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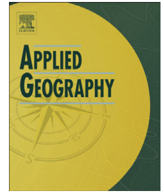

Effects of the payout system of income taxes to municipalities in Germany

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A B S T R A C T

The German system of allocating income tax revenues to municipalities is rather complex. Several layers of administration and legislation are involved, thereby hindering easy comprehension of the system. In general, national legislation demands that the funding a municipality receives from the state (*Land*) as a share of income tax revenues (output of the system) should be a fixed proportion of the total income tax yield of each municipality (input to the system). This work presents a nationwide examination of the input/output properties for all municipalities in Germany. Surprisingly, the system operates in two modes: municipalities receive either a large share (high quota) or a small share (low quota) of the input. A nationwide analysis of all municipalities revealed that, in general, municipalities located in eastern Germany receive a low quota of 10% and less. On the other hand, municipalities in western Germany (except some rural municipalities) are usually allocated a relatively high quota of 15% and more of the income taxes per taxpayer paid to the state.

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1. Introduction

Germany's municipalities basically derive their income from three sources: Taxes or charges paid by local households or businesses, transfer payments from other public budgets as part of a financial equalization scheme or the raising of loans (e.g. BMF, 2016; Hillebrand, 2006). The primary form of municipal funding should in fact be tax revenue (Scherf, 2009, p. 217). Typical municipal taxes in Germany are income tax (which includes salary/wage tax), trade tax, turnover tax (=VAT) as well as corporation income tax (Hillebrand, 2006; Torgler & Werner, 2005).

The financial health of municipalities is determined by the potentials for economic development as well as the level of competitiveness in the national as well as international marketplace (Klein, 2005; Rosenfeld, 2010). Depending on their size, Germany's municipalities provide vital services to the surrounding region and are primary contractors and investors in necessary infrastructure (Rauber, 2012). Reflecting this situation, municipalities frequently strive to increase their attractiveness (Hüther & Naegele, 2013, p. 263; Krause-Junk, 2008, p. 3) through targeted investment in additional infrastructure as well as new housing and leisure facilities. The aim is to retain local residents and companies as taxpayers and also to attract additional investors and residents in order to increase tax revenues. Towns and municipalities are therefore in continual competition with one another to increase their local populations and number of jobs as well as to ensure a good quality of life and business environment.

A considerable proportion of municipal budgets is financed through a share of the income tax paid by the local population. In 2007 this Income Tax Share contributed 25% (eastern Germany) to 35% (western Germany) of total municipal funds (BMF, 2016). In the current paper, the overall effects of this system are investigated for all municipalities in Germany in the form of an input-output analysis.

The allocation of the Income Tax Share to municipalities is based on the aims of the so-called *Gemeindefinanzreform* (Municipal Finance Reform) (cf. BMF, 2015, p. 9; Krause-Junk, 2008, p. 7). These are: 1) Each municipality should receive an Income Tax Share proportional to the total income tax paid by its residents; 2) Differences in income tax yield between municipalities of the same functional capacity and size should be reduced; 3) Differences in tax revenue generation between large and small municipalities should be retained.

The basic rules on how to calculate the Income Tax Share are

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determined by national legislation (GG Art. 106(3); GG Art. 106(5); GG Art. 107(1); GemFinRefG Art. 2 and Art. 3, EStG). From the total tax yield generated within each state, 15 percent is transferred to the municipalities, whilst the remaining part is evenly divided between the state authorities and the national government. In principle, these regulations stipulate that the monies the state allocates a municipality should be – for the majority of municipalities – a fixed percentage of the total income tax yields of each municipality (BMF, 2015; Torgler & Werner, 2005; Lenz, 1985; Elsner, 1979). So-called "allocation keys" are used to specify this percentage (GG Art. 106(3)). The calculations involved are rather complex, and the allocation keys differ from state to state. In determining the keys, the states consider an adjusted total tax yield for each municipality by taking in to account the income tax paid by households that falls below a certain threshold. Here the aim is to redistribute the tax revenues amongst the municipalities in such a way as to even out income disparities (cf. GemFinRefG under the keyword *Höchstbetragsgrenzen*).

The determination of the allocation keys is, however, increasingly being criticized by municipalities (Rehm & Rehm, 2010, p. 128; Wixforth, 2009, p. 342) due to the lack of transparence in the calculation of the Income Tax Share. In most cases local residents are not even aware that only a fixed percentage of the total income tax they pay is returned to municipal funds. One effect is that local residents have insufficient knowledge of and tangible feeling for the costs of municipal services. On the other hand, the municipalities have little say in determining the share of income tax revenues they receive – apart from a "long-term settlement policy" (Wixforth, 2009, p. 58) – and therefore have difficulty in increasing municipal service provision to meet local needs.

In 2006 the "Stiftung Marktwirtschaft", a German liberal economic think tank, pointed out that Germany's system of allocating income tax revenues is highly complex, and very nearly incomprehensible to the average taxpayer (Färber, Kühl, & Alt, 2014; Stiftung Marktwirtschaft, 2006).

The majority of published works on the German income tax payout system (Stiftung Marktwirtschaft, 2014; Lang & Eilfort, 2013; Rehm & Rehm, 2010; Müller, 2010; Zimmermann, 2009; Stiftung Marktwirtschaft, 2006; Hofmann & Scherf, 2001; Broer, 2001; Sander, 2001; Weiß, 2001; Karrenberg & Münstermann, 2000; Smekal, Sendlhofer, & Winner, 1999; Beland, 1998) have been descriptive, criticizing the allocation principles and the relevant legislation in Germany.

Recker (1985) undertook a comparison of the Income Tax Share per capita of Germany's states for the year 1985. Average values for the share of tax income paid by the states were calculated by considering the total number of inhabitants and the total tax income share of municipalities in each state. The findings of this study were that, for example, Baden Württemberg exceeded the national average of tax share per capita by 12% while the Saarland allocated 25% less than the national average to its municipalities. Recker concluded that there exist strong spatial disparities between Germany's states regarding the percentage of allocated income tax per capita (Recker, 1985, p. 320). Municipality data was not taken into account. When Wixforth (2009) compared data of the states after German reunification, he found that the figure of 15% municipal Income Tax Share varied depending on the total income tax yield of each state. The average tax income share per capita in the eastern states was clearly below the national average. As tax revenues are gathered and allocated by each state separately, Wixforth (2009) has determined that municipalities in high-income states can draw on a higher total fiscal base than municipalities in poorer states.

Vesper compared the revenues from different types of municipal taxes (e.g. income tax, trade tax, property tax) by classifying the municipalities according to population (Destatis, 2015a). For large cities (pop. > 100,000) income tax made up only 30% of total municipal revenues. However, in municipalities with less than 3000 inhabitants, income tax represented about half of revenues. The main focus of Vesper's discussion was on basic and contemporary issues of municipal finance (Vesper, 2015, pp. 1–66). He pointed out that growing interregional and intraregional disparities could be attributed to the inadequate funding of municipalities by numerous states. In his view: "A sustainable solution to municipalities' problems will only be possible if municipal funding is significantly increased." (Vesper, 2015, p. 1).

Against this background, we investigate the system of income tax distribution at the level of Germany's municipalities (n = 11,669). To the best of the authors' knowledge, the characteristics and relationships between the Income Tax Yield and the Income Tax Share in Germany have not yet been analyzed at this scale. The main finding of the analysis is that the tax payout system deviates substantially from direct proportionality. Instead, analysis shows that the tax payout system operates in two modes: for a given income tax yield within a municipality, the municipality may either receive back a larger (15%) or a smaller proportion (10%). In order to investigate the distribution of income tax revenues to Germany's municipalities, we have to identify the specific features of the given distribution mode as well as spatial factors that impact the income of municipalities. The aim here is to create an empirical basis to support discussion on ways to review or modify the current mechanism of allocating income tax revenues to the municipalities.

2. Material and methods

2.1. Data

All analyzed data is from the year 2010. Germany's system of governance operates at three levels: the federal government (*Bund*), the states (*Länder*) and the municipalities (*Gemeinden*). In 2010 there were n = 11,669 municipalities and n = 16 states.[1]

2.2. Municipality income tax yield (MTY)

In general, the states consider an adjusted Municipality Income Tax Yield when determining the share of income tax to be redistributed. Under this adjustment, only those tax yields under a maximum level of private income are taken into account. The motivation for this is to attempt to redress the imbalance in incomes between richer and poorer municipalities when tax revenues are redistributed. In the current study, data on this adjusted municipality income tax per taxpayer[2] (*Municipality Income Tax Yield*, MTY) used for the calculation of "allocation keys" was not

[1] Municipal and state boundaries were obtained from the Federal Agency for Cartography and Geodesy (BKG: http://www.bkg.bund.de). The website was accessed on 10 March 2015 under Products/Geodata/Boundaries. Boundaries were extracted from the dataset VG250. The municipalities in the three city-states of Berlin, Bremen and Hamburg were treated as belonging to the surrounding state. This resulted in thirteen territorial states: Schleswig-Holstein and Hamburg (n = 1117 municipalities), Lower Saxony and Bremen (n = 1026), North Rhine-Westphalia (n = 396), Hessen (n = 426), Rhineland-Palatinate (n = 2306), Baden-Wuerttemberg (n = 1101), Bavaria (n = 2056), Saarland (n = 52), Brandenburg and Berlin (n = 420), Mecklenburg-Vorpommern (n = 814), Saxony (n = 485), Saxony-Anhalt (n = 300) and Thuringia (n = 942). In addition, there were n = 228 so-called "unincorporated areas" generally forested areas, lakes and larger rivers.

[2] The number of taxpayers per municipality was obtained from the Regional Database Germany (Destatis, 2015a). The database was accessed on 12 Jan 2015 under Public finance/Taxes/Wage and Tax/Wage and income tax statistics/Municipalities and Year = 2010. The number of taxpayers per municipality was extracted from the variable "LSNW01".

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