Decentralization and tax independence in OECD countries: GDP per capita analysis from 1995–2018

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Received: 15 February 2022 / Revised: 12 July 2022 / Accepted: 1 August 2022 / Published online: 24 August 2022

ABSTRACT

The association of local and regional self-government is examined in regard to the decentralization of state administration. This study extrapolated data from 36 Organisation for Economic Co-operation and Development (OECD) countries and analyzed whether decentralization of the state assists in economic growth and development. Administrative decentralization is explored through defining a precedence from the literature. A systematic literature review was conducted and macroeconomic OECD data using nominal gross domestic product was analyzed for the period of 1995–2018. The results confirmed that decentralization does not positively correlate with the level of tax independence of local government and, in effect, is not an advantage. Territorial administration is highlighted throughout the paper as a key factor behind tax autonomy in relation to fiscal decentralization levels.

JEL Classification: E7; F3; O1; O11

Keywords: state administration, self-government, public finance, tax autonomy, general government tax revenue, federal law

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DOI: 10.7172/2353-6845.jbfe.2022.1.3

1. INTRODUCTION

The enlargement of local and regional self-governments is associated with the decentralization of state administration. One of the elements of this mechanism is the decentralization of public finance via its transference to the local level. Interdependency, offset by the level of decentralization and tax independence, interrelates with the internal power struggle of state governance and government control fluctuating between central, regional, and local authorities. The decentralization of public administration is, in part, the decentralization of the state—with the other components comprising the political system and financial structure (Adler & Borys, 1996; Christiano, Eichenbaum, & Evans, 2005). To better understand the decentralization of public finance, important system and performance structures must be taken into account, i.e., top-down versus bottom-up processes (Ahuja, 2000; Mokyr, 2018; Zhou, Liu, Chang, & Hong, 2019). Top-down decentralization relates directly to the unitary state in which the central authority is the overriding entity. The makeup of top-down decentralization incorporates three important factors that must be taken into consideration by the local government: dispersion, delegation, and devolution (i.e., the expenditure and income independence of the local government) (Wągrodzka, 2011). Bottom-up decentralization occurs in the federal state where the implementation of local tasks is prioritized. The central government, in this case, has no influence on the local government which independently institutes tasks and responsibilities (Trussel & Patrick, 2009; Wągrodzka, 2011). In summary, government competence between the central level of the state and regional or local self-government is thus the degree of dependence (i.e., the level of independence) on the state—characterized via three administrative systems: federal, regional, and unitary.

In federal states, laws set at the central level prompt certain actions. Such actions include making regions able to implement law and, to the extent agreed, to create supplementary legislation that must not infringe federal law. In this model, there is a certain scope of independence of local self-governance within legal, economic, and administrative bounds (Beer, 1973; Mokyr, 2018; Radin & Boase, 2000). Regionalized countries are like unitary ones in that a relatively high level of decentralized competence exists. Regions can make laws, but their competences are not irremovable, i.e., the powers assigned to them are part of the powers of the central government. In this system, there is a large decentralization of law making at the local level (Fossum & Jachtenfuchs, 2017; Harrison & Heley, 2015; Hudson, Hunter, & Peckham, 2019). As a result, competitive and equivalent competences of central and local authorities are triggered via activities from public authorities, i.e., specifically from territorial and centralized units, overlapping and sharing similar rights and entitlements. In the unitary system of territorial administration of the state, territorial units are subordinated to the state authority (Salder, 2020). The competence of regions or local units is directly filtered down from the powers of the central level of government. Territorial units are subordinated and organized centrally, which shapes the system and jurisdictional structure—both with centralized and decentralized variants (Tomaszewski, 2007).

The research looks at 36 member countries associated with the Organisation for Economic Co-operation and Development (OECD) and examines the relationships between decentralization of state administration and public finance tax independence at the local level using nominal gross domestic product (GDP) as the key indicator. The study is the presentation of the principles that have aided the different types of change and the economic progress of the countries under exemination from 1995 to 2018. Table 1 illustrates the affiliation of OECD (2020b) countries in relation to their administrative system. The unitary administrative system is the dominant model in which local government units have powers subordinated to the central authority. This trend is observed in most countries throughout the world (World Bank, 2020); however, it should be noted that it is sometimes difficult to define the various variants of administrative systems currently in place. The existing elements of autonomy and independence of local government units can vary—especially in unitary states or specific subordinate-like local government units in federal

DOI: 10.7172/2353-6845.jbfe.2022.1.3

states—making the definition of a state's system variable to some extent. First, the paper examines the notion of administrative decentralization and assesses the competitive edge needed by local governments to thrive. Financial independence is then discussed in relation to case research on OECD countries. Finally, a discussion elucidates the relationship between decentralization and economic success.

Table 1
Territorial administration systems in the 36 selected OECD countries*

Federal	Regional	Unitary
Australia, Austria, Belgium, Canada, Germany, Mexico, Switzerland, United States	Spain	Chile, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, Sweden, Turkey, United Kingdom

* based on OECD (2020b) data and information obtained from the respective embassies of each country

2. LITERATURE REVIEW

2.1. Administrative decentralization

Decentralization mechanisms are elements that can contribute to the emergence of competition between varying local governments, potential residents and entrepreneurs alike. This rivalry can create administrative push and pull factors that attract people as well as business investment (i.e., related to public goods and services) by matching the supply of public goods (i.e., in terms of qualitative and quantitative returns) to any proposed group (Tiebout, 1956). Having the ability to better match public goods and services at the local level increases the efficiency of the public sector in terms of transference of decisions, competences, and finances from the central authority to local government units. In a number of cases, this has been shown to improve local economic development and, in effect, help shape infrastructural activity (Baskaran, Feld, & Schnellenbach, 2016; Oates, 1993). Decentralization can engage a focalized view of adjusted public goods and services provided according to socioeconomic circumstances (Oates 1972, 1999). Essentially, effective decentralization must incorporate adequately localized income with favorable conditions such as mobility of production factors (e.g., employability), operational mechanisms to cope with budgetary constraints, and functional and effective institutional stability (Weingast, 2014).

Decentralization favors the mechanisms of competition between local governments. It steers towards improving efficiency in terms of budgetary revenue and expenditure by aiding economic and community development. Some negative effects of competition, however, have shown to reduce tax revenue, which has translated into a lower overall budget, e.g., via less investment. In line with the Pareto principle, private investors are more inclined to do business regardless of community input, which potentially can reduce the provision of public goods and services and decrease local government efficiency (Border, 1983; Chipman, 2006; Sher, 2020). As a result, accumulation of revenue from low tax policies most likely would increase the local budgetary deficit by augmenting scarcity (Edwards & Keen, 1996; Keen & Marchand, 1997; Weingast, 1995; Wilson & Wildasin, 2004; Zodrow, Mieszkowski, Zodrow, & Mieszkowski, 1986). When considering the reduction of public spending, one can expect a decline in the activity of private entrepreneurship, which can cause a decline in economic growth. This idea reflects public expenditure support and supplementation on the part of private entrepreneurship which can improve productivity of private capital, e.g., by funding the development of education (Ozturk, 2008) and designing new infrastructure (Gerson, 1998). Competition between local governments

DOI: 10.7172/2353-6845.jbfe.2022.1.3

usually can improve the quality of the overall governance of a system (de Mello & Barenstein, 2001) since they are more likely to be held directly accountable by local inhabitants. This can motivate self-governance-oriented authorities to regularly evaluate the socioeconomic conditions and veer towards proven policy models that have been successful (Bardhan, 2002; Besley & Case, 2003).

2.2. Finding the competitive edge

Decentralization and the emergence of competition between local or regional units may prevent the market economy from being mismanaged by political entities, in particular, at the central government level. An example is any attempt to take over and subordinate private property or public land owned by local authorities. To counterbalance this, granting more powers and authority at the local or regional level, alongside with strong budgetary restrictions, can aid in preventing excessive market fluctuation ensuing from strong top-down political decisions (Chatry, 2017; Weingast, 1995). Ineffective decentralization may result from deficiencies in democracy, e.g., improper controls during elections, which stand as a type of bedrock for holding local authority action-responsible. Examples of ineffective decentralization include: poor quality of governance, emergence of local or regional interest groups taking advantage of or overly abusing their benefits, and corruption (i.e., connections between individual levels of government, obtaining subsidies, and subsidies by local governments from the central level). As a result of the existence of special interest groups, power is much easier to execute and sustain at the local or regional level than at the central level (Enikolopov & Zhuravskaya, 2007; Weingast, 2014). In terms of political influence, decentralization must also consider the power struggle of political parties. In less developed countries, in conditions of limited democracy, strong political parties have a motivating effect on local or regional politicians and decentralization favors development. In order to gain party power, local or regional politicians try to introduce pro-development measures that can eliminate costs negatively affecting the functionality of the economy. As such, the level of power of political parties (i.e., via the centralization of a country's policy) can influence the effects of decentralization on economic growth (Enikolopov & Zhuravskaya, 2007).

Research in the early 2000s indicated that varying tax levels set by local tax authorities did not correlate with strong economic growth (Stegarescu, 2004; Thornton, 2009). Moreover, subsequent studies identified some impact in selected OECD countries over several decades but revealed income as negatively correlated with economic growth (Espasa, Esteller-Moré, & Mora, 2017). With additional measures, however, such as administrative decentralization added to fiscal decentralization, varying results were found. As a result, these conditions could be conducive to the decision-making process by local governments—signaling them to implement higher levels of administrative decentralization with high levels of fiscal decentralization (Espasa et al., 2017; Filippetti & Sacchi, 2016).

Studies from around the world appear to show country-specific findings that outline some ambiguity about one fixed solution versus preferred top-tier of approaches. In China, Yang (2016) showed a non-linear correlation in which low income consistently increased decentralization and, hence, led to economic development and growth. However, in the case of high decentralization, economic development was limited. Moreover, the impact of decentralization was dependent on regional infrastructure levels (Long, Wu, Wang, & Dong, 2008; Yang, 2016). In Russia, fiscal decentralization was shown to slow the pace of development, especially if an increase in the share of subsidies and subsidies from the state budget (i.e., income exclusive to territorial units) was poorly accounted for (Yushkov, 2015). This can be related to a lack of decision-making and political clout at the Russian local level. Digging deeper in this topic, the interdependence between fiscal decentralization and the rate of economic growth is verified by Bayesian model averaging. According to this model, a large number of regression equations with different independent variables are estimated to confirm or exclude the

DOI: 10.7172/2353-6845.jbfe.2022.1.3

operation of the analyzed variables (Fragoso, Bertoli, & Louzada, 2018; Steel, 2020; Wasserman, 2000). Asatryan and Feld (2015) applied this technique to a selection of OECD countries and found that there was no interdependence between decentralization and the rate of economic growth. Similarly, a Polish study on municipalities nationwide found that no clear positive impact from decentralization was widespread (Kopańska, Kula, & Siwińska-Gorzelak, 2018). Kopańska et al.'s (2018) research did emphasize, however, a positive effect of decentralization when specific complementary conditions were included, i.e., the level of investment expenditure, cost-effectiveness of local governments, the level of education, and the type of municipality (e.g., urban versus rural and rich versus poor). Moreover, Baskaran et al. (2016) conducted a comprehensive review on the subject matter and found a number of other viewpoints relating to decentralization and economic growth. To date, it is important to point out that the advantage (i.e., positive impact) of decentralization to economic growth is not conclusive. This study reexamines this topic by assessing OECD countries—drawing upon much of the state-of-the-art and discipline-specific research—to test this idea. As such, the originality of research lies in determining whether the independence of territorial units (i.e., institutional factors) are a determinant of the economic success and prosperity of the citizenry of a given country. The possibility of using the level of autonomy of local governments and tax independence to confront this argument could also be expanded to include other macroeconomic indicators (e.g., economic growth, unemployment, etc.); this being said, the study acts as a baseline to developing comparative research to better project how countries might develop economic metrics in an out-of-the-ordinary manner.

3. MODEL SPECIFICATION AND DATA

3.1. Method

A systematic literature review was conducted using the following electronic journal databases: Science Direct, Web of Knowledge, Scopus, Science Direct, Directory of Open Access Journals, Google Scholar, and Google. The following English language keywords were used: "decentralization", "tax independence", "tax dependence", "economic autonomy", "economic growth", "self-government", "self-governance", "state administration", "fiscal decentralization", "central government", "federal system", "regional system", "unitary system", political stability", "public financial", "federal law", "economic development", "expenditure", and "OECD". The literature was compiled, and the publications were systematically analyzed so as to identify the methodologies used. As part of the systematic review process, we also identified past and existing terminology relating to decentralization and tax independence and synthesized and updated it so as to provide a way forward with the benchmark research (Paczoski et al., 2019). Microsoft Excel 2021 was used to collate datasets and conduct the analysis.

The study examined the 36 OECD (2020b) member countries that ratified their membership before 2018, using macroeconomic data (i.e., nominal GDP) to create datasets within a twenty-four-year period between 1995 and 2018. Note, Columbia and Costa Rica are not included in the research as they both ratified their membership after the end date of the research period on 28 April 2020 and 25 May 2021, respectively. The following two research hypotheses are considered:

Hypothesis 1 (H1): Increased decentralization of state administration in conjunction with fiscal independence from local governments increases the amount of GDP per capita.

Hypothesis 2 (H2): Increased decentralization of state administration in conjunction with fiscal independence from local governments decreases the amount of GDP per capita.

DOI: 10.7172/2353-6845.jbfe.2022.1.3

3.2. Categorization of taxation

In OECD countries, it is common for the local government budget to include more than one local tax although, most often, one of them is of dominant importance. The exception to this rule is in the United Kingdom, where the budget of local governments is supplied only by revenue from the so-called council tax. It is a tax that combines the features of a classic property value tax and poll tax (Oulasvirta & Turala, 2009). In most other countries, property tax is the responsibility of the varying levels of territorial administration. Local government units most often have a specific scope of tax jurisdiction regarding the tax category. As such, their decisions relate to the amount of tax rates within the limits of statutory maximum rates. Only in countries such as Hungary and Belgium are these rates set centrally. On the other hand, the level of property tax revenue ranges from 2.4% in Sweden to 100%, e.g., in the United Kingdom. The second category of taxes that should be analyzed is income tax. In Poland, for example, local governments have a 100% share in income tax paid in the form of a tax card, shared via personal and corporate income tax, but do not have any tax authority in this respect. As such, personal income tax is a local tax in eleven OECD countries (Semmerling, 2019), including mainly the Scandinavian countries, some Western European countries such as Switzerland, Belgium and Italy, and non-European countries including the United States, South Korea, and Japan.

Apart from the two groups of local taxes mentioned, the budgets of local government units in OECD countries are supplied with revenue from other taxes which are difficult to explicitly classify. Among them, taxes take a variety of forms, including: transport (i.e., Spain, Belgium, Estonia, Greece, Poland, and Portugal), real estate trade (i.e., Slovakia), organization of artistic events (i.e., Czech Republic), gambling (i.e., Czech Republic and Slovenia), advertising (i.e., Estonia), residential (i.e., Finland), disposal of household waste (i.e., France and Italy), increase in the value of real estate due to location in a city (i.e., Spain), tourism (i.e., the Netherlands and Hungary), advertising (i.e., Slovakia) and occupied space in the public domain (i.e., Italy). The revenue from such taxes is generally of negligible fiscal importance. In many cases, local governments have the power to impose taxes until a certain level of decentralization is reached (Semmerling, 2019). The scope of local tax authority is mainly associated with the taxation within geographical limits and detailed regulatory legislation to justify the tax. Since 1995, the OECD has published cyclical lists of indicators of tax autonomy—all the way down to the local level. The update from 2018, i.e., the last year of the period analyzed in this study, is illustrated in Table 2. The classification of taxation, broken down using the OECD's (2020a) five main groups of local government financial independence, formulated the structuring and methodology used in this paper. The categories are as follows:

- category "A" = full authority over tax rates and tax bases;
- category "B" = power over tax rates (i.e., essentially representing a type of "piggy bank" tax);
- category "C" = power over the tax base;
- category "D" = arrangements for tax distribution;
- category "E" = no power on the rates and bases at all; and
- category "F" = represents taxes that cannot be allocated.

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Table 2
Tax autonomy in OECD countries, 2018

	Discretion on rates and reliefs		Discretion on rates		Discretion on reliefs	Tax sharing	Rates and reliefs set by CG	Other
	Full	Restricted	Full	Restricted				
	(A1)	(A2)	(B1)	(B2)	(C)	(D)	(E)	(F)
Australia	100.0	—	—	—	—	—	—	—
Austria	8.9	—	—	14.8	—	1.1	68.1	7.1
Belgium	7.5	—	92.3	—	—	—	0.1	—
Canada	1.4	—	95.5	—	—	—	1.0	2.1
Chile	—	—	15.3	25.3	—	59.3	—	0.1
Czech Republic	—	—	—	99.9	—	0.1	—	—
Denmark	—	—	89.0	11.0	—	—	—	—
Estonia	10.9	—	—	82.0	—	7.1	—	—
Finland	—	—	83.6	8.1	—	8.3	—	—
France	44.2	—	5.6	3.3	0.2	16.2	21.2	11.3
Germany	—	—	12.8	42.1	—	43.6	—	1.5
Greece	—	—	—	93.8	—	—	6.2	—
Hungary	0.1	—	—	96.4	—	3.5	0.0	—
Iceland	—	—	—	96.9	—	—	—	3.1
Ireland	—	—	—	90.1	—	—	9.9	—
Israel	—	4.9	—	—	—	—	95.1	—
Italy	14.3	—	—	52.3	—	32.5	—	0.3
Japan	—	0.2	55.2	26.6	—	—	18.0	—
Korea	—	—	—	85.2	—	—	14.2	0.6
Latvia	—	—	—	13.6	—	86.4	—	—
Lithuania	10.6	—	—	84.0	1.1	—	4.3	—
Luxembourg	8.8	—	—	85.4	—	—	0.9	—
Mexico	100.0	—	—	—	—	—	—	—
Netherlands	—	—	68.0	31.2	—	—	—	0.7
New Zealand	97.1	—	—	2.9	—	—	—	—
Norway	—	—	—	99.2	—	—	0.8	—
Poland	—	—	—	25.6	—	65.1	3.7	5.5
Portugal	—	—	—	68.6	—	11.7	19.0	0.7
Slovakia	8.9	—	—	90.0	—	—	—	1.1
Slovenia	15.7	—	—	—	—	75.9	8.2	0.1
Spain	26.3	—	—	56.2	—	16.7	0.6	0.1
Sweden	—	—	97.6	—	—	—	2.4	—
Switzerland	2.4	—	—	97.6	—	—	—	—
Turkey	—	—	—	—	—	83.2	16.8	—
United Kingdom	—	—	95.8	0.8	—	2.6	—	0.8
United States	—	—	—	—	—	—	—	100.0

Source: based on OECD (2019) data on taxing power of sub-central governments in 2018.

DOI: 10.7172/2353-6845.jbfe.2022.1.3

4. RESULTS

Overall, the results illustrate the assessment of the level of tax independence of local governments in the assessed 36 OECD countries. As part of the tax independence assessment, selected variables for the member countries were analyzed. Data indicating the percentage of local tax revenue in terms of total tax (i.e., for central and local government sectors) for the years 1995–2018 is presented in Appendix 1. Note, since the tax autonomy data for the selected countries is not available after 2018, the results of the research match accordingly. Table 3 illustrates the share of tax revenue of local authorities from general government tax revenue for 1995 and 2018 with the standard deviation and minimum and maximum values between the two years.

Table 3
Share of tax revenue of local authorities from general government tax revenue, 1995 and 2018

	1995	2018	Standard deviation	Minimum value	Maximum value
Australia	3.4	3.4	0.247	2.9	3.6
Austria	4.1	3.0	0.346	3.0	4.1
Belgium	4.8	4.6	0.265	4.1	5.4
Canada	9.8	10.0	0.716	8.1	10.7
Chile	6.5	7.9	0.847	5.2	8.4
Czech Republic	0.9	1.0	0.163	0.8	1.3
Denmark	31.3	27.0	3.041	23.7	33.2
Estonia	0.8	0.8	0.236	0.8	1.6
Finland	22.3	22.7	1.051	20.7	24.3
France	11.0	13.5	1.238	9.8	13.5
Germany	7.4	8.6	0.523	6.8	8.6
Greece	2.0	2.4	0.168	2.0	2.6
Hungary	2.5	5.8	0.993	2.5	6.7
Iceland	20.8	27.6	2.242	18.6	27.6
Ireland	2.7	2.1	0.465	2.0	3.5
Israel	6.4	7.9	0.737	6.4	8.8
Italy	5.4	11.7	3.734	5.4	16.8
Japan	25.2	23.2	1.403	22.7	28.3
Korea	18.7	16.6	0.993	15.1	18.9
Latvia	19.5	18.1	1.217	16.0	20.3
Lithuania	2.3	1.2	0.378	1.2	2.4
Luxembourg	6.5	4.5	1.021	3.3	6.6
Mexico	1.5	1.6	0.280	1.0	1.8
Netherlands	3.1	3.5	0.288	3.0	4.0
New Zealand	5.3	6.6	0.673	5.3	7.2
Norway	20.0	15.3	2.290	11.9	19.6
Poland	8.5	12.7	1.621	8.5	13.5
Portugal	5.4	7.2	0.589	5.4	7.3

DOI: 10.7172/2353-6845.jbfe.2022.1.3

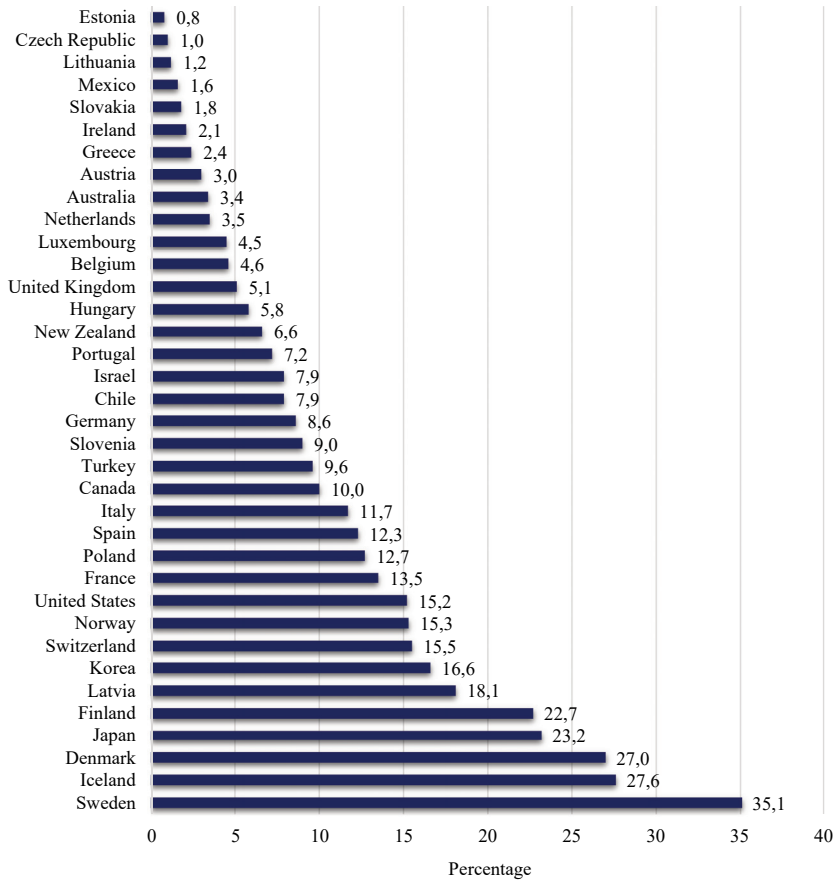
Table 3 – continued

	1995	2018	Standard deviation	Minimum value	Maximum value
Slovakia	1.3	1.8	0.588	1.3	2.9
Slovenia	6.2	9.0	1.605	6.3	11.1
Spain	8.6	12.3	0.893	8.2	12.3
Sweden	30.8	35.1	2.696	28.8	36.9
Switzerland	17.6	15.5	0.797	15.1	17.7
Turkey	12.8	9.6	2.337	5.9	15.7
United Kingdom	3.7	5.1	0.480	3.7	5.3
United States	13.3	15.2	1.376	12.2	17.6

Source: based on the fiscal decentralization database from OECD (2020a).

Three countries, Sweden, Iceland, and Denmark, achieved the highest share of tax revenue at the local level with over 27%, followed by Finland and Japan with over 22%. At the end of the spectrum, there are countries whose local authorities obtained less than 5% of total shared tax: Australia, Austria, Belgium, Czech Republic, Estonia, Greece, Ireland, Lithuania, Luxembourg, the Netherlands, Mexico, and Slovakia. The difference between Sweden, which has the highest share of local tax revenue, and Estonia, i.e., the lowest, is 34.3 percentage points (ppt) in 2018. Figure 1 shows the ranking of the countries, from lowest to highest, whose local governments received tax revenue according to data for 2018.

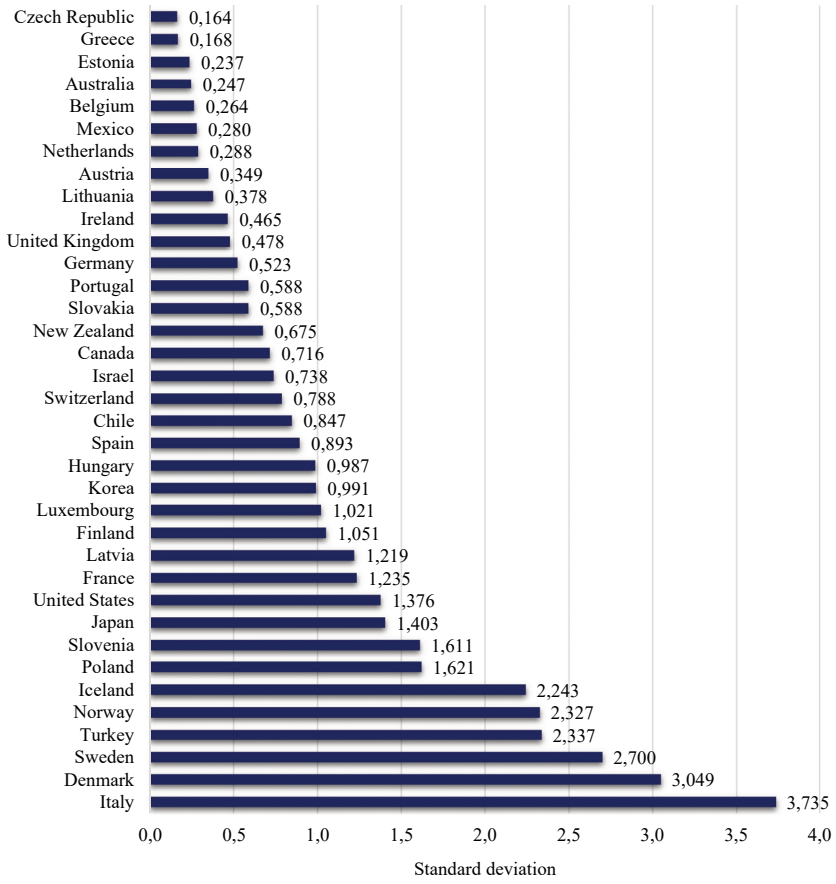
Figure 1
Local level tax revenue as a percentage from the total general government sector, 2018



DOI: 10.7172/2353-6845.jbfe.2022.1.3

The standard deviation, calculated for the years 1995–2018, is also worth considering (Figure 2). It illustrates that some countries had a high degree of variation in local authorities' share of total income. The highest values of standard deviation, i.e., > 2, were achieved by six countries: Denmark, Iceland, Italy, Norway, Sweden, and Turkey. It can be observed for the analyzed time period that the lowest value of the share in taxes of local authorities in Italy was 5.4% and the highest was 16.8% (i.e., a difference of 11.4 ppt) while in Denmark these values were 23.7% and 33.2% (i.e., 9.5 ppt), respectively. The Czech Republic achieved the lowest standard deviation value of 0.164.

Figure 2
Standard deviation of the share of local government tax revenue from the total general government sector, 1995–2018



According to Table 2, only two states, i.e., Australia and Mexico, have full local authority over tax rates and tax bases. For New Zealand, the autonomy rate for local taxation is 97.1%. France was next with 44.2%. In general, among the member countries, sixteen countries had full tax autonomy over the rates and tax bases in 2018; however, most of them, i.e., seven, achieved this rate at a level lower than 10%. This indicates that 43.75% of these countries, i.e., classified as belonging to countries with the attributed tax authority, have only less than 10% of tax revenue. Moreover, when considering the issues of tax authority in the context of tax independence, the dominance of Scandinavian countries (i.e., Denmark, Finland, and Sweden) is present. Their share from taxes, whose rates are shaped by local authorities, is approximately 90%. This high percentage rate is also shared by Belgium, Canada, and the United Kingdom. Countries in which local authorities have the possibility to shape tax rates with certain limitations (i.e., restricted (B2) discretion on rates above 80%) include the Czech Republic, Estonia, Greece, Hungary, Iceland, Ireland, Korea, Lithuania, Luxembourg, Norway, Slovakia, and Switzerland. Poland is one of the European countries with little tax control over the share of tax revenue as such. Municipalities can

DOI: 10.7172/2353-6845.jbfe.2022.1.3

fully decide on the tax rate within the established framework and the share of such tax revenue, i.e., 25.6%. Moreover, the states recognized as federations were characterized by different levels of power in terms of tax autonomy. These countries include variants with 100% sovereignty in terms of rates and basic tax base (i.e., Australia and Mexico) and those with local authorities that do not play a major role in relation to these taxes (e.g., Austria) (Table 4). The autonomy level of local tax is dominant at level "B", which gives some freedom as to the tax rate implemented. Based on the presented data, the relationship between the administrative system and the level of local tax autonomy cannot be confirmed (Figure 3).

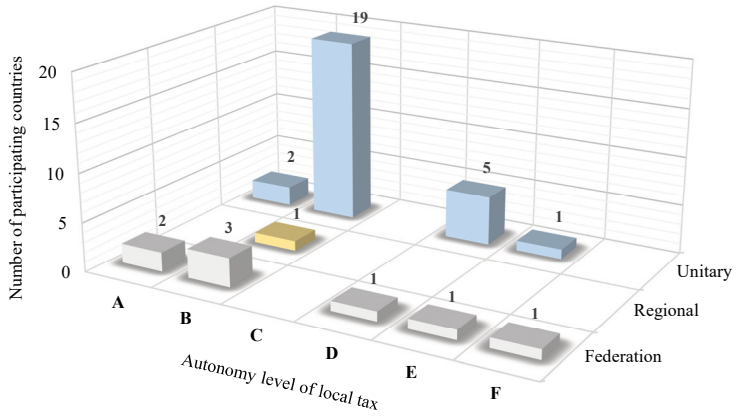
Table 4
System of territorial administration, GDP per capita, and level of local tax autonomy in selected OECD countries, 2018

Country	System	GDP per capita (USD)	ALLT	Country	System	GDP per capita (USD)	ALLT*
Australia	Federation	57,180.78	A	Korea	Unitary	33,436.92	B
Austria	Federation	51,486.58	E	Latvia	Unitary	17,865.03	D
Belgium	Federation	47,549.21	B	Lithuania	Unitary	19,186.18	B
Canada	Federation	46,548.64	B	Luxembourg	Unitary	117,254.74	B
Chile	Unitary	15,772.33	D	Mexico	Federation	9,686.98	A
Czech Republic	Unitary	23,419.74	B	Netherlands	Unitary	53,044.53	B
Denmark	Unitary	61,591.93	B	New Zealand	Unitary	43,250.44	A
Estonia	Unitary	23,063.56	B	Norway	Unitary	82,267.81	B
Finland	Unitary	49,988.91	B	Poland	Unitary	15,468.48	D
France	Unitary	41,592.80	A	Portugal	Unitary	23,562.55	B
Germany	Federation	47,973.61	D	Slovakia	Unitary	19,389.98	B
Greece	Unitary	19,756.99	B	Slovenia	Unitary	26,116.86	D
Hungary	Unitary	16,427.37	B	Spain	Regional	30,364.58	B
Iceland	Unitary	74,469.80	B	Sweden	Unitary	54,589.06	B
Ireland	Unitary	79,107.60	B	Switzerland	Federation	86,388.40	B
Israel	Unitary	42,063.45	E	Turkey	Unitary	9,454.35	D
Italy	Unitary	34,622.17	B	United Kingdom	Unitary	43,646.95	B
Japan	Unitary	39,727.12	B	United States	Federation	62,805.25	F

* ALLT = autonomy level of local tax
Source: GDP per capita, World Bank (2022).

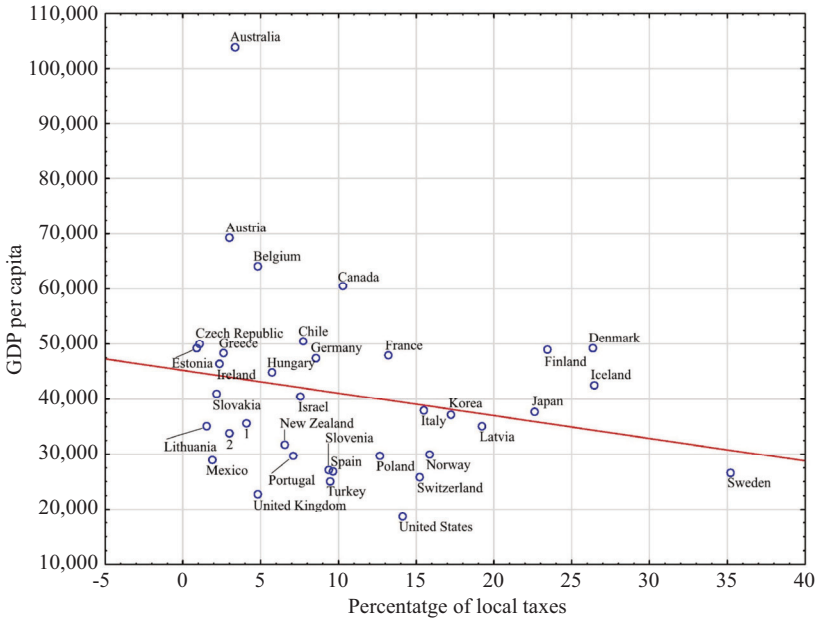
DOI: 10.7172/2353-6845.jbfe.2022.1.3

Figure 3
Participation of the selected member countries' administrative systems in relation to the autonomy level of local tax, 2018



When examining the level of correlation between the measure of GDP per capita and the share of local taxes in total taxes, the result is -0.439419 (i.e., $p < 0.05$), which indicates the existence of a negative correlation between the two variables (Figure 4).

Figure 4
Distribution of dependence on GDP per capita and share of local taxes in terms of total tax, 2018



Note: [1] Luxembourg, [2] Netherlands.

As an extension, it would seem that greater tax autonomy of local authorities should lead to an increase in economic development; however, in practice, such a large spatial differentiation shows that it may lead to the opposite effect. It seems that in terms of both tax management at the local level and the dynamics of economic development, the possibilities of territorial units as well as the experience, competences, and knowledge of those responsible for management locally are more important than the legal regulations themselves.

DOI: 10.7172/2353-6845.jbfe.2022.1.3

5. CONCLUSIONS

Financial independence of local governments, in essence, is the starting point at which territorial self-government, i.e., at of the local or regional level, manifests decentralization (Piotrowska-Marczak, 1997). These territorial units have the freedom to set tasks (i.e., make decisions), legal regulations, and political agendas as well as strategies for economic development, organization and community-based planning, and local management schemes (Heller, 2006; Kozera, Głowicka-Wołoszyn, & Wysocki, 2016). A principal issue of territorial units is the ability to utilize localized funds needed to implement established tasks with the highest possible return. As such, financial independence of the local government, both in terms of income and expenditure, can be treated as one of the determinants of independence from the central government. Another example of a determinant is decision-making independence where development priorities are localized and community-oriented. In this study, financial independence of local government units is treated as a desired state that ensures development. Local government authorities identify the development needs of a given territory as better than centralized development since they are closer and usually directly involved and impacted. Moreover, the management of financial resources is usually more effective as a public authority can be directly held accountable for its actions. Local government has also a closer relationship with the local or regional community and can foster social and economic development in a more effective manner (Diaz-Serrano & Rodríguez-Pose, 2015). The scope of this financial freedom is the degree of fiscal independence at the local level.

The decentralization of public finance brings about the need for administrative oversight, including what government authority public finance is used for and what part of those public finances remains at the local and regional governmental level. As part of income independence, the categorization of this income needs to be considered, i.e., tagged as permanent, indefinite in nature, without limitations, or in part state-controlled with proceeds at the disposal of local government units (Dylewski, Filipiak, & Gorzałczyńska-Koczkodaj, 2004; Gonet, 2008). Hence, the competence of local governments to conduct fiscal policy is important. They must consider tax authority, establish local power, and determine the amount of taxation, payment period, rules for collection, enforcement, preferences, and tax remission. In essence, economic independence of local governments is the ability to perform public tasks on their own behalf, under their own responsibility, and to provision their own income (Kozera, 2018). This includes the possibility of conducting localized fiscal policy (Poniatowicz, 2015).

An independent fiscal policy can be interpreted as the freedom local governments have in determining the amount and structure of taxes and local tax rates. The sources of income constitute the basis of local government's finance (i.e., budget) and are key to determining its level of independence—especially in terms of fiscal decentralization. Key factors include the possibility of creating income sources and structuring favorable stability and efficiency on the local income side of the budget (Wyszkowska, 2017). Power struggle governance, in terms of these factors, allows for more effective control of the budget revenue, budget balance, and performance of local government duties (e.g., investment, education, and social policy). Increased sovereignty may be helpful in conducting a more flexible fiscal policy by local governments in the event of changes in the economic situation (e.g., the COVID-19 pandemic) and in budgetary conditions imposed by the central state (Wyszkowska, 2017).

Financial independence of local governments in the selected individual OECD countries varies as regards local and regional units. The notion of "fiscal autonomy" is of fundamental importance, as it covers the various aspects of the freedom that local authorities have over their own taxes. Among OECD countries, only a few have full authority over tax rates and tax bases, i.e., Australia, Mexico, and New Zealand. Most member countries, however, have authority over the rates of some local taxes, while others whose local governments have none to a low level of power (i.e., Israel, the United States, and Austria) illustrate the diversity of the study.

DOI: 10.7172/2353-6845.jbfe.2022.1.3

Hypothesis H2, i.e., increased decentralization does not positively interrelate with the level of tax independence of local government and, in effect, is not an advantage to economic growth and development (i.e., GDP per capita), is corroborated with the analyzed OECD data. Together with the literature (Chipman, 2006; Sher, 2020), it confirms that the system of territorial administration has no influence on the limits of tax autonomy of local governments and no strong correlation exists between the share of local taxes in total taxes and achieved economic benefit or an increase in nominal GDP per capita (Edwards & Keen, 1996; Weingast, 1995; Wilson & Wildasin, 2004). Such observations lead to the conclusion that the legal provisions which determine the scope of tax autonomy are not a sufficient element for dynamic economic development. The share of taxes and the amount of locally-produced income at the disposal of local governments are of course of significant importance for development opportunities; however, other factors may prove to be significant influencers. These may include, e.g., the introduction of rent variability (i.e., in terms of location) as well as the level of experience and autonomy, and the continuity of government since the competence of local authorities for a given region should be strategically-oriented and decision-making should be region-specific.

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DOI: 10.7172/2353-6845.jbfe.2022.1.3

DOI: 10.7172/2353-6845.jbfe.2022.1.3

Appendix 1
Total percentage of general government sector tax revenue, 1995–2018

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australia	3.4	3.4	3.3	3.1	3.1	3.0	3.1	3.0	3.0	2.9	2.9	2.9	2.9	3.2	3.5	3.5	3.4	3.4	3.4	3.6	3.6	3.6	3.4	3.4
Austria	4.1	4.0	3.8	3.8	3.7	3.5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0
Belgium	4.8	4.8	4.8	4.5	4.6	4.1	4.5	4.8	5.0	4.8	4.8	4.8	5.0	4.4	5.4	5.1	5.0	4.6	4.7	4.6	4.9	5.0	4.9	4.6
Canada	9.8	9.6	9.2	8.9	8.6	8.1	9.3	9.5	9.4	9.2	9.2	8.9	9.0	9.8	10.4	10.7	10.4	10.5	10.5	10.4	10.4	10.4	10.3	10.0
Chile	6.5	6.7	7.2	7.7	8.4	7.9	7.9	7.9	8.0	6.9	6.5	5.5	5.2	6.3	8.4	6.9	6.6	6.7	7.3	7.6	7.6	7.8	7.8	7.9
Czech Republic	0.9	0.9	0.8	0.9	0.8	0.9	0.8	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.2	1.3	1.2	1.3	1.3	1.2	1.2	1.1	1.1	1.0
Denmark	31.3	31.0	31.3	31.5	31.4	30.7	32.4	33.0	33.2	31.8	30.4	30.7	23.7	24.7	25.6	26.7	26.7	26.4	26.2	24.6	26.0	26.6	26.4	27.0
Estonia	0.8	1.4	1.4	1.4	1.5	1.6	1.5	1.4	1.3	1.2	1.2	1.0	0.9	1.2	1.2	1.4	1.5	1.3	1.1	1.1	1.0	1.0	0.9	0.8
Finland	22.3	22.8	21.7	21.8	21.7	21.6	22.1	21.4	21.1	20.8	20.7	21.0	21.3	21.9	23.7	24.3	23.2	22.7	23.4	23.5	23.7	23.1	23.5	22.7
France	11.0	11.1	10.9	10.9	10.6	10.0	9.8	10.0	10.2	11.0	11.4	11.4	11.9	12.0	13.0	10.6	12.9	13.0	12.8	12.9	13.1	13.4	13.3	13.5
Germany	7.4	7.3	7.4	7.9	7.9	7.4	7.3	7.0	6.8	7.4	7.8	8.3	8.4	8.5	7.8	7.9	8.0	8.2	8.2	8.2	8.3	8.5	8.6	8.6
Greece	2.0	2.2	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.6	2.4	2.4	2.4	2.4	2.4
Hungary	2.5	3.7	4.1	4.5	5.3	5.2	5.5	5.4	5.7	6.1	6.2	6.4	6.2	6.4	6.7	6.4	6.6	6.2	5.9	5.6	5.8	5.8	5.8	5.8
Iceland	20.8	20.2	23.9	23.3	22.5	23.3	24.9	24.7	24.2	23.5	22.9	24.2	25.0	25.9	27.3	25.5	26.6	26.3	26.6	24.5	25.6	18.6	26.5	27.6
Ireland	2.7	2.5	2.4	2.2	2.1	2.0	2.1	2.3	2.3	2.2	2.2	2.0	2.2	2.6	3.3	3.3	3.3	3.5	3.1	2.8	2.5	2.3	2.2	2.1
Israel	6.4	6.6	6.7	6.9	6.9	6.7	6.7	7.0	7.2	7.7	7.6	7.5	7.7	8.2	8.8	8.7	8.6	8.5	8.3	8.2	8.1	7.9	7.6	7.9
Italy	5.4	5.6	5.8	11.8	9.4	15.3	15.8	16.3	16.8	16.6	16.6	16.1	16.4	16.2	15.0	15.4	15.6	16.2	16.1	16.6	16.5	15.1	15.5	11.7
Japan	25.2	25.7	25.9	26.6	26.6	26.1	26.4	26.0	25.7	25.6	25.2	25.5	27.5	28.3	27.5	25.9	25.2	24.7	24.2	23.4	23.9	23.9	22.7	23.2
Korea	18.7	18.3	17.9	16.8	16.3	15.1	17.8	18.9	18.0	17.8	17.4	18.1	16.8	16.7	16.5	16.6	16.2	15.8	15.5	16.9	18.0	17.5	17.3	16.6
Latvia	19.5	20.3	16.1	16.3	16.0	16.9	17.4	17.1	17.6	17.7	16.7	16.9	17.8	18.8	17.8	20.0	19.2	18.7	18.6	18.9	18.7	18.9	19.2	18.1
Lithuania	2.3	2.4	2.0	1.8	1.9	2.0	1.9	2.2	1.7	1.7	1.5	1.3	1.2	1.2	1.6	1.7	1.6	1.6	1.2	1.2	1.3	1.3	1.2	1.2
Luxembourg	6.5	6.6	6.2	6.2	5.7	5.8	5.7	6.1	6.0	4.9	4.5	4.4	4.4	4.5	4.5	4.4	4.6	4.0	3.5	3.3	3.5	3.9	4.1	4.5

Appendix 1 – continued

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mexico	1.5	1.3	1.1	1.1	1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.7	1.8	1.7	1.7	1.8	1.8	1.8	1.6	1.5	1.6	1.6
Netherlands	3.1	3.4	3.4	3.5	3.3	3.3	3.5	3.6	3.8	4.0	4.0	3.3	3.3	3.3	3.6	3.6	3.8	3.9	3.8	3.8	3.8	3.1	3.0	3.5
New Zealand	5.3	5.6	5.4	5.9	6.2	5.7	5.6	5.5	5.6	5.5	5.3	5.6	5.8	6.4	7.1	7.2	7.2	6.9	6.9	6.9	6.8	6.7	6.6	6.6
Norway	20.0	19.1	18.3	18.3	17.2	15.1	16.4	13.0	14.7	13.7	13.3	12.6	12.6	11.9	13.9	13.6	12.1	12.5	13.3	13.9	15.4	16.2	15.9	15.3
Poland	8.5	9.7	10.1	10.3	9.3	9.2	10.2	10.1	9.6	12.8	12.7	12.9	13.3	13.5	13.1	12.6	12.3	12.6	12.6	13.0	12.9	12.8	12.7	12.7
Portugal	5.4	5.5	5.5	5.8	6.3	6.3	6.1	6.3	6.0	6.7	6.7	6.6	7.1	7.0	7.0	6.7	6.5	6.7	6.9	7.2	7.3	7.3	7.1	7.2
Slovakia	1.3	1.5	1.5	1.4	1.4	1.4	1.4	1.8	1.8	1.8	2.6	2.7	2.6	2.6	2.8	2.9	2.8	2.9	2.8	2.7	2.0	2.0	1.9	1.8
Slovenia	6.2	6.6	6.7	6.5	7.1	7.3	7.4	7.4	7.6	7.6	7.4	7.7	9.1	8.9	10.1	10.9	10.8	11.1	10.9	10.6	9.6	9.5	9.4	9.0
Spain	8.6	8.5	8.8	9.2	9.1	8.9	8.7	8.5	8.2	8.2	8.2	8.3	8.2	8.5	8.8	8.9	9.0	9.3	9.7	9.9	9.8	9.9	9.7	12.3
Sweden	30.8	30.4	29.4	29.1	29.6	28.8	31.0	32.6	33.1	32.8	32.1	31.9	32.3	34.6	36.2	35.3	35.6	36.7	36.9	36.9	36.0	35.4	35.3	35.1
Switzerland	17.6	17.4	17.1	16.6	17.1	16.2	16.9	16.7	16.5	16.3	15.9	15.8	15.8	15.3	15.5	15.2	15.2	15.1	15.2	15.4	15.3	15.6	15.3	15.5
Turkey	12.8	12.5	12.4	15.7	14.1	8.9	8.8	6.5	5.9	7.0	7.6	8.3	8.4	8.7	8.8	9.3	8.8	8.9	8.8	9.4	9.6	9.7	9.5	9.6
United Kingdom	3.7	3.8	3.8	3.9	3.9	4.0	4.2	4.5	4.8	4.7	4.7	4.6	4.6	4.8	5.3	5.1	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.1
United States	13.3	13.0	12.8	12.4	12.4	12.2	12.7	14.4	14.9	15.0	14.6	14.3	14.6	15.1	17.6	16.7	16.1	15.7	14.6	14.5	14.2	14.6	14.2	15.2

DOI: 10.7172/2353-6845.jbfe.2022.1.3