FISCAL DECENTRALIZATION IMPACT ON REGIONAL DEVELOPMENT

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ABSTRACT

This paper aims to examine how fiscal decentralization may influence regional development in selected CEE countries (the Czech Republic, Slovakia, and Poland). Previous research on this question has primarily focused on just the relationship between fiscal decentralization and growth. This paper further examines the effect of subnational revenue, subnational expenditure, and transfers to subnational governments on regional development, i.e., GDP growth rate and Human development index (HDI). Data from Organization for Economic Cooperation and Development (OECD) and World Bank from 2010 to 2019 at the subnational government finance, GDP growth and HDI for the examined countries were used. The analysis involved analysing the three countries by focusing on each individual country of the CEE countries to ascertain the results' strength and veracity. We find that decentralized revenues positively influence GDP growth rate and HDI in selected CEE countries with overall positive significant results in all countries. There is no significant effect for subnational expenditure in the two countries, the Czech Republic and Poland, except Slovakia. Although this impact is much less clear in some countries, central government transfers, however, showed no positive significance at all in each of the selected countries. Because the dependent and independent data are linear variables, we adopted the ordinary least squares regression analysis method.

KEYWORDS

Fiscal decentralization; regional development; OLS regression.

JEL CLASSIFICATION CODE

H77, 018, H00

1. INTRODUCTION

Fiscal decentralization policy was one of the most common development patterns in the 1990s (World Bank, 2000; Lamba, 2019; Sow, 2017). However, many of these time-consuming and expensive interventions (Bonet, 2006) have only made little progress towards their desired outcomes. Given this discrepancy in results, there has been a lot of discussion on whether fiscal decentralization is a good idea and how it culminates regional development. Decentralized finances are seen as an important determinant of sustainable economic growth (Romp and Haan, 2005). In light of the current trend in emerging economies to decentralize expenditures and revenues to subnational governments, it is important to consider whether and how fiscal decentralization affects regional development.

More so, interest in fiscal decentralization as a catalyst of regional development is not limited to emerging and transitional economies; it has risen to the top of most OECD country policy agendas (Vazquez and Mcnab, 2003). In view of this, the increasing number of countries' interests in fiscal decentralization is viewed as a move of adopting an effective tool for increasing the efficiency of public expenditure and shifting fiscal power to subnational governments to lessen the central government's grasp of the economy. As Taillant (1994) put it, the question in many of these countries is no longer "whether to decentralize" but rather "how best to decentralize."

Even though there are some proofs from earlier literature on the direct relationship between fiscal decentralization and economic growth, it is best inconsistent (Vazquez and Mcnab, 2003). It lacks a compelling statement in any direction as to the direct impact of fiscal decentralization on regional development. Theoretical advancement and evidence on the relationship between fiscal decentralization and regional development are not explored at length hence the consideration of the title effect of fiscal decentralization on regional development with emphasis to the HDI.

This paper first reviews the literature on what fiscal decentralization is and other main fiscal federalism theories to reveal the subject's empirical aspect. Secondly, a regression analysis of the data gathered from OECD was conducted and results computed. Thirdly, we critically reviewed the literature's main findings on the effects of decentralization on a relevant list of fiscal decentralization and regional development variables (e.g., subnational revenue, subnational expenditure, and transfers to subnational government, HDI and GDP growth). Findings were interpreted and discussed, and finally concluded.

The GDP growth rate is used as a dependent variable because it is our expectation that when subnational governments are allowed to raise their own revenue and decide on their investments and expenditures, it will improve upon the economic performance and public services of regions which will, in general, affect the national GDP growth rate of the country. Additionally, the HDI is considered a tool for ensuring efficiency and quality of life in the country. Hence, it is expected that when the quality of life at the subnational level is high, it will raise the general human development index of a country.

2. THEORETICAL BACKGROUND

Decentralization entails the delegation of decision-making authority to subnational governments, thus contrasting deconcentration, which involves decentralizing central government operations but not delegating decision-making authority. The concept of fiscal decentralization traces its roots to the theory of fiscal federalism, which was introduced by renowned scholars like Oates, Olson, and Tiebout, among others. The rationale behind this concept is to ensure or allow for economic wellbeing and efficiency as the delegation of factors like subnational revenue and expenditure could generate efficiency in the public sector. In his fiscal decentralization theorem, Oates further argues that the provision of public services through a decentralized government system would usually contribute to improved citizen wellbeing in the face of diverse desires and needs (Oates, 2005). Another opinion is that enhanced decentralization will boost government official’s transparency, but it will also complicate policy coordination (Vázquez et al., 2017).

While the initial goal of decentralization was concentrated on the governance structure and its relationship to fiscal and economic matters, the number and levels of government, jurisdiction size, both expenditure and revenue allocations, decentralization later refocused more generally on the nature of those structures as political and economic entities (Weingast, 2009). On the other hand, fiscal federalism theory also emphasizes three major dimensions, stabilization, allocation, and redistribution (Musgrave, 1959), aiming to ensure a delegation of authority from the central to subnational government.

These lines of reasoning notwithstanding, several fiscal decentralization theories have contributed explicitly to the literature currently under review. For instance, fiscal interest theory assumes that revenue decentralization offers incentives to concentrate on economic expansion policies and reduce income and waste in the government by directly linking the impact of spending policies with the revenue budget (Weingast, 2009). In this same breath, Oates (2005) posited that subnational governments are considered serving their own interests rather than supporting fiscal federalism theory.

Some scholars (Andreas et al., 2012, Weingast, 2009, Careaga and Weingast, 2003) are also of the view that, the excessive central government financing with respect to revenue and expenditure of subnational government is counterproductive. As a results, revenue decentralization will improve government spending efficiency because central government expenditure is expected to reduce and in some cases, even decrease the total budget size. Based on this, we hypothesize that

H1a: subnational revenue has a significant positive effect on GDP growth rate

H1b: subnational revenue has a significant positive effect on HDI

Another notable theory is fiscal competitiveness; the literature on fiscal competition between subnational governments has yielded a range of fairly obvious insights into their spending composition. This is because competition in this respect is largely regarded as an active element in that subnational government uses tax and expenditure policies to execute its aims, i.e., the attraction of firms to generate employment and income (Ferreira et al. 2005). It is an established fact by Andreas et al. (2012) that, in countries where the government’s transfers mainly finance subnational governments, the subnational budget limitation is generally segregated from subnational expenditure decisions. As a result, there are far fewer transfers to implement regional development enhancing policies (such as investing in efficient infrastructure) than in countries where subnational governments are financed by their own revenues (Andreas et al., 2012).

Having identified these, we, therefore, hypothesize that

H2a: Transfer from central government has a negative influence on GDP growth

H2b: Transfer from central government has a negative influence on HDI

Ordinarily, if fiscal decentralization improves regional investment, development and overall economic growth are expected to increase. This statement is supported by the hypothesis of a hump-shaped relationship between GDP growth and fiscal decentralization as it appears to hold also for both federal and unitary countries as found by other scholars (Thiessen, 2003).

Having said that, regional development is the utmost priority of fiscal decentralization. Hence the link between fiscal decentralization and regional development is highly necessitated. Decentralized finance is considered the changing and disputed development concepts aimed to accommodate and reflect on regional diversity, unequal economic, financial, political, cultural, and environmental conditions and legacies in various places worldwide (Pike et al. 2010). Again, regional development is believed to have originated from the disparities between Eastern and South-Eastern Europe, underdeveloped or developed countries, and subjects of unbalanced regions (Tosun et al., 2003; Ildırar, 2004).

Some researchers established that it is not right and efficient to provide equalized public goods and services across regions (Oates, 1972, 1977). This is due to the fact that the marginal benefits of public services vary depending on the demand patterns in each population. Diversifying resources can be saved without causing damage to those involved in that government services are customized to suit the needs of the people. As a result, decentralized expenditure can result in greater consumer efficiency (Ulrich, 2003; Vazquez and Mcnab, 2003). Thus, fiscal decentralization theories emphasize maintaining stable and efficient production of public goods and services under certain revenue constraints, transfer of accountability, responsibility to subnational governments, and political power delegation, aiming to support and geared towards ensuring regional development.

Therefore, having seen this trajectory of development posed by decentralized expenditure, we, as a result of this, finally hypothesize that

H3a: subnational expenditure has a significant positive influence on GDP growth

H3b: subnational expenditure has a significant positive influence on HDI

While several recent studies have attempted to analyze the role of decentralization on growth, the question of the impact of decentralized finance on regional development and quality of life has remained unanswered. Hence, this paper sought to explore the impact of fiscal decentralization on GDP growth and HDI in selected CEE countries.

2.1 METHODOLOGY

As we stated above, data from Organization for Economic Cooperation and Development (OECD) and World Bank data for GDP growth rate and HDI for country level from 2010 to 2019 were used in this paper. The OECD receives information from its member countries and several non-member countries via thousands of individual data. OECD is among one of the best reliable sources of data used by researchers. We focus on fiscal decentralization variables, GDP growth rate, and HDI in some selected CEE countries - the Czech Republic, Slovakia, and Poland. The analysis involved analyzing the three models by first focusing on each model to assert the results' strength. In total, we analyze 28 observations in all selected countries. Because the dependent and independent data are linear variables, the traditional and commonly used is linear regression analysis (Legendre, 1805, Gauss, 1809), which is mathematically defined as:

$$y = \beta o + \beta ix + \varepsilon \qquad (1)$$

Where "y" represents the dependent variable or output, "βo" represents the y-intercept, "βi" is the slope of the simple linear regression, "x" represents the value of the independent variable or the input variable, "ε" represents the random error variable. Selected dependent and independent data are shown in Table 1.

Table 1. **Description of the variables used**

Variables	Description	Sources
GDP growth (dependent)	Real Gross Domestic Growth (annual growth rate)	(Ebel et al. 2002; OECD Database)
Subnational expenditure (independent)	Decentralized Expenditure by economic classification comprises: current expenditure, i.e., compensation of employees, intermediate consumption, social expenditure, subsidies, and other current expenditures (taxes, financial charges, and adjustments); and capital expenditure, i.e. direct investment and capital transfers (level of subnational expenditure in Billions Eur).	OECD Database
Subnational revenue (independent)	Subnational Revenue Comprises tax revenue (current and capital grants and subsidies), tariffs and fees, property income, and social contributions (level of subnational revenue in Billions Eur).	OECD Database
HDI (dependent)	The HDI is a means of comparing key indices of human development, i.e. long and healthy living, access to education, living standards and the overall maturity of the state	(Huther and Anwar, 1998) World Bank Database
Transfers (independent)	Transfers to subnational from other levels of government (Share of total subnational revenues and grants in %)	(Martínez and Jorge, 2017) OECD Database

Adapted from OECD Database, World Bank Database

This paper sorts to analyse the impact of fiscal decentralization variables - the amount of subnational expenditure and revenue, transfers to the subnational government (as a share of subnational revenues) on the variables representing regional development as GDP growth and HDI.

Model Fit

The paper measured collinearity using the Variance Inflation Factor (VIF). The model showed no multicollinearity issues among the variables, with all variables showing less than ten values as propounded by (Hair et al. 2017). It also shows that about 98% of the variance is explained.

2.1.1 Results and Discussion

Regarding our analyses in Table 2 below, we first analyzed some selected variables on GDP and HDI in each country. Furthermore, following the approach of (Abel and Serdar, 2002; Martinez and Jorge, 2017) to obtain results that would be more feasible across the selected CEE countries, regression analyses of the data were performed.

Table 2. **Results of Analysis**

Variables	The Czech Republic		Poland		Slovakia	
	GDP growth	HDI	GDP growt	HDI	GDP growth	HDI
	P-Val (Beta)	P-Val (Beta)	P-Val (Beta)	P-Val (Beta)	P-Val (Beta)	P-Val (Beta)
Subnational Revenues	0.01*** (13.61)	0.39 (1.52)	0.01*** (12.51)	0.25 (7.70)	0.02** (12.77)	0.01*** (0.021)
Transfers	0.62 (-14.69)	0.20 (0.03)	0.37 (21.05)	0.89 (8.67)	0.33 (1.63	0.77 (7.30)
Subnational Expenditures	0.04** (-9.65)	0.54 (1.36)	0.08* (-7.60)	0.64 (-4.53)	0.19 (-4.33)	0.05** (0.01)
R^2	0.969	0.881	0.987	0.769	0.962	0.965
No. of Observations	28					

Source: own calculations

Legend: ***significant at p<0.01;**significant at p<0.05;*significant at p<0.10

As clearly shown in Table 2 above, the results show a positive and strong or medium significance regarding subnational revenue and GDP growth rate in all observed countries. There was a statistically significant and positive effect Regarding the GDP growth rate of the Czech Republic and the level of subnational revenue. Similarly, in Poland, the result shows a highly significant positive impact regarding subnational revenue and GDP growth rate. The Slovakian GDP growth rate was affected by subnational revenue only with moderately statistical significance. This means that for prudent growth in these countries, better performance and GDP growth is expected when the subnational government mobilizes its resources and revenues. The results effectively accept hypothesis H1a. The observed result is also in compliance with the finding of Andreas et al. 2012; Robert and Serdar, 2002; Jing and Heng, 2002; Gemmell et al. 2013, who affirm that decentralized revenue is very significant in ensuring GDP growth and overall development of countries.

Regarding subnational expenditure, a moderate significance and negative effect on GDP growth are observed in the Czech Republic. However, there is less significant observation for subnational expenditure and a negative effect on the growth of GDP in Poland. On the contrary, subnational expenditure shows no significance as observed but has a positive impact on the GDP growth in Slovakia. Based on observations, we reject hypothesis H3a. Although we reject hypothesis H3a, this result is surprising because the GDP growth rate is expected to improve when the government decentralizes its expenditure. This result completely contradicts the literature reviewed (Thiessen, 2003; Lessmann, 2006; Euijune et al., 2003; Weingast, 2009; Bähr, 2008), suggesting that increasing decentralized expenditure enhances growth which will trigger a corresponding increase in infrastructural development, etc.

Concerning HDI in the Czech Republic, none of the variables show statistically significant influence on HDI, but show a positive effect, most importantly with subnational revenue. Given Poland, fiscal decentralization variables show no statistically significant HDI results but show the highest positive impact on transfers. This means that when the central government percist or contnuely engage on funds or transfers, it rather leads to an obstruction of fiscal decentralization. Although this also accepts H1b and H3b hypotheses, this result could be better if the subnational government is fully responsible for their region's financial activities. Hence, it would have a positive influence on the quality of life. Subnational revenue in Slovakia shows a statistically highly positive significant effect on HDI. Subnational expenditure also indicates a moderate positive significance lower positive effect on HDI. In effect, this finding complies with the work of Libman, 2013; Bojanic and Collins, 2019. According to our expectation, improved fiscal decentralization will increase the quality of life in a country. Hence we formulated a hypothesis implying that the amount of subnational revenue and expenditure affects HDI positively. However, the hypothesis H1b, H3b is rejected given the subnational revenue and expenditure level with HDI in both the Czech Republic and Poland. Still, both are affirmed in Slovakia. The result (as shown in Table 2 above) accepting the formulated hypothesis H2b further confirms that transfers may not necessarily influence the GDP growth and efficiency of fiscal decentralization. The distribution without consideration of fiscal capacity and explicit measures of expenditure needs may increase inequality (Monoz et al., 2019). Additionally, some scholars have argued that transfers may be a yardstick for central government interference in the subnational government decision making process as it might want to decide for them which projects or activities they should carry out at a point in time (Kappeler et al. 2012).

Table 3: **Summary of Hypotheses, Tests and Results**

Hypotheses	**The Czech Republic**	**Poland**	**Slovakia**
H1a: subnational revenue has a significar positive effect on GDP growth rate	Accepted	Accepted	Accepted
H1b: subnational revenue has a significar positive effect on HDI	Rejected	Rejected	Accepted
H2a: Transfer from central government has a negative influence on GDP growth	Accepted	Accepted	Accepted
H2b: Transfer from central government has a negative influence on HDI	Accepted	Accepted	Accepted
H3a: subnational expenditure has a significant positive influence on GDP growth	Rejected	Rejected	Rejected
H3b: subnational expenditure has a significant positive influence on HDI	Rejected	Rejected	Accepted

Source: own calculations

In summary, the selected CEE countries' findings indicate that fiscal decentralization influences GDP growth and the HDI of countries. In particular, it shows a highly positive significant effect of subnational expenditure in Slovakia but negative and no significance in Czech and Poland. Consequently, subnational revenue shows a positive and high significance across all selected countries at $p<0.01$ confidence level. The transfer shows a negative relationship with no significant effect on GDP growth and HDI in the Czech Republic, Poland, and Slovakia. This finding effectively accepts the formulated hypothesis H2a and H2b. This result conforms to an established fact (Andreas et al. 2012) that, in countries where the central government’s transfers mainly finance subnational governments, the subnational budget limitation is generally segregated from subnational expenditure decisions.

As a result, there are far fewer transfers to implement regional development enhancing policies such as investing in efficient infrastructure than in countries where subnational governments are financed by their own revenues (Andreas et al., 2012). However, the result contradicted Gemmell's findings on the role of the central government transfers' in ensuring growth in their respective countries (Gemmell et al., 2013; Weingast, 2009). Though this position contradicts our results, the result affirms the view that considers transfers more effective in federal states. Hence, considering the selected countries in this research which unitary states, we consider the finding to be appropriate (Thiessen, 2003).

3. CONCLUSION

The paper aims to assess how fiscal decentralization variables such as subnational revenue, subnational expenditure, and transfers to subnational governments affects GDP growth rate and HDI. We examined whether decentralized finances carried out by the subnational government spurred regional development expressed by GDP growth and HDI. The descriptive statistics results demonstrated that the GPD growth rates in the Czech Republic, Poland, and Slovakia regarding subnational revenue are positively significant for regional development. In all countries under review, support for decentralization from their respective central governments were most influential for their GDP growth. The empirical results showed that carrying out subnational expenditure activities does not significantly stimulate regional development even though the significance was high in Slovakia. This implies that Slovakia experiences a higher relationship between decentralized subnational expenditure and GDP growth than the Czech and Poland experience.

However, we found out that the higher the amount of transfers from central government to subnational governments, the stronger the negative impact on GDP growth and HDI in all countries, affirming our formulated hypothesis. Finally, the study concluded that decentralization increasing is very significant to spur GDP growth and HDI in the selected CEE countries. It complements the view that an increased decentralization in both federal and unitary countries would be beneficial to ensure the development process is efficient and expedited (Feld and Dede, 2005).

In total, we analyze 28 observations in all selected countries. As it is difficult to get information and data regarding some decentralization indicators in some countries. The number of observation is quite less and we consider it as weakness of the research. Therefore, future research in line with this subject area should address an investigation of the data from all CEE countries. Moreover, the effects of transfer could be explored in more detail.

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