory argues that the growth dynamics are internal result of forces largely determined by the character of key attributes of the economic system, i.e. economic and development policies of a region, and not the forces that act outside (Todaro and Smith, 2012). Economic growth at regional level takes place based on amplifying the innovation learning-knowledge-assimilation process corresponding to labour force. This process presents significant spatial implications up to the moment when transaction costs corresponding to transferring knowledge elements remain very high. Moreover, neoclassical school explains that growth in the value of production

at national and regional level is the result of an increase in the quantity and quality of labor, increase in physical capital, and the production technological level rise via its own Rand D activities (Barro and Sala-i-Martin, 2004).

Empirical studies also have focused on the regional convergence and the spatial disparities since this topic still remain insufficiently investigated and analyzed. According to Rey and Montouri (1999), strong patterns of both global and local spatial autocorrelation are found throughout the study period, and the magnitude of global spatial autocorrelation is also found to exhibit strong temporal co-movement with regional income dispersion in the U.S. This study revealed strong evidence of spatial auto correlation in the levels of state per capita incomes and showed that the strength of the spatial autocorrelation in the state incomes. Resosudarmo and Vidyattama (2006) found 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. Hence, the disparity in provincial income per capita in Indonesia is relatively severe. Second, there is a conditional growth convergence in Indonesia where GDP per capita of poorer provinces grows faster than that of richer provinces during 1993 to 2002.

The evidence of conditional convergence in China's growth, namely, per capita GDP in the initiative year is negatively related to growth rates in following years, labor market distortion negatively impacts regional growth rates (Cai Fang, et al, 2002). Cai Fang (2016), based on Chinese experience on enlarging income gap between the coastal area and the hinterland, further elaborates on the possibility for widening regional income gap across regions due to improving trade condition and the increasing rural-to-urban mobility. With a geographical advantage in international trade, the coast becomes the initial location for industrial agglomeration. The necessary labor supply for industrial agglomeration in the coast comes from intraregional rural-to-urban migration. As a consequence, the income disparity between the coast and the hinterland increases. The location disadvantage of the interior comes from higher transportation cost in trade (Hu, 2002). The results of decomposing the regional disparity suggested that the urban-rural disparities are the main source of regional disparities in China. Hence changes in regional disparities in recent years in China is attributed to many factors, including policies and regional specific factors as well as some cyclical factors (Shantong and Zhaoyuan, 2008)

An analysis of the growth performance and structural changes in the domestic product of Indian states in the last two decades reveals that the development process has been uneven across states. While advanced industrial states have tended to leapfrog in the reform years, other states have lagged

behind. The poorer states have not only performed poorly but their failure to stem population growth has left them in an even worse position. And also, it is noted that the tertiary sector, rather than industry, has become the engine of growth in the last two decades in India (Bhattacharya and Sakthivel, 2004). They showed strong evidence of spatial dependence, and that regional inequality reduction occurred simultaneously with increasing spatial autocorrelation in Brazil. The low value for the convergence coefficient, in conjunction with the strong influence of shocks in the residuals, indicate the existence of a very sensible dynamic of convergence across Brazilian states, what helps explaining the well documented persistence in regional income disparities in Brazil. After conditioning on other important variables that could affect growth, however, spatial dependence disappears (Silveira-Neto and Azzoni, 2005).

Another study by Shankar and Shah, (2003) provided a classification of countries by the degree of convergence. Countries experiencing regional income divergence: Vietnam, China in the 1990s, Indonesia post-1993, Russia, The Philippines in late 1980s and late 1990s, Brazil, Sri Lanka, India and Romania; Countries experiencing no significant change in regional income variations: Mexico and Canada; Countries experiencing regional income convergence: Thailand, China till early 1990s, Indonesia till early 1990s, The Philippines in early 1980s and early 1990s, Uzbekistan, Chile, Pakistan and The United States. According to the results, regional development policies have failed in almost all countries, federal and unitary alike. Still, federal countries do better in restraining regional inequalities, because of the greater political risk these disparities pose for such countries. Findings also suggest that countries experiencing divergence tend to focus on interventionist policies, while those experiencing convergence have taken a hands-off approach to regional development and instead focus on removing barriers to factor mobility and ensuring minimum standards in basic services across the country (Shankar and Shah, 2003)

Decentralization in high income countries has, if anything, been linked with a reduction of regional inequality. Whereas in low-and medium-income countries, fiscal decentralization has been associated with a significant rise in regional disparities. Among other factors, policy measures taken by subnational governments for expenditure in economic affairs, education, and social protection have contributed to this trend (Rodrı´guez-Pose and Ezcurra, 2010). Twofold orientation of the development of inequality was emphasized by Novotný (2007). These two dimensions include: the development in time and the reproduction of inequality across geographical scales. An increase in regional integration associated with the amelioration of inequality at one level usually corresponds to a reproduction of inequality at higher geographical levels.

Although there are many descriptive research publications available regarding the Sri Lankan development disparities across regions only few studies focus on how significant the policy effectiveness and strategies implemented by sub-national level governments and how powerful regionally diverse socio economic and cultural factors as driving forces of regional development dynamics in Sri Lanka. Therefore, our research identified this research gap for exploring the determinants of regional development disparities in Sri Lanka with more of statistical precisions. Hopefully the results of this research would be helpful to have a better understanding of what has been ineffective for balance regional development and what policy corrections need to be done and how to reformulate strategies for reaching our goal of minimizing regional disparities.

3. Methodology

3.1 Data and Sources

This study uses annual panel data for the nine provinces (Western, Central, Southern, North West, 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 finance commission of Sri Lanka, annual report of Labour Force Survey, Department of Census and Statistics, Sri Lanka and annual reports of Central Bank of Sri Lanka.

3.2 Model Specification and Estimation

A panel data set, while having both a cross-sectional and a time series dimension, differs in some important respects from an independently pooled cross section

First differencing is just one of the many ways to eliminate the fixed effect, a_i. An alternative method, which works better under certain assumptions, is called the fixed effects transformation. To see what this method involves, consider a model with a single explanatory variable: for each i,

$$y_{it} = \beta_1 x_{it} + a_i + u_{it} \qquad t = 1,2,\ldots\ldots T \qquad (1)$$

Now, for each i, average this equation over time

$$\bar{y}_i = \beta_1 \bar{x}_i + a_i + \bar{u}_i \qquad (2)$$

where $\bar{y}_i = T^{-1} \sum_{t=1}^{T} y_{it,}$ and so on, because a_i is fixed over time, it appears in both eq. 1 and 2. If (2) – (1) for each *t*,

$$y_{it} - \bar{y}_i = \beta_1 (x_{it} - \bar{x}_i) + u_{it} - \bar{u}_i \qquad t = 1,2,\ldots,T$$

$$\ddot{y}_{it} = \beta_1 \ddot{x}_{it} + \ddot{u}_{it}, \qquad t = 1,2\ldots.,T \qquad (3)$$

where, $\ddot{y}_{it} = y_{it} - \bar{y}_i$ is the time-demeaned data on y, and similarly for $\ddot{x}_{it}$ and $\ddot{u}_{it}$. The fixed effect transformation is also called within transformation. The important thing about equation (3) is that the unobserved effect, a_i, has disappeared. This suggests that equation (3) should be estimated by pooled OLS. A pooled OLS estimator that is based on the time-demeaned variables is called the fixed effects estimator or the within estimator. The latter name comes from the fact that OLS on equation (3) uses the time variation in y and x within each cross-sectional observation.

The between estimator is obtained as the OLS estimator on the cross-sectional equation (2) (where an intercept, β_0 is included): time averaged is used for both y and x and then run a cross-sectional regression.

Adding more explanatory variables to the equation causes few changes. The original unobserved effects model is:

$$y_{it} = \beta_1 x_{it1} + \beta_2 x_{it2} + \ldots + \beta_k x_{itk} + a_i + u_{it} \qquad (4)$$

Time-demeaning is used on each variable including things like time period dummies and then do a pooled OLS regression using all time-demeaned variables. The general time-demeaned equation for each *i* is:

$$\ddot{y}_{it} = \beta_1 \ddot{x}_{it1} + \beta_2 \ddot{x}_{it2} + \ldots + \beta_k \ddot{x}_{itk} + \ddot{u}_{it}, \qquad t = 1,2,\ldots T \qquad (5)$$

which is estimated by pooled OLS.

Under a strict exogeneity assumption on the explanatory variables, the fixed effects estimator is unbiased: roughly, the idiosyncratic error u_{it} should be uncorrelated with each explanatory variable across all time periods. The fixed effects estimator allows for arbitrary first differencing. Because of this, any explanatory variable that is constant over time for all *i* gets swept away by fixed effects transformation: $\ddot{x}_{it} = 0$ for all *i* and *t*, if x_{it} is constant across *t*. Some panel data sets, especially on individuals or firms, have missing years for at least some cross-sectional units in the sample. In this case, the data set is called as an unbalanced panel. The mechanics of fixed effects estimation with an unbalanced panel are not much more difficult than with a balanced panel. If T_i is the number of time periods for cross sectional unit *i*, it can be used these T_i observations in doing the time-demeaning. The total number of observations is then $T_1 + T_2 + \ldots + T_N$. As in the balanced case, one degree of freedom is lost for every cross-sectional observation due to time-demeaning. Any regression package that does fixed effects makes the appropriate adjustment for this loss (Wooldridge, 2006).

This study uses 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. Also, this measurement in regional development analysis is supported by the

literature of previous researchers as well (see Antonescu, 2014; Wijerathna, et. al., 2014; Cai, Fang et. al., 2002). Therefore, we made our effort in this research to explain regional development disparities using the explanatory variables selected as determinants of PGDP. The Fixed Effect Multiple Linear Regression Model can be specified as follows:

$$PGDP_{it} = \alpha_0 + \alpha_1 CEXP_{it} + \alpha_2 REXP_{it} + \alpha_3 IEDU_{it} + \alpha_4 IHEL + \alpha_5 IRS_{it} + \alpha_6 UNEM_{it} + \mu_i + \varepsilon_{it} \quad (6)$$

where, PGDP: per capita GDP (Rs.), 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, u_{it} and ε_{it}: error terms (0, σ^2). All the independent variables except UNEM are presented as absolute values (Rs. Million).

4. Results and Discussion

The descriptive statistics of our explanatory variables selected for estimating the Fixed Effect Multiple Linear Regression Model for the panel data analysis are given in Table 1.

Table 1: **Descriptive Statistics**

	PGDP	CEXP	REXP	IEDU	IHEL	IRS	UNEM
Mean	359844.2	883.7925	12393.22	200.3585	155.1321	288.8679	4.509434
Median	356697.4	413.0000	11802.99	166.0000	155.0000	270.0000	4.400000
Maximum	729998.3	5857.000	23374.87	861.0000	269.0000	585.0000	7.800000
Minimum	179074.0	175.0000	6100.000	95.00000	65.00000	42.00000	2.500000

Source: Author's Calculations

As the first step of the data analysis the pooled regression (OLS) was conducted. Since the study mainly focuses on panel data analysis, Fixed Effect Multiple Linear Regression Model was conducted following Hausman test. According to the results of Hausman test (see Table 2) the Null hypothesis is rejected at 1% significant level implying that fixed effect estimation is preferable compared to random effect estimation. Fixed effect estimation is more realistic than the random effect estimation and it shows the actual or

typical pattern of selected data. Therefore, using fixed effect estimation for this analysis brings the actual pattern of the distribution of values.

Table 2 shows the results of Hausman Test and it indicates the probability value is less than 5% significant level.

H_0: Random effect is appropriate

H_1: H_0 is not true

Table 2: **Results of Hausman Test**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	34.243835	6	0.0000

Source: Authors' own calculations

The estimation results of Fixed Effect Estimation (Unbalanced) shows in Table 3 reveal that Capital Expenditure (CEXP), Recurrent Expenditure (REXP), investment in education sector (IEDU) and investment in road sector (IRS) variables affect the provincial-wise 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 variables positively associate with the provincial-wise PGDP while IRS negatively associate with the dependent variable; provincial-wise PGDP. According to the estimation results imply that provincial-wise capital and recurrent expenditure, investment in education sector are statistically responsive to increase the level of provincial-wise per capita GDP. These results can further be elaborated using the following interpretations. For example, while other factors are constant, when CEXP increases by one unit (Rs. 1 Million) will result in provincial-wise per capita GDP to increase by Rs. 29.44 million. Also, when IEDU increases by one unit (Rs. 1 Million) provincial-wise per capita GDP increases by Rs. 150.33 Million. The effects of the remaining variables can also be interpreted in a similar fashion based on the estimation results shown in Table 3.

Table 3: Results of Fixed Effect Estimation (Unbalanced)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CEXP	29.44835	11.38711	2.586112	0.0137**
REXP	22.81674	2.483402	9.187694	0.0000*
IEDU	150.3331	76.11542	1.975068	0.0556***
IHEL	-120.2717	253.0965	-0.475201	0.6374
IRS	-223.6498	124.6923	-1.793613	0.0808***
UNEM	-16142.48	10636.57	-1.517639	0.1374
C	176981.3	64530.95	2.742580	0.0092
R-squared	0.880608	Mean dependent var		359844.2
Adjusted R-squared	0.836622	S.D. dependent var		128118.7

Source: Authors' own calculations

Moreover, the estimated results indicate that regional disparities among provinces are mainly resulted by the impacts of these expenditures as the main determinants of the differences in provincial-wise per capita GDP. Further, as per the results, among other variables, recurrent expenditure, capital expenditure and investment in education sector are the most influential determinants of regional disparities in terms of per capita GDP, while investment in road sector is the least influential determinant of regional disparities. Therefore, regional disparities in terms of provincial-wise GDP, depending on the statistically significant levels, are resulted by the variations of these influential determinants. Therefore, with this ambience, there is a possibility that regional disparity can be mitigated through controlling these influential determinants appropriately by the policy makers and decision takers. For example, if respective authorities can take steps to stimulate the development process through increasing capital expenditure and investment in education especially in backward regions or provinces there is greater chances to increase provincial-wise GDP and thereby improve the socioeconomic wellbeing of the people in those regions. Furthermore, the estimation results of this study can be used as references in policy making to know by how much each category of expenditure should be increased in order to raise the provincial-wise GDP to the targeted level. Hence, this is clearly a new addition to the existing knowledge in addressing the problem of regional development disparities in Sri Lanka compared to previous descriptive research studies, which merely mention about the reasons for regional development disparities.

Moreover, cross-sectional effect is also estimated in order to identify the regional disparities in terms of provincial-wise per capita GDP. Table 4 shows the cross-sectional effect of each province. The results show that cross-sectional effect of per capita GDP of each province when the coefficients of other independent variables are zero. The results 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 of fixed effect estimation, which implies that the income accumulation within the Western Province is experiencing at a higher level, while less income accumulation is taking place in other provinces in the country.

Table 4: **Cross-sectional Effect**

	PROVINCE_VARIABLE	Effect
1	Western	222768.8
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

Source: Authors' own calculations

According to the results, for example, the worst scenario is recorded by Sabaragamuwa Province showing the highest disparity in term of per capita GDP compared to other provinces. Hence, these figures prove that the geographical area is not a matter of this kind of issue on regional income disparity, but it is a matter of steps or measures need to be taken to redistribute income fairly across other provinces.

This ambience arises mainly due to concentration of a large portion of leading economic activities and availability of related facilities in 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 create more income in the Western Province and unequal income distribution across provinces in the country. Therefore, the prevailing situation over many decades of unequal income accumulation implies that the regional disparity in Sri Lanka is highly disadvantageous to almost all other provinces in Sri Lanka. According to Wijerathna et al (2014), the trend in provincial income convergence for the period 1996 to 2011 suggests that it will take 15 years to halve the current inequality and about 30 years to achieve a regionally balanced economy. Therefore, currently in the

absence of any such well-planned regionally inclusive development strategies at nationally or provincially to address this problem and thereby continuation of a higher level of provincial-wise GDP disparities may take even longer period to reduce the development disparities in Sri Lanka. Although the Provincial Council System has been established with the purpose of political stability and thereby improving the social and economic wellbeing of the people the expected outcome does not seem to have realized effectively due to weak institutional structure and lack of expertise in strategies and policy making.

5. Conclusion and Policy Recommendations

Findings of our study show that greater income concentration experience in Western Province, which adversely impacts on the development potentials of other regions. This is reflected from the lower intercept value of per capita GDP of fixed effect estimations. Furthermore, these results indicate that differences in provincial-wise capital and recurrent expenditure, investment in education sector cause to increase the level of provincial-wise per capita GDP. The estimation results therefore, implies that if the prevailing situation is to continue in the development discourse in Sri Lanka, the 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 their living standards as a short run measure. Secondly, capital expenditures and expenditures on upgrading education facilities specifically in war affected areas and provinces with greater part of rurality should be the priority of the central government when fiscal allocations are considered for provincial-wise development. The estimation results for expenditures on health and infrastructure does not seem to have a strong relationship with provincial-wise GDP, which means corrective measures for addressing regional disparities lie basically on education, and recurrent expenditures. However, no further expansion of administrative arm of local government and functions of local government is desirable practice, but need to rationalize the existing local government finance for allocation of finance on the development of people's livelihoods, small and medium scale businesses and empowerment would be desirable policy measures in the short

run, but capital expenditures on expansion and upgrading education facilities, workforce development programs commensurate with development of physical infrastructure would become an important components for future development policies.

This research can further be tested on the identification of leading industries for specific regions. Then, it is possible to estimate spatial auto-correlation of such leading industries affect through inter-regional development impacts across different provinces. This part is suggested for further research.

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