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Abstract

Municipalities shoulder the burden of creating business-friendly environments – managing infrastructure, navigating public resistance, and investing countless hours in smoothing the path for economic development. Yet, the rewards often flow elsewhere. Local taxes on economic activity offer a powerful solution. While a thriving local economy boosts budgets, different taxes shape municipal decision-making in distinct ways. This report examines how various type of taxes can serve as rewards for local economic development. To compare municipal tax revenues across countries, it introduces three dedicated indicators. To illustrate real-world impact, three case studies demonstrate how the sharing of direct taxes can catalyse local growth. Furthermore, there are strong indications that voluntary tax compliance rises when revenues remain local. In other words, rewarding local governments through tax sharing is a potential driver of both economic growth and fiscal compliance – benefiting citizens, businesses, and governments at all levels.

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Executive summary

In the EU, local governments are responsible for many public services and infrastructure that are important for the daily lives of citizens and businesses. Municipalities can foster a local business climate that supports a wide range of enterprises. Although they can be drivers of economic growth, they have, up to this point, been overlooked in economics.

Creating and maintaining an excellent local business climate requires constant commitment and resources. To remain sustainable, such commitment must yield rewards, and shares in local taxes can be one such reward. Therefore, tax sharing with municipalities could be an important factor in achieving successful cohesion and increasing competitiveness across the EU.

This report is the first to systematically examine the impact of different types of taxes on general economic activities that generate added value and can be paid into municipal budgets. In order to inform further discussions on this topic among policymakers and researchers and future research in the field, the report presents three indicators (two qualitative and one quantitative) for comparing the proportion of taxes paid into local budgets across national fiscal systems. Three case studies on the positive impact of tax sharing on the economic performance of municipalities in the EU support the call for more attention to be paid to local taxes and tax sharing with local governments, in order to trigger economic growth through a bottom-up approach that activates the creativity and commitment of the many municipalities in the EU.

Alongside fostering local economic growth, tax sharing with local governments seems to strengthen voluntary tax compliance. Taking these effects into account, a tax-sharing policy is likely to benefit everyone, from citizens to the central government.

1. Introduction

The classical inputs of economic growth are land, labour and physical and human capital, while modern growth theory (Solow 1956) emphasises capital accumulation, labour growth and technological progress, later extended to include human capital. These inputs do not come together in an institutional and physical vacuum to produce economic growth, but are, instead, embedded in the specific institutional and social environments of locations within a territory. While the state sets the stage for economic growth by providing a formal institutional framework, including legislation, a well-functioning judiciary and executive, a common currency and other important macro-framework conditions for modern economies, the economy itself literally 'takes place' on a physical piece of land within a territory. In the EU the prerogative for the management of land use is primarily with local self-governments. Local governments, as providers of local public services and infrastructure, are intermediaries between citizens, businesses and central states, and as implementers of legislation are responsible for creating a place in which land, labour and physical and human capital transforms into economic activities and economic growth. The increasing interest in urban economics reflects a recognition in economics of the need for a better understanding of how local governments, local businesses and local people interact in a given territory to make an economy work, and what factors enable sustainable local economic growth. This report examines how the incentives created by the taxes paid to local governments shape the behaviour of these governments as potential facilitators, intermediaries and catalysts of local economic development.

2. Municipalities, districts and self-governing regions as 'greenhouses' providing a favourable local business climate

To recall the important role that local governments play in local economic development, this chapter summarises the key levers local governments have to influence local economic development within the EU. In the EU, local self-governments, primarily municipalities, manage the provision of many different public services and infrastructures, which elsewhere may be provided by deconcentrated, local levels of central state administration, or private businesses, or may not be available at all. Given the large body of literature on local public services and infrastructure, the focus of this chapter is to provide a brief overview of the main levers of local governments, particularly municipalities, for shaping and fostering local economic growth. Importantly, the review will not cover any measures that imply the provision of selective benefits by local governments to private businesses, whether in monetary or non-monetary form (e.g. tax breaks to support selected local firms or to attract particular investors); such benefits create incentives for rent seeking by firms at the expense of local public finances. The focus of this review is, instead, on the core function of local governments to create a local environment that is based on excellent local public goods that are available non-exclusively and are attractive and supportive to all types of businesses, including local start-ups and established businesses that have moved or expanded into the local area.

With this focus on locally provided public infrastructure and services, the chapter first describes the specific legal status common to all municipalities in the EU. Next, the chapter discusses local governments as providers of public goods and services to citizens and businesses. The chapter then discusses local governments as regulators of the day-to-day affairs and interests of local citizens and businesses, and as local supervisors and monitors (by delegation) of many macro-regulations imposed on citizens and businesses by higher-level governments. Finally, the chapter discusses the role of local governments as informal intermediaries of information and as trust-based contacts between different local actors.

2.1. Municipalities in the European Union

The long-standing tradition of local (municipal) self-governance is a key feature of European history. From the city states of Hellas to the northern Italian cities of the Renaissance, and the cities of the northern European Hanseatic League in the late Middle Ages, self-governing settlements have played a major role as kernels of innovation in the societal, economic, political and technological development of Europe. The European Charter of Local Self-Government ([1]), an internationally recognised legal benchmark for the rights and responsibilities of local self-governments, testifies to the long-established special role of local self-governments in Europe's territorial administrative structure. However, within this general framework, different administrative traditions in Europe are reflected in the different ways in which local governments operate.

Indeed, when it comes to municipalities, the term 'local government' has different connotations, and the legal statuses and fiscal traditions of local governments differ in Europe and around the world. In order to avoid possible confusion, we set out the main features common to all municipal

([1]) https://www.coe.int/en/web/impact-convention-human-rights/european-charter-of-local-self-government#/.

governments in the EU. First, the term 'local government' in the EU refers to a local **self-government** with a council that is elected by citizens through a local election. In some EU Member States, the local council elects a mayor to head the local administration. In most Member States, the mayor is also elected in local elections ([2]). In both cases, the mayor is the head of the administration of the municipality, while the local council defines the overall vision for the development of the municipality and controls the work of the mayor and the administration in general. Second, municipal councils have the right to change the rates of local taxes within the legal framework set by the central state. Third, all municipalities in the EU are **territorial public legal entities** subject to public law, which implies that they can act as a single economic agent. For example, depending on the legal framework of their state, they can take out loans for local economic development, using future tax revenues as collaterals. More importantly, the legal form of municipalities as territorial public legal entities, with a clear structure of responsibilities of their different organs, mayor, council and administration, ensures the transparency and accountability of local self-governments to their principals, the local residents.

2.2. Local authorities as providers of local public goods and services

For the discourse on local public goods and services provided by municipalities (and, in the case of small municipalities, districts or regions) that are important for promoting local economic growth, we divide services into two distinct categories: technical services and infrastructure, and social services and infrastructure.

2.2.1. Local governments as providers of technical services and infrastructure

Local governments, especially municipalities, provide a variety of technical services and infrastructure that reduce transaction costs, thus reducing friction in the coexistence of people and businesses. Settlements require an organised water supply, sewage and waste management systems (including collection and treatment), public lighting and cleaning services. These services are so basic, yet so important in enabling economic activity. Nevertheless, it has been difficult to showcase their positive impact on local economic activities for a long time. Using examples of randomised public investments in local public infrastructure (paving, sewerage, drinking water, community development centres, pavements and medians, public lighting and garbage collection) in Mexico, Iacovone et al. (2023) demonstrated a causal, positive impact of public infrastructure investments on local economic growth. In the local vicinity of these public investments, efficient firms started to grow faster. This effect was not short-lived; it lasted for at least a decade, suggesting that the public investments had sustainably improved the structure of the private sector locally, thereby driving long-term economic growth.

Good physical infrastructure reduces operating costs for businesses and can be a determinant of business location. The reduction of transaction costs for local labour and firms through the provision of high-quality transport infrastructure by local governments is possible, and has been widely documented in the academic literature as an important driver of local economic growth. Fisher (1997) provides an overview of early studies investigating the link between infrastructure investment and economic growth, looking specifically at the impact of investments in local transport

([2]) The election of mayors in the Netherlands is an interesting exception, as mayors are appointed by the king or queen after being put forward by the Ministry of the Interior and Kingdom Relations. The ministry makes its selection based on consultation with the city council. The terms of office of mayors (six years) are different from those of city councils (generally four years). The city council cannot dismiss the mayor.

infrastructure. More recently, Akbar et al. (2023), using the travel speeds of motor vehicles (cars, buses, etc.) in over 1 200 large cities in 152 countries, show that public investments in urban road infrastructure (e.g. adding more main roads) can increase uncongested speeds and reduce travel times within large cities, thereby reducing the cost of movement for vehicles. In addition, work by Tsivanidis (2026) on the effect of introducing a bus rapid transit system in Bogotá, Colombia, and an analysis by Zarate et al. (2022) of the effect of new subway lines on formal employment around the new subway stations in Mexico City strongly indicate a positive and causal impact of investment in public transport on overall welfare and local economic growth, benefiting, in particular, low-income groups by providing wider access to better-paid employment.

With the arrival of the age of digital services, the provision of public ICT infrastructure to increase digital connectivity, in particular in rural areas, became another example of a technical service of local governments that could help foster local economic growth. So far, empirical evidence of a causal, positive impact of this service is lacking, owing to methodological challenges (e.g. in precisely assessing the demand for the service in disadvantaged locations, Gerli et al., 2022). However, there is an indication that the use of advanced ICT by municipal administrations in Italy has had positive spillover effects on local businesses (Matteucci et al., 2023).

In addition to technical services and infrastructure, which have a direct impact on the operating costs of local businesses, local authorities have an increasingly important role to play in providing consumption amenities, which support business development by increasing the attractiveness of a place to a highly skilled labour force. The seminal work of Glaeser et al. (2001) showed that, in the United States, cities with a wider variety of consumption amenities grew faster than places with a limited variety of such amenities. While some local consumption amenities are driven by private investment, such as a wide variety of restaurants or leisure facilities, there are also some quality-of-life amenities that can be better provided, or even only provided, by local governments. Examples include public parks or the coordinated renovation of historic centres. The creation of pleasant public spaces as consumption amenities requires local consensus building and spatial planning, which are the prerogatives of local governments. Such public investments in beauty can pay off, as 'beautiful cities' disproportionately attract highly educated people (Carlino et al., 2019). Being located in a beautiful place makes it easier for businesses to access talent. In addition, start-up founders are more likely to settle in these beautiful places.

2.2.2. Local governments as providers of public social services

Beyond technical services and public physical infrastructure, local governments, as the public authorities that are closest to citizens, are also in charge of providing important public social services like social assistance and childcare. In many countries, these services also include primary education, and in some countries, they include secondary education; care for older people; and emergency, primary and secondary health services. All these social services are important for maintaining the social fabric of the local community, which in turn is important for both daily residential life and local economic activity.

Two social services, namely health services and preschool and school education, are particularly important not only in ensuring social cohesion and societal stability, but also in increasing the productivity of the local workforce, with a direct impact on the productivity and competitiveness of local businesses.

2.2.2.1. Local governments as providers of childcare and education

Human skills and knowledge (in economic terms, human capital) is considered a fundamental factor in economic growth (Lucas, 1988; Romer, 1990). The provision of childcare and high-quality preschool and school education by local governments is therefore crucial for long-term economic growth and social cohesion.

Recent research has shown the particular importance of high-quality preschool education for children's intellectual and social performance in later schooling and for their occupational outcomes in later life (Duncan et al., 2013; Gray-Lobe et al., 2023; Heckman et al., 2013). Therefore, investment in high-quality preschool education, though minor in amount compared with many other investments, may yield one of the highest social and economic returns among all possible public investments. As the provision of preschool education is a major responsibility of municipalities in the EU, its importance for the long-term economic performance and social cohesion of the EU can hardly be overestimated.

In many Member States, local authorities (municipalities, counties and regions) are also responsible for primary and secondary education. By providing high-quality formal schooling local governments play a crucial role in long-term economic growth, which depends on a well-educated population. Given the growing mobility of the labour force, local investment in schooling not only benefits the local economy but also generates far-reaching positive impacts beyond the borders of the local governments. At the same time, high-quality local school education may be an important factor in attracting a highly skilled workforce, as parents are keen to ensure the best possible school education for their children (Burgess et al., 2015). Therefore, high-quality local public schooling may lead to a double pay-off for local economic development – increasing local human capital and helping to attract human capital from elsewhere. The same logic applies even more to region-funded university education.

Beyond preschool, primary, secondary and tertiary education, vocational training increases workforce productivity by improving employees' skills and knowledge. In some Member States, local governments are in charge of organising, in coordination with local businesses, vocational training, thereby helping the businesses to find the skilled workforce they need. In addition, in some Member States, local and regional authorities have the freedom to establish their own vocational training centres and partnerships with local businesses to provide apprenticeships and internships (e.g. Sweden; see Hermelin et al., 2014; Persson et al., 2022).

2.2.2.2. Local governments as providers of healthcare

In some Member States, local authorities are also responsible for providing primary (and in a few cases secondary) healthcare. Like excellent local formal education, access to high-quality local healthcare is an important factor in retaining and attracting labour. At the same time, a healthy local population also implies a more productive local population, as workers are less likely to drop out of the labour force for health reasons (for empirical evidence on the positive impact of public investment in health on economic growth in countries with higher wage levels, such as Member States, see, for example, Hu et al., 2024). Thus, healthcare provided by local governments can also be seen as an important contributor to the productivity of the local economy. However, more empirical research is needed to determine whether the provision of healthcare by local governments, rather than by the private sector or the central government, is the most efficient. Regardless, municipalities can take care of people's health in only two respects. First, they are responsible for the structure and quality of the public space in their area, they can actively mitigate environmental hazards that are harmful to public health (air pollution, noise, extreme heat, etc.).

Second, municipalities can promote the adoption of healthier lifestyles by shaping public spaces in ways that facilitate walking and cycling rather than using cars and public transport (see, for example, Ogilvie et al., 2004; Pucher et al., 2010).

2.2.2.3. Local governments as 'factories of social capital'

Beyond education and health, local governments, particularly municipalities, have a crucial role to play in supporting and fostering the formation of 'social capital'. Broadly speaking, social capital refers to the trust between people. While the provision of education and healthcare are important determinants of productivity at the individual level, social capital is about increasing productivity at the group level. Consensus building and mobilisation of community members towards common goals will be faster and more efficient when interpersonal trust in a community is high than when it is low (see the seminal work of Putnam (1993) and Putnam et al. (1994)). Overall, there is strong evidence that levels of trust and economic performance are closely correlated at the national level (Zak et al., 2001). Muringani et al. (2021) find a positive correlation between social capital (in the sense of 'bridging social capital', which refers to open networks bridging heterogeneous groups, as defined by Putnam (2000)) and economic growth in European regions. Francois (2002) finds a clear link between social capital and economic development, asserting that bridging capital is extremely important for the generation of innovation. Warner (1999, 2001) argues that local authorities in particular can play an important role as generators of social capital. They can help promote and maintain local social inclusion and cohesion across different social networks ('bridging' types of social capital). For example, by fostering learning, cooperation and trust through supporting grassroots activities, hobby clubs, and voluntary cultural, sporting and scientific organisations, and through organising joint events for different social groups around local festivities, local authorities can help bridge social capital, as another important element of ensuring a favourable local business climate. Arends et al. (2023), using the example of the 2015–2020 Ukrainian decentralisation reform, demonstrate a causal relationship between the formation of a local self-government that receives a significant share of citizens' taxes and an increase in local interpersonal trust. In other words, simply creating a fiscally strong local government increases interpersonal trust. To summarise, municipalities have an important role in maintaining interpersonal trust.

2.2.2.4. Local governments as providers of local security

Local governments are, in many cases, also in charge of local security. While the police are organised by the central government, many countries have incorporated in their legal frameworks the complementation of national police forces' work by local security services, managed by the relevant local governments. The positive effect of local investments in public security on local economic growth performance has been found in manifold studies (see Fisher (1997) for an overview).

2.2.2.5. Local governments as providers of services to local businesses

All the services discussed above support local business development indirectly by creating an environment that can help local firms to increase their productivity. Beyond these general factors, local governments can provide specific services in the form of formal economic development initiatives, like local economic development agencies or departments focused on attracting, advising and retaining businesses (Clark et al., 2010).

2.3. Local governments as regulators

Regulations have substantial implications for businesses in modern economies. According to the public interest theory of regulation, as formulated by Pigou et al. (1938), regulations are thought to protect and benefit the public at large. Regulations create legal stability for all, including businesses, by helping to minimise legal uncertainty and consequently the risk of costly litigation. This positive aspect of regulations is challenged by public choice theorists who claim that any regulation is socially inefficient and a tool for extracting rents for bureaucrats or incumbent firms (McChesney, 1987; Niskanen, 1971; Shleifer et al., 1997; Stigler, 1971). Djankov et al. (2002) showed in a global comparison that the cost of regulatory burdens (e.g. on business entry) can be exorbitant and can heavily influence the dynamics of businesses. There is no final verdict on the benefits of regulations. However, as strongly suggested by Bosio et al. (2022), regulation depends on a high-quality administration for effective and socially optimal implementation.

Following the principle of subsidiarity, enshrined in Article 5(3) of the Treaty on European Union, local governments have an important role in handling and regulating issues close to the citizens and businesses in the EU. The scopes of administrative and regulatory competences of municipalities, and, where applicable, districts and regions, differ substantially across the Member States. However, there are issues in which all Member States' municipalities have a say, for example regarding planning the use of land within their jurisdiction. At the same time, local governments are increasingly tasked by central governments with the implementation of regulations, adopted at the national level as delegated tasks, because local governments are closer to citizens and businesses. Often these national regulations relate to EU legislation. With the increasing number of regulations in the Member States (on labour protection, security, environmental issues, etc.), local governments have become increasingly important as implementing authorities aiming to facilitate ordered living.

Amoroso et al. (2024) found that the quality of local and regional government across the EU plays a crucial role in determining the extent to which regulations affect the regional growth rates of high-growth firms: the higher the quality of local and regional government, the fewer regulations hamper the development of high-growth firms. Given the increasing role of local governments in the implementation of their (own and national) regulations, these findings point to a crucial role of local governments in the productivity of the firms within their jurisdiction. The better the local and regional governance, the more regulations work in the spirit of public interest and help businesses to grow.

2.3.1. Local governments as authorities of their own regulation and procedural mechanisms of the daily issues and interests of residents and local businesses

To date, no systematic survey has been conducted on what types of regulations are implemented at what levels of government in the different Member States. However, in most Member States, municipalities, districts or regions are responsible for managing the administrative procedures relating to land use within their territory, such as land planning and the issuing of building permits.

Businesses need land and housing. Throughout the EU, municipalities have a prerogative for urban planning and development within their jurisdiction. By planning ahead, they can ensure that there is always enough land available for new commercial or industrial activity and that public infrastructure is in place to support the needs of local businesses.

Time is money, and the faster and frictionless processes run, the more resources local firms can keep investing in production. The importance of land planning and the difficulties involved therefore cannot be overstated, as land planning is almost unavoidably associated with complex conflicts (Fienitz et al., 2023). As Peltonen et al. (2010) argue, 'conflict [about the use of land] arises fundamentally because of competing demands for a limited resource (for example the use of land); because of the uneven distribution of costs and benefits that result from the development; and because of environmental impacts that arise when the use of land changes.

The process of land planning involves many different stakeholders who are affected by the planning decisions (Chabot et al., 1998; Kaiser et al., 1995). When rural land is converted into building land, the value of the land increases substantially, generating a substantial rent for the previous landowner. Even if this rent is subject to substantial taxation, the resulting windfall profit from the sale of previously agricultural land as building land is large in most countries. This windfall rent makes any conversion of rural land to building land prone to conflict, as different parties may want to enjoy this profit or may not want to see others enjoy it. Fischel (1987) provides a comprehensive description of the complexity of the economics of land use issues.

Furthermore, incumbent owners of property adjacent to new developments, whether residential, industrial or commercial, may see the value of their property diminish as a result of the developments, or may have environmental or aesthetic concerns or feel otherwise disturbed and reluctant to accept the developments. As new developments naturally cause spatially concentrated costs while producing diffuse benefits, the resistance of local residents to new construction in their neighbourhood is almost unavoidable. This behaviour by incumbent property owners is widely observed and discussed in the literature as the 'not in my backyard' (NIMBY) effect. The NIMBY effect can be a substantial obstacle to local development. It has been extensively studied with regard to housing development (Foster et al., 2022), but also applies to industrial and commercial developments, including green energy (Stokes, 2016, Kashner, 2026). In acknowledgement of the severe negative impact of NIMBY on local economic development, possible solutions became an important line of research (e.g. Foster et al., 2022; Tavakalov et al., 2024). In this research, the particular importance of the local governments in mitigating or even dissolving 'not in my backyard' resistance is widely acknowledged.

The importance of local governments in managing and mitigating the multiple and multiparty conflicts over land use for economic growth may be seriously underestimated. In growth economics, the management of land use is usually not seen as an issue, as the share of the agricultural sector (primarily using land as an input factor) in total national value added is steadily declining. And for the remaining sectors of the economy, available land and housing are assumed to be market-driven input factors, overlooking the fact that, as outlined above, the availability of land and housing is subject not only to the price at which an owner wishes to sell their property, but also to the decisions of the local community, represented by local councils, regarding the transfer and repurposing of land and existing building stock. Reducing resistance and conflict to new development requires a skilled and motivated local government that is able to build consensus and support for new developments at a low cost. In this sense, local authorities can be the invisible, local, benevolent social planners, helping to overcome conflicts over land use change and harmful NIMBY effects and thereby decisively impacting local economic development.

2.3.2. Local governments as implementers, supervisors and monitors (by delegation) of macro-regulations established by higher-level governments on residents and companies

As outlined above, in most of Member States, local governments are in charge of implementing, as delegated tasks, various regulations that are important for many businesses and set by the state. These can include regulations on construction, production, environment and labour and on issuing rights like residence and work permits and managing business registries. All these regulations are important to avoid friction between stakeholders and provide legal certainty to businesses.

Regulations cannot provide their implementers with guidance on how to assess and decide on all possible scenarios. Even if this was possible, circumstances may arise during implementation that were not expected or considered when the regulation and its specifications were adopted. For this reason, the implementing body usually affords some discretion to the implementer to decide on unusual or new cases and to adapt the implementation of the regulation to new circumstances in the spirit of the regulation. As the work of Bosio et al. (2022) shows, high-quality regulation allows for some flexibility in the decision-making of the implementing body. This can lead to socially optimal outcomes if combined with a high-capacity administration that is able to use the degree of freedom in an impartial manner.

Municipalities (including cities) and, in the case of small municipalities, district governments can usually exercise some discretion in how they interpret regulations. If they are prepared to invest the time needed to consult all affected stakeholders to find a balanced, impartial approach that protects everyone's interests and gains the support of all relevant local stakeholders for the implementation of regulations in the spirit of the ultimate goal of those regulations, while avoiding excessive burdens on businesses, they can create a stable, predictable and attractive business environment. Such a consensus and outcome-based approach to regulation is costly in terms of time and resources for municipalities, but significantly reduces the burden on local businesses. In addition to a skilful and committed approach to the implementation of regulations, the speed of implementation is a critical factor in the performance of businesses within the jurisdiction of the local government – the faster regulations are implemented, the sooner businesses can enjoy legal certainty, allowing them to focus on the growth of their business. To give an example from Italy, according to the World Bank (2019), it took 105 days to get a construction permit in Milan in 2019, but 325 days to do so in Reggio Calabria. This implies that any firm that needs a new building to produce its stock in Milan will outperform a competing firm in Reggio Calabria, all other things being equal.

Unfortunately, no analysis has attempted to quantify in monetary terms the benefits (or costs) of high- or low-quality implementation of regulations by local governments for businesses in all Member States. However, the qualitative arguments presented here on the importance of the balanced and speedy handling of regulations should be sufficiently convincing to underline the important impact that local governments' handling of regulations has on the productivity and competitiveness of the firms within their jurisdictions.

2.4. Other functions of local governments

Local governments, especially municipalities, are close to local citizens and businesses. Members of the local government and their administrative staff often meet randomly with citizens and business representatives outside office hours, informally exchanging information and building trust between different local actors. This informal process of information exchange and networking can be both harmful and helpful to local economic development. It can be harmful if the emerging local networks become exclusive and facilitate the privileged treatment of some local actors, leading to nepotism, corruption and embezzlement. However, under the right conditions, where local governments and local administrations are interested in helping everyone impartially for the benefit of prosperity for the whole community, these informal mechanisms can provide additional support to any local business. Importantly, this support comes at almost no cost to local governments, as a natural by-product of their daily informal information exchange. Previous research has focused only on nepotism, corruption and embezzlement in local governments, ignoring the possibility that there may also be conditions under which local governments, in their own interest, provide impartial support to a local economic agent without asking for a favour, or even a bribe, in return (e.g. where local governments benefit through taxes from a growing local tax base; see Weingast, 2009). Therefore, the following points are based on field observations only. Future research in the empirical social sciences may provide quantitative evidence.

2.4.1. Local governments as coordinators between different businesses

Members of municipal governments (mayors, council members) who are in informal bilateral exchanges with local businesses are brokers of information. Once they have gained a reputation for being trustworthy in the local business community, businesses often inform them of their needs and problems, including sensitive information that they would not like other businesses to know. By accumulating this sensitive information across businesses, local governments can help businesses to find common interests, facilitating resource pooling or strategic development, with the local government complementing services with, for example, vocational training or infrastructure. Local governments can further facilitate this by organising events and creating platforms for collaboration among local businesses (Considine et al., 2008).

2.4.2. Local governments as ambassadors of their local economy

Leaders and councillors of municipalities and district and regional self-governments can provide a variety of informal but effective support to businesses wishing to expand beyond local markets, by acting as ambassadors when travelling within their country or by organising international partnership programmes or visits. They can also invite local businesses to join delegations visiting partner local authorities abroad. Motivated and trusted members of local governments can help their local businesses by enabling them to use these 'bridges of trust' between local governments from different regions and countries to discover new markets or new partners at low cost.

2.4.3. Municipalities as sensors and advocates for good regulation at the national level

Municipalities are the closest tier of government to citizens and businesses. Unlike other levels of government, municipalities can observe the technical challenges of implementing new rules and the impact of new laws or regulations introduced by the state. They are the first to learn of unintended negative side effects of well-intentioned regulations. At the same time, local politicians are usually

members of national parties, so most local politicians have contacts with their party's politicians at the national level. Local politicians can therefore share their observations of negative side effects at the national level and advocate for a better solution based on their observations and informal exchanges with local stakeholders. Local governments can thereby become an important element of an informal feedback mechanism, providing constant and effective input to national legislators to improve national regulation and thus contribute to national competitiveness. So far, this process has not been subject to research. However, the experimental research of García-Hombrados et al. (2024) proves the importance of the flow of information between local politicians and central government.

2.5. The quality of local governance as a decisive factor for the productivity and competitiveness of local businesses

As shown above, local governments can use many important levers to boost the productivity of firms within their jurisdictions by providing high-quality public goods (services and infrastructure). While it is still difficult to provide good empirical evidence of net benefits to local firms for each of the levers described, there is now a rich body of literature on the positive impact of high-quality local and regional government on the performance of firms and the economy as a whole. Thanks to regular surveys of people's perceptions of the work of local and regional government commissioned by the European Commission ([3]), a large body of research has been published showing a strong positive correlation between the performance of local and regional government and economic outcomes across the regions of the EU. For example, Rodríguez-Pose et al. (2015), using the first cohort of these data, find a positive relationship between the quality of local and regional government and the innovation performance of the regional economy, measured by the number of patents. Ganau et al. (2019) find evidence that the quality of local and regional government is positively correlated with the productivity of manufacturing firms, a result they replicate with data on labour productivity in general (Rodríguez-Pose et al., 2022). Muringani et al. (2024) show that the quality of regional government, together with social trust, shapes political trust, which in turn is closely related to economic development. Amoroso et al. (2024) find that the quality of government influences the impact of regulation on high-growth firms in the region: the higher the quality of government, the less regulation reduces the growth rates of high-growth firms.

Balaguer-Coll et al. (2022), using the accounting of municipal budgets as an indicator of local government quality, find a positive relationship between the quality of local government and economic growth at the municipal level in Spain. Giordano et al. (2020), using objective measures of efficiency for childcare, education, healthcare and civil justice as indicators of quality of government at the provincial level in Italy, find a positive impact of quality of government on firm growth. Using a composite indicator of city government efficiency and applying objective criteria, Rodríguez-Pose et al. (2019) find a positive association between city government efficiency and economic growth in cities in China.

In view of the wide range of findings, using different indicators of local government quality and different measures of economic growth in different countries, it is fair to say that the quality of local government could be an important factor in medium- and long-term economic growth at the national level. Given that municipalities in the EU have the prerogative to plan land use within their jurisdiction, and that land is in one way or another an input factor for almost all economic activity, municipalities may have a gatekeeping function for medium- and long-term economic growth.

([3]) https://ec.europa.eu/regional_policy/information-sources/maps/quality-of-government_en.

The quality of work of municipalities is a factor that may have been overlooked in economics so far. Perhaps all the efforts that national governments employ to create the best conditions for economic growth, like ensuring highly efficient capital and labour markets, enforcing property rights through well-functioning judiciaries and providing highly skilled human capital, could still fail if local governments, in particular municipalities, see no reason to support local economic development, or block business development to avoid conflicts with their local electorate due to NIMBY issues or other problems. Municipalities that see no tangible benefit in investing time or resources in local economic development may represent an overlooked bottleneck to economic growth across many countries.

2.6. A need for rewards for motivated and skilled local governments

Looking at the wide range of tasks and challenges facing local government, including managing childcare provision, providing physical infrastructure, engaging local civil society and entrepreneurs, and coordinating urban planning and public transport, one can only pay tribute to the enormous variety of skills required to run local government. The importance of an efficient, motivated mayor, and a local council and administration with the same characteristics, for citizen satisfaction and local economic growth is hard to overstate. How to ensure that skilled and motivated people enter local government, and in particular become mayors, in order to achieve a high-quality government should perhaps be a key question for anyone interested in reducing political discontent and driving economic growth and social cohesion.

However, the rich academic literature in the field of economics on the importance of high-quality local and regional government has so far not led to an understanding of how to achieve a high-quality government. Strongly believing that one of the fundamentals of economic theory, namely the power of incentives, also applies to local government, we posit that the right combination of rewards is needed in one way or another to achieve a high-quality government at the local level, irrespective of historical background or geographical factors. To better understand what the right rewards may be, a thorough understanding of how the economic and behavioural 'machinery' of local governments works may be useful. The next chapter aims to provide such an analysis.

3. Impact of behavioural aspects of the revenue structure on local governments' decision-making

As outlined in Chapter 1, local governments, particularly municipalities, can play a crucial role in the quality of the local business climate and the productivity of local enterprises. Local governments, especially municipalities, serve as the central meeting point where citizens, businesses and public administration can negotiate on how the local area should be shaped, including whether local land should be used for housing or businesses. When it comes to the use of land for new economic activities, municipal governments are key players. Spatial planning is usually one of the main responsibilities of local governments. If local governments are unable to persuade their communities to approve changes in land use for new economic activities, the prospects for local economic development will be poor. Beyond addressing the often-contentious challenge of rezoning land for businesses, mayors and local councils have additional tools at their disposal to create favourable conditions for economic growth. However, exercising these levers demands significant investments of time and effort. Local economic growth rarely occurs without cost to local administration; more often, it imposes considerable demands on local governments. In the medium and long term, intrinsic motivation alone is unlikely to sustain the necessary level of effort. To maintain commitment over time, tangible rewards are essential.

Financial rewards help to maintain the motivation of local governments. For example, a salary increase or a one-off extra payment to the mayor, council members or staff of the administration following an improvement in the local economy may maintain the commitment level of these members of local government. However, this would not solve the problem of an electorate unwilling to accept new businesses that bring negative local externalities without offering tangible benefits. Even if the businesses provide new and better jobs for a part of the local electorate, most of the local electorate will still have a NIMBY attitude towards the negative impacts that may come with expanding or new businesses. A local government that would push too hard for increasing the number and size of businesses in the municipality, to increase their remuneration, is likely to be voted out of office by a discontented majority of voters.

To ensure broad local support for new or expanding businesses, a community-level benefit from a growing local economy is needed. Given the bias observed in people's time preferences (for a review of time preferences, see Cohen et al., 2020), this reward should also come with no long delay. In addition, the collective benefit should grow in parallel with the local economy, without capping or diminishing rates.

Local taxes on economic activity generally fulfil these conditions. Taxes per se are an economic burden on businesses, reducing investment and growth. However, high-quality local public services and infrastructure, such as education, training, transport and healthcare, can increase the productivity of local firms (see the literature cited in Chapter 1). As Helms (1985) and Mofidi et al. (1990) have shown, if taxes are invested in productive public goods, they can overcompensate for the negative impact of higher taxes on business and lead to increased economic growth. So far, the literature has mainly discussed local public goods as an element of the utility function of local residents as a labour force and as voters, or the utility functions of local governments (see Agrawal et al. (2022) for a survey of the literature). Like Rodríguez-Pose et al. (2022) did for labour productivity, the quality of local public services and infrastructure may need to be considered in future research as a part of total factor productivity or as a factor in the productivity of firms.

If part of the taxes paid by businesses go towards the budgets of the local government in which they are located, they can benefit the businesses, as this revenue provides a strong financial benefit to both local governments and local citizens. The success of local businesses therefore becomes a common local interest. Irrespective of the political majorities in local councils, addressing the needs of local businesses becomes a common denominator for local policymakers.

At the same time, with increased tax revenues, local governments can better fund local public services and infrastructure for their local constituents and compensate them for possible negative externalities of new or expanding businesses. This additional financial benefit to the local community should reduce or even eliminate the NIMBY effect, meaning locals' opposition to new development, for example of factories, in their area, but not necessarily to similar development elsewhere (for more on NIMBY, see Chapter 1).

To take renewable energy as an example, as Saglie et al. (2020) have shown in the case of wind energy development, taxes on windmills paid into the municipal budget are key to reducing or even eliminating NIMBY opposition towards windmills. Similarly, Serra-Sala (2024) observes that the benefit of green energy property taxes (relative to the total of budget) determines the willingness of municipalities to allow green energy in their territory. The greater the expected revenue relative to the total of the local budget, the more likely green energy will be welcomed.

New businesses should therefore face less resistance if the negative externalities of new or expanding businesses are associated with better local services and infrastructure. Correlations for institutional settings and residential land use in Europe are consistent with this hypothesis. Local taxes provide a local advantage and incentivise development (e.g. in Switzerland), compared with centralised settings without local taxes, which tend to be more restrictive in terms of new development (e.g. in the United Kingdom) (see, for instance, Ehrlich et al., 2018).

Taxes on local economic activity should also mitigate or prevent 'local capture', where special interest groups influence democratic processes (Bardhan et al., 2000). Such taxes could counter local capture through two mechanisms.

1. **Competition between municipalities.** As Brennan et al. (1980) argue, competition for taxpayers forces municipalities to serve all taxpayers, thereby constraining the 'Leviathan state' and increasing government efficiency. Empirical work of Brülhart et al. (2019) and Barankay et al. (2007) supports this hypothesis.

2. **Dependence on local economic growth.** Municipalities that rely on taxes from their local economy have a strong incentive to support any new local businesses, regardless of opposition from special interest groups. Blocking new entrants to favour established local businesses becomes costly in terms of foregone taxes. Fiscal dependence on a flourishing and diverse business base favours the break-up of local monopolies or oligopolies, thereby preventing a small number of large businesses from controlling local politics in the long term. Conversely, municipalities that rely solely on transfers do not suffer any financial losses in terms of foregone tax income if they give in to local capture by a powerful player (e.g. a dominant corporation). In fact, conflict with powerful local stakeholders could politically be very risky and costly for them. Without incentives to attract new businesses, the local economy is likely to stagnate as a result of local capture.

While empirical research supporting the protective effect of local taxes against local capture is lacking, the absence of reported cases of local capture in countries where substantial taxes on

the local economy feed into municipal budgets is indicative. Further research is needed to explore this relationship.

To summarise, taxes on local economic activities should be important drivers of local economic development. However, different types of taxes on economic activities have different incentive effects on local governments and their communities. This chapter therefore first describes the characteristics of local governments, especially municipalities, from a behavioural economics perspective. It then discusses the incentive effects of taxes paid into local budgets on local government, citizens and business in general, and then the nuances of the incentive effects of different types of taxes.

3.1. The behavioural economics of local government

Local government is the level of public authority that is 'tangible' to citizens and businesses. Citizens, businesses and local government may meet from time to time in formal, official interactions. They also meet frequently in informal contexts, for example on the street, in cafes and at nurseries, schools and sports clubs. These informal face-to-face encounters make the interactions between citizens and local governments, especially municipalities, very different from the interactions between citizens and the central state administration (for any state larger than a city state, for example the Vatican City State, Andorra, Monaco, San Marino and Liechtenstein). The more distant and 'faceless' the relationship between public administration and citizens, the more anonymous and hierarchical these interactions become (Boadway, 2009; Oates, 1999). Conversely, the closer the public administration is to citizens and businesses, the more personal and egalitarian are the contacts between them.

The nature of informal, but frequent, face-to-face interactions, dubbed as peer-to-peer interactions, has become subject to intensive research in experimental economics in recent decades. Peer-to-peer interactions influence human behaviour substantially. People want to be regarded by their peers as behaving cooperatively. Having the feeling of being watched (Bateson et al., 2006) or the awareness of others knowing one's identity (Butz et al., 2021) instantly and significantly increases prosocial behaviours.

Gossip is another enforcer of cooperation (Fehr et al., 2019; Milinski, 2019; Piazza et al., 2008). Gossip can improve or worsen someone's reputation (Feinberg et al., 2014). The combination of gossip and reputation further increases cooperation (Wu et al., 2016). Beyond these soft forms of fostering cooperation there are harder measures further pushing peers to stick to cooperation. The threat of being excluded from a group of cooperating peers (i.e. being ostracised) makes people cooperate, even if they are inclined to act selfishly (Maier-Rigaud et al., 2010). When combined with gossip, the threat of ostracism becomes an even stronger enforcer of cooperation (Feinberg et al., 2014). Excluding a non-cooperating peer from a group is detrimental to the group because it means that there is one less person who can contribute to the achievement of a common good. Therefore, in many situations, it may be more beneficial to get the non-cooperating peer to cooperate than to exclude them from the group. Targeted informal sanctions against freeriding peers, even if costly to the sanctioning peer, are tools that can encourage freeriding peers to cooperate (Espín et al., 2012; Fehr et al., 2000, 2002; Gächter et al., 2008, 2009, 2011; Masclet et al., 2003; Ostrom et al., 1992; Yamagishi, 1986). Alternatively, cooperating peers can reward each other and thereby increase cooperation (Ellingsen et al., 2021; Rand et al., 2009), though this mechanism seems to not be as effective as punishment (Sefton et al., 2007). The combination of sanctions and rewards can lead to a further increase in prosocial behaviour (Andreoni et al., 2003).

In an experimental environment where participants do not know the faces and names of the other members of a group, the option of costly punishment can, in some social groups, lead to the punishment of cooperating peers by defecting peers (Herrmann et al., 2008). Such antisocial punishment can lead to the breakdown of cooperation (Gächter et al., 2009) and could limit self-governance in a context where peers are anonymous to each other (Gächter et al., 2011). However, even in social groups that are prone to antisocial punishment in the context of anonymity, punishment becomes a catalyst for group cooperation once anonymity is removed, after peers have briefly looked into each other's eyes and learned each other's names (Arechar, 2014). Put differently, people knowing each other by name and looking into each other's eyes can achieve high levels of cooperation, even if there are heterogeneous social norms on cooperating with strangers.

All these more or less subtle mechanisms are at work in everyday social interactions. They are not specific to local government. And they also apply to all other levels of multilevel governance. However, it is at the local level that these peer-to-peer mechanisms have the greatest impact on the level of cooperation between public administrations, citizens and businesses. Entrepreneurs, members of public administrations, local politicians and citizens meet frequently and casually, exchange information about each other in interwoven social networks and maintain a high degree of social control over each other. Importantly, information disseminated in this informal way can cover issues that are too private or too sensitive to be included in written channels of dissemination of information, such as in newspapers or on social media. It is precisely this sensitive, private information, spread through informal dissemination via peer-to-peer mechanisms, that enables the peer-to-peer mechanisms outlined above, to work efficiently.

Unfortunately, to date, no research has been conducted to measure the speed and density of flow of socially salient information along the social networks within and across local governments. However, it is fair to assume that the smaller the territory of a municipality, the less physical distance socially salient information has to pass to cover most part of the local population. Conversely, the larger the territory of a local government, the more distance the informal flow of relevant information has to travel. At the same time, population density is crucial to the speed and diversity of information flow: t denser population, the more frequent encounters between people and the faster the spread of various kinds of information triggering peer-to-peer enforcement of cooperation between citizens, business (as taxpayers) and local governments (as the bodies translating these taxes into local services and infrastructure).

When municipalities cover a large territory, the topology of settlements will also play a role. A municipality with many small settlements spread over a large area may have much less social control of their local government by citizens and businesses than a municipality with the same area and population but with the population concentrated in only one large settlement. While socially salient information spreads very quickly in a population concentrated in one large settlement because everyone meets frequently and casually, in dispersed small settlements encounters may occur mainly within each settlement and not between settlements. Future research will shed light on how the topology and population density of a municipality affect the nature of social interactions between citizens, businesses and local governments.

Territorial size and topology of population density are only two of the parameters that influence the flow of information and the likelihood of actions to enforce peer-to-peer cooperation. Other parameters, such as the geographical profile of the territory (flat versus mountainous, separation by rivers, etc.), the spatial structure of social infrastructure (few large schools, kindergartens, churches and bars versus many small schools or kindergartens, churches and bars), or the demography of the population, shape the speed of diffusion of reliable information. In the absence of solid empirical

research on the impact of the various parameters influencing the speed with which informal information diffuses within local governments, the size of the territory and population density could be used as a starting point for quantifying the power of local peer-to-peer enforcement of cooperation in future research.

The findings reported above from the economic laboratory cannot be directly translated into people's behaviour in the context of local governments. However, they do cover fundamental behavioural mechanisms that are at work in one way or another at the local level. Combined with an appropriate fiscal structure, the peer-to-peer interactions that characterise municipal governments should foster social cohesion, economic inclusion for all and political stability in the local community, which in turn enable long-term economic growth. To this end, local government would need to be organised as a local public good game. A public good game is a framework in which members of a group enable the provision of a common good for all group members through their costly contributions. In the context of municipalities, costly contributions to local public good games are relevant shares of taxes paid by local citizens into the budget of their municipality. The legal status of municipalities in the EU fits well with their modelling as local public good games. As territorial public entities, municipalities unite a clearly defined territory and the people registered within in one legal entity, giving citizens, businesses and local administrations a sense of joint ownership and common good. Embedded in this public legal entity, local governments and their citizens naturally develop close peer-to-peer interactions and measures to facilitate scrutiny and control, along with all the mechanisms of enforcing cooperation outlined above.

3.2. Taxes as a monetary reward for high-quality local services and infrastructure

The higher the share of taxes paid by the local residents to local budgets, the more local governments will find themselves under the scrutiny of their tax-paying electorate. Independent from the type of taxes they pay, taxpayers, in return, want high-quality, efficiently provided services. As taxes go to local budgets, local governments would find it hard to excuse any failure to deliver high-quality services with claims that other administrative tiers have not, or too late, provided sufficient funds. The accountability to taxpayers becomes direct and inexcusable. Municipal governments find themselves under constant scrutiny of their community, which will enforce, via the many informal mechanisms, as outlined above, good use of their taxes. A study by Gadenne (2017) of the quantity and quality of municipal services in Brazil revealed that both increased when funded by additional tax income, while an increase in general grants did not result in any such increase. Martínez (2025) compares the effects of local tax revenue and royalties from natural resource extraction on the quality of municipal governance in Colombia. He found that higher tax revenue had a stronger effect on improving municipal services in education, health and water supply than the same amount of revenue from oil royalties. However, increasing revenues from royalties was associated with a higher probability of a mayor being prosecuted, which has the opposite effect to that seen with increasing tax revenues. In other words, the more that the municipal budgets in Colombia depend on taxes paid by local taxpayers, the less likely that mayors are to embezzle funds, as they seem to sense the informal control by their electorate. Conversely, revenues that come as 'manna from heaven' seem to trigger this temptation as they are far less subject to scrutiny from local taxpayers.

Local taxes that fund quality services and infrastructure (e.g. childcare, schools, roads and public transport) can increase satisfaction, trust in authorities and stability, which are crucial for a favourable local business climate. However, not all local taxes may encourage municipalities to

promote growth across all sectors of the economy. For example, a municipality dependent on property taxes from residential buildings may favour investment in consumption amenities such as restaurants, shopping centres and health services, as these increase life quality in the location and thereby increase local property values. Conversely, such municipalities most likely will resist commercial or industrial developments that have even minor negative local impacts, fearing electorate's discontent and, in addition, potential declines in property values and subsequently tax revenues to municipal budgets. Fischel (2002) formulated his considerations on the potentially detrimental effects of property taxes on local economic growth as the 'homevoter hypothesis'. Empirical research (Ahlfeldt et al., 2015; Dehring et al., 2008; Duranton et al., 2023) provides strong evidence in support of the 'homevoter hypothesis' and the detrimental effect of local property taxes on local economic growth. In the context of our discussion about local taxes as an incentive for local governments, it is important to bear in mind that local governments that predominantly raise revenues from residential property may experience a decline in economic sectors associated with local negative externalities.

3.3. Taxes as a motivation to local governments to care for local economic growth

To work as an effective incentive for municipalities and their communities to foster local business growth, taxes to municipal budgets must have a direct link to local economic activities: greater local economy growth leads to higher revenue for the local budget. In their self-interest, local governments would then be able to provide tailored local public services and public infrastructure to facilitate the growth of any kind of economic sector (see Chapter 1 for the many ways in which local governments can improve the local business climate and increase the productivity of local firms).

The case of China during the reform period of the 1980s and 1990s provides empirical evidence that taxes on local economic activities paid into local government budgets act as a powerful incentive for local governments to pursue policies in support of a wide range of businesses, far beyond providers of amenities. China's central government largely shared central state enterprise tax with local governments (prefectures and provinces) during the reform period of the 1980s and 1990s; a policy that appears to have been very beneficial to economic growth (Lin et al., 2000), as the shared taxes incentivised local governments to engage in 'market-supporting activities' (Chen et al., 2024; Jin et al., 2005). Conversely, local authorities in China were quick to shift land supply from industrial to residential areas when their share of central state enterprise tax was reduced (Han et al., 2015).

These field observations from China, on the powerful effect of local taxes and the more general form of decentralisation in shaping local authorities' support or blockage of local economic development, are helpful. However, the case of China is not fully comparable with that of Europe because the political and legal structures of local governments in China and Europe are different.

In China, local governments are the **lowest level of state administration** and are therefore accountable to their hierarchy all the way up to the top in the capital (Cheng, 2016). Local governments can ignore by and large the needs and peer pressure of local citizens, as long as they serve their administrative hierarchy in the central government. In such a context, the local authorities' share of the central government's enterprise tax induces them to pursue myopic, exploitative policies that promote short-term economic growth, even if this creates massive local negative externalities that threaten the destruction of natural and human resources (Chen et al., 2024) and social stability, to the detriment of long-term economic growth.

By contrast, in Europe, all local governments are **local self-governments**, elected by local citizens and accountable to them. In other words, in Europe, local citizens regularly judge the work of their local governments in local elections. Faced with regular elections, local governments cannot ignore the interests of their electorate. The impact of tax revenues in local budgets on local economic development and citizen satisfaction therefore is very different between European self-governing municipalities and local branches of central government in China. European municipalities must always consider the satisfaction of their electorate. A policy of supporting business by whatever the expense of the local electorate will not last long. Whatever support they consider providing to business, municipalities in the EU must always weigh the negative externalities against the expected additional tax revenues. This implies that municipal governments, in self-interest, must assist on solutions for local businesses that minimise local negative externalities at a reasonable cost.

Herrmann (2022) found that EU Member States in which taxes on local economic activities constitute a substantial proportion of municipal revenues experienced significantly stronger economic growth than those Member States where such taxes represent a low proportion. This Another example of how local taxes drive local economic development and social inclusion in the European context is provided in the empirical study by Ferraresi et al. (2026), which analyses two fiscally autonomous Italian provinces, Trentino and Bolzano. The two provinces retain almost all of the state's personal income tax (PIT) and corporate income tax (CIT). Even when controlling for the size of public budgets, the per capita income in the municipalities of these two provinces grows more strongly than in neighbouring regions with a regular status, where all state PIT and CIT is paid to the central government and reallocated to municipalities through transfers. At the same time, these two provinces have the highest quality of regional and local government, according to the 'European Quality of Government Index'of the European Commission ([4]), and the highest level of individual well-being in terms of happiness and life satisfaction (see Neira et al., 2018). This indicates that these provinces are highly attractive places to live. Interestingly, Cerqua et al. (2025) found that this high-quality local governance is managed by mayors, deputy mayors, executive committee members and local council heads who have low levels of education and are among low shares of white-collar workers – perhaps the lowest in Italy. This observation suggests that the quality of local government may be less dependent on the formal education and professional careers of local politicians and more dependent on their motivation to serve the interest of local taxpayers, who want good public services in return for their taxes.

This enforcement of consensus and approval seeking by local politicians, enabled by local self-government in the continental European tradition, is important to bear in mind when discussing the effect of relevant types of taxes on local economic activity.

Another important consideration regarding the incentives generated by local taxes is the impact of fiscal equalisation schemes, which redistribute taxes from municipalities with a large tax base to those with a smaller one. If a large proportion of additional tax revenue from an increasing tax base in a municipality is transferred to other municipalities through an equalisation mechanism, then there may be little incentive to further increase the local tax base, even if tax revenues are high.

([4]) See European Commission (2014, 2017)

3.4. Differences in the effects of local taxes on rewards

There are four types of taxes that municipalities in the EU can levy, which support all businesses in all sectors of the economy if they are paid – at least in part – to local government: PIT, CIT, local business tax and taxes on property owned or used by any type of business. All other taxes, such as tourism tax, water tax, electricity tax and value added tax, provide incentives to only certain sectors of the economy. By targeting specific sectors of the economy, such sector-specific taxes discourage local governments from thinking about how to take full advantage of local comparative advantages. Take tourist taxes as an example, there are many places in the EU with exceptional local amenities, such as locations by the sea or near mountains, and locations with beautiful historical heritage and architecture. These local assets, combined with excellent local public services, such as childcare, international schools, healthcare and multilingual public administration, could attract highly skilled people from around the world to work in high value-added economic sectors. This would not only benefit the economy within the municipality, but, with all the positive spillover effects, the regional and national economy as well. However, in the context of a municipality receiving only tourist and property taxes, but no share in PIT or CIT, this path of economic development is unlikely to even be considered as an option, as the strategy of stimulating the construction of tourism-related housing to secure property and tourist taxes appears as much more beneficial in terms of revenues to local budgets.

In contrast, revenues to local government budgets from taxes on personal and corporate income, local business taxes or taxes on property used for economic activities create incentives for much broader local development strategies, not excluding *ex ante* one promising sector at the expense of another promising sector in local economic development.

3.4.1. Personal income tax

The most important tax in terms of revenues to budgets across the EU is PIT (see European Commission: Directorate-General for Taxation and Customs Union, 2024), the only exceptions are Bulgaria, Croatia and Romania, as elsewhere the revenue from PIT is the biggest single tax revenue. In most Member States, PIT is a state tax. The exceptions are the Nordic countries and the three Basque Country provinces and the Navarre region. In the Nordic countries, income tax is levied at a municipal level, with rates defined by local councils. In the Basque Country, PIT is paid to the provinces, which also set the tax rates. In the Navarre region, the regional government owns and defines the PIT rate. In some of Member States, the state is sharing PIT with local governments.

Related to the taxable income of individuals, PIT creates a very strong link between municipal governments and any citizens with taxable income when local governments receive a share of this tax. Since many citizens pay PIT, allocating this revenue to municipal budgets based on its origin fosters a strong sense of accountability among municipalities towards their local taxpayers – and, reciprocally, strengthens taxpayers' awareness of how their contributions are used.

At the same time, this revenue for local budgets creates an incentive for local governments to take care of local economic development: the more the local economy is growing, the higher the local income, the bigger the local tax base and in result the higher the revenues from shares in PIT. However, this relationship is not straightforward. In most Member States, PIT is paid where the taxpayer lives, not where the taxpayer works. This may lead to municipal strategies, especially if municipalities are small sized, with municipalities recommending themselves as a nice place to live, rather than working on the build-up of new businesses that may come along with local negative externalities.

In a few Member States, the payroll tax is paid to the municipalities where the employing company is registered. Within the EU, Romania is such an exception. Municipalities receive around 60 % of PIT paid by people working in their jurisdiction ([5]). In this context, PIT revenues are very closely linked to the local economy and are a strong incentive for each municipality to provide a growth-friendly environment for local companies and to attract additional companies from outside.

3.4.2. Corporate income tax

3.4.2.1. Shares in state corporate income tax

A local government share of state CIT provides a very strong incentive for local governments to allow local businesses to grow and to attract business investment from elsewhere. Since different industries are associated with different levels of local negative externalities and expected profits, municipalities, depending on their budgetary situation, may select specific types of businesses for investment within their jurisdiction. For example, heavy industry firms, which may have lower average profits (and therefore pay less CIT), but which generate negative externalities (pollution and noise), will find it harder to find welcoming municipalities than clean, high value-added firms from industries such as banking, insurance and software development ([6]). However, this does not mean that they will find no municipality that welcomes their investment.

3.4.2.2. Local business taxes

Here, we focus only on local business taxes that are positively linked to companies' economic performance (e.g. profit, turnover, added value or employee salaries). This ensures that improved economic performance of local businesses directly increases municipal revenues. In the EU, there are two different types of local business tax that match this basic requirement.

One type is the taxation of business profits. Examples are the local business taxes in Germany (trade tax (*Gewerbesteuer*)) and Luxembourg (communal business tax (*impôt commercial communal*)). In both Member States, municipalities can set the tax rates within certain limits. This is sometimes expected to lead to harmful 'race to the bottom' tax competition, where tax rates (and hence the level of local public service provision) fall below the socially optimal level. However, empirical evidence suggests that this is not the case (Boning et al., 2023). The quality of local government is an important determinant of business growth (see, for example, Amoroso et al., 2024), and therefore firms may be willing to pay the local tax rate as long as they receive the appropriate quality of services and infrastructure in return.

These local business taxes are volatile due to their link to profit. On the one hand, revenues from the taxes can quickly increase almost without limit. The city of Mainz, for example, experienced a rise in local business tax revenues from EUR 0.15 billion in 2020 to EUR 1.25 billion in 2022 due

([5]) See legislation on personal income tax in Romania, available at https://lege5.ro/gratuit/g43donzvgi/impozitul-pe-venit-codul-fiscal?dp=hazdimzvge2to. Every company with more than five employees must register for payment of payroll tax (see the legislation available at https://legislatie.just.ro/Public/DetaliiDocument/184744).

([6]) The former business value added tax (*cotisation sur la valeur ajoutée des entreprises*) in France is a good example of how the legislator accounts for this effect. If a firm has multiple establishments (i.e. if it operates across several jurisdictions within France), the added value – which serves as the tax base and is calculated at the consolidated firm level – has to be allocated among the different local governments. When determining the share received by each municipality, industrial plants are given additional weight to 'compensate' the municipality for the negative local externalities of industrial production. The legislation defining this principle is available at https://bofip.impots.gouv.fr/bofip/1062-PGP.html/identifiant%3DBOI-CVAE-LIEU-10-20180606.

to the success of a local biotechnology company (Janeba et al., 2025). On the other hand, revenues from the taxes can also quickly fall to zero in a recession. While this volatility makes the management of these revenues and the medium-term planning of their budgets a challenge, the signals provided by these volatile revenues are important, as they force municipalities to react immediately to any business crises in their local jurisdiction. Any difficult periods for local businesses are immediately reflected in their tax payments to the budget, prompting the local administration to look for ways to help local businesses and to step up efforts to attract other businesses.

At the same time, this volatility of revenues is a constant reminder to local governments to ensure that there are a variety of businesses in their local economies, so as not to become dependent on one large local tax-paying business. In other words, it is precisely because of its volatility that this type of local business tax acts as a powerful incentive to prevent local capture by a single business. This volatility ensures that local governments cater to the needs of businesses from different economic sectors, rather than just those that are the most promising at the time. To host a variety of economic sectors, a high-quality public administration is needed. Put differently, the volatility of the revenue from this type of local business tax may not allow municipalities to enter a 'race to the bottom', as the municipality needs to stay 'fit' and able to attract all kinds of businesses by providing various kinds of local public services. A study by Boning et al. (2023) suggests that municipalities are immune to a race to the bottom on local business tax rates: examining the impact on local business tax of municipalities in Germany recommending themselves to businesses as 'tax havens', no race to the bottom was observed.

Another type of local business tax is linked to turnover and added value of local business. Examples are the business value added tax (*cotisation sur la valeur ajoutée des entreprises* (CVAE)) and the company property tax (*cotisation foncière des entreprises* (CFE)) in France, the municipal tax (*Kommunalsteuer*) in Austria and the local business tax (*Helyi IParűzési Adó*) in Hungary. In France, the CVAE is specifically based on the added value generated by companies with turnover exceeding EUR 500 000. The tax rate is split between the company and the central government, with smaller companies (in terms of turnover) paying a reduced rate. Although the CFE is primarily based on property values, a minimum tax applies when business premises are deemed to have a low value or when a business operates without premises; the company's turnover determines this minimum tax. In contrast, the tax base of the *Kommunalsteuer* in Austria is the total of salaries paid to employees. In Hungary, the companies' net sales form the tax base of the *Helyi IParűzési Adó*.

Like profit-linked local business taxes, these taxes create a strong link between municipalities and their businesses and an incentive for municipalities to provide local conditions conducive to all types of business; however, they are less volatile than profit-linked taxes. This makes them easier for municipalities to administer. However, this lack of volatility is accompanied by a delay in the signalling of a crisis in the local economy through the flow of revenue to the municipalities. Reductions in wages due to lay-offs and reductions in value added occur with a delay after a reduction in company profits. Municipalities receive revenue from these taxes even when local businesses are already facing severe existential crises potentially delaying fast and robust measures to maintain the local tax base.

3.4.2.3. Effect of both local business tax and shares in state corporate income tax on social cohesion

Municipal shares in state corporation tax and local business tax should promote not only local economic growth but also social inclusion across diverse income groups within municipalities. The growth and success of local businesses are reliant on a broad spectrum of skills and abilities within the local labour force, from low to high skills, to create a diverse economic ecosystem. Consequently, municipalities cannot afford to selectively attract individuals from high-income groups (a tempting strategy in the case of property tax and/or PIT), but must accommodate residents from all socioeconomic and educational backgrounds. This inclusivity is essential, as all local income groups contribute to business success, thereby fostering municipal development. Thus, local business tax and shares in state CIT may act as more powerful enhancers of social inclusiveness than property tax and PIT. Future research is crucial for understanding how municipalities' shares in state corporation tax and local business tax can drive local social inclusion. In the absence of empirical evidence, it may still be important to consider this factor when determining the right mix of taxes for municipalities.

3.4.3. Local business property tax

In the absence of any taxes on personal and corporate income, turnover or added value, local business property taxes can be a strong incentive for municipalities to work on local economic development. The incentive is stronger when the tax rate applied to business property is higher relative to the tax rate applied to residential property, assuming other revenues and structure of expenditures equal. If tax rates and tax bases for business and residential property are equal, residential property may be more attractive to local governments, as these properties usually have fewer expected negative externalities. However, the decision of a local council to use additional land for residential or commercial construction depends on the full set of additional revenues and additional expenditures related to new businesses or residents (e.g. presence or absence of additional shares in PIT, CIT, new schools and day care that may have to be built).

The advantage of business property tax is that the associated revenue is very constant and predictable. This makes it easy to forecast revenues for local budget planning. At the same time, it is difficult to increase the tax base quickly. The only way to increase revenues from business-related property tax in the short term is to convert, usually rural, land into commercial and industrial land.

In the mid and long term, revenues from the commercial property tax can also be increased by helping local businesses to increase their productivity (e.g. through fast and efficient processing of regulations, and the provision of excellent local schooling and vocational training), thereby increasing local wealth, which in turn increases the value of property, including commercial property in the mid and long term. Changes in property market value must be reflected in adjustments to property tax bases if this effect is to be achieved.

However, such a long-term approach via increasing the value of commercial property covers a time horizon usually well beyond the next local election and therefore is not very likely to impact strongly the strategic reasoning of municipal governments. In contrast, a local business tax, as discussed above, would translate increases in productivity and subsequent profits of local businesses immediately into increased revenues for local government budgets. However, even in the absence of a local business tax, the presence of a substantial business property tax should keep local governments sufficiently motivated to pursue local policies conducive to the growth of all business

types, as the need to maintain the value of local stock of commercial property high. This is only possible if they remain attractive to additional business investments in local commercial property.

3.5. The interplay between jurisdiction size and rewards

In Section 3.1 we have discussed in detail the characteristics of social interactions in communities from a behavioural economics perspective: the closer the public administration is to citizens and businesses, the more face-to-face interactions, the more informal peer-to-peer interactions and the more peer-to-peer enforcement of cooperation. Having outlined the different types of taxes on economic activity and their incentive effects, we will now consider how the size and territorial structure of municipalities may influence the impact of taxes on economic activity.

In the past, driven by the perception that municipalities are organised similar to industrial models of production, with economies of scale, there was a common perception that larger municipalities meant better managed municipalities. The rationale for this is that larger municipalities have bigger budgets and they therefore are assumed to be able to afford better-qualified staff, who should be able to make use of the economy of scales, generating more and better public goods for the taxpayers' money. While it may be possible to measure the efficiency of local public services in terms of cost per unit (at least approximately), any empirical analysis faces the issue of the absence of objective criteria for the quality of the services provided. This complicates any attempt to fully understand the implications of the size of local governments on the quality of their services.

Even when focusing strictly on unit costs, economies of scale do not apply uniformly to all types of local services. While certain services benefit from scale effects, others do not (Bel, 2013; Gómez-Reino et al., 2023). Municipal amalgamation, however, merges all services indiscriminately, failing to account for these varying potentials. Consequently, the high transaction costs of a merger, combined with increasing distance between citizens and local administration and reduced social scrutiny, often outweigh any partial improvements in scale. These negative trade-offs are even more pronounced in the case of mandatory mergers.

Indeed, most of the empirical evidence strongly suggests that, in most cases, amalgamation does not deliver the expected economic gains in terms of lower costs per unit of service. Moisio et al. (2013) found no evidence that the amalgamation of municipalities in Finland created efficiency gains, nor did Studerus et al. (2025) in Switzerland, Allers et al. (2016) in the Netherlands or Blom-Hansen et al. (2016) in Denmark. Similarly, Roesel (2017) could not find any efficiency gains in the case of district amalgamation in Germany. This finding was replicated by Blesse et al. (2019) in Austria. Fritz (2015) and Lüchinger et al. (2002) even found that the amalgamation of municipalities in Germany and Switzerland increased costs. Fritz et al. (2020) demonstrated that amalgamation of municipalities in the Baden-Württemberg region led to substantial increases in debts of municipalities. Blom-Hansen et al. (2021), testing in a quasi-experimental setting whether the size of municipalities and quality of local public schools are related, found no relationship, leading them to conclude that 'the search for the optimal jurisdiction size is futile'.

These empirical findings on the lack of economic benefits of amalgamation comes, apart from the Netherlands, from countries where municipalities receive substantial taxes on local economic activity. Future comparative research on the effect of municipal amalgamation on the efficiency of local government in the absence or presence of such taxes could help to determine whether the presence of these taxes, rather than the size of municipalities, is the key factor in ensuring efficient use of local budgets. The smaller a municipality, the more the peer-to-peer mechanisms described above enforce a high level of local government efficiency in using the received taxes from local

taxpayers for local needs. Amalgamation may not be able to increase this efficiency any further. Conversely, an increase in the physical distance between local governments and citizens may lead to a decrease in the social, informal control of local governments by local citizens and subsequently to less informal pressure on local governments to act efficiently.

Numerous studies have demonstrated that the amalgamation of smaller municipalities and districts into larger ones reduces trust in and satisfaction with local governments. Hansen (2013) finds a significant decline in trust in local government following a large-scale amalgamation of municipalities in Denmark. Frey et al. (2023) observe a significant drop in voter turnout following amalgamation of municipalities in Switzerland. Roesel (2017) demonstrates that the amalgamation of districts in Saxony, Germany, led to a decrease in candidates and voter turnout and an increase in support for populist right-wing parties in local elections.

Looking at the opposite process to municipal amalgamation, that is, settlements leaving larger districts, run by state administration, to form much smaller local self-governments, Arends et al. (2023) demonstrated a causal relationship between increased interpersonal trust and confidence in local governments and increased participation in local elections in Ukraine. Tavares (2018, 2024), reviewing all available studies from the last two decades, reported that the deterioration of local democracy because of amalgamation is common, while observing only minor, if any, changes in the quality of local services Since valid indicators of service quality are rarely available, most studies of economic effects focus on the per capita cost of services. The results regarding cost savings are inconclusive, as cost savings are found in some policy areas (most notably administration), while costs in other policy areas are increasing or unaffected. Summing up across the studies Tavares (2018) emphasize that a number of studies point to 'amalgamation reforms experiencing a trade-off between efficiency and democracy' (Tavares, 2018). No studies of amalgamation reforms have focused on the role of local taxes as a determinant of outcomes of amalgamations.

However, looking at the question of the 'optimal' size of municipalities from the point of view of the incentive effects of different taxes on local economic activities may be still a useful exercise. The following aspects merit attention.

In most Member States, PIT is typically tied to residence rather than workplace. Smaller municipalities can specialise in attracting high-income residents, externalising business-related local negative externalities to other municipalities in their surroundings. Conversely, larger municipalities often find it harder to focus solely on residential income tax attraction, reducing opportunities for 'cherry-picking' taxpayers. Larger territories and populations favour local strategies of fostering local human capital to generate employment opportunities for everyone, rather than 'cherry-picking'. These key local strategies target quality childcare, education, vocational training and healthcare, which increase human capital and, with it, income opportunities, and are often matched with a fast and efficient public administration facilitating the entry of new businesses and the grow of existing ones. Thus, in a fiscal framework where municipalities rely solely on PIT, there may be a minimum size of municipalities needed to enable them to foster a local conducive business climate.

In the context of municipal shares in state CIT or substantial local business taxes, the size of the municipal territory shapes the municipal strategy. If municipalities are very small, municipalities will be tempted to attract businesses generating a lot of CIT or local business tax, while leaving the costs of providing land for housing and all social services for the workforce to surrounding municipalities. This issue can be mitigated with intermunicipal cooperation. This is common in many countries, including in Germany, France and Italy. However, such intermunicipal cooperation should be based on a voluntary process. Through the example of rural municipalities in France, Tricaud

(2025) demonstrate that municipalities forced to integrate ended up with fewer public services and more unwanted construction, fostering local discontent ([7]).

The more compact the territory of a municipality, the more equitably the costs (negative externalities) and benefits (increased budget) of local businesses are distributed among citizens. Almost everyone is exposed to local negative externalities, but everyone also enjoys the benefits of better local goods funded by additional revenues. Conversely, the larger the municipal territory, the more opportunity for the municipal government to allocate businesses with negative externalities to peripheral settlements, far from the administrative centre and close to neighbouring municipalities, in order to minimise the impact of negative externalities on the core electorate. Such allocation decisions are similar to the decisions of national governments to place nuclear power plants in border regions, far from urban centres (Demir et al., 2024).

However, the tax revenues generated by these peripheral businesses are most likely invested throughout the municipality, leading to a potential mismatch where peripheral settlements may not receive commensurate benefits relative to the quality-of-life costs imposed by negative local externalities from new economic activities in their vicinity. This disparity can foster internal conflicts between the affected settlements at the periphery and the rest of the municipality, potentially jeopardising the municipal business climate. However, in contrast to the counterfactual of a municipality with no CIT revenues, and therefore nothing to share or dispute, there remains always an opportunity for these peripheral settlements to negotiate a more equitable share of the additional tax revenues generated by the new businesses in their neighbourhood.

A local commercial property tax could encourage development in municipalities with large amounts of land and a small populations: the more land available and the smaller the population, the more likely it is that a municipality can host new businesses without triggering NIMBY-related resistance. At the same time, the resulting increase in revenues will be very tangible for local citizens. Conversely, the larger the existing population and the less land available, the more likely the electorate is to react negatively to new business constructions, while, at the same time, the per capita benefit from the local commercial property tax is lower.

3.6. The interplay between the taxes paid to different levels of government

In many Member States, the state architecture is organised in two levels: local self-government and the central state. In larger Member States there are additional levels of self-governance, like provincial and regional self-governments. Higher administrative tiers generally have less ‘street level bureaucracy’ (Hupe et al., 2007), while formal interactions often replace informal interactions when administrations are more distant from the daily lives of citizens and businesses. A higher administrative tier enables a bird’s-eye view that can facilitate the coordination and planning of larger public services and infrastructure, which are essential for economic development (e.g. regional transport and secondary and tertiary education). At the same time, the upper tiers often fail to capture the local moods and sensitivities of people at the municipal level regarding the potential negative externalities of new policies or public or private investments. A cooperative relationship between the different administrative tiers of a multilevel government structure is

([7]) Intermunicipal cooperation is increasingly used for the joint provision of local services. Since it has no effect on jurisdiction size and only very occasionally affects taxation, a comprehensive discussion of this measure is beyond the scope of this report.

essential for successful economic development of the territory. Ideally, municipalities, districts and regions would support each other in fostering economic growth within their territories.

The discussion on optimal taxation structure at different levels of government has been the subject of extensive theoretical (e.g. Gordon, 1983; Keen, 1998) and empirical (e.g. Slattery, 2025; Slattery et al., 2020) work on vertical externalities in multilevel governments. Different levels of government can generate vertical externalities, as taxes imposed or subsidies provided by higher levels of government affect the taxation and spending decisions of lower levels of government. In addition to vertical externalities across different levels of government, local jurisdictions can generate horizontal externalities through mechanisms such as tax competition or, as a positive externality, the spillover of the provision of a particular local public good to neighbouring jurisdictions (Keen et al., 2002; Wildasin et al., 1991; Wilson, 1986).

This line of research assumes competing but benevolent social planners at all levels of government, driven only by economic considerations. This may be an overly optimistic assumption, as there may well be political competition beyond economic considerations that does not necessarily follow a benevolent rationale.

For the sake of socially inclusive economic development of a territory, the most powerful instrument for fostering mutually beneficial cooperation between different levels of self-government, even if they are governed by competing or even conflicting political interests, may be a fiscal structure that allows all levels to benefit from revenues from taxes on economic activities within their jurisdiction. If such a fiscal structure is established, then all levels of government should have a common interest in the economic development of the territory.

So far, there is no convincing analytical work that assesses the extent to which the different levels of subnational self-government can reinforce or hamper the impact of each other's efforts and policies for economic development within their jurisdiction (in a setting where they all receive an origin-based share of taxes on economic activities within their jurisdiction). Likewise, there is a gap in literature assessing whether with increasing number of administrative tiers the coordination on efficient support to local business becomes too costly ([8]). It is unclear, so far, how large the impact on territorial economic development would be if municipalities and/or counties and/or regional self-governments did not receive a fiscal benefit from taxes. Future structured research analysing carefully the various background factors shaping the incentive structure for each government level, like, for instance, the presence or absence of a horizontal or vertical equalisation mechanism, or the involvement of lower levels in the decision-making of upper levels, will provide greater clarity.

However, as argued in Chapter 1, it is at the municipal level where the main framework for a thriving local economy is set. Municipalities are the 'gatekeepers' that control what kind of economic activity will develop on their land. If municipalities do not receive a share of the tax revenue from additional local economic activities, then it may be difficult for higher levels of government to push municipalities to support their local business base. Therefore, in terms of the dynamics of territorial economic development, it may be more important for municipalities, than for higher levels of government, to have a share in the tax revenues generated from local economic activity.

([8]) There may also be a problem of too many levels of government doing too much; see, for example, discussions on the 'territorial *mille-feuille*' in France, articulated in this report available at https://www.vie-publique.fr/rapport/294451-couts-des-normes-et-enchevetrement-competences-etat-et-collectivites and draft reform legislation available at https://www.assemblee-nationale.fr/dyn/17/dossiers/simplifier_millefeuille_territorial_collectivite_unique_17e#AN1 [accessed March 2026]

Table 1 gives an overview on the variety of fiscal structures in Member State governments with three levels of self-government. It can be seen that there is a huge variety of combinations between the share of revenues from taxes on economic activities across different levels of local governments.

This variety is important for understanding the impact of these different fiscal structures on local economic growth.

Table 1. Examples of revenues from taxes on economic activities across local governments in Member States with three tiers of subnational self-governance.

MEMBER STATE	MUNICIPAL LEVEL	DISTRICT LEVEL	REGIONAL LEVEL
Germany	Substantial local business tax (*Gewerbesteuer*) and substantial share in PIT	Co-funded from tax revenues of the municipalities of the district	Substantial share in PIT
Germany – city states	None	None	Substantial local business tax (*Gewerbesteuer*) and substantial share in PIT
Spain – common regime regions	Minor local economic activity tax and minor property tax on commercial, industrial and office real estate	Minor share in state PIT	Substantial share in PIT
Spain – autonomous provinces of the Basque Country	Minor local economic activity tax and minor property tax on commercial, industrial and office real estate	All PIT and CIT	The regional administration (Basque Country) is financed by provinces
Spain – Navarre region	Minor local economic activity tax and minor property tax on commercial, industrial and office real estate	No district/province level	All PIT and CIT
France	Intermediate local business tax and local business property tax	None	None
Italy – regular regions	Minor share in PIT and minor property tax on non-residential property	None	None (*)
Italy – Autonomous Province of Bolzano and Autonomous Province of Trento	Minor share in PIT and minor property tax on non-residential property	The provinces have a major share in state PIT and CIT and they finance general transfers to municipalities. These transfers are negotiated annually between the provincial associations of municipalities and the provincial governments	None
Italy – region of special status Valle d'Aosta	Minor share in PIT and minor property tax on non-residential property	No district/province level	Major share in PIT and CIT. The region finances transfers to municipalities following a fix allocation formula

Italy – region of special status Friuli-Venezia Giulia	Minor share in PIT and minor property tax on non-residential property	None	Major share in PIT and CIT. The region finances transfers to municipalities
Italy – regions of special status Sicily and Sardinia	Minor share in PIT and minor property tax on non-residential property	None	Major share in PIT and CIT. Municipalities are financed from national budget
Austria	Substantial local business tax (*Kommunalsteuer*)	None	None
Poland	Substantial share in PIT, minor share in CIT and relevant property tax on commercial and industrial property	Substantial share in PIT, minor share in CIT	Relevant share in PIT and substantial share in CIT

(*) Regions receive revenues from a minor business tax; however, these revenues must be used to finance the regional healthcare system only and are therefore not listed here as an incentive-compatible form of revenue retention.

Source: Data collected by country experts.

4. Qualitative indicators of the reward power of local revenues

This chapter assesses the fiscal autonomy and incentive structures of municipalities across Member States. Employing a comparative qualitative approach, it draws on expert-prepared country factsheets and evaluates administrative responsibilities, service delivery proximity and local tax structures.

Two scoring systems are introduced to rank the 'award power' of local revenues across countries. The first scoring system assigns weighted scores based on the type and extent of origin-based taxation, such as own PIT, local business tax and commercial property tax, with higher scores reflecting stronger fiscal incentives at the local level. The second system offers a simplified binary assessment, awarding scores based on the presence and relevance of specific tax instruments. Both systems exclude formula-based tax sharing, as it lacks a direct link to local economic activity. The methodology also includes comparative tables on municipal tasks and service distance, which quantify how close services are to citizens and how much control municipalities have over them. This multidimensional framework enables a simple and fast evaluation of the reward power of the revenue structure of local governments and the potential for local governments to shape the conditions for a growth-conducive local business climate.

Our approach has two major limitations. First, the two scoring systems rely on qualitative judgments and simplified assumptions, which may not fully capture the complexity of local tax systems or the nuances of intergovernmental fiscal relations, given the complex rules in the national states. Second, our approach focuses primarily on structural and legal aspects, without assessing the actual performance or efficiency of service delivery. With these simplifications in mind, it is important to note that the goal of the proposed scoring systems is not to rank countries, but rather to facilitate the exchange of experiences and initiate discussions among policymakers at the local, regional, national, European and global levels on the effectiveness of different local revenue structures as awards for efforts to increase the local business base.

4.1. Administrative structure and size of local government

Within and between Member States, municipalities exhibit significant variations in terms of size and population (see Table 2 for an overview). Moreover, there are considerable differences in the multilevel government structures in which these municipalities are embedded. In Member States where municipalities have, on average, smaller populations, there is often an additional administrative tier of local self-governance at the district level that assumes some of the administrative tasks typically managed by large municipalities elsewhere (e.g. *Landkreise* in Germany, *départements* in France and *Powiats* in Poland). In the case of self-governed district-level administering functions of municipalities, there are sometimes parallel urban centres of special status that manage these tasks by themselves (e.g. in Germany, Latvia, Poland and Romania).

Table 2. Number and size of municipalities (reference year 2022).

MEMBER STATE	NUMBER OF MUNICIPALITIES	MINIMUM POPULATION	MEDIAN POPULATION	MAXIMUM POPULATION
Ireland	31	35 199	139 703	592 713
Latvia	43	3 138	29 800	679 115
Lithuania	60	4 090	25 743	586 836
Estonia	79	161	7 656	453 033
Denmark	98	1 769	43 343	644 431
Bulgaria	265	470	9 354	1 280 334
Sweeden	290	2 372	16 283	984 748
Portugal	308	434	13 968	557 519
Finland	309	111	5 879	664 028
Greece	332	142	14 169	789 166
Croatia	428	171	2 082	16 015
Poland	2 411	1 173	7 150	96 448 (*)
Hungary	3 178	10	1 200	1 750 000
Romania	3 181	117	3025	2164295
Czechia	6 258	16	452	1 357 326
Italy	7 901	32	2 401	2 755 309
Spain	8 131	3	518	3 280 782
Germany	10 981	9	1 766	3 755 251
France	34 945	0	468	2 149 216

(*) Including cities with county status, 1 861 975 inhabitants.

Source: Authors' calculations, based on data from national authorities and associations of local self-governments.

In addition to the average population per municipality, the size of the Member State shapes the governance environment of municipalities: Member States with larger territories have a third level of subnational self-government, such as the *Länder* in Germany (even as independent federal states), the Régions of France and the Voivodeships in Poland.

4.2. The capacity of municipalities to shape the local economic environment

Across Europe, local authorities manage many issues affecting their citizens' daily lives. Their autonomy is a key aspect of European multilevel governance, legally enshrined in the European Charter of Local Self-Government. However, just as there is a remarkable diversity among Member States in terms of the size of population and territory of local authorities, there is also considerable diversity in terms of the concrete administrative tasks they manage as their own or as delegated tasks. The Local Autonomy Index', previously developed by the European Commission ([9]), provides

([9]) https://ec.europa.eu/regional_policy/information-sources/publications/studies/2021/self-rule-index-for-local-authorities-in-the-eu-council-of-europe-and-oecd-countries-1990-2020_en.

an excellent overview and comparison of the different aspects of local autonomy. To better understand the ability of local governments in the EU to shape local conditions for a thriving economy, we specifically assess and compare the degree of autonomy in the provision of public services that are key to a growth-conducive local business environment, based on the tasks discussed in Chapter 1. We start with municipalities, as they are the most important interface between citizens, businesses and public administration. We examine their role in spatial planning, childcare, primary and secondary education, primary and secondary healthcare, vocational training, public transport / road maintenance and waste management by applying a binary scoring system, presented in Table 3. Provision of land for economic use is a key input for almost any economic activity. High-quality childcare, primary and secondary education, and primary and secondary healthcare are fundamental factors in the formation of human capital, the basic input factor for sustainable economic growth (United Nations, 2015). Public transport / road maintenance and waste management are also basic services needed for the development of economic activities (Rodrigue, 2020).

Table 3. Scoring system used to assess municipal tasks.

TASK	1 POINT	0 POINTS
Zoning / land planning	Complete autonomy in planning, with coordination or compliance with higher levels	No local autonomy, planning is made at higher levels
Childcare (*)	Municipality provides childcare	Municipality may provide childcare, but not everywhere and for everyone
Primary education	Municipality is responsible for primary education (regardless of what share of the cost it directly covers or if it is responsible for only the building or more)	Municipality does not deal with primary education
Secondary education	Municipality is responsible for secondary education (regardless of what share of the cost it directly covers or if it is responsible for only the building or more)	Municipality does not deal with secondary education
Vocational training	Municipality is responsible for vocational training (regardless of what share of the cost it directly covers or if it is responsible for only the building or more)	Municipality does not deal with vocational training
Primary healthcare	Municipality has substantial decision-making power regarding primary care and may be responsible for full/substantial financing	Municipality may support the provision of primary healthcare through various voluntary measures, but the decisions are made elsewhere
Secondary healthcare	Municipality has substantial decision-making power regarding secondary care and may be responsible for full/substantial financing	Municipality does not deal with secondary healthcare
Local public transport / road maintenance (**)	Municipality provides local public transport and/or is responsible for road maintenance	Municipality does not provide local public transport and is not responsible for road maintenance
Waste management	Municipality is fully responsible for waste management	Waste management organised at higher levels

(*) Care or preschool education for children before they start primary education; the starting age may differ.
(**) Assessed jointly, meaning that the municipality can improve transport availability/comfort.

Source: Data collected by country experts.

Table 4 presents a comparison of the tasks managed by municipalities across Member States. The four items regarding education (childcare, primary education, secondary education and vocational training) are summarised in the 'Total' score. For childcare, 1 point is awarded if childcare is the only service managed by municipalities, while 4 points are awarded if all four services are managed by municipalities. The same logic applies to healthcare services: 0 points if not managed by the municipality at all; 1 point if primary healthcare services are offered; and 2 points if primary and secondary healthcare are managed by the municipality.

Table 4. Key tasks managed by municipalities across Member States.

MEMBER STATE	EDUCATION	HEALTHCARE	TRANSPORT	WASTE	ZONING	TOTAL
Romania	4	2	1	1	1	9
Finland	4	2	1	1	1	9
Lithuania	3	2	1	1	1	8
Denmark	3	1	1	1	1	7
Portugal	3	1	1	1	1	7
Sweden	4	0	1	1	1	7
Germany	3	1	1	1	1	7
Bulgaria	3	0	1	1	1	6
Estonia	3	0	1	1	1	6
Greece	3	0	1	1	1	6
Latvia	3	0	1	1	1	6
France	2	0	1	1	1	5
Czechia	2	0	1	1	1	5
Croatia	2	0	1	1	1	5
Italy	2	0	1	1	1	5
Hungary	1	1	1	1	1	5
Poland	2	0	1	1	1	5
Ireland	0	0	1	1	1	3
Spain	0	0	1	1	1	3

Source: Data collected by country experts.

The comparison of the tasks performed by municipalities, presented in Table 4, shows quite a universal approach regarding transport, waste and zoning where municipalities in all the Member States have sufficient responsibility in these areas. However, the actual power in the area of transport may differ among the Member States and among individual municipalities within the same Member State.

Municipalities in 18 Member States are responsible for childcare and 17 for primary education. In 12 Member States, municipalities are also responsible for secondary education.

The least involvement of municipalities is in the area of healthcare. Municipalities are responsible for both primary and secondary healthcare in only three Member States (Lithuania, Romania and Finland) before 2023.

4.3. Responsibilities for public services and infrastructure relevant to the local business climate

In this section, we analyse the proximity of public services to citizens (Tables 5 and 6). The score is assigned according to the level of government that provides the given service or infrastructure:

- 3 points – the municipality, as its own task or a mandatory intermunicipal task;
- 2 points – second tier, as its own task;
- 1 point – third tier, as its own task;
- 1 point – the municipality, as a delegated task.

Cities with a special status are not considered in this scoring.

Table 5. List of public services and infrastructure evaluated.

AREA	PUBLIC SERVICE PROVISION
Registry	Managing (as own or delegated task) the registry of businesses
Water	Enabling access to local public water supply and water disposal
Healthcare	Organising (as own or delegated task) secondary healthcare infrastructure
Education	Organising (as own or delegated task) kindergartens / childcare centres
	Organising (as own or delegated task) primary education
	Organising (as own or delegated task) secondary education
	Organising (as own or delegated task) vocational training
Labour	Implementing (as delegated task) labour regulations
Construction	Issuing (as own or delegated task) construction permits
	Implementing (as own or delegated task) construction control
Transport	Organising (as own or delegated task) road construction
Internet	Organising (as own or delegated task) broadband internet connections

Source: List compiled by country experts.

Table 6. Service distance.

Member state	Construction	Education	Health-care	Internet	Labour	Registry	Transport	Water	Total
Germany	6	9	2	3	0	3	3	3	29
Romania	6	12	3	0	0	0	3	3	27
Denmark	6	9	2	0	3	0	3	3	26
Finland	6	12	2	0	0	0	3	3	26
Sweden	6	12	2	0	0	0	3	3	26
Italy	6	8	0	3	0	0	3	3	23
Poland	2	10	2	3	0	0	3	3	23
Bulgaria	6	12	0	0	0	0	3	0	21
Czechia	2	10	2	0	0	1	3	3	21
Estonia	6	9	0	0	0	0	3	3	21
Latvia	6	9	0	0	0	0	3	3	21
Lithuania	6	9	0	0	0	0	3	3	21
Portugal	2	10	2	0	0	1	3	3	21
Greece	6	7	0	0	0	0	3	3	19
France	3	9	0	0	0	0	3	3	18
Hungary	6	3	0	3	0	0	3	3	18
Croatia	2	7	2	0	0	0	3	3	17
Spain	6	0	0	0	0	0	1	3	10
Ireland	6	0	0	0	0	0	3	0	9

Source: Factsheets created by participating experts.

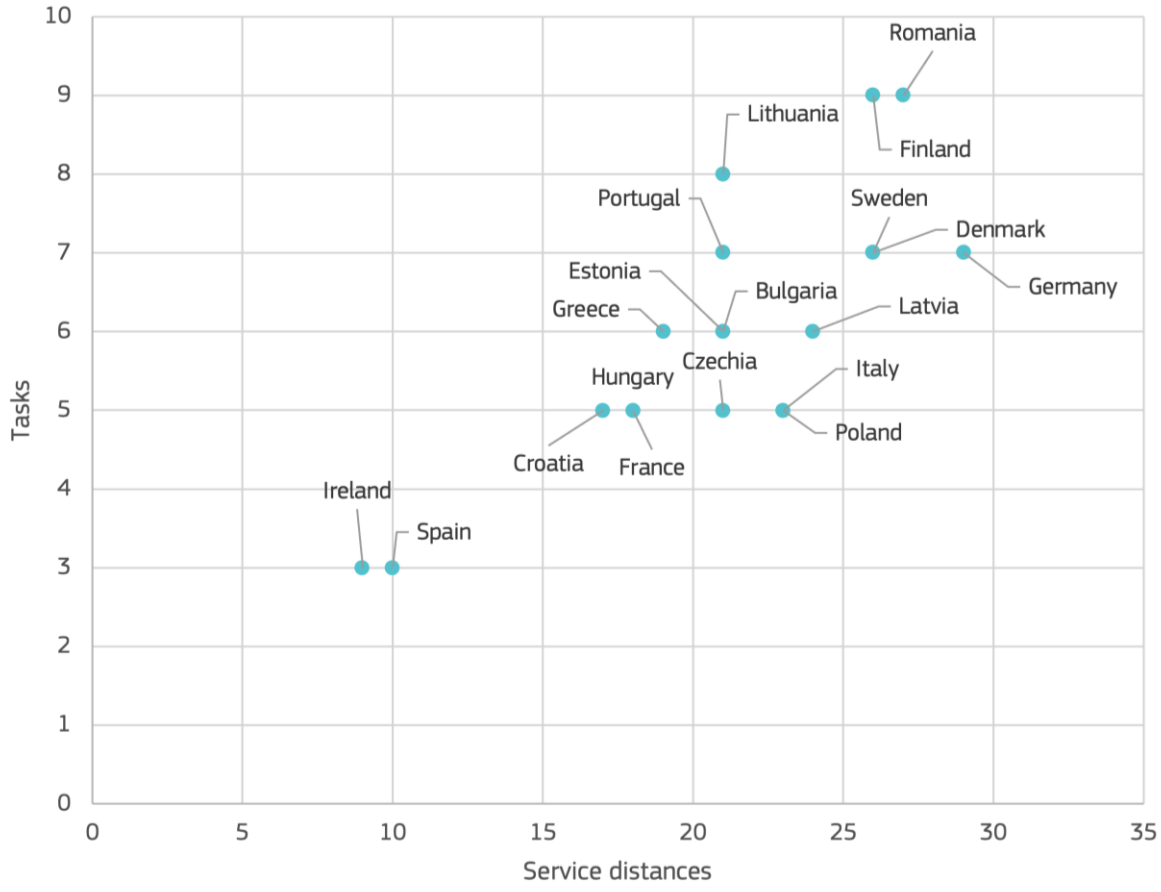
Implementation of labour regulations and managing the registry of businesses are generally central government functions, the only exception is in Germany, where municipalities manage the registry of businesses. A similar situation is seen in the organisation of broadband internet connections, which is carried by municipalities in only in three Member States (Germany, Italy and Hungary).

However, enabling access to local public water supply and waste water disposal is a municipal task in all Member States except Bulgaria and Ireland. In France, water is managed at the intermunicipal level, and is not the responsibility of the municipality per se.

In the areas of both transport and construction, issuing construction permits and enforcing construction regulations are primarily a municipal task.

In the area of education, we see varied systems of responsibility assignment across the different levels of government. The maximum of 12 points in this category means that municipalities are responsible for providing education, from preschool to secondary education, including vocational education.

Figure 1. Comparison of the indicators of municipal tasks and service distances among Member States.



Source: Based on data from Tables 6 and 7.

The comparison of two indicators – municipal tasks and service distance – shows, expectedly, some similarity among Member States, especially Ireland and Spain (Figure 1). In addition, France has a municipal task / service distance score higher than that of Bulgaria, Czechia, Italy, Latvia and Poland; services are closest in Germany; and municipalities perform the most tasks in Lithuania and Finland.

4.4. Local revenue structures and incentives for local economic growth

As discussed in Chapter 2, revenues from local economic activities to local budgets can work as a reward mechanism for municipalities that pursue local policies conducive to local business development. The variety of taxes generating revenues from the local economy to local budgets is vast.

4.4.1. Comparison of origin-based and formula-based tax sharing

Own tax means that 100 % of proceeds from the given tax is a revenue of the municipality where the tax originates (i.e. the taxpayer has a permanent residence in the municipality, in the case of PIT; the taxpayer has a seat or branch in the municipality, in the case of CIT; or the real estate is located at the territory of the municipality, in the case of the commercial property tax). Furthermore, 'own taxes' refer to taxes for which local governments have the autonomy in setting tax rates, though this is often subject to limits defined by national legislation.

Shared tax revenues have two major characteristics: the collected revenue is shared between two or more governmental levels and the volume of revenue kept by the local government is a function of the total revenue collected in the territory (i.e. so-called **origin-based tax sharing**).

We do not consider it tax sharing if the formula lacks a positive parameter linking taxes collected locally to total tax revenue. Without this parameter, there is no connection between economic activity and tax revenue, making the system more analogous to an allocation mechanism than true tax sharing.

A hypothetical example of an origin-based tax-sharing system is presented here and in Table 7. There are two municipalities in the country, which differ in terms of population size and economic level. The citizens of municipality A (with 80 000 inhabitants) paid EUR 100 million in PIT, while the citizens of municipality B (with 120 000 inhabitants) paid only EUR 60 million. The law stipulates that municipalities receive a 25 % share of PIT revenue. Applying this origin-based principle, the municipality retains 25 % of the PIT paid by its citizens. This means that the budget revenues for municipality A amount to EUR 25 million and for municipality B to EUR 15 million. Thus, the budget revenue per inhabitant is EUR 312 500 in municipality A and EUR 125 000 in municipality B. The state budget income amounts to EUR 120 million (i.e. 75 % of the total amount of EUR 160 million). Either a vertical or a horizontal equalisation mechanism ensures that differences in revenues from origin-based shares do not become excessive.

When applying the formula-based principle, the revenue of the state budget is the same, but the revenue of the individual municipalities is different. The municipalities will share EUR 40 million in the ratio determined by the formula (in this case the number of inhabitants) and not in the proportion in which they contributed to the revenue. Revenue per inhabitant is the same in both municipalities (EUR 200 000).

Table 7. Hypothetical example for origin- and formula-based tax sharing.

	MUNICIPALITY A	MUNICIPALITY B	TOTAL
Population	80 000	120 000	200 000
Paid PIT in the given region (*million EUR*)	100	60	160
Origin-based principle: 75 % state budget, 25 % local government budgets			
State budget revenues (*million EUR*)	120		120
Revenues of the local government budget (*million EUR*)	25	15	40
Per capita revenues of local government (*thousand EUR*)	312.5	125	—
Formula-based principle: 75 % state budget, 25 % local government budgets; the criterion is the number of inhabitants			
State budget revenues (*million EUR*)	120		120
Revenues of the local government budget (*million EUR*)	16	24	40
Per capita revenues of local government (*thousand EUR*)	200	200	—

Source: Authors' calculation.

4.4.2. Own local business tax

The link between economic activity and municipality is the closest in the case of own business tax (i.e. a tax levied on the profit or added value of companies with a seat and production in the given municipality). There are only few countries with a local business tax in the EU.

Local taxation in France has undergone significant changes over the past 40 years. In 2010, the *taxe professionnelle* (business tax) was abolished and replaced by two new general business taxes: CFE and CVAE.

CFE is levied on the rental value of property used by businesses, regardless of ownership. Its rate is determined by the local authority. CVAE, by contrast, is a tax on the value added by the business. Since value added is calculated at the firm level, when a company operates across several local jurisdictions, the tax base is apportioned according to a formula that considers both the rental value of property and the local wages paid. The CVAE rate is uniform across the country.

In practice, revenues from both CFE and CVAE are, in most cases, allocated to intermunicipal budgets. However, as of 2023, CVAE revenues are no longer attributed to local governments but instead are transferred to the central state budget. CVAE is scheduled to be phased out completely in the coming years. Although the timeline has been repeatedly revised, its full abolition is currently (mid 2025) expected by 2030.

In Germany, municipalities set their business tax (*Gewerbesteuer*). The tax base is identical for the entire federal territory and it is calculated based on business profit, which is then adjusted with some deductions and additions.

Municipalities can set an assessment rate on local business tax. The average is 400 %, and so with the 3.5 % general tax tariff × 400 % the effective tax rate for firms is 14.0 %. There is a strong link between local business activity and local business profitability (exceptions are only made for agriculture and a few selected commercial sectors). The multimunicipal companies' tax is split by the volume of salaries where part of the business tax (levy) goes to the state and the federation (approximately 8 % in total). On average, business tax counts for 47 % of tax revenue and 18 % of total revenue of municipalities.

In Hungary, business tax is the most important local tax, accounting for around 80 % of local tax revenues and over 30 % of total revenue. It can be levied at up to 2 % of taxable net sales revenue (added value); however, the specific tax rate is determined by the municipality, except in 'special preferential economic zones' designated by the central government, where municipalities are prohibited from levying and collecting any local business taxes. All business activities pursued for income or profit, whether permanently or temporarily, within the jurisdiction of a local government are subject to taxation. This is based on commercial domicile / place of business.

In Spain, companies with a physical presence in a municipality and a net turnover exceeding EUR 1 million are required to pay the local economic activities tax (*Impuesto sobre Actividades Económicas*). However, municipalities cannot influence the tax base or the tax rate, which are set by the state and are not related to the business profit. Increasing the net turnover of a business only marginally increases the baseline tax. The range of coefficients for the location of the business is much wider ([10]). As a result, this tax is closer to a fee than a tax and does not provide local governments with a significant incentive to increase the local business base.

The local patent tax in Bulgaria, which applies to individuals with an annual turnover below BGN 100 000, again, resembles a fee more so than a tax. As for the local economic activity tax in Spain, the location of the business shapes this tax more than economic parameters. Therefore, the revenues from this tax are not a relevant source of revenue for municipalities.

4.4.3. Shared corporate income tax

There are only two Member States with a shared CIT: Finland and Poland., In Finland, municipalities' share of the CIT revenue was 23.91 % in 2023 and 33.76 % in 2022. In Poland, the share in the total of collected state CIT was 6.71 %, and 8.11 % in case of cities with county status, until 2024. Following a major reform that came into effect in 2025, municipalities now receive 1.6 %, and cities with county status 2.2 %, of the corporate income of a firm registered within the territory of a given local government unit.

In Denmark, the CIT rate for corporate/business taxes is set by the national government and is, at present, 22 % of corporate income. An estimated 14.24 % of the revenue is redistributed to municipalities where the business is registered in the Danish register of companies.

([10]) The coefficient increases from 1.29 for a net turnover between EUR 1 million and EUR 5 million to 1.35 for a net turnover greater than EUR 10 million. By contrast, the coefficient for the location of the business within the municipality ranges from 0.4 to 3.8; see the legislation available at https://www.boe.es/eli/es/rdlg/2004/03/05/2/con.

4.4.4. Own personal income tax and local surcharge to state personal income tax

In Finland, the municipal PIT rate was, on average, 21 %. In 2023, after the responsibility for health and social services were transferred from municipalities to counties in charge of well-being services, the average tax rate decreased to 8.5%. The tax base is earned income (capital income excluded). The tax rate is flat, but, due to deductions, people start paying the local income tax when annual earnings exceed EUR 17 650 (in 2023). The municipality can choose the tax rate freely, but it cannot affect the tax base or deductions.

In Denmark, according to legal statutes, municipalities can autonomously decide the municipal PIT rate. However, the total level of taxes levied by all municipalities has to stay below the limits set in the annual economic agreements between the national government and Local Government Denmark. The average PIT tax rate in 2022 was 24.98 %. The tax base is the local citizens taxable personal income, which the local level cannot influence.

In Sweden, residents pay the municipal PIT to the local municipality where they live ([11]). The local elected politicians in the municipal council decide on the tax level. The average local tax rate was 32.24 % in 2022 (when 20.67 % is the average municipal tax and 11.56 % was the average regional tax).

Italy is the only Member state with a municipal PIT surcharge. The tax rate should not exceed 0.8 %, although in Rome it can increase to 0.9 %. Municipalities can apply a single rate or a range of tax rates; in the latter case, rates must be articulated according to the income brackets established for the national PIT (Imposta sul reddito delle persone fisiche) and diversified and increased in proportion to each of them. The tax base is the total income determined for PIT purposes, including deductible expenses and tax credit for income produced abroad. Municipalities are allowed to introduce a threshold for exemption. It should be noted that the central government may suspend changes in the rates of municipal surtaxes on PIT, as occurred in 2016 and 2017, in order to preserve the overall balance of public finances. The PIT surcharge constitutes 2.3% of the total PIT revenue (national + surcharge).

4.4.5. Shared personal income tax

In Romania, PIT is a shared tax, but the total proceeds are shared among different types of local governments. PIT is collected based on employment figures (and, as a result, the municipalities with the highest employment figures gain the most revenue) and shared on a derivation basis. In 2024, 100 % of PIT was transferred to the local level with the following shares: 63 % to the local budgets of the communes, towns and cities; 15 % to the county budget; 14 % to a separate account for balancing local budgets (including local- and county-level budgets); 6 % to a separate account that is distributed to the communes, towns and cities by decision of the county council; and 2 % in a separate account funding local cultural institution. Since 2018, PIT has been set at 10 % in Romania. The formula for PIT distribution is extremely volatile and subject to yearly changes.

In Germany, PIT is subject to federal tax sharing, where municipalities receive a 15 % share of the national PIT collected by the federal state based on the place of residence. Capping limits are used in the calculation to prevent significant disparities. The tax base for income tax is the same across

([11]) Sweden also has a state-level personal income tax for individuals earning above a specified threshold.

the whole federal territory. Following the same distribution mechanism, municipalities receive 12 % of the capital gains tax.

PIT is also shared in Latvia (municipalities receive 78 % from 2025, 75 % from 2021 to 2024, and 80 % before 2021), Croatia (municipalities receive 74 %) and Lithuania (municipalities receive 51.62 %). Lithuania municipalities receive 51.62 % of PIT (2024) through an origin-linked sharing system with equalisation and structural adjustments; approximately 44 % of PIT operates as the retention-incentive component tied to residents' PIT, while the remainder reflects equalisation/variable pools, with annual forecast-based shares introducing about a one-year lag in the incentive. In Poland, the way in which municipalities receive their share of PIT revenue changed fundamentally in 2025. Under the old system, municipalities received a percentage of the total PIT collected by the state – a share that had been gradually rising, from 38.34 % in 2022 to 38.40 % in 2023 and 38.46 % in 2024, though it never reached its target of 39.34 %. The new system works differently, however. Instead of taking a slice of the state's total PIT revenue, municipalities now receive a fixed percentage directly from each taxpayer's income. Standard municipalities receive 7 % of taxpayers' PIT income, while cities with county status receive 8.6 %. As a result of these changes (and the reform of the municipalities' shares in CIT, see Section 4.4.3), the structure of local government revenues in Poland is expected to shift quite significantly, with a clearly higher share of broadly defined own-source revenues (including PIT and CIT) and a reduced role of the general subsidy transferred from the state budget.

Czechia applies a formula-based tax-sharing system. In 2024, municipalities received a share of 24.92 %, although, according to our specification above, this is not considered tax sharing.

4.4.6. Commercial property tax

There are only 10 Member States where in the case of the commercial property tax the tax base and/or rate is substantially higher than that for non-commercial property. Here are some examples of this differentiated approach.

In Czechia, the tax base is the same for all the buildings: it is based on the area of the building in square metres with coefficients applied in case of more floors. The tax rates differ in the law and also, starting in 2024, municipalities can set different coefficients (0.5–5) for different types of property. Therefore, it is to be expected that the effective tax rates will be in most of the municipalities higher for commercial than residential property.

In Finland, residential buildings have a lower rate (allowed range of 0.41 % to 1 % and a mean of 0.54 %) than commercial buildings (allowed range of 0.93 % to 2 % and a mean of 1.1 %). Both residential and commercial land are taxed at the same rate (allowed range of 1.3 % to 2 % and a mean of 1.32 %). The ranges and rates are for 2024 as the property tax system changed that year when land tax was separated from the general property tax. The taxable value of buildings is the estimated construction cost and the taxable value of land is the estimated market price. In practice, both lag far behind realistic values. The tax base excludes forest and agricultural land, but agricultural buildings are included. The municipalities cannot affect the tax base but can choose tax rates within bounds set by the central government. Municipalities cannot affect assessment rates either, but are responsible for updating the registry on properties, and hence may, to some extent, affect tax enforcement.

In Latvia, the tax base for all properties is the cadastral value (based on market value). Cadastral values in force are valuations based on market data up to 2012. Cadastral values have not been

actualised because all actualisation bids have failed to ensure fairness and proportionality between properties. The tax rate for all land and buildings is 1.5 %, with an exception for residential buildings, which are 0.2 %, 0.4 % or 0.6 %, depending on the cadastral value. Land under residential buildings is taxed at the tax rate of 1.5 %. Municipalities have the right to change the tax rate from 0.2 % to 1.5 % and have the right to give more reductions as in law. In many municipalities a tax rate of 1.5 % is set also for residential buildings for which there is no declared resident. For properties in bad condition, municipalities have the right to impose an additional rate, ranging from 1.5 % to 3 %.

In Romania, the property tax is imposed on buildings and land. The tax rate for non-residential buildings is significantly higher that for residential buildings (0.08–0.2 % versus 0.2–1.3 %). The tax rates differ for different types of taxpayers and property.

In Ireland, there are so-called commercial rates. The base is the rental value of commercial and industrial properties, and it is levied on the occupier. The tax base is determined centrally, is valued by a national state valuation agency and is revalued periodically (every 5–10 years). The rate is set annually by the local authority as part of the budgetary process. Revenues from this property tax can be substantial. There is a separate property tax on residential properties, called the local property tax. The base is the market value of the residential property and it is levied on the owner. The base is determined by central government and the tax is self-assessed by the taxpayer periodically (every four years according to the new legislation). The rate is set centrally, but with upper and lower limits as there is an annual 'local adjustment factor' of ± 15 %, allowing for local rate-setting powers at the margin.

In Germany, companies and private households pay property tax. As part of the reform that came into force in 2025, it is possible to differentiate between tax rates for commercial and private properties. However, the assessment basis can be determined by the federal states, which means that there is no longer a uniform tax basis. As a result, it is very difficult to determine the effective tax burden on owners. Commercial properties tend to be taxed slightly higher than private properties. Property tax is, however, of secondary importance and has only contributed about 4 % to municipal revenues in recent years.

In Lithuania, property tax is paid to municipalities by owners of commercial real estate, whether natural persons or legal persons. It is also paid by natural persons as owners of 'expensive' housing for the actual use of the real estate, provided that construction has been completed. The tax base is the average market value of the commercial real estate, with rates ranging from 0.5 % to 3 %. The property value of 'expensive' housing exceeding EUR 150 000 is taxed at progressive rates of 0.5–2 %. The specific rate is set by the municipal council. State and municipal real estate, bankrupt enterprises and other real estate used for non-commercial activities referred to in Article 7 of the Real Estate Law are not subject to tax. Since 1 January 2026, housing is taxed under a law to be adopted in June 2025. Municipalities will set rules (including the main home exemption) within national parameters.

4.4.7. How to compare the award power of taxes on local budgets: a qualitative indicator

Given the diversity of taxes on local economic activity on local budgets across Europe and globally, we have developed two models of a qualitative indicator to quickly evaluate the award power of taxes on local budgets in each country to facilitate a discourse among policymakers at the local, national and European levels.

The first scoring model allows a rough assessment of the potential award power of the specific type of origin-based taxes and their revenues for municipalities (Table 8). The second scoring model assesses only whether a particular type of origin-based tax exists or not (Table 9).

Six major tax types are included in the evaluation: state or own, local, PIT, CIT, local business tax and commercial real estate tax.

Table 8. Model 1 – scoring of the local tax structure and its rationales.

TYPE OF TAX	SCORE	RATIONALE OF THE SCORING STRUCTURE
Own PIT	20 points	Own PIT is a powerful incentive and link between local citizens, entrepreneurs and local government.
Share in state PIT (*)	1 point per 5 % share; if less than 5 % then 0 points (**)	If 100 % of the state PIT was to go to the municipalities, the scoring would be the same as if the municipality had its own PIT (20 points). Scoring in 5 % increments is considered sufficiently fine-grained. Less than 5 % of state PIT results in revenues that are too small to be an important source of income for local governments.
Municipal surcharge on state PIT	As the surcharge is based on the income, 1 point per 1 percentage point of the surcharge tax rate; if less than 1 percentage point surcharge, then 0 points	1 % on personal income is approximatively equivalent to a share of 5 % in the total of PIT collected by the state (PIT rates across the EU are somewhere between 10 % and 30 %).
Own local business tax (***)	If the tax base is profit, then 1 point per 1 percentage point in the tax rate; if the tax base is added value or cross wages paid to employees, then 5 points for each percentage point in the tax rate	As with municipal income tax, 1 percentage point in tax on profit of business equals 1 point. Since added value or gross wages exceed profit substantially, each percentage point of tax yields considerably more revenue: here, approximated with a five times higher scoring weight per percentage point.
Share in the state CIT	1 point per 2 % in the amount collected as CIT by the state; if less than 2 %, then 0 points	The share in state corporation tax share acts as incentive for the municipality to focus on local business development. PIT may not necessarily relate to economic activities within the municipality's jurisdiction, as income could be generated elsewhere (negative side effects: cherry-picking of high-income people, leaving the provision of important public goods to other municipalities, etc.). Participation in CIT is about local business.
Municipal surcharge on state CIT	1 point per 0.5 percentage points of the surcharge tax rate; if less than 0.5 percentage points of the surcharge tax rate, then 0 points	A 0.5 % on corporate income is approximatively an equivalent to a share of 1 % in the total of CIT collected by the state.
Commercial property tax (***)	1 point	

(*) Origin-based taxation; in the case of any formula-based tax sharing, 0 points.

(**) Example: Latvia 75 % = 15 × 5 % = 15 points.

(***) No license (like patent tax in Bulgaria, or tax depending mainly on the location of the business like the economic activity tax in Spain, etc.; genuine business tax that uses either profit, turnover of the company and/or value added as a tax base.
(***) With a larger tax base and/or a higher tax rate for commercial properties than residential properties, with the municipality having full disposal of tax revenues.

Source: Authors' definitions.

Table 9. Model 2 – scoring of the local tax structure.

TAX	SCORING
Own PIT	2 points
Share in state PIT (*)	1 point if share in municipal revenue is more than 5 %; otherwise, 0 points
Municipal surcharge on state PIT	1 point if share in municipal revenue is more than 5 %; otherwise, 0 points
Own local business tax (**)	2 points
Share in state CIT	1 point if share in municipal revenue is more than 5 %; otherwise, 0 points
Municipal surcharge on state CIT	1 point if share in municipal revenue is more than 5 %; otherwise, 0 points
Commercial property tax (***)	1 point

(*) Origin-based taxation; in the case of any formula-based tax sharing, 0 points.
(**) No license (like patent tax in Bulgaria, or tax depending mainly on the location of the business like the economic activity tax in Spain, etc.; genuine business tax that uses either profit, turnover of the company and/or value added as a tax base.
(***) With a larger tax base and/or a higher tax rate for commercial properties than residential properties, with the municipality having full disposal of tax revenues.

Source: Authors' definitions.

The scoring results are shown in Table 10 and Figure 2.

Table 10. Scoring results.

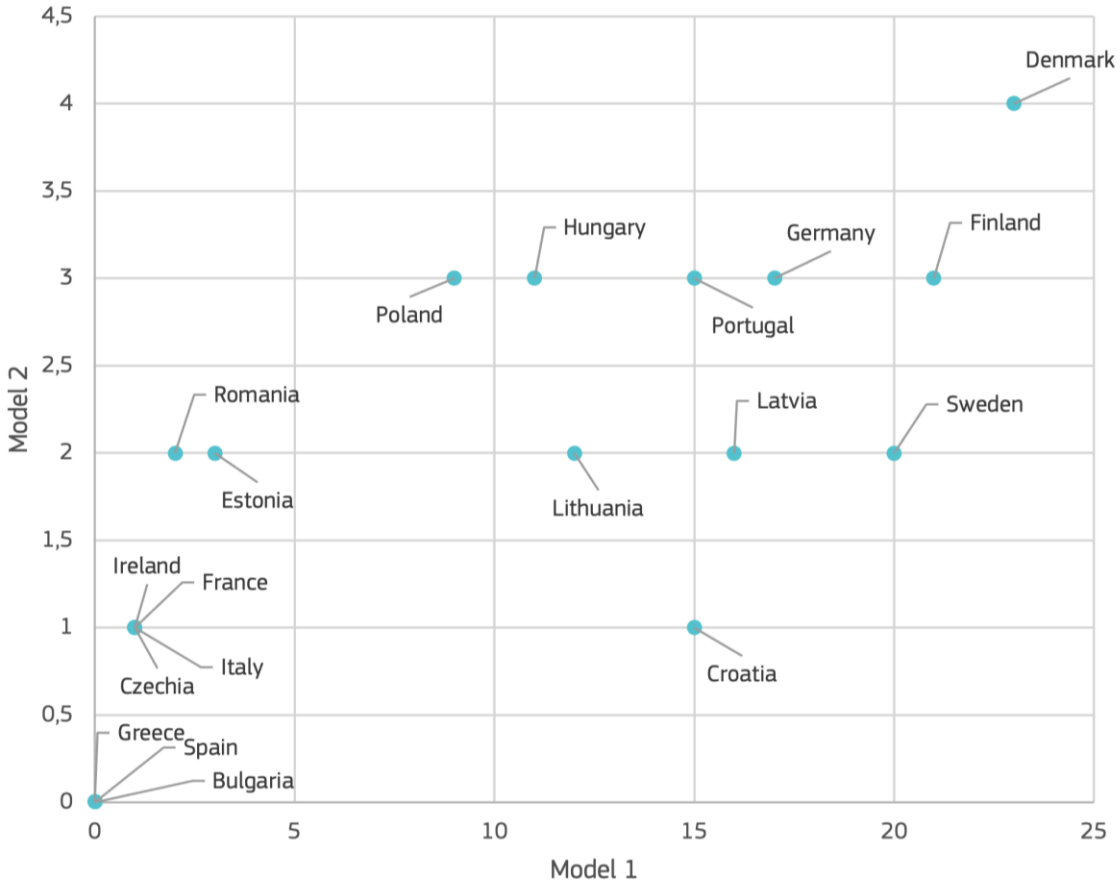
MEMBER STATE	MODEL 1	MODEL 2
Bulgaria	0	0
Czechia	1	1
Denmark	23	4
Germany	17	3
Estonia	3	2
Ireland	1	1
Greece	0	0
Spain	0	0
France	1	1
Croatia	15	1
Italy	1	1
Latvia	16	2
Lithuania	12	2
Hungary	11	3
Poland	9	3
Portugal	2	2
Romania	15	3
Finland	21	3
Sweden	20	2

Source: Calculations of experts, based on the qualitative information collected across EU Member States.

The correlation between the results of the two scoring models is, of course, not surprising. The simplicity of Model 2 is counterbalanced by the higher uniformity in its results.

Both models clearly show that there are substantial differences in the extent to which local authorities participate in tax revenue and in the directness of this participation. This results in very different levels of connection between local economic activities and the revenue that local authorities can generate from them. In the Scandinavian countries of Denmark, Finland and Sweden, as well as in Germany and Romania, the participation of local authorities is very high, while in Bulgaria and Spain it plays virtually no role. An interesting starting point for further research lies in the fact that countries such as Greece, Italy and Portugal involve their local level in economic activities to only a very limited extent, while, at the same time, economic stagnation can be observed in many regions.

Figure 2. Comparison of scoring results using Models 1 and 2.



Source: Based on data from Table 10.

To evaluate the tax award power of higher-level government (district or regional), the same scoring models can be applied and scores added to municipal-level scores to evaluate the tax award power across all subnational governments. The sum of all the scores would allow for a qualitative assessment of the tax award power across subnational governments.

4.4.8. Summary

This chapter highlights the significant diversity in fiscal structures, administrative responsibilities and local governance capacities across Member States. It is evident that the autonomy and incentive structures of municipalities vary widely, influencing their ability and motivation to foster local economic development.

Municipalities play a central role in shaping the local environment through responsibilities in education, healthcare, transport and infrastructure. However, their capacity to act effectively depends not only on legal mandates but also on the fiscal tools available to them. The analysis of municipal tasks and service distance reveals that while some Member States empower local governments with substantial responsibilities and proximity to service delivery, others centralise key functions, limiting local responsiveness.

The comparison of tax structures further underscores the disparities in fiscal incentives. Origin-based tax sharing and own-source revenues – particularly from local business taxes and

commercial property taxes – create stronger links between local economic activity and municipal budgets. Some Member States demonstrate high award power, incentivising municipalities to support business growth. In contrast, formula-based sharing systems dilute this connection, potentially weakening local motivation for economic development.

The scoring models introduced provide a framework for evaluating the award power of local tax systems. They reveal that while some Member States offer robust fiscal autonomy, others lag behind, suggesting scope for reform to enhance local governance effectiveness.

Overall, the findings suggest an incentive-aligned approach to local fiscal policy. Enhancing the fiscal autonomy of municipalities, particularly via origin-based tax mechanisms, could empower them to drive sustainable local development and improve public service delivery.

5. Realised revenue retention rate: a quantitative measure of the incentive effect of local tax revenues

The analysis of fiscal and political decentralisation has become increasingly important in both academic research and policy discussions, leading to the development of various indexes that measure the degree of autonomy granted to subnational governments. Since the late 20th century, international organisations such as the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD) have introduced decentralisation indicators to assess variations in subnational power and financial autonomy (IMF, 2001; OECD, 1999). These measures have become essential tools for policymakers, researchers and institutions seeking to compare decentralisation trends across countries and over time (Rodden, 2004).

The rise of decentralisation indexes can be traced to two complementary approaches: political scientists have aimed to categorise political regimes according to the degree of territorial autonomy granted to subnational entities (Hooghe et al., 2010; Ladner et al., 2016), while economists have focused on fiscal decentralisation, using statistical measures of revenue and expenditure distribution to analyse the financial autonomy of subnational governments. These two approaches have shaped contemporary decentralisation research, influencing how fiscal and governance structures are compared globally.

Revenue decentralisation refers to the extent to which subnational governments retain control over the revenues they generate from local economic activity. The activity may comprise activities of companies (profits, revenues, production) and of private households (generating income, having property). While tax decentralisation is defined by whether or not a subnational administrative tier has the authority to levy and manage its own taxes, revenue decentralisation focuses on the proportion of tax revenues that remain at the local level for non-earmarked use. Although tax decentralisation inherently implies some degree of revenue decentralisation, the reverse is not necessarily true. Revenue decentralisation can follow either an origin-based approach, when revenues are retained where they are collected, or a formula-based approach, when redistribution follows predetermined rules. However, formula-based systems usually do not entail a criterion covering the relative contribution of a local government to the total of tax revenue (contributing more than the average to the collected taxes, see example in Chapter 3). In general, they do not provide any fiscal incentives for local governments to enhance tax collection or stimulate local economic activity.

There is a need for an indicator capturing the incentive effect of taxes on local economic activities paid in an origin-based manner to municipal budgets. We suggest 'realised revenue retention rate' as the appropriate term. The 'realised revenue retention rate' would measure the proportion of locally generated revenues that remain under the fiscal control of the originating jurisdiction, net of intergovernmental transfers made for horizontal or vertical equalisation purposes. It captures the effective degree of fiscal autonomy by reflecting not just what is collected locally, but what is genuinely retained, thereby quantifying the financial incentive local governments have to expand their own tax base.

The 'realised revenue retention rate' captures fiscal incentives by measuring the share of locally generated revenues that remain under local control after redistribution. This includes both origin-based revenues and formula-based redistributions by higher levels of government, in the (possibly very rare) case of redistribution rules include a positive parameter for the relative economic performance of a recipient municipality (the better the relative local economic performance

the more transfers allocated). By incorporating this distinction, the realised revenue retention rate provides a new framework for assessing fiscal autonomy, with the novelty of emphasising the incentives, created by own tax revenues, for local governments to expand their tax base. Many existing decentralisation measures fail to account for the extent to which subnational governments benefit from taxes collected (by state, regional or local administrations) within their jurisdiction, making the realised revenue retention rate a crucial addition to the study of fiscal decentralisation.

The realised revenue retention rate for a local entity *i* at time *t* is defined as:

$$realised\ revenue\ retention\ rate_{i,t} = \frac{R_{i,t} - E_{i,t}}{TR_{i,t}},$$

where $R_{i,t}$ represents municipal tax revenues, including taxes tied to regional economic activity that are collected and retained by local governments as well as shared state taxes distributed based on the economic performance of the local entity. $E_{i,t}$ refers to equalisation grants paid, consisting of intergovernmental transfers funded directly by municipal tax revenues and allocated for horizontal or vertical fiscal equalisation among governmental units ([12]). Total revenues of the local entity are given by $TR_{i,t}$, encompassing all sources of income, including own-source and shared tax revenues, intergovernmental transfers and service fees.

The incentive-compatible tax types that contribute to $R_{i,t}$ include PIT, CIT, business taxes and taxes on commercial properties. The inclusion of these taxes is critical because they are sensitive to local economic performance and provide subnational governments with the capacity to directly benefit from economic growth. For the following analysis across EU Member States, we use only the income taxes (PIT, CIT, business taxes), as revenues from commercial property taxes cannot be extracted from the aggregated property tax revenues in the available data.

Equalisation grants, denoted as $E_{i,t}$, play a significant role in reducing disparities across jurisdictions; however, excessive reliance on these transfers can weaken fiscal discipline by reducing local governments' incentives to maximise their tax efforts and distorting tax policies (Baretti et al., 2002; Buettner, 2006).

Normalising by total revenues ensures that the realised revenue retention rate accounts for the relative importance of own-source revenues within the overall fiscal structure. For example, even if a municipality retains all its own-source revenues, the overall incentive effect may be small if these revenues constitute only a small share of total income. This normalisation accounts for the differing incentive effects of own revenues versus central transfers. A higher share of central transfers is associated with lower tax effort and higher public spending (Rodden, 2003).

([12]) Only equalisation grants directly paid by the municipalities count here. Equalisation grants from other jurisdictions are not included, even though the local tax revenues may have a direct influence on those grants.

5.1. Comparing the realised revenue retention rate with existing decentralisation indicators

While the realised revenue retention rate provides a novel approach to measuring fiscal autonomy by emphasising the financial incentives of local governments, it is important to compare it with established decentralisation indicators. Existing measures, such as the Local Autonomy Index (LAI), the Regional Authority Index (RAI), and fiscal decentralisation indicators from the OECD and IMF capture different aspects of decentralisation, including political, administrative, and fiscal dimensions. Assessing the correlation between these indicators and the realised revenue retention rate helps evaluate the extent to which this new indicator aligns with conventional measures and whether it provides additional insights.

Table 11 presents the correlation coefficients between the realised revenue retention rate and selected decentralisation indicators, alongside summary information on the concepts and dimensions covered by each measure.

The OECD indicator reflects the overall revenue share of subnational governments, whereas the realised revenue retention rate more precisely captures the share of revenue that subnational governments both generate and retain. By not distinguishing between total subnational revenue and the portion effectively retained at the local level, the OECD measure may overstate the degree of fiscal decentralisation. Nevertheless, the OECD measure is very strongly correlated with the realised revenue retention rate, with a correlation coefficient of 0.95. However, the OECD database does not include all countries in the sample, with Bulgaria, Croatia, and Romania missing from the measure.

Similarly, the IMF's revenue decentralisation ratio measures own-source revenues relative to total government revenues across all levels of government. In contrast, the realised revenue retention rate focuses more directly on the financial incentives available to local governments and therefore provides a more targeted measure of effective fiscal autonomy. The IMF indicator also shows a very strong positive correlation with the realised revenue retention rate (0.96). However, this result should be interpreted with caution, as the IMF database excludes several countries, namely Bulgaria, Denmark, France, Spain, Poland, Romania, and Slovenia, meaning that the correlation is based only on a smaller subsample of countries.

The RAI also exhibits a strong correlation with the realised revenue retention rate (0.85), indicating that regions with greater political, administrative, and fiscal authority tend to provide stronger fiscal incentives for local governments through higher revenue retention. By contrast, the LAI shows only a weak correlation (0.16), suggesting that realised revenue retention captures only a limited aspect of the broader institutional and governance dimensions reflected in the LAI.

Overall, the findings suggest that the realised revenue retention rate is closely linked to existing fiscal decentralisation indicators but is not fully captured by them. Its emphasis on retained revenue differentiates it from broader decentralisation indices that combine political, administrative, and fiscal dimensions. As such, the realised revenue retention rate complements established indicators by providing a more focused measure of the effective financial autonomy and fiscal incentives of local governments.

Table 11. Comparison of revenue to other decentralisation indicators.

STUDY	INDICATOR	UNIT OF ANALYSIS	DIMENSION(S)	MEASUREMENT	CORRELATION TO REALISED RETENTION RATE
OECD (2023)	Subcentral revenue as a per cent of total revenues	Regional and local units	Fiscal	Subcentral revenue as a percentage of total revenues	0.95
IMF, Fiscal Decentralization Dataset (2019)	Revenue decentralisation ratio	Central, regional and local units	Fiscal	Ratio of own revenues to general government revenues	0.96
Ladner et al. (2021)	LAI 2.0	Local units	Political, administrative and fiscal	Combination of 11 variables of local autonomy	0.16
Hooghe et al. (2021)	RAI	Regional units with an average population of 150 000 or more	Political, administrative and fiscal	Authority in self-rule and shared rule across five dimensions	0.85

Source: Authors own calculation based on data provided in referenced sources and collected within the JRC Exploratory research activity 'Reward4localgrowth'.

5.2. Regional disparities in revenue retention in the European Union: a quantitative comparative analysis

Figure 3 illustrates municipal-level realised revenue retention rates across selected Member States in 2019, highlighting significant regional variations. We use 2019 as our starting point as it is the last year prior to two major exogenous shocks to the EU economy: the onset of the COVID-19 pandemic and the Russian war of aggression against Ukraine.

The realised revenue retention rate ranges from 0, indicating no municipal tax revenues, to 1, where a municipality generates and retains its entire tax revenue. Table 12 presents the corresponding summary statistics, while Table 13 provides a detailed breakdown of the calculation of the realised revenue retention rate by country.

The Nordic countries, particularly Sweden and Denmark, exhibit the highest realised revenue retention rates, with own-source tax revenues accounting for more than 50 % on average. They are followed by Estonia, Lithuania, Finland, Germany and Romania. Among these, Germany stands out for its regional divide, a characteristic largely absent in other European countries, where fiscal structures tend to be more uniform. In Germany, higher realised revenue retention rates are observed in western and northern regions, whereas much of eastern Germany shows considerably lower values. In the Baltic states, Estonia shows the highest mean realised revenue retention rate (0.51), followed by Lithuania (0.47) and Latvia (0.45).

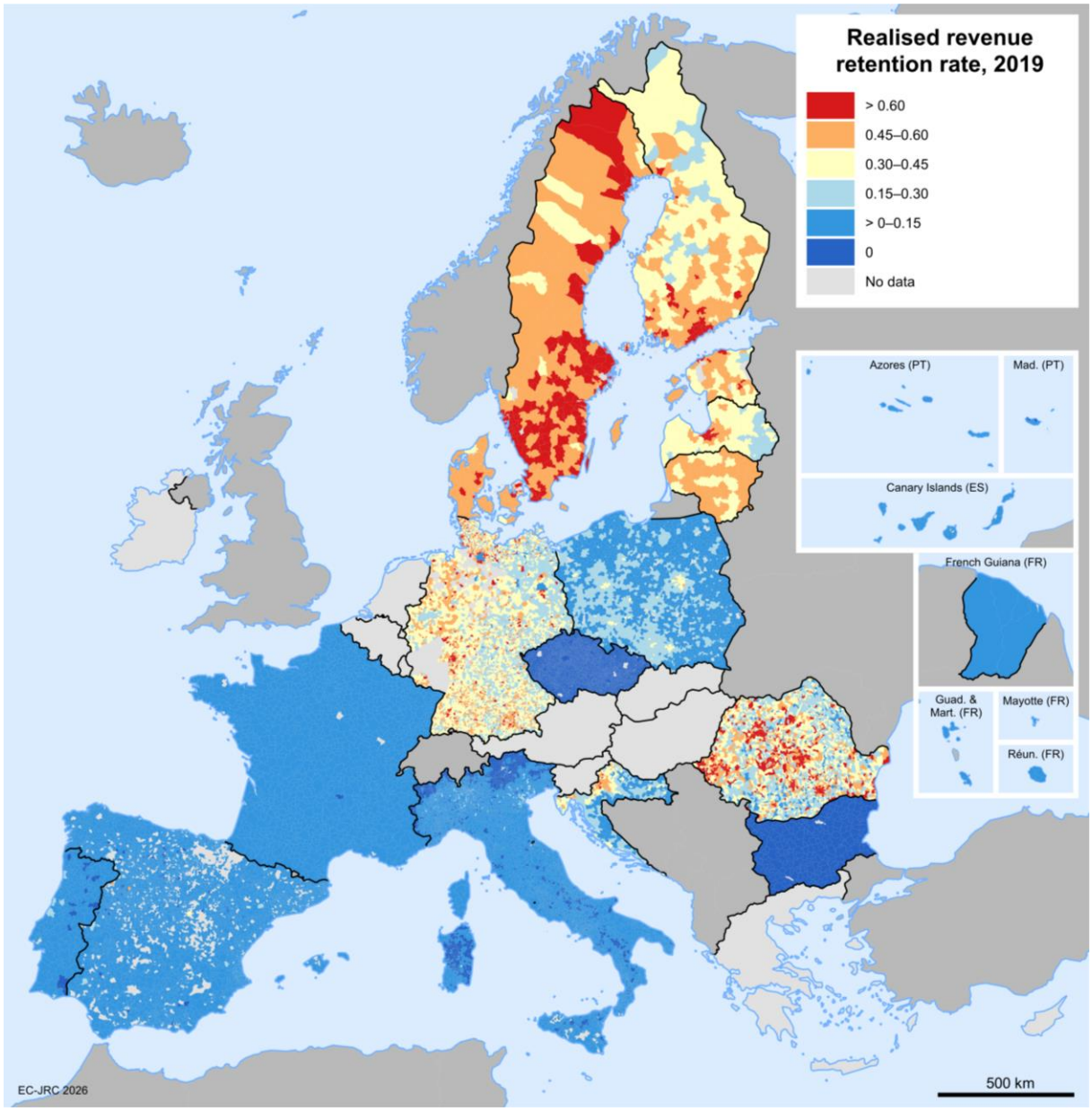
Regional disparities are evident, particularly between urban and rural areas. In many countries, major metropolitan centres exhibit higher retention rates. This is evident in Germany, where municipalities like Munich and Stuttgart stand out with distinct red and orange clusters (see Figure 3) and Romania. A similar trend is observed in Denmark, Croatia and Latvia, where capital cities tend to retain a larger share of their tax revenues. In France and Italy, the urban–rural contrast is much less pronounced, as realised revenue retention rates are very low across the country, indicating a more uniform reliance on central transfers.

Southern European countries, such as Italy, Spain and Portugal, along with several eastern European countries exhibit low levels of incentives. In Spain, the actually realised revenue retention rate is slightly higher than shown in the figure, since cities with more than 75 000 inhabitants or provincial capitals are entitled to 2.1% of the total PIT collected in the city. This revenue retention is not presented due to a lack of available data. In Portugal, higher values are concentrated along the coastal regions while there are spots of very low realised revenue retention along the border regions to Spain. Interestingly, eastern Europe does not present a uniform pattern. While Bulgaria and Czechia exhibit no realised revenue retention, Romania, Poland and Croatia stand out with moderate values of 0.36, 0.24 and 0.23, indicating a greater degree of local fiscal autonomy. This suggests that Romania, Poland and Croatia have made more progress in decentralising financial resources to municipalities compared with their regional counterparts. In contrast, in Bulgaria and Czechia, there is virtually no incentive-compatible own-source tax revenues. These countries are dominated by dark blue (see Figure 3), indicating extremely low local realised revenue retention rates.

When interpreting variations in realised revenue retention rates between municipalities in different countries, caution should be exercised and an examination of the underlying incentive effects of different types of taxes and the institutional framework in which municipalities operate must always be included.

To date, in-depth empirical evidence of the causal impact of local realised revenue retention rates on local socioeconomic development remains limited. However, the wide variation in realised revenue retention rates among European municipalities will facilitate future research examining the relationship between local realised revenue retention rates and socioeconomic development at local, regional, and national levels.

Figure 3. Realised Revenue Retention rate in selected Member States, 2019.



Source: Data collected by authors within the JRC Exploratory research activity 'Reward4localgrowth'.

Table 12. Summary statistics of the realised revenue retention rates, 2019.

MEMBER STATE	REALISED REVENUE RETENTION RATE			
	Mean	SD	P10	P90
Bulgaria	0.00	0.00	0.00	0.00
Czechia	0.00	0.00	0.00	0.00
Denmark	0.55	0.10	0.45	0.67
Germany	0.38	0.13	0.22	0.54
Estonia	0.48	0.09	0.37	0.62
Spain	0.02	0.03	0.00	0.05
France	0.06	0.04	0.02	0.10
Croatia	0.23	0.13	0.09	0.42
Italy	0.05	0.04	0.00	0.11
Latvia	0.40	0.11	0.29	0.55
Lithuania	0.47	0.04	0.42	0.53
Poland	0.15	0.06	0.08	0.24
Portugal	0.05	0.04	0.01	0.11
Romania	0.36	0.18	0.16	0.61
Finland	0.45	0.11	0.32	0.61
Sweden	0.60	0.09	0.49	0.70

NB: 'SD' stands for standard deviation. 'P10' is the 10th percentile latency and 'P90' is the 90th percentile latency.

Source: Authors own calculation based on data collected by authors within the JRC Exploratory research activity 'Reward4localgrowth'.

Table 13. Formula for calculating the realised revenue retention rates, by Member State.

MEMBER STATE	CALCULATION FORMULA
Bulgaria	No incentive-compatible municipal tax revenue
Czechia	No incentive-compatible municipal tax revenue
Denmark	Realised revenue retention rate = (municipal revenues from a share of the state PIT and a share of the state CIT) / total municipal revenue (*)
Germany	Realised revenue retention rate = (municipal revenues from a share in the state PIT and business tax) / total municipal revenue
Estonia	Realised revenue retention rate = (municipal revenues from a share of the state PIT) / total municipal revenue
Spain	Realised revenue retention rate = municipal revenues from a local economic activity tax / total municipal revenue
France	Realised revenue retention rate = (intermunicipal revenues from a business tax) / total municipal revenue
Croatia	Realised revenue retention rate = (municipal revenue from a share of the state PIT) / total municipal revenue
Italy	Realised revenue retention rate = (municipal revenues from a surtax on PIT) / total municipal revenue
Latvia	Realised revenue retention rate = (municipal revenues from a share in the state PIT – equivalisation fees paid by municipality) / total municipal revenue
Lithuania	Realised revenue retention rate = (revenues from a share in the state PIT) / total municipal revenue
Poland	Realised revenue retention rate = (municipal revenues from a share in the state PIT and a share in the state CIT – equivalisation fees paid by municipality) / total municipal revenue
Portugal	Realised revenue retention rate = (municipal revenues from a share in the state PIT and a surcharge on the state CIT) / total municipal revenue
Romania	Realised revenue retention rate = (municipal revenues from a share in the state PIT) / total municipal revenue
Finland	Realised revenue retention rate = (municipal revenues from municipal PIT and a share of the state CIT– adjusted equivalisation fees paid by municipality) / total municipal revenue Adjusted equivalisation fees paid by municipality = equivalization fees paid by municipality – (population in the municipality × total equivalisation fees / total population)
Sweden	Realised revenue retention rate = (municipal revenues from PIT – equivalisation fees paid by municipality) / total municipal revenue

(*) Equivalisation transfers paid by municipalities are omitted due to data availability.

Source: Authors own definitions based on qualitative information collected by authors within the JRC Exploratory research activity 'Reward4localgrowth'.

6. Observations across the European Union on how local revenue retention shapes local development

The indicator introduced in Chapter 4 provides a basis for future empirical quantitative research into the impact of direct and property taxes on local budgets and local economic development, and on growth in the EU. This chapter presents different examples that show how revenue retention catalyses economic development in various ways. Despite existing data limitations – specifically local taxation information available across a narrow time frame and limited geographic scope, which restrict comprehensive causal modelling – the analysis provides informative insights about the relationship between high revenue retention at the local level and economic growth. It aims to inspire the discussions of policymakers at the local, regional, national and European levels and the work of researchers across disciplines.

6.1. The economic development of Bulgaria and Romania following the transition to a market economy

Source: Left photo: Smolyan (Bulgaria) – © Stoyan Haytov / stock.adobe.com; right photo: Oradea (Romania) – © ecstk22 / stock.adobe.com.

This section discusses the economic development in Bulgaria and Romania after 2000 when both Member States had similar fundamental and structural characteristics. The two Member States have taken distinctively different approaches to the financing of local governments and to local tax revenue generation and its link to local budgets. These differences seem to provide a plausible explanation for the different developments observed in Bulgaria and Romania.

Bulgaria and Romania were both formerly centrally planned economies where formal education in science, technology, engineering and mathematics were important (Pevkur, 2024; Vuksanovic, 2025). Both Member States started therefore with a relatively high level of human capital when they embarked on the transition to a market economy at the beginning of the 1990s.

However, there were also differences between the two Member States. Bulgaria was more urbanised than Romania, and the non-agricultural sector correspondingly accounted for a larger proportion of gross domestic product (GDP) in Bulgaria than in Romania. Bulgaria was also home to an electronics industry that accounted for a significant proportion of all electronics traded within the former socialist countries and exported internationally (Petrov, 2023). The transition process was very similar in the two Member States within the first decade (European Bank for

Reconstruction and Development, 1999), though Bulgaria adopted effective reforms more decisively in the late 1990s, achieving better results in assessments by international organisations (Hunya et al., 2002). In the first decade of the new millennium, both Member States pursued accession to the EU, which entailed growing trade with the EU and substantial foreign direct investment prior to accession. Bulgaria's foreign direct investment as a share of GDP was almost double that of Romania in the last years prior to accession (Dobrinsky, 2021). In summary, while the two Member States share similarities in terms of their past as centrally planned economies, their relatively high level of education in science, technology, engineering and mathematics, as well as their accession process and final accession to the EU on 1 January 2007, there are also differences. Overall, Bulgaria seemed better placed to benefit from joining the EU's common market – one might have expected Bulgaria's GDP per capita to grow faster than Romania's in the years leading up to and following its accession – however, this was not the case. Although the GDP per capita was similar in both Member States, in 2000, Romania grew faster than Bulgaria before and after accession. In face of the structural characteristics of both countries discussed above, this may seem somewhat puzzling; the Member States must have differed in other important dimensions. Taking a closer look at the development of local revenue retention in these two Member States during the transition process can provide some helpful insights into the relative success of Romania compared with Bulgaria.

In the 1990s, the municipalities of both Member States received a substantial proportion of the national payroll tax collected within their jurisdiction. In Bulgaria, municipalities were also entitled to 100 % of corporate profit tax. Legislation on local public finances was unstable in both Member States during the first decade of transition, implying constant changes to legislation regarding municipalities' shares in state payroll tax and/or corporate profit tax. Though revenue retention on direct taxes was in place in both Member States, it came with constant uncertainty about how legislation on revenue retention would develop in the next years.

In 1999, the situations in Bulgaria and Romania began to evolve differently. A new legislation on municipal finances, formulated in Law No. 189/1998, adopted by the Romanian Parliament on 14 October 1998, made revenue retention predictable in Romania ([13]). Municipalities had certainty that they would receive a 36.5 % share and counties a 10 % share of the state PIT collected within their jurisdiction. A further 15 % went to county budgets to balance revenues across the different local governments within the county. The local government's share of PIT increased further under the new law on local public finances (Law No. 273/2006), adopted in 2006. From 2007 to date (with minor annual changes), 47 % of PIT goes to local budgets for communes, towns and cities, 13 % to county budgets and 22 % to a separate account for balancing local budgets (including budgets at the local and county levels). In other words, since 1999 and even more so since 1 January 2007, Romanian local governments have enjoyed a system of revenue retention that is predictable and rewards their efforts to foster local economic growth.

Bulgaria's local finance legislation evolved differently over this period. Under the Municipal Budgets Act and annual state budget acts during 2000 to 2002, Bulgarian municipalities received 50 % of PIT revenues, allocated based on the taxpayer's workplace location. Although horizontal equalisation mechanisms limited the PIT share that wealthier municipalities could retain, this origin-based sharing system still allowed local governments to benefit fiscally from their tax base. Additionally, municipalities received 10 % of CIT revenues during 2000–2002, distributed according to each company's employment in the municipality (Dillinger et al., 2004) – effectively linking CIT allocation

([13]) See the legislation available at https://legislatie.just.ro/Public/DetaliiDocument/15967.

to where economic activity occurred. Together, these direct tax shares provided municipalities with fiscal incentives to support their local economies.

In 2003, a transitional change occurred: the CIT share was eliminated, but municipalities gained an additional 50 % of PIT revenues (previously allocated to central government), giving them 100 % retention of PIT for that single year.

A major reform followed in 2004, fundamentally altering municipal finance. From 2004 through 2007, municipalities no longer received direct shares of PIT. Instead, they received formula-based state transfers derived from total PIT collection, with the municipal share declining from 58 % in 2004 to 44 % in 2007. Critically, these transfers were subject to two caps: the transfers could not exceed the forecasted PIT revenues for each municipality, and the transfers were limited to the cost of state-delegated responsibilities. Any PIT revenues exceeding either the state's forecast or the calculated cost of delegated functions remained with the central government. This design effectively severed the link between local economic performance and municipal revenues, eliminating fiscal incentives for local economic development during 2004–2007.

A final reform in 2007 completed this transition by removing municipalities' connection to PIT entirely, replacing it with general state transfers unrelated to PIT collection. This left local governments without any retention of direct taxes and thus without any fiscal reward for fostering local economic growth. For more details on the recent history of tax sharing and local taxes in Bulgaria see Kalcheva (2025).

If local revenue retention of direct taxes influences economic growth, we would expect to observe specific patterns in the relative economic performance of Bulgaria and Romania. First, Bulgaria's GDP per capita growth should have decelerated relative to Romania's starting in 2004, when Bulgaria severed the link between municipal revenues and local PIT collection. Second, this growth gap should have widened further after 2007, when Bulgaria eliminated municipalities' PIT share entirely while Romania simultaneously increased local governments' origin-based retention of PIT revenues.

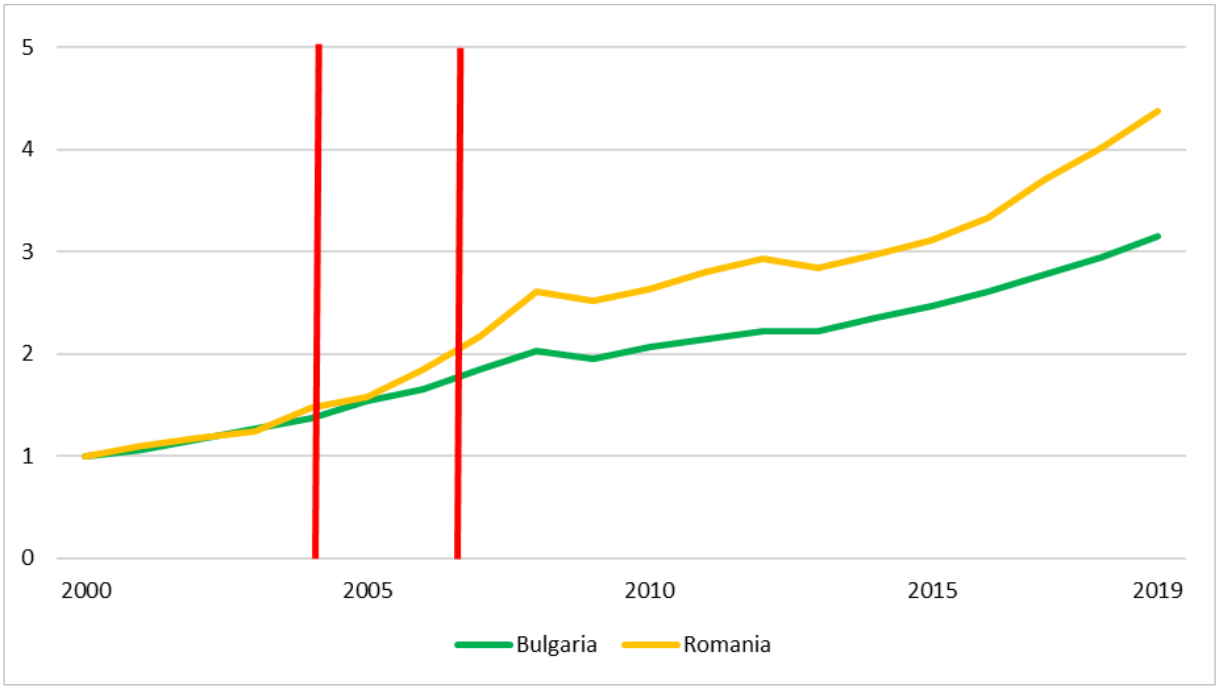
If the retention of local tax revenues provides incentives and thus fosters local economic development as hypothesised, one should also observe the divergence in gross value added between urban centres and smaller towns and rural areas to increase more strongly in Bulgaria than in Romania from 2004 onwards. After 2004, local governments in Bulgaria might have seen less benefit from investing heavily time and intellectual resources in local economic development and seeking to exploit their local comparative advantage. Without the motivation for ambitious local economic development, economic growth would be largely shaped by natural local production amenities. A large population size and high population density are substantial natural production amenities, leading to stronger economic growth in urban centres than in sparsely populated areas (Ahlfeldt et al., 2019; Bettencourt et al., 2007; Curtale et al., 2025; Dobrinsky, 2021; Glaeser et al., 2009). In the context of Bulgaria after 2004, this natural production amenity should have become a relevant factor in local growth.

However, in Romania, where each municipality is motivated to provide, seek out and develop local advantages and opportunities beyond the presence or absence of natural production amenities, in order to increase the tax base and thus revenues directed to the local budget, the presence of natural production amenities should have remained less relevant than in Bulgaria after 2004. As rural regions and smaller towns actively and creatively seek opportunities for local economic development, the difference in their development pace should be less distinct from that of urban centres in Romania. It follows, therefore, that the difference in gross added value per capita

between urban centres and the rest of the country should grow more slowly in Romania than in Bulgaria.

Figure 4 illustrates the development of indexed GDP per capita between 2000 and 2019. The time series ends in 2019, as the 2020 COVID-19 pandemic and Russia's ongoing war of aggression against Ukraine constitute exogenous shocks that make comparison difficult. The growth trajectories of Bulgaria and Romania were at the same level between 2000 and 2006. After 2006, however, Romania's GDP per capita growth accelerates, outpacing that of Bulgaria.

Figure 4. GDP per capita indexed growth in Bulgaria versus Romania, normalised to 2000.



Source: Authors' calculations, based on the Annual Regional Database of the European Commission.

Figure 5 compares the growth in gross value added per capita in predominantly urban, intermediate and predominantly rural NUTS 3 (nomenclature of territorial units for statistics) regions of Bulgaria and Romania between 2000 and 2019. As the transfer of state resources from economically advanced regions to less-developed regions could distort the presentation of the economic value generated, gross value added is used as the unit of comparison. In the early years of the millennium, the three types of regions grew at a similar pace in both Member States. From 2004, in Bulgaria, gross value added per capita started to grow faster in predominantly urban regions than in the other two types of regions, pulling them well ahead of intermediate and predominantly rural regions. In contrast, from 2004, in Romania, all three types of regions continued to grow at a similar pace. Increasing population density only slightly increases the growth of gross value added per capita over the years.

Both observations – the stronger increase of GDP per capita in Romania after 2006 and the appearance of a divergence in gross added value per capita between predominantly urban regions and other regions in Bulgaria following the disappearance of local revenue retention on direct taxes – are not definite proof, but a very strong indication that local revenue retention on direct taxes lead not only to more economic growth, but also to more homogeneous growth across regions, independent from their degree of urbanisation.

Figure 5. Growth of gross value added per capita from 2000 to 2019 indexed in predominantly urban, intermediate and predominantly rural NUTS 3 regions of Bulgaria and Romania.

Source: Authors' calculations, based on the Annual Regional Database of the European Commission.

6.2. Local revenue retention as a driver of economic growth without increasing the carbon footprint

Source: Left photo: Vordingborg (Denmark) – © Gesture / stock.adobe.com; right photo: wind parks in front of Copenhagen and Malmö (Denmark) – © Gesture / stock.adobe.com.

Over the last five years, renewable energy has become the cheapest source of electricity in many EU regions. Solar energy, in particular, is the cheapest option when consumed directly where it is produced, as there are no storage or transport costs. (International Energy Agency, 2025, p. 122). Access to cheap energy provides a substantial local comparative advantage for energy-intensive industries.

A disadvantage of solar power and wind energy is their large-scale land requirements. Their impact on the landscape is often perceived as negative, triggering NIMBY effects. Wind farms also risk reducing the local market value of residential properties, thereby intensifying NIMBY sentiments (Kashner, 2026).

The resulting negative local attitudes can often block the potential of renewable energy for local economic development. This is particularly impactful in rural areas, which would benefit most from renewable energy. Using only non-arable land, rural areas, particularly in southern Europe, could generate 8 600 TWh per year. In 2023, the installed capacity in the EU was only 136 TWh per year, which is 60 times less. Adding the potential of agrivoltaics would further increase the potential for renewable energy. Rural areas in the EU, particularly in the north, also have the potential to produce 1 200 TWh per year through onshore wind. In 2023, this figure was four times lower, at 280 TWh per year (Perpiñá Castillo et al., 2024).

To harness this potential, mitigating the well-being costs of renewable energy on local populations and potential losses in property value is critical. As Kashner (2026) demonstrated using the example of wind farms and the different state-level compensation regulations in the US, local governments' acceptance of wind farms depends critically on whether or not monetary compensation is provided for these negative effects.

A better way to compensate municipalities and their communities for the negative local externalities potentially associated with renewable energy would be to levy local taxes on green energy produced within the municipality's jurisdiction. Such taxes, applied in the same way to every investment, might be more transparent than bilateral agreements on compensation between operators and the municipal government.

One example of a municipal revenue from renewable energy is the municipal surcharge on renewable energy in Germany. Since the 2021 revision of the Renewable Energy Act, municipalities have been entitled to a surcharge of 0.02 cents per kWh on renewable energy generated within their jurisdiction. Revenues from this municipal surcharge on renewable energy can be substantial and can be used to fund any kind of local infrastructure.

These revenues are not precisely reported in the financial statistics as they are not counted as tax income. Furthermore, they are not subject to fiscal equalisation and so all income from the surcharge can be used locally. However, individual cases reported in the press suggest that the revenues from this surcharge can easily exceed EUR 1 million per year (see, for example, Kühn, 2025). As these surcharges mainly benefit rural municipalities with small populations and small budgets, this green energy-related flow of revenue can have a significant impact on the capacity of municipalities to increase funding for local public services: the bigger the revenue to the municipality budget, the more and better additional local public goods and services can be provided, and the more likely local communities can reach a consensus to embrace investments into green energy. As this reform is recent and planning and implementation of renewable energy projects can take years, it is difficult to empirically quantify the impact of this municipal surcharge on communities' readiness to embrace new renewable energy projects notwithstanding local NIMBY sentiments.

However, the prospect of enjoying better local infrastructure in return for solar panels and wind turbines seems to encourage local acceptance of green energy, as anecdotal observations, choice experiments and surveys in Germany, Sweden and Ireland strongly suggest (see Knauf, 2022; Le Maitre et al., 2023; Lienhoop, 2018; Lindvall et al., 2024; Kühn, 2025).

While such green energy-related municipal taxation may help to increase the local community's readiness to tolerate the negative local-level side effects of green energy, it would not necessarily encourage municipalities to strategically use this cheap local energy to attract additional businesses in need of cheap energy for energy-intensive products or services. To achieve this, municipalities may need a share of PIT and CIT, as the example of the municipality of Vordingborg in Denmark indicates. As discussed in Chapter 3, municipal PIT and a share of state corporate tax paid by businesses located in the municipality are important sources of revenue for the municipal budget. Therefore, increasing the local tax base by growing the local business base is key for any municipality in Denmark, including Vordingborg Municipality.

Vordingborg Municipality is located on the southwest coast of the island of Zealand. It has a population of 45 352 and covers an area of 621 km^2. The municipality is situated right by the Baltic Sea, where a large offshore wind farm was inaugurated in 2021. This project revitalised the small fishing village of Klintholm Havn, which had not seen any investment for many years until a Swedish energy corporation selected the harbour on the island of Møn as the offshore service port for the wind farm. Owing to the falling production costs for wind turbines and photovoltaic panels and the increased efficiency, electricity produced by these renewable sources has become the cheapest in the region. This attracted a major investor from the chemical industry, who is set to invest on a large scale in the production of sustainable aviation fuel. In summary, Vordingborg Municipality is a good example of how sharing PIT and CIT with municipalities can encourage local governments to take advantage of the many economic development opportunities that renewable energy provides to rural regions.

The immense potential of renewable energy across the EU, and the development of new economic sectors in rural areas, could, most likely, accelerate much faster if municipalities across the EU benefit from local taxes on renewable energy generation and local businesses using this energy.

6.3. Revenue retention and the capacity to cope with local economic shocks: the examples of Oulu and Tampere in Finland

Source: Left photo: Oulu (Finland) – © sahan.ssw / stock.adobe.com; right photo: Tampere (Finland) – provided by Tampere city.

Constant innovation, characterised by the continuous replacement of existing products and services, and local specialisation in specific economic sectors means that local governments are inevitably at risk of local structural economic shocks triggered by industrial decline or corporate collapse. A prominent example is the city of Detroit, Michigan, USA, formerly the centre of the United States car industry, which went bankrupt in 2014 following decades of decline in the city's car manufacturing industry. Another example is the 'quartz revolution' in Switzerland at the beginning of the 1980s, which led to a massive wave of bankruptcies and the disappearance of two thirds of all jobs in the Swiss watch industry (Raffaelli, 2018), leaving many Swiss municipalities in severe economic distress, particularly in the small canton of Neuchâtel. There are many other examples, as structural breaks are constantly taking place, driven by rapid innovation and the rise of new global competitors. However, the outcomes of such structural shocks can differ greatly. For instance, in the case of Detroit, the city has not yet fully recovered from the long-lasting local economic decline, while, in contrast, the Swiss municipalities and cantons affected by the quartz revolution not only recovered from the crisis, but also went on to develop completely new, innovative and competitive industries, building on the skills developed in the watchmaking sector.

Local governments and local revenues played an important role on both cases. Anderson (2018), for example, argues that poor governance was a major cause of the lasting crisis in Detroit. A critical factor exacerbating the crisis was the city's reliance on property taxes: as property values plummeted, local government, in need of revenues, kept tax rates and the value of the tax base high, leading to over-assessment and widespread tax delinquency (see MacDonald, 2020). This eroded the city's tax base, accelerating urban decay and undermining public services. According to Anderson et al. (2022), this created a vicious circle in which notoriously low taxable property values pushed the city of Detroit to increase property tax rates, accelerating the exodus of capital and resulting in further reductions in the tax base. As a result, property tax revenues fell from USD 240 million in 1995 to just USD 90 million in 2016 (Sands et al., 2015). Detroit has levied personal and corporate profit taxes since the 1960s. However, the strong reliance on revenue from property taxes appeared to diminish the effectiveness of income tax retention as an incentive for promoting local economic development.

In contrast, local governments in Switzerland rely mainly on revenues from direct taxes from citizens and from businesses registered within their jurisdiction, while property taxation plays only

a marginal role. Local governments in the affected regions of Switzerland (mainly the canton of Neuchâtel) were therefore forced to consider how to stimulate economic growth and get their local economies quickly back on track. Rather than supporting the watch industry, local governments decided to support a technology that had evolved from it: microtechnology (Stöhr, 1990, p. 231). Fostering microtechnology enabled new industries with high added value to evolve in the municipalities and the canton of Neuchâtel, such as the medical technology industry ([14]), generating new sectors of high added value.

The comparison of the trajectories of development of Detroit and Neuchâtel suggests that retaining local revenue from direct taxes could be important for local governments to successfully manage local economic shocks and build long-term resilience by transforming their local business and fostering new, innovative, products and services.

So far, no quantitative empirical research has been conducted on the relationship between local retention of direct taxes and the speed and quality of recovery from severe local economic crises. Therefore, one must remain agnostic on this relationship for the time being.

However, an example of two cities in Finland, Oulu and Tampere, which were heavily affected by the decline of the world's largest producer of mobile phones at the end of the first decade of the 2000s, is instructive. Both Oulu and Tampere successfully navigated local economic shocks – resulting from the decline of the mobile phone producer Nokia – by reorienting their local economies towards new, innovative businesses. Not only did both cities master their local economic crises, which almost went unnoticed by most outside observers, but they also managed to transition into leading centres of innovation, recognised at the European level ([15]).

The crisis in Oulu began in 2009 when the world's largest mobile phone manufacturer at that time started experiencing severe difficulties following the rise of new competitors in 2007. At its peak in 2009, this company ranked as the 85th largest company globally and employed between 5 000 and 6 000 people directly in Oulu, with thousands more in the subcontractor network – totalling nearly 14 000 high-technology workers and representing approximately 16 % of total regional employment (Simonen et al., 2020).

Following the company's rapid decline in the mobile phone market, approximately 3 500 employees were laid off by technology companies in the region between 2009 and 2014 (Simonen et al., 2020). By the end of 2014, more than 2 000 workers in the high-technology sector remained unemployed, and by 2015, Oulu faced an unemployment rate of 18 %. The region's economy, which had been built predominantly around this mobile phone manufacturer and its suppliers, proved dangerously dependent on a single anchor company. The city of Oulu and its surrounding municipalities responded swiftly and comprehensively to the crisis through multiple coordinated initiatives. For example, in 2009, the city established the Oulu Innovation Alliance in partnership with the University of Oulu, Oulu University of Applied Sciences, and Technopolis Ltd, to promote research and innovation that would benefit the local economy. The following year, the city of Oulu created an informal discussion platform to coordinate recovery efforts with all relevant

([14]) https://www.swiss-medtech.ch/en/industry/history.

([15]) Oulu was recognised as a European Rising Innovative City in 2024 (see the city's page on the European Innovation Council website, available at https://eic.ec.europa.eu/eic-prizes/european-capital-innovation-awards/european-capital-innovation-awards-icapital-2024-25-winners/oulu-finland_en), and Tampere was a semi-finalist of the 2024 European Capital of Innovation Awards (iCapital) of the European Commission (see the announcement at https://eic.ec.europa.eu/news/european-capital-innovation-awards-icapital-2024-discover-semi-finalists-2024-08-28_en).

stakeholders. Together with the Centre for Economic Development, the city set up a pre-incubator programme targeting unemployed engineers, particularly those formerly employed by the telecommunications producer. Originally planned for three years, the programme's success led to a seven-year extension. It helped to create over 100 new start-ups and generated approximately 400 jobs (Simonen et al., 2020). The city, and its surrounding municipalities, successfully diversified the economy away from dependence on a single anchor company by fostering a vibrant start-up ecosystem and attracting new industries. The proximate driving forces behind this 'Oulu miracle', according to Simonen et al. (2020), were three core elements: knowledge creation, entrepreneurship and community spirit. The fact that the city and its surrounding municipalities are dependent on a flourishing and innovation-based local economy for sufficient revenue might have been decisive in fostering smooth and effective cooperation between local administration, businesses and the public.

By the mid 2010s, employment in the high-technology sector returned to pre-crisis levels, though the structure had fundamentally changed. Instead of being dominated by one large corporation, Oulu developed a more diverse and resilient ecosystem of start-ups and small and medium-sized enterprises. The region established itself as one of Europe's leading start-up ecosystems, ranking third in Europe for venture capital per capita invested in local companies.

A similar process took place in Tampere ([16]). In 2011, the Tampere ICT cluster employed around 9 500 people, including significant numbers from the world's largest mobile phone manufacturer at that time. Based on publicly available information, the company's Tampere site employed around 4 000 people before lay-offs in 2011. Tampere was a central hub for the company's research and development, particularly with regard to mobile phone technology and software. An exact figure of the number of people ultimately made redundant at the company's Tampere site during the 2011 restructuring is not available. However, a significant number of jobs were lost, causing a major local economic crisis that could quickly have turned into a major budgetary crisis for Tampere, given that a significant proportion of the city's budget comes from municipal income tax and state CIT. Faced with this prospect, the city administration, in close coordination with other stakeholders, acted immediately to ensure that the highly skilled workers made redundant by this large company would stay in the city and start new businesses, rather than move elsewhere.

The city administration was not caught off guard by the sudden loss of many high-income jobs. Concerned about dependency on one global company, the local authorities had prepared for a possible ICT sector crisis at any time, ensuring that they could quickly offer alternatives to former staff in the event of large-scale dismissals.

When the company announced significant job cuts, funding decisions for support measures were made just days after the announcement, and cooperation between the authorities and local businesses was intensified immediately.

A central focus of the local administration was to help employees who had been laid off to start their own new businesses in Tampere. Through a project financed by the European Globalisation Adjustment Fund for displaced workers business support services and start-up funding was offered to the former employees. Space was provided to new start-ups to access services and to enable community collaboration. The city of Tampere also initiated a more ambitious development of start-up services, culminating in 2020 with the repurposing of an entire building to house approximately 300 start-up entrepreneurs. Entrepreneurship counselling was particularly valuable for dismissed employees, resulting in around 100 new companies focused on gaming, software development

([16]) This description is based on information kindly provided by Tampere's regional authorities (*Pirkanmaa*).

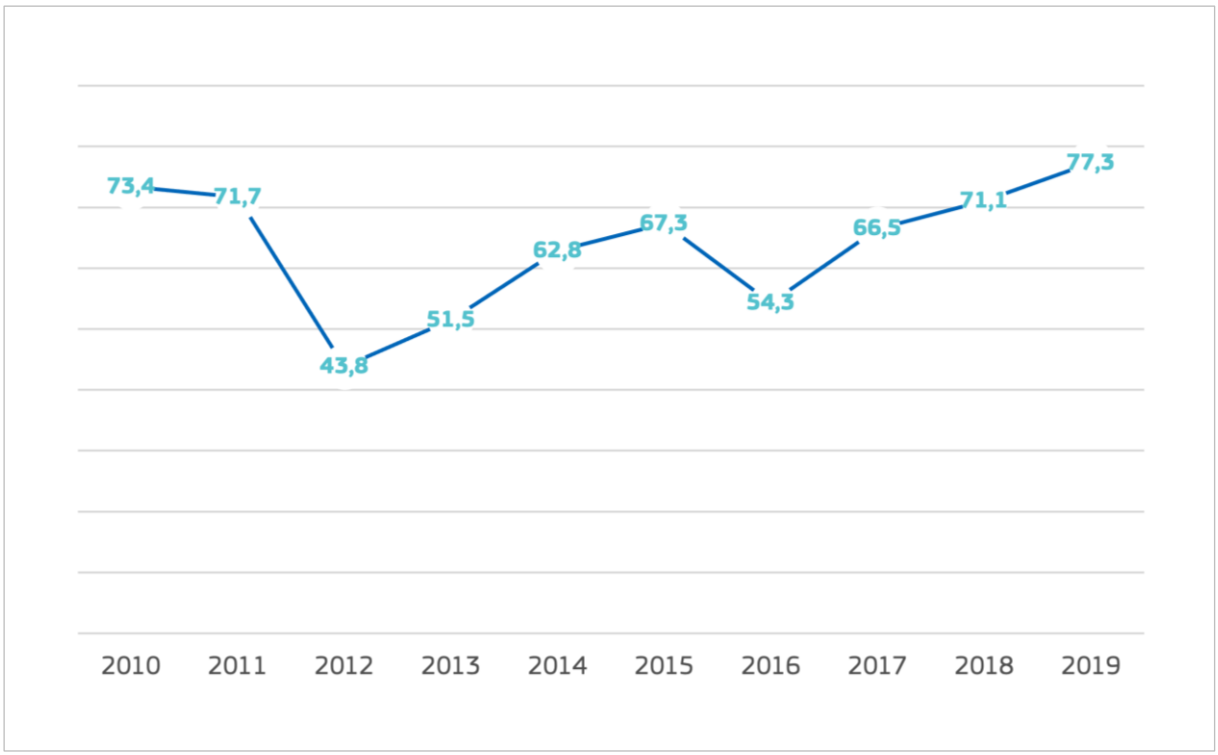
and other professional services. The regional authorities Tampere Region (also known as '*Pirkanmaa*') developed targeted training and coaching programmes to support those made redundant. Thanks to these programmes, many dismissed employees did not move away, as they quickly found new employment in the city. Networking was a key part of Tampere's survival strategy. Local actors organised regular ICT breakfasts and Mobile Monday events, bringing together local technology companies, laid-off experts and regional developers. These networking events provided participants with opportunities to share their expertise in an informal environment and build new connections.

All these measures, swiftly and effectively applied by highly motived local administrations, not only tamed the severe employment crisis, but also enabled the formation of completely new industries in Tampere. The economies of the city of Tampere and the surrounding region of Pirkanmaa are much more resilient today than they were 12 years ago. Owing to this quick results-oriented response and Nokia's own strong actions, Tampere quickly recovered from this major economic crisis and became one of Europe's most vibrant start-up cities.

This success mirrors also in the development of revenues from the city of Tampere's share in state CIT (see Figure 6). Tampere avoided a budgetary crisis by rapidly redeploying its skilled workforce, with corporate tax revenues rebounding from EUR 43.8 million in 2012 to EUR 77.3 million in 2019.

The successful recoveries in Oulu and Tampere suggest that retaining revenue from direct taxes at a municipal level can be crucial in getting local governments to act immediately and successfully in the event of a local economic crisis. However, it needs a contextualisation. Local governments alone cannot cope with a severe local economic crisis unless the central government provides a national framework of policies conducive to a sustainable, innovation-based economy. The reasoning vice versa may also apply: the best national policies aimed at providing the conditions for economic growth may face difficulties in fostering sustainable economic growth in all territories if local governments do not have the prospect of receiving monetary reward for local economic growth in the form of increased tax revenues. Crisis management with external support is inevitable. However, retaining revenue from direct taxes at the local level provides municipal leadership and administration with strong incentives to act quickly, change scope and persist in searching for new industries and opportunities, rather than waiting for external help or trying to prop up the crisis-stricken industry. Future research will shed more light on these relationships between national policies and local government revenue retention and local government capacity to cope with severe local economic crises.

Figure 6. Development of revenues from CIT, Tampere (million EUR) in the years from 2010 to 2019.



Source: Authors' calculations, based on data provided by the City of Tampere.

7. Tax sharing with local governments to increase revenues of national governments

The academic debate on fiscal decentralisation is closely related to the discourse on fiscal federalism and the competition between subnational units to offer the lowest tax rates. However, this report does not seek to contribute to these lines of thoughts.

Instead, this report aims to highlight the importance of taxes on local economic activities. These are paid to municipalities in the form of locally rooted revenues as a reward for their efforts to foster local economic growth in spite of all the inconveniences associated with that process. From this perspective, it is irrelevant whether these taxes are local taxes for which local governments are entitled to set rates or state taxes shared with municipalities at fixed rates. In both cases, the taxes serve as an important reward. There may be an additional benefit to municipalities owning taxes, as the resulting competition on tax rates between municipalities may encourage the evolution of even better local services at a lower tax burden.

However, as fiscal structures are conservative and municipal taxes on income are the exception rather than the rule in the EU, introducing income taxes at a municipal level may be too big a change for countries where PIT and CIT are currently paid into the central budget. Where local taxes on incomes are absent, an efficient way to introduce a reward for municipalities' efforts to increase their business base may be to introduce the sharing of income taxes between central government and municipalities (in return for a reduction in transfers from central budget to local budget), as this does not imply a complete restructuring of the fiscal system of a country. The established taxes on personal and corporate income would remain as they are. The tax burden on business would not increase (but businesses would likely get better services for the taxes they pay). The only change required would be that municipalities would receive a part of these taxes according to origin.
To achieve this, local shares in direct taxes should be allocated to municipalities according to economic activity (e.g. based on the number of employees, total wages, value added). This change must go along with a re-balancing of general transfers from the state to municipalities and possibly an introduction of a horizontal equalisation mechanism.

Undoubtedly, any such reform would require substantial political commitment and preparation. However, these efforts would be worthwhile, as tax sharing could encourage municipalities to invest in the provision of local production amenities conducive for more economic growth, even if tax rates were kept constant. Additional economic growth means more taxes for the central government. In other words, tax sharing may benefit central government by increasing tax revenues into the central budget, even while holding tax rates constant.

In addition to generating more economic growth and increasing revenues to the central budget, sharing direct taxes could generate other benefits, such as increasing satisfaction with public authorities, local democracy, social cohesion, societal resilience and sustainability. A comprehensive analysis of all these additional benefits would warrant a separate report; however, one important aspect of taxes, namely tax compliance, is briefly outlined here.

For any state administration, ensuring tax compliance solely through taxpayers' fear of control and punishment is considered a suboptimal strategy. Control and the implementation of punishment are very costly, reducing the budget resources available for other state functions, and are unlikely to foster trust between citizens and businesses and the state. Therefore, increasing voluntary tax compliance is imperative for any state. A final verdict on the key factors favouring voluntary tax

compliance has yet to be reached. However, making taxes more localised, for example through municipal taxes, is widely recognised as an important way to increase voluntary tax compliance.

Local taxes can lead to closer relationships between citizens and public administration, which in turn can lead to higher tax compliance (Alm et al., 2006; Torgler et al, 2005, Torgler et al., 2010). Close formal and informal contacts between taxpayers and public authorities also give local governments an advantage over central administrations when it comes to knowledge of local conditions and needs (Oates, 1999; Qian et al., 1997; Rodrik, 2000; Treisman, 2007). With more personal contacts, mutual trust also increases. Trust in local authorities has been shown to be an important driver of businesses' readiness to pay taxes to local administrations (Giese et al., 2024). In other words, local governments are better placed than higher tiers of administration to understand the preferences of people and businesses regarding local services and infrastructure and can therefore provide services and infrastructure that better match the demands of local taxpayers.

At the same time, the readiness of local businesses and citizens to voluntarily pay taxes increases when they can see the benefits they receive in return (see field experimental research by Giaccobasso et al. (2025)). Finally, it becomes obvious to local taxpayers that local public services and infrastructure can only be financed if taxes are paid. The need to pay taxes in order to access public services becomes very tangible. Local taxes may therefore encourage mutually beneficial cooperation between the local government, businesses and citizens, as the last two contribute directly to the local budget.

Tax sharing turns citizens, who are united in a territorial public legal entity of a municipality, into 'stakeholders' who want to see their 'investments' (their share of taxes paid to local budgets) being used efficiently to meet local needs. As the paying principals, taxpayers may want to see better public services and infrastructure provided by their agents, the municipal governments. Taxpayers therefore exert informal control over the proper use of the local budget. Gadenne (2017) illustrates this effect using the example of Brazil, where the way municipalities are financed has an impact on the quality of public goods and infrastructure. Increases in local (municipal) tax revenues have a very different effect from increases in grants, over which municipalities have discretion. While local tax revenues were used to improve municipal education infrastructure, increases in grants to municipalities had no impact on the quality of local public infrastructure.

The pull and push forces motivating local governments to provide the best local services and infrastructure for taxpayers' money – the former being the incentive to increase the local tax base, as discussed in this report, and the latter being informal control by local citizens and businesses – can create a self-enforcing virtuous cycle of tax compliance. As demonstrated by numerous economic laboratory experiments, individuals are willing to contribute more to a common good when the social return is higher (i.e. when they receive more common good in return for their contribution) (Andreoni et al., 2002; Brown-Kruse et al., 1993; Isaac et al., 1984, 1988). In the context of local government, particularly municipal government, this translates as follows: the better the public services and infrastructure for which taxes are paid, the more likely local taxpayers are to be voluntarily tax compliant.

Paying a share of direct taxes into municipal budgets should also have a positive effect on taxpayers' readiness to exert informal control over tax compliance among their peers: once a local taxpayer has paid their taxes in full, they will not want to be seen as the only one financing local public services while others evade taxes. Furthermore, local council members and mayors are also likely to encourage, or even enforce, tax compliance informally in peer-to-peer interactions. It is difficult to hide wealth and income locally. There is possibly no better tax inspector than a peer who is interested in the taxpayer's honest contribution to local public goods.

All the factors potentially increasing voluntary (or informally peer-enforced) tax compliance are intertwined. Disentangling them in the field is difficult, if not impossible, at this time. However, there is strong empirical evidence that indicates that keeping tax revenues local significantly improves voluntary tax compliance. Saavedra et al. (2021) found that reducing the share of tax revenue that remains in a municipality leads to an increase in non-compliance and tax evasion. Conversely, Ferraz et al. (2024) found that, in the case of municipalities in Brazil, an increase in revenue from state transfers was accompanied by reduced local capacity (and willingness) to enforce tax compliance.

To summarise, by sharing direct taxes with municipalities, central governments can provide an incentive for municipalities to drive economic development within their jurisdictions, increasing economic growth and tax contributions to the central budget, and fostering voluntary tax compliance. The biggest beneficiaries of tax sharing are likely to be the national ministries of finance.

8. Conclusions

Historically, the discourse on fostering economic growth has not paid sufficient attention to the revenue structure of local governments. However, municipalities play a crucial role in providing services to businesses. Proactive local governments and communities that are positive about local economic development, even when it entails some negative externalities, are therefore important determinants of business success and hence economic growth.

The revenue structure of municipalities may be a key factor in motivating communities and their local governments to support the expansion of local businesses or the establishment of new enterprises. Taxes on economic activities within a local government's jurisdiction can provide the necessary incentives for local economic development. This report provides the first systematic behavioural analysis of the effects of different types of taxation on the motivation of local governments to develop their local business base. It also presents qualitative and quantitative indicators to measure local tax revenue retention. This represents an important first step, opening the door to a new line of quantitative research in regional development and growth economics concerning the role of local governments in promoting growth.

The reported case studies strongly suggest a direct link between local tax revenues and local business activity, creating strong incentives for municipalities to foster economic development. While the precise mechanisms underlying this relationship require further investigation, the presented empirical patterns suggest improved economic performance in weaker regions, such as in Bulgaria and Romania; enhanced incentives for the deployment of renewable energy, such as in Denmark and Germany; and greater resilience during economic crises, such as in Finland and Switzerland. These findings suggest that revenue structures that generate direct fiscal benefits from the success of local businesses can lead to different policy responses at the municipal level that are beneficial for the national economy. Furthermore, the national level can benefit from such policies as strengthening the link between local economic activity and municipal revenues may enhance tax compliance, as taxpayers perceive a more direct connection between their contributions and the services provided locally.

Even when tax sharing is absent, implementing a transition towards more tax sharing (keeping rates and the tax base constant) would not require far-reaching transformations of existing fiscal structures. Allocating a small percentage of income taxes back to the municipalities of origin would suffice to create rewards for local economic development. This approach would enable a pragmatic pathway for policy reform that builds on existing institutional frameworks while potentially generating significant benefits for regional economic development across the EU.

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List of abbreviations and definitions

ABBREVIATIONS	DEFINITIONS
CFE	company property tax (*cotisation foncière des entreprises*)
CIT	corporate income tax
CVAE	business value added tax (*cotisation sur la valeur ajoutée des entreprises*)
GDP	gross domestic product
IMF	International Monetary Fund
LAI	Local Autonomy Index
NIMBY	not in my backyard
OECD	Organisation for Economic Co-operation and Development
PIT	personal income tax
RAI	Regional Authority Index

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