Bulletin of the Transilvania University of Braşov
Series V: Economic Sciences • Vol. 15(64) No. 1 - 2022
https://doi.org/10.31926/but.es.2022.15.64.1.7

FISCAL DECENTRALIZATION AND LOCAL EMPLOYMENT GROWTH: EMPIRICAL EVIDENCE FROM KOSOVO'S MUNICIPALITIES

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Abstract: *The main objective of this research consists in assessing the impact of the level of local fiscal decentralization on local employment growth in municipalities of Kosovo. To achieve the goal of this study, several panel datasets have been constructed, which include all 38 municipalities in Kosovo and cover the period from 2012 to 2020.*
This study also uses several models to test the relationship between fiscal decentralization and employment growth; however, the Hausman Taylor IV estimator is the main estimation strategy. The findings of the paper recommend that local fiscal decentralization has positive effects on local economic growth especially in the level of employment regardless of the size of Kosovo municipalities.

Key words*: Fiscal decentralization, Kosovo, local employment growth, Hausman Taylor estimator, JEL classification: H71; H72*

1. Introduction

The interest in studying the economic effect of fiscal decentralization increased significantly in this regard, numerous research papers have been written (Oates, 1993; Oates, 1999). Almost all countries have experienced some form of transfer of power to local government (Dillinger, 1994).

Financial decentralization is largely driven by the idea that decentralization will increase economic efficiency by allowing local governments to provide better services due to proximity and information benefits, and that for public service delivery, competition between local governments will ensure correctness matching preferences between local communities and local governments (Tie bout, 1956).

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Studies on fiscal decentralization are usually conducted not only from an economic point of view, but also from a political one. Proper research on this topic can assist governments in comparing, diagnosing, and reforming fiscal systems, as well as assessing the effectiveness of previous reforms. They can help determine if and to what extent decentralization promotes economic growth and employment, improves public sector efficiency, or contributes to macroeconomic stability.

Kosovo is a specific case to study fiscal decentralization because, after the 1999 war, it began to move from a de facto power vacuum to a market-oriented decentralized economy. Kosovo has had many difficulties in achieving the preconditions for a successful implementation of fiscal decentralization measures. The presence of a weak legal system, persistent financial instability, and the legacy of 40 years of central planning posed significant challenges to creating sustainable decentralized systems.

2. Literature Review

Previous research on the link between fiscal decentralization and economic growth or employment is inconclusive, some authors report positive effects, some report negative effects especially in developed countries while a third of the research reports mixed effects. Most studies report positive correlations between fiscal decentralization and economic growth.

Methodological studies that report positive relationships can be categorized into two groups, those that use cross-data and use simple OLS and those that use time series and panel data more advanced panel data methods.

Studies that stand out from the first group include studies by Lin and Liu (2000) conducted in China, who report that a percentage point increase in revenue decentralization increases GDP per capita by about 0.27 percent.

Almost identical results are reported by (Akai, Hosoi and Nishimura, 2009; Akai and Sakata, 2002), who use cross-country data from the United States. Similarly, some authors (Ebele and Yilmaz, 2002; Busser, 2011) suggest that fiscal decentralization has a positive effect on GDP growth using cross-sectional data of different samples composed of developed countries, developing and also mixed samples.

Moreover, the studies that stand out from the second group include the (Imia, 2005) study, which uses a mixed sample of fifty-one countries from both developing and developed backgrounds; they report a positive correlation between fiscal decentralization and GDP growth.

Similar findings have been reported by Stanfel (2005), using U.S. data from 1960 to 1990; (Zhang and Zou, 1998) using data from Indian states.

A non-negligible research group fails to find any link between fiscal decentralization and GDP growth and many of them report negative links. Davoudi and Zou (1998) report a negative relationship between fiscal decentralization and economic growth in a sample of forty-six developing countries, however in a subsequent study conducted by the same authors (Xia, Zou and Davoudi,1999) they fail to find a relationship between fiscal decentralization and economic growth.

Similarly, Wooller and Phillips (1998) who use longitudinal data from twenty-three developing countries report negative relationships between fiscal decentralization and economic growth.

3. Research Methodology

3.1. Data

To achieve the research goal, a panel database was created through a combination of data from the Kosovo Agency of Statistics and the Ministry of Finance. Measuring local economic development is not an easy task, as there are no disaggregated data either on production at the local level or any indicator of GDP approximation at this level.

Knowing this fact, we follow the example of (Bart let, Ulis and Knezek, 2020) and use the employment rate at the municipal level as substitute information for local economic development, based on the argument that local economic development is closely related to employment, in other words local economic development is necessarily reflected in employment with an almost immediate effect.

To extract employment data, we got access to microdata of the Labour Force Survey (LFS) collected by the Kosovo Agency of Statistics. Knowing that LFS is the only official source of labour market statistics we have restricted the study period between 2012 and 2020 because LFS carried out with the Eurostat methodology only for 2012, while for previous periods of the data are not always comparable, therefore they are not reliable to be included in such empirical analyse.

In addition to the data discussed in the section above, the ASKDATA web portal also includes some of the variables that serve as control variables. This platform offers data on the number of population and the number of minority population in each municipality for the study period, population density, number of settlements in municipalities, percentage of population from 15 to 24 years of age.

Annual Financial Reports (Budget Reports) of the Ministry of Finance were used to derive a reliable indicator of fiscal decentralization for all municipalities of Kosovo. These reports contain detailed annual information on all revenues and expenditures at all levels of government and for all municipalities in Kosovo.

For the needs of this research, we have obtained additional data from the municipality's sources for revenues and expenditures from the budgeting offices of municipalities of Kosovo.

3.2. Variables

In this paper, we will use revenue decentralization as the main indicator of decentralization. Knowing that the financial reports of the Ministry of Finance, as discussed, contain detailed information on local revenues and expenditures as well as transfers from the central government. We use this information to define the revenue decentralization at annual level for each municipality as follows:

$$\text{Re}venue\ decentralization_t = \sum_{i=1}^{I} \frac{r_t}{R_t} \quad (1)$$

where: the summation operator marks the municipality, *I* is *the* year; r *is* the own source of revenues; R is the total local budget.

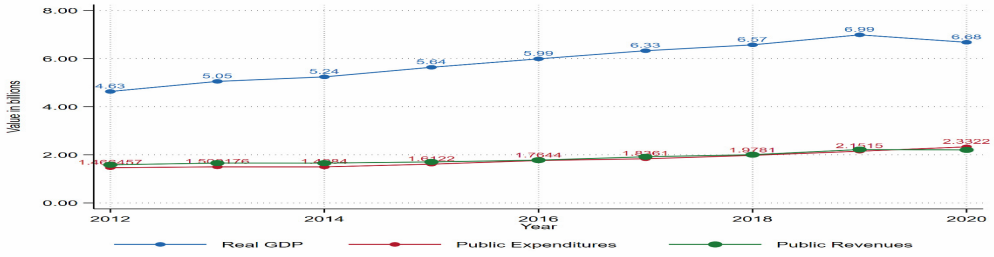
The population logarithm is included as substitute information for labour force growth. The variable for young age (15-24) years in the municipality is the ratio between the numbers of individuals aged 15-24 years and the total population in each municipality in each year. Variable Large city is a binary variable that is equal to 1 if municipality *k* has 100,000 or more inhabitants in year *i* and 0 if municipality *k* has less than 100,000 inhabitants in year *I.*

The number of settlements shows the total number of settlements of each municipality. While the variable "Political party" indicates whether in year *i* in the local government of the municipality *k* is from the same party as the ruling party or any of the coalition parties in the central government.

Finally, the percentage of the minority population is the ratio between the number of minority inhabitants in municipality *k* in year *I* and the total population in that municipality. Instead of local economic development measured through production at the municipal level this research follows the example of (Bart let, Ulis and Knezek, 2020) and uses substitute information for local economic development, specifically, the main dependent variable is employment at the local level. Since the interest is to see how the decentralization potentially affects the employment rate, the simplest form would be to define the employment rate variable as the ratio between employed individuals and the total population for each municipality in each year in the sample.

3.3. Descriptive statistics

Kosovo constantly has been one of the countries with highest economic growth compared to its Western Balkan neighbours. As Figure 1 shows the period between 2012 and 2020 is characterized by a steady increase in the real GDP and Kosovo has managed to increase its real GDP by more than two billion euro, which amounts to around fifty percent cumulative increase. Interestingly the growth of public revenues and expenditures did not increase with the same percentage and the expenditures are always lower than revenues.



Source: Authors calculation based on Kosovo Agency of Statistics (KAS) &Ministry of Finance (MF)

Fig. 1. *Trends in real GDP, public revenues, and expenditures (in billions*)

Despite these positive trends, Kosovo's economy remains weak and fragile especially in cases of shocks it shows signs of volatility. Figure one shows directly how fragile Kosovo's economy is after the COVID-19 pandemic reflected in the economic activity and a promising year in 2020 turned out to be a year of an economic shock, we can see that the real GDP decreased by more than 300 million euros or around 5 percent compared to 2019.

Based on nominal decrease of GDP it was estimated that more than 50 thousand people lost their jobs temporarily. During 2020 the government intervened with several economic packages trying to reduce the negative economic and fiscal effects of the pandemic.

Table 2 summarizes some important features for this analysis. Column (1) of this table shows the average population, the number of inhabitants is larger in large municipalities compared to medium and small municipalities.

On the other hand, more urbanized municipalities seem to have significantly more inhabitants than the non-urbanized ones, perhaps because most urban municipalities are large with many inhabitants and vice versa. As for the region, on average, the region of Prizren has the most inhabitants followed by Pristina and Peja, while the regions with the lowest inhabitants are those of Gjilan and Mitrovica.

Table 2

Descriptive statistics of selected variables by groupings of municipalities

Description	(1) Population	(2) Density	(3) Own revenue per capita	(4) Total costs per capita	(5) Employ. rate	(6) Workforce participation
Municipality size						
Small	16419	213	27.2	307.8	0.29	0.35
Medium	51639	166	19.1	208.9	0.23	0.29
Large	104988	227	38.8	233.7	0.26	0.32
Population						
Rural	27933	133	24.6	284.4	0.27	0.33
Urban	80870	336	35.9	240.7	0.26	0.33
REGION						
Pristina	61060	212	55.0	298.3	0.27	0.33
Mitrovica	33016	350	11.3	255.5	0.33	0.39
Peja	59283	126	27.6	220.9	0.25	0.34
Prizren	68528	251	19.5	218.2	0.23	0.29
Ferizaj	37103	165	26.8	276.9	0.27	0.38
Gjilan	29327	117	30.1	339.7	0.27	0.31
Gjakova	50254	149	19.8	209.7	0.23	0.28

Source: Authors calculation based on Kosovo Agency of Statistics (KAS) &Ministry of Finance (MF)

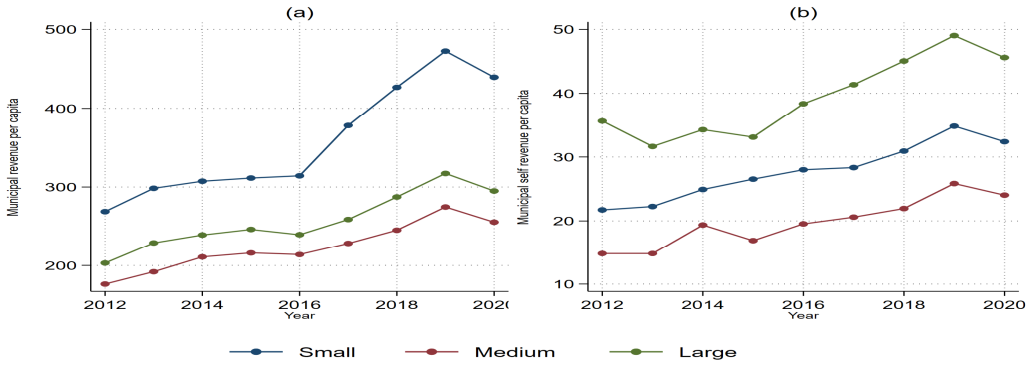
Column (2) shows the population density, it can be noted that large municipalities are those with the highest density with 227 inhabitants per km ^{2}, then there are small municipalities with 213 inhabitants per km^2 and finally medium municipalities with only 166 inhabitants per km^2, the urban municipalities have significantly higher density with 336 inhabitants per km^2 compared to only 133 for rural ones.

Regarding the region, the highest density is in the region of Mitrovica, followed by Prizren and Pristina, while the lowest density is in the regions of Gjilan and Peja.

The next two columns (3 and 4) present the income per capita and total expenditures per capita in the municipality, in the next part of this chapter we will presents and discuss in more detail these indicators. In the table the revenues per capita are highest in the municipalities, followed by small municipalities, however the total per capita expenditures are higher in small municipalities than in large municipalities.

Regarding the level of urbanization, it is interesting that the self-revenues are significantly higher in urban municipalities, perhaps due to the construction tax, but the total per capita expenditures are higher in rural municipalities.

The regions with the highest revenues as well as with the highest expenditures per capita are Pristina and Gjilan, while those with the lowest expenditures are Mitrovica and Prizren. Columns (5, 6) present employment indicators at the local level in this case small municipalities seem to have a higher employment rate compared to the other two types, followed by large municipalities.



Source: Authors calculation based on Kosovo Agency of Statistics (KAS) &Ministry of Finance (MF)

Fig. 2. *Types of per capita income by size of municipalities*

Panel (a) general revenues, panel (b) the own source of revenues

Figure 2 presents the total revenues and own source revenues per capita according to the size of the municipality. This graph is self-explanatory however to further clarify it a brief discussion is made below. As the figure presents for the period from 2012 to 2020 these municipalities the planned revenues at the beginning of the period were around 250 euros, while in 2019 they reached around 450 euros.

The small municipalities are followed by large municipalities from 2012 to 2019 the increase is significant from 200 euro to about 330 euros per capita. Th medium-sized municipalities in 2012 had 180 euro while in 2019 they amounted approximately 270 euro per capita.

Panel (b) presents the own revenues of municipalities. Unlike panel (a) in this case the results are quite different in this case the general trend of changing revenues is positive for all municipalities but this time, the increase in own revenues is higher in the large municipalities.

This suggests that the increase in total local expenditures per capita in small municipalities comes mainly from government budget transfers, which have increased more rapidly for small municipalities, perhaps to promote balanced regional development.

While the same phenomenon has produced the opposite effect for large municipalities, which are also heavily dependent on the central government, the slower growth of government transfers for large municipalities is reflected in a slower increase in total local spending per capita in large and medium-sized municipalities. In this case also, the middle municipalities seem to have the worst performance.

The positive trend of fiscal revenues of all municipalities in Kosovo was interrupted in 2020 as the year of the Covid-pandemic as consequence we had the decrease of 4-5% of fiscal revenues of all municipalities.

4. Empirical Strategy

This paper is based on the research of Devoid and Zou (1998) & Rodríguez-Pose and Ezcurra (2011). However, it differs considerably from these studies on the approach it adopts. While these studies in this line explore the effect of fiscal decentralization on GDP at the level of a given country or region, our study is among small studies like (Canaleta, Arzoz and Gárate, 2004; Nguyena and Anwarb, 2011; Kyriacou, Muinelo-Gallo and Roca-Sa gales, 2015; Bartlet, Đulić and Kmezić, 2020) emphasizing the effect of fiscal decentralization on local economic development measured through employment.

First, we used a pooled OLS model where all observations were pooled together, ignoring the data panel structure. Pooled OLS assumes that for each ***X,*** there is no serial correlation and that the standard error is not heteroskedastic. In other words, this assumption implies that the model treats each observation in the sample as independent, so it ignores the fact that the sample includes 27 municipalities for a period of 9 years but treats all observations as unique cases.

This approach may be reasonable in cases where the sample is too small and cross-sectional but ignoring the data panel structure can produce biased results. Although the shortcomings of this method are evident, in this paper we use it because it provides a good basis for comparison and its results will be compared with the results of more advanced models that will be discussed below.

Fixed and Random Effect models are two other methods that were used. These two models are used due to their nature, both models are designed to analyse panel data and minimize endogeneity problems because of unobserved heterogeneity of municipalities.

Moreover, the Fixed Effects model is generally considered to produce more consistent estimates even when the Random Effects model is more efficient, so it is common for researchers to prefer the Fixed Effects model to the Random Effects model.

This trend is largely driven by the fact that the Random Effects model assumes that the error term is not correlated with independent variables, this assumption is being considered too strong to be reliable. To eliminate shortcomings of other models we use

the Hausman-Taylor estimator. This model offers a more convenient method because it is always consistent and efficient.

Therefore, its results are assumed to be more accurate compared to other methods. Hausman-Taylor is a method of instrumental variables which uses the information contained in the model to eliminate the correlation between the independent variables and the error term enables the variables that change over time to be kept in the model.

The main reason for selecting this method as the main method is that this method is considered more accurate in eliminating endogeneity, considering that employment may be correlated to any of the variables included in the model.

Formally, the Hausman-Taylor model takes this form.

$$\ln(y_{it}) = \beta_0 + \beta_1 \ln(RD_{it}) + \beta' X + \beta' Z + \mu_i + \varepsilon_{it} \quad (2)$$

where:

The dependent variable Y_i includes the logarithm of the number of employees in the municipality i. The variable RD_i is the main variable we are interested in, measured through the decentralization of general local revenues; the point estimate β_1 measures the impact of fiscal decentralization on the employment rate at the municipal level.

As it is very likely that there are variables that simultaneously affect both the degree of fiscal decentralization and the degree of employment, it is considered necessary to include a few control variables at the municipal level, these variables in the model are included in two vectors. The first vector: X_i includes vector of variables which change over time.

This vector includes indicators for years of education, population density, population number, number of individuals aged 15 to 24, an indicator for the ruling party and the percentage of minority population in the municipality. While the second group: Z_i is a vector of variables which do not change over time, specifically the size of the city and the number of settlements in each municipality.

Average years of education of the population over 15 years are included because it indicates the development of human capital in each municipality, which directly affects the employment opportunities of the inhabitants of each municipality.

The following control variable is the population and population density which is included in the model to check for competition for employment among residents in the municipality.

The next control variable is the percentage of individuals aged 15-24 in the municipality this variable is included because the employment opportunities of this age group differ drastically with the older age groups, so it may be the most important information in the model.

Finally, the percentage of the minority population is included because it is possible that various projects funded from inside and outside Kosovo to improve the living conditions of minorities may also be reflected in indicators of fiscal decentralization. The first term μ_i captures municipality's fixed effects, by checking for unobserved characteristics of municipalities including those that do not change over time, while ε_{it}

represents the time-varying error term which is assumed not to be related to the independent variables.

5. Empirical Results

This section reports the results on the impact of fiscal decentralization on employment at the local level.

Table 3

Impact of revenue decentralization on the local employment rate

	(1) POLS	(2) RE	(3) FE	(4) Hausman-Taylor IV
Decentralization of revenues	1,063 ***	0.459 ***	0.343 **	0.324 **
	(0.119)	(0.160)	(0.159)	(0.159)
Years of education (log)	0.468 ***	0.768 ***	0.782 ***	0.783 ***
	(0.071)	(0.063)	(0.060)	(0.060)
Density	0.000	-0,000	0.007 ***	0.004 ***
	(0.000)	(0.000)	(0.001)	(0.001)
Population (log)	1,048 ***	0.986 ***	-1.115 ***	-0,487 **
	(0.030)	(0.063)	(0.289)	(0.241)
Young 15-24 (log)	-0.044 *	-0.100 ***	-0.119 ***	-0.117 ***
	(0.025)	(0.023)	(0.022)	(0.022)
Big city	-0.028 **	0.059	0.000	0.537 *
	(0.013)	(0.050)	(.)	(0.320)
No. of settlements	0.001 **	0.001	0.000	0.028 ***
	(0.000)	(0.002)	(.)	(0.010)
Political party	0.041 ***	0.051 ***	0.055 ***	0.055 ***
	(0.010)	(0.011)	(0.011)	(0.011)
Percentage of minority population	-0.010 **	0.037 *	0.000	0.233 **
	(0.005)	(0.020)	(.)	(0.118)
Constant	-2.976 ***	-2,818 ***	19.227 ***	9,627 ***
	(0.208)	(0.531)	(2.887)	(2.203)
Observations	215	215	215	215
Groups		27.000	27.000	27.000
R^2 overall	0.977	0.971	0.511	.
Within		0.157	0.227	.
Between		0.984	0.538	.
F-test	3949.604		40.450	29.168
Wald test		2202.848		
Hausman test			-134.098	
Chi squared				262.516

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Source: Authors calculation based on Kosovo Agency of Statistics (KAS) &Ministry of Finance (MF)

Table 3 reports the findings on the impact of income decentralization on employment at the local level. The results of this analysis suggest that revenue decentralization has a statistically significant positive impact on employment at the local level specifically the results suggest that the increase in revenue decentralization by one percentage point is associated with a 0.324 percent increase in the employment rate (SE 0.159) ceteris paribus. As discussed, this finding varies by a large margin depending on the model used.

The results remain almost identical to the main Hausman-Taylor IV model if the Fixed Effects model (0.343) is used, however they suggest that the Random Effects model (0.459) appears to produce a large effect by almost 0.15 percentage points, while according to the POLS the model influences revenue decentralization of 1.06 which is 0.76 percentage points higher than our main model.

This shows that using simple methods like POLS produces biased and potentially erroneous results. Therefore, the decision to use many models seems to be a productive decision. Further, most control variables appear to have the expected impact on employment at the local level. As expected, average years of education have a positive impact on the employment rate at the local level.

Based on the results of the model the increasing the years of the education of the population for one percentage increases the employment rate by 0.78 percent, the population density has a small (0.04%) but statistically significant impact on local employment, while the population growth by one percent seems to have a negative impact of about 0.5 percent.

Similarly, the increase in the percentage of the population aged 15-25 per unit is accompanied by a decrease of 0.117 percent in employment at the local level. While the size of the city and the number of settlements is also positively related to employment at the local level. As expected, if the party is in power in both the municipality and the central level, this is accompanied by a 0.05% increase in employment at the local level. Finally, surprisingly, the growth of the minority population by 1 percent seems to have a positive impact on employment growth at the local level by almost 0.23 percent.

6. Conclusions

- The research confirmed the basic hypothesis that the increased level of fiscal decentralization has a positive effect on employment growth at the local level in Kosovo municipalities in the analysed period (2012-2020).
- The main contribution of this study is that it is the first empirical study with econometric methods, and which measures the correlation between fiscal decentralization and local employment rate in the case of municipalities of Kosovo.
- The empirical analysis is based on panel data regression methods, where the model that produces the most accurate results is the Hausman Taylor method.
- The results suggest that revenue decentralization contributes directly to local employment growth by approximately 0.32 percentage points.

- The reason why a positive link has been found between fiscal decentralization and local employment growth has to do with the fact that, due to the larger competencies in the sectors of health and education and in capital expenditures in the local level.
- Based on lager competencies for municipalities the central government has given priority to fiscal decentralization on local level to accommodate these expanded competencies. As a result, the efficiency of local service delivery has increased, and the municipalities have had the financial flexibility to design policies that have better targeted the drivers of local employment growth at the municipality level.

References

Akai, N., Hosoi, M., & Nishimura, Y., 2009. Fiscal decentralization and economic volatility: Evidence from state-level cross-section data of the USA. *The Japanese Economic Review*, 60(2), pp. 223-235.

Bartlet, W., Đulić, K., & Kmezić, S., 2020. The Impact of Fiscal Decentralization on Local Economic Development in Serbia. *Lex Localis-Journal of Local Self-Government*, 18(1).

Baskaran, T., & Feld, L. P., 2013. Fiscal decentralization and economic growth in OECD countries: is there a relationship?. *Public finance review*, 41(4), pp. 421-445.

Buser, W., 2011. The impact of fiscal decentralization on economics performance in high-income OECD nations: an institutional approach*. Public choice*, 149(1), pp. 31-48.

Canaleta, C. G., Pascual Arzoz, P., & Rapun Garate, M., 2004. Regional economic disparities and decentralization. *Urban studies*, 41(1), pp. 71-94.

Davoodi, H., and Zou, H. F., 1998. Fiscal Decentralization and Economic Growth: A Cross-Country Study. *Journal of Urban Economics*, 43(2), pp. 244-257.

Dillinger, W., 1994. *Decentralization and its implications for urban service delivery.*

Ebel, R. D., & Yilmaz, S., 2002. Concept of fiscal decentralization and worldwide overview. Washington, DC: World Bank Institute.

Iimi, A., 2005. Decentralization and economic growth revisited: an empirical note. *Journal of Urban economics*, 57(3), pp. 449-461.

Kyriacou, A.P., Muinelo-Gallo, L., & Roca-Sagalés, O., 2015. Fiscal decentralization and regional disparities: The importance of good governance. *Papers in Regional Science*, 94(1), pp. 89-107.

Lin, J. Y., & Liu, Z., 2000. Fiscal decentralization and economic growth in China. *Economic development and cultural change*, 49(1), pp. 1-21.

Nguyen, L. P., & Anwar, S., 2011. Fiscal decentralization and economic growth in Vietnam. *Journal of the Asia Pacific Economy*, 16(1), pp. 3-14.

Oates, W. E., 1993. Fiscal decentralization and economic development. *National tax journal*, 46(2), 237-243.

Rodríguez-Pose, A., & Ezcurra, R., 2011. Is fiscal decentralization harmful for economic growth? Evidence from the OECD countries. *Journal of Economic Geography,* 11(4), pp. 619-643.

Stansel, D., 2005. Local decentralization and local economic growth: A cross-sectional examination of US metropolitan areas. *Journal of Urban Economics*, 57(1), pp. 55-72.

Woller, G. M., & Phillips, K., 1998. Fiscal decentralization and IDC economic growth: An empirical investigation. *The journal of development studies*, 34(4), pp. 139-148.

Xie, D., Zou, H., & Davoodi, H., 1999. Fiscal decentralization and economic growth in the United States. *Journal of Urban Economics* 45 228^ 239 Conditions of use. This article may be downloaded from the E&P website for personal research by members of subscribing organizations. This PDF may not be placed on any website (or other online distribution system) without permission of the publisher.

Zhang, T., & Zou, H. F., 1998. Fiscal decentralization, public spending, and economic growth in China. *Journal of public economics*, 67(2), pp. 221-240.