THE RISE IN PETROL PRICES AND THE DISCUSSION ON THE GERMAN COMMUTING ALLOWANCE: AGGLOMERATION EFFECTS AND AN ALTERNATIVE CONCEPT FOR COMMUTING SUBSIDIES IN GERMANY

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ABSTRACT

It is well-known that modern economies also depend on the mobility of workers. In general worker´s mobility is an important condition economic development of regions. In the traditional simple framework mobile workers decide between the place of residence and the place of work and consider commuting costs. Many countries subsidize commuting and allow the deductibility of commuting costs, so the decision about separating job and residence is determined by financial policy. In our paper we portray the traditional economic debate on commuting subsidies in Germany by discussing the pros and cons of commuting subsidies including the “chicken-and-egg”-problem. Then we focus on agglomeration effects and concentrate our argumentation on the literature on allocative effects of commuting and agglomeration externalities. As Borck and Wrede (2009) have shown under consideration of agglomeration effects (e.g. Baldwin and Krugman, 2004) we argue that there is a particular economic justification for commuting subsidies. However, in the last part the paper presents alternative subsidy elements for the city states, also by consideration of interjurisdictional competition between the core city and the periphery of an agglomeration where public inputs like special commuting-related infrastructure and services are competition parameters.

Keywords: Agglomeration Effects, Commuting Allowance, Subsidy Competition

I. INTRODUCTION

We often can observe that workers separate the place of residence and the place of work. The result of this decision is that they have to commute between home and job nearly every day. Against this background economists discuss two main questions:

- Why households are willing to bear commuting costs?
- Why the public sector is willing to subsidize commuting?

Not only in Germany academics and policy-maker alike have shown increasing interest in the presence and impact of commuting subsidies. It is well-known that in particular industrialized countries try to support the mobility of their own population, especially the employees to reduce unemployment and to raise the national welfare.

Of course, from a political-economic point of view politicians are interested in supporting special groups of voters who can benefit from group-related public activities. An enhancement of the net income of a special group of voters can improve the chances of re-election, e.g. over public budget activities. No wonder that since in spring 2012 the price for Petrol (95 octane) in Germany climbed up to Euro 1.70 per litre the controversial political debate about the German commuter´s allowance has began again, while less than 14 percent of all ways (100 bill. per year) in Germany are work-related (Federal Statistical Office, 2011). No wonder because the commuter´s allowance is a political instrument if politicians aim to maximize votes for themselves.

But we have also to consider that in a federal system as the Federal Republic of Germany the jurisdictions on the jurisdictional levels compete with each other. Thereby they use any instrument which is suitable to attract households and firms. Therefore political actors are looking for political instruments which benefits a special group of individuals (or firms) while the economic cost can be evenly distributed on the general public. In fact, the German commuter´s allowance works in this sense.

II. THE ECONOMIC DISCUSSION ON COMMUTING SUBSIDIES IN GERMANY

It was a “kick-off” for a political debate in spring 2012 when the price for Petrol (95 octane) in Germany climbed up to € 1.70 per litre. While less than 14 percent of all ways (100 bill. per year) in Germany are work-related (Federal Statistical Office, 2011), politicians across all parties began to debate about the “right” flat rate. Thereby the three German city states (Berlin, Free Hanseatic City of Bremen and Free and Hanseatic City of Hamburg) have special commuting problems with their respective peripheries because of the state borders between agglomeration core and agglomeration periphery. Otherwise, especially the

agglomerations and also the City states Bremen and Hamburg profit from the German commuting allowance scheme because of the regional effects of the federal wide commuting allowance scheme (e.g. Färber et al. 2009; Bruckmeier, Zarth and Schnitzlein, 2009). Of course, this were not the aspects discussed in the debate. From an economic point of view this aspects are the economical interesting aspects in the economic discussion.

II.1. General Arguments for Subsidizing Commuting

There are several reasons why households commute to work every day (see Borck and Wrede, 2009, 26). First commuting enables to realize low housing costs far from the employment center or a central business district (CBD). Second households desire special goods like a green and city-noise-free environment or the absence of crime which are in general given away from the city centers (Borck and Wrede, 2009, 26). Borck and Wrede (2009, 26) point out that additional we have to consider that "people may move to suburbs with better schools or other local public goods." And third households can be fixed to a residence, for instance, by dual-career couples with two widely separated workplaces, located human capital and social network externalities respectively. So we find a lot of causes why households are willing to pay for commuting.

Otherwise commuting leads to traffic congestion. It is widely known that, for instance, transport infrastructure is a club good. So an efficient provision implies that the users have to pay for using the transport infrastructure on the marginal cost level. Considering this, governments should be interested in collecting congestion charges or city tolls. "Traffic congestion wastes a massive amount of time and fuel" (Kono et al., 2012, 619). This nonmarket public bad goods reduce the city quality of life. However, in most countries commuting subsidies are a normal public activity. "In most countries, public as well as private transport are heavily subsidized" (Borck and Wrede, 2008, 841). From a political-economic point of view it is clear that subsidizing special groups of voters is important for vote-maximizing politicians. Borck and Wrede (2005) have shown in a spatial model that "the existence of commuting subsidies can be explained by the redistribution between groups with different political clout" (Borck and Wrede, 2005, 495). Brueckner (2005) has discussed the effects of transport subsidies to undesirable urban sprawl.

While long distance commuting is observable worldwide and "seems to be an important phenomenon" (Borck and Wrede, 2009, 25) the handling with commuting expenses differs. Wrede (2001; 2003) has pointed out that in several EU countries, e.g. the Scandinavian countries and also Germany, commuting expenses are deductible. Otherwise in many other countries, e.g. the United States, Canada, the United Kingdom, Australia, Spain or Portugal, commuting expenses are not deductible (Bach, 2012).

In Germany as well as in the worldwide economic literature the treatment of commuting expenses has a long tradition. On the one hand one main argument is that workers should not be distorted when choosing between the place of work and the place of living (Wrede, 2000, 216). This leads to the requirement of legislative rules which aim for absorbing the distortion of individual´s decision in the case of commuting expenses (see also German Council of Economic Experts 2003, subparagraph 493 f.; Wrede, 2004, 12; Gasche, 2004; German Council of Economic Experts 2005, subparagraph 440; Krause-Junk, 2007). The German Council of Economic Experts has focus to the Government´s tax policy principles including the criterion of decision neutrality. So in general individual´s decisions should not be distorted by tax policy rules, e.g. the income tax. In other words a worker who has to decide between his place to live and his place to work should be able to decide for a job with the highest gross income dependent on his productivity. Nothing should distort this decision. "From the ability-to-pay principle associated with horizontal and vertical equity follows the principle that pure work-related expenses should be excluded from the tax base since income that is used to pay for work-related expenses does not increase the taxpayer´s ability to contribute to the cost of government" (Wrede, 2001, 80). However in a particular framework commuting subsidies are economically grounded but not in the case of a rise of petrol prices set in a cartel-like environment.

On the other hand tax legislation rules which consider commuting expenses leads to financially supporting of private decisions. Given a decision to work a commuter´s allowance provides the basically private decision to move to a new residence far away from the workplace. Therefore a Government´s tax relief distorts the private decision to move and the allocation of resources, e.g. land, too.

II.2. Legal regulations of the German Commuting Allowance: An Overview

In Germany transit costs are deductible independent from the transport mode. Using the own car, train, tram, bus or bicycle or walking by feet it doesn´t matter. Every kilometer between workplace and residence can be deducted from income liable to income tax as income-related expenses. This is pursuant to § 9 of the German Income Tax Act or as business expenses pursuant to § 4 of the German Income Tax Act. The German commuting allowance is independent of the real incurred cost. The deduction takes the form of a flat rate. For every working day and commuting kilometer between home and workplace for the employees (§ 9) and the self-employed persons (§ 4) the flat rate amounts to Euro 0.30 per kilometer. The tax relief is limited to Euro 4,500 per year, unless the commuter is using his own car or a company car.

Bareis (2004) argues that this is unsystematically because the German Income tax Act focuses on net taxation taking into account the real cost that are directly incurred in earning income. Actually commuters who, for instance, use bicycles and therefore have low real

commuting costs benefit from the specific deductible amount per kilometer. Furthermore the German commuter´s allowance implies a problem of distribution. Because the commuter´s allowance in Germany is deductible from the tax base high incomes benefit more than low incomes. If we assume the realized commuting cost of both high and low income equals, high income might by reason of a progressive income tax benefit more from this legislative tax rule. Obviously taking into account the "welfare state principle" the German commuter´s allowance produces a problem of equity (Bareis, 2004, 10). Otherwise Wrede (2000) discusses higher commuting expenses by given both the place of work and the domicile and concludes that more expensive cars or higher commuting cost in general, the commuting time can be reduced so the deductibility of commuting expenses guarantees "that the decision made about them and therefore the decision on the commuting time is not distorted by the income tax" (Wrede, 2000, 217).

In 2007 the German income tax code was changed temporarily. The reform of the treatment of commuting expenses enacted in 2007 has focused on reducing the commuting allowance. In 2006 the Government has favored the so-called "factory gate principle".[1] Based on this principle the legislative provided in § 9.2 sentences 1 and 2 German Income Tax Act that the commuting cost incurred are no income-related expenses (sentence 1) but "like work-related expenses" (sentence 2). Moreover, the legislator has allowed a deductibility of Euro 0.30 for distances from the 21st kilometer travelled (see Federal Constitutional Court 2008). After a decision on December, 9th 2008 of the German Constitutional Court[2] who declared that the elimination of the deductibility of commuting expenses for distances less than 20 kilometers was against the basic law for the Federal Republic of Germany the political decision-makers (the *Bundestag* (German Parliament) and the *Bundesrat* (Chamber of the German *Länder*)) have decided to provide the deductibility for the 1st kilometer again.

Additional commuters in Germany receive state subsidies in form of a reduced to 7 % VAT rate (value added tax) (VAT rate: 19 %) for the carriage of passengers in the local public transport (§ 12.2 No. 10 VAT Act). The reduced VAT rate shall favor the commuters who can also make use of the commuter´s allowance. The German Council of Economic Experts (2005, paragraph 437) has pointed out that there is no reason for benefiting commuters twice.

1 This principle excludes all costs the employee bears between his own doorstep and the work place. It seems a bit antique, because in the era of the industrialization the employees worked and lived close to the factory, so indeed they had no mobility costs. These are not the circumstances in the 21st century.

2 See Federal Constitutional Court, Judgment of December, 9th 2008 (2 BvL 1/07, 2 BvL 2/07, 2 BvL 1/08, 2 BvL 2/08).

III. COMMUTING AND ALLOCATION

III.1. Unproductive Commuting

In a simple framework by Richter (2004) following a model framework of Wrede (2000) the problem of subsidizing unproductive commuting can be shown easily. Assume that a worker is endowed with fixed units of time $\bar{T}$ and supplies fixed labor units L, measured in working time. The worker derives utility from leisure F, so commuting time D reduces the individual welfare because of working burden $V(L+D)$ with $V_D > 0$ and $V_{DD} > 0$. Additional commuting costs are denoted by cD where $c > 0$ denotes the constant transportation costs per commuting time unit. These are the commuting costs in the stricter sense (Richter, 2004, 6). If the worker benefits from commuting, we describe the well behaved sub-utility function $H(D)$ with $H_D > 0$ and $H_{DD} < 0$ as the advantages from commuting the worker can realize if he profits from low housing costs far away from the city center. The worker benefits also from commuting if the commuting will be remunerate by the labor demand. The remuneration can be expected if the commuting raises the production. This work-related utility is denoted by $B(D)$ with $B_D > 0$ and $B_{DD} < 0$. However, the worker also benefits from commuting expenses because of commuting expenses reduce commuting time (Wrede, 2000, 217), so consider $D(c)$ endogenously with $D_c < 0$ and $D_{cc} > 0$. So the time constraint for the worker is $\bar{T} = L + F + D(c)$. If markets are competitive profit maximization of the firms implies $Y_L = w^L$, where Y_L is the marginal output and w^L is the given wage in a competitive labor market. Labor income will be taxed. The government collects a wage tax τ, so the worker achieves the net income $(1-\tau)Y_L$ after taxation. The worker supplies one labor unit if the net income equals the working burden. So the following equalization describes the optimizing problem (Richter, 2004, 6):

$$H_D - (1-\alpha\tau)c = V' = (1-\tau)Y_L \tag{1}$$

The left side of the equation $(H_D - (1-\alpha\tau)c)$ shows the decision of optimizing the commuting time. The worker´s decision is to choose the commuting time which maximize the net advantages described by $H(D) - (1-\alpha\tau)cD - V(L+D)$. The term $(1-\alpha\tau)$ focuses on the deductibility of commuting expenses (see also Wrede 2000, 219 f.). If $1 > \alpha > 0$ the commuting expenses will be deductible, if $\alpha = 0$ it is not provided for deductibility. In the case of $\alpha < 0$ the commuting expenses would be taxed. So $(1-\alpha\tau)cD$ are the commuting costs after tax.

As Richter (2004) has pointed out the maximization of the social surplus

$$Y(L) + H(D) - cD - V(L+D) \tag{2a}$$

and taking account equation (1) while the budget constraint of the public sector is given by

$$\tau L Y_L - \alpha \tau c D = constant \tag{2b}$$

leads to $\alpha < 0$ for $\tau > 0$ in the optimum (Richter, 2004, 6; see also Wrede 2000, 219f.). It can be shown that private household´s decisions to commute are in that case no justification for deductibility. "Hence, non-deductibility of commuting expenses is a precondition for efficiency if the labor supply is fixed. If traveling to work expenses were deductible, taxpayers would underestimate the traveling costs and commuting expenses would be too high" (Wrede, 2000, 220).

III.2. Productive Commuting

We illustrate the allocation problem with the following simple example (see also Krause-Junk, 2007). Given the residence one employee has to choose between a workplace A close to the residence, where 1.000 income units can be earned, and workplace B where the wage is 1.500. Assume that the commuting costs to workplace B accounts 300. Without taxation the employee will decide for a job at workplace B (net income 1.200) while the net income is less at workplace A. Income taxation (e.g. a wage tax of 50 per cent) with non-deductible commuting costs leads to net incomes of 500 (workplace A) and 450 (workplace B). The result is that taxation without a tax relief will distorts the allocation. The main aspect that is discussed in the present literature is the question whether an employee chooses first the place to live or the place to work. By given residences the literature presents good economic arguments for deductible commuting costs. Instead, given workplaces the majority of economists reject the deductibility of commuting costs. It seems to be a "chicken-and egg-problem" because an economic solution depends from the first decision about workplace or place to live. Work-related commuting can also yields an income if the firms pay for commuting in accordance to the marginal productivity, $w^D = B_D$. As Richter (2004, 7) has pointed out the worker maximizes his utility if he takes into account the net income $(1 - \tau(wLL + wDD)$ minus the related commuting costs $1 - \alpha \tau c D$ and the working burden $V(L+D)$, so it yields

$$(1-\tau)B_D - (1-\alpha\tau)c = V' = (1-\tau)Y_L \tag{3}$$

The budget constraint of the public sector can be written as

$$\tau(Lw^L + Dw^D) - \alpha \tau c D = constant \tag{3a}$$

while the social surplus is given by

$$Y(L) + B(D) - cD - V(L+D) \tag{3b}$$

At constant working burden production efficiency requires a maximization of the net output $Y(L) + B(D) - cD$, so production efficiency is characterized by (Richter 2004, 7)

$$B_D - c = Y_L \tag{3c}$$

A comparison between equation (3) and (3c) shows that production efficiency is not violated if $\alpha = 1$. In other words, production efficiency requires full deductible commuting expenses. This solution is also shown by Wrede (2000, 219f.).[3]

III.3. Commuting and Agglomeration Externalities

Given residences the workers have to choose whether they commute or not (Borck and Wrede, 2009, 26). This depends on the given wages individuals can earn and the individual commuting costs. A worker decides to commute if the individual wage on the workplace is higher than the individual marginal costs of commuting. High wages can result from agglomeration effects (Francis 2009), especially in the core of an agglomeration or a central business district (CBD). Since Krugman (1991) it is well-established the treatment on geographic concentration of activity within industries (Wren 2012; Rosenthal and Strange 2003), whereas Ellison and Glaeser (1999) emphasize the impact of natural advantages. Accordingly Wren (2012), explanations rely on agglomeration economies in some form, whereas Döring and Schnellenbach (2006) provide a survey on literature discussing regional growth based on the modern endogenous growth theory. “The agglomerative economies of interest are those that lead to increased profits from locating close to other activity in the same industry, which is known as a “spillover” (Ellison and Glaeser, 1997). These include the transfer of knowledge and technology, benefits from shared labor market and inter-firm trade, although not including inter-industry relationships” (Wren, 2012, 682). Further Francis (2009) shows the positive impact of agglomeration economies by reducing the degree of skill mismatch and in-migration to more concentrated markets caused by agglomeration economies “increases the real value of output and induces new firms to open vacancies which increases job creation” (Francis, 2009, 197).

From an economic point of view individual´s working activities can generate positive externalities in general (Henderson 1974). In this case social and private returns to working in a city differ. “In order to achieve first-best efficiency, workers should be confronted with the social effects of their commuting decision” (Borck and Wrede, 209, 26). The existence of agglomeration externalities leads to the economic problem that the individual does not take into account the positive effects for social welfare into his private decision to work and to

[3] Wrede (2001, 87f.) argues that in the case where residents live only in one region and has to choose between two regions of work the “commuting expenses should be deductible at more than 100%: β >. The choice of the region of work would not be distorted by a 100% deductibility of traveling expenses to work if commuting were not time consuming.” (Wrede, 2001, 89).

commute, respectively. So non-deductible commuting expenses or non-subsidized travelling costs in general would prevent the welfare-maximizing work activity. Against this background, commuting subsidies might be justified in the case of agglomeration effects. Nevertheless, the further question is how commuters should be subsidized.

Against this background the economic problem can be demonstrated with the framework of Vandyck and Proost (2012). They show in a simple but sufficient way the solution in a perfect competitive environment with perfect mobility and commuting. Figure 1 shows what happen if commuting between two regions (region 1 and region 2) is possible and the marginal productivity differs. Assume a given number of employees in both regions, the sum $\bar{L}$ is composed of L_1 residents in region 1 and L_2 residents in region 2.

Vandyck and Proost (2012, 661) assume region 2 can be a core of an agglomeration (e.g. a city with respective peripheries) or a central business district (CBD).[4]

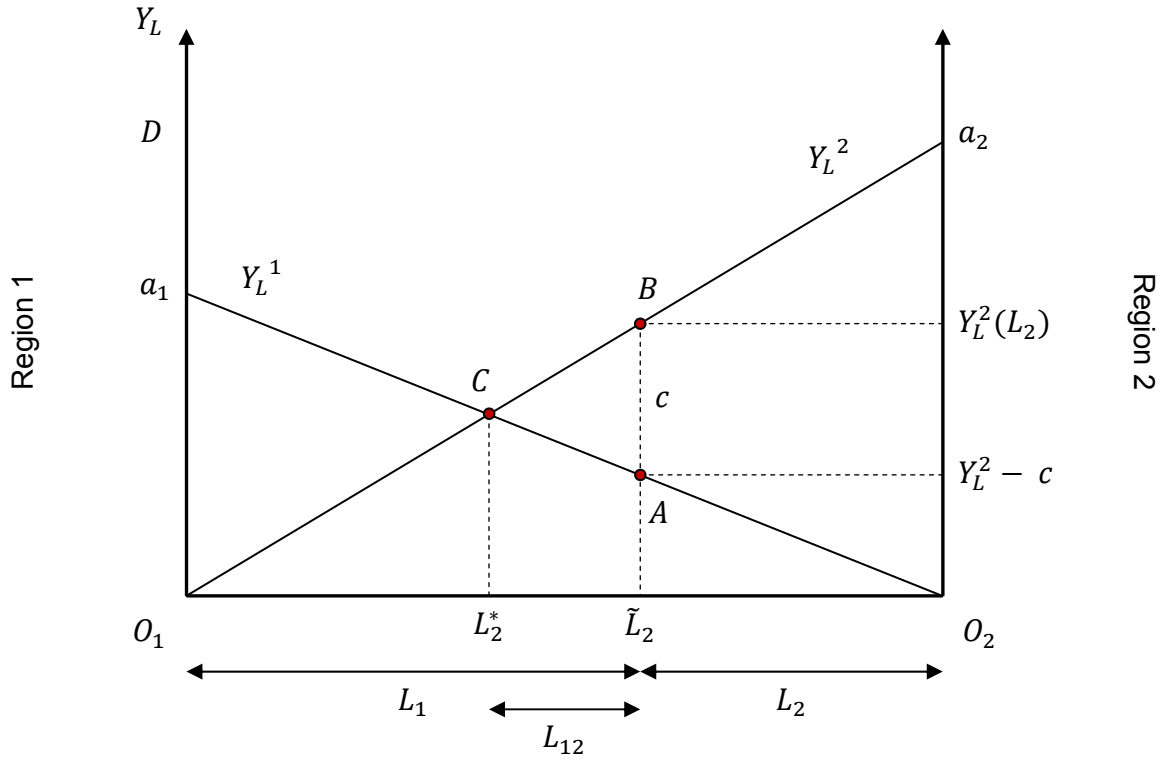

Figure 1 – Different marginal productivity and commuting

Source: According to Vandyck and Proost (2012, 662).

[4] As assumed by Borck and Wrede (2009, 27).

In the figure 1 we see the allocative inefficiency if only L_2 residents work in region 2 and L_1 work in region 1. If it is possible to motivate a share of residents from region 1 travel to region 2 day by day, the welfare can be increased. The social optimum requires equal marginal productivities (Y_L) in both regions (point C). We can show that the positive welfare effect in region 2 because of the commuters from region 1 to region 2 (L_{12}) (area $\tilde{L}_2 BCL_2^*$) is higher than the production loss in region 1 given by the area $\tilde{L}_2 ACL_2^*$. So the net benefit is described by ABC.

In the case of a perfect competition, the wages in region 1 and region 2 equals with the marginal productivity and the average commuting costs c are constant (Vandyck and Proost, 2012, 663). While the commuters have to bear the constant average commuting costs if they travel from region 1 to region 2, the equation (3c) ($B_D - c = Y_L$) must be fulfilled. However, this leads to the requirement of policy activities to reduce the average commuting costs c. Vandyck and Proost (2012, 663) propose decreasing activities by public transport investments to reduce the commuting costs.

Additional the presence of agglomeration externalities tightened the economic problems. Agglomeration externalities lead to increasing productivity. In a further discussion Vandyck and Proost (2012, 676f.) argue that the agglomeration effect,

$$\frac{\partial E(L_2 + L_{12})}{\partial L_{12}} > 0 \tag{4}$$

where $E(L_2 + L_{12})$ is the externality function and reflects increasing productivity (Vandyck and Proost, 2012, 676) is “external” because the firms can not influence that effect. The consequence is that the workers not receive a wage at the level of their real marginal product, so “the social optimum differs from the spatial equilibrium when workers are free to choose their job location. This provides an incentive for the social planner to provide a commuting subsidy, internalizing the agglomeration externality in the net wage, such the social optimum can be attained.“ (Vandyck and Proost, 2012, 677).

IV. COMMUTING SUBSIDIES IN AN INTERJURISDICTIONAL COMPETITION

The interjurisdictional competition of regions and cities on the “market of jurisdictions” is very intensive. Cities and (also city states, e.g. in Germany) compete with spending competences and taxation competences (e.g. Lyytikäinen, 2012; Buettner, 2001; Haughwout and Inman, 2001) for mobile factors. It is also well-established that the treatment with economic

interdependencies between city center and suburbs or core and periphery in an agglomeration is important for understanding specific public activities in the interjurisdictional competition. To internalize spillover effects on the level of municipalities the jurisdictional boundaries can be changed by higher governments. However, in the case of federal units such as U.S. states or German *Lände*r this is impossible, so the boundaries are almost fixed (see Buettner, Schwager and Stegarescu, 2004, 497). This applies to the three city states in Germany (Berlin, Free Hanseatic City of Bremen, Free and Hanseatic City of Hamburg) which combine two levels of public decisions, the state level and the level of local decisions. In the case of intercity commuting (Borck and Wrede, 2009) workers from the suburbs generate agglomeration rents in the agglomeration core (e.g. CBD of a city state), but an internalization of the positive externalities is not feasible.

A key question is how local jurisdictions compete with each other. Hauptmeier, Mittermaier and Rincke (2012) analyze the decision parameters for local policy-maker and find empirical evidence for an strategic interaction between (local) governments in simultaneously choosing policy instruments given for the local policy-maker. The both policy instruments, taxes and public inputs, are used from the local policy-maker as strategic instruments in the interjurisdictional competition on mobile factors. In Germany the cities (and also the city states) have taxation power of a local business tax ("Gewerbesteuer"), a real estate tax ("Grundsteuer") and taxation power of several local taxes (e.g. dog licence tax, tax on holiday homes, entertainment tax). And local governments can fairly autonomous invest in industrial real estates, basic local infrastructure (e.g. nursery schools, elementary schools, road transport systems, wastewater treatment, sewer system, parks etc.) and business-related (transportation) infrastructure (e.g. access roads to a business park). Against this background, considering the findings from the New Economic Geography by taking into account agglomeration effects open cities and in particular the city states should be motivated to incent mobile workers to work e.g. in the CBD´s.

V. DECENTRALIZATION OF COMMUTING SUBSIDIES

Borck and Wrede (2009) demonstrate that commuting subsidies are economic instruments to internalize agglomeration externalities caused by commuting workers. "Commuting subsidies would act as a welfare enhancing transfer from the core to the periphery, were rents locally captured" (Borck and Wrede, 2009, 32). To achieve efficiency it is necessary to offer tailored instruments which are able to internalize economic externalities. The current form of the commuter´s allowance ion Germany is not a tailored instrument. All journeys are treated equally. So both non-production-enhancing journeys and production-enhancing-journeys are subsidized. A better way would be to subsidize the real production-enhancing activities. If the production will be enhanced in agglomeration areas (e.g. metropolitan areas) based on agglomeration effects, the generated agglomeration rents (see Baldwin and Krugman, 2004)

can be skimmed to compensate commuters for the agglomeration externalities they have generated.

This would lead to the requirement of decentralized tax competences including the competences to allow deductibility. Unfortunately, based on the German fiscal constitution the *Länder*, the cities and also the city states are not allowed to set specific rules for accounting the tax base. However, after two fiscal federalism reforms in the last decade in politics and economics the strengthening of local and regional tax autonomy is being debated. Subsidizing the worker´s wages would be another way to compensate commuters. As Borck and Wrede (2009, 32) have pointed out location specific wages could be an alternative instrument. Therefore local governments need competences to pay wage subsidies. Otherwise administrative costs may rise. Reducing the commuting time for long-distance commuters is just as good as reducing the monetary costs of commuting. So local or regional governments can provide well-developed transport infrastructure to improve the traffic situation in the CBD. Further free parking or reduced parking fees can increase labor supply. Subsidizing the use of public transportation in form of reduced tickets (e.g. job tickets) is an instrument which is already used in Germany.

VI. CONCLUSION

Commuting to work is a well-known economic activity of individuals in modern industrialized countries. On the one hand in many cases commuting is a private decision, on the other hand in particular in agglomerations commuting can enhance the local production and therefore enhance the economic welfare. We conclude that in general commuting subsidies can, contrary to a standard analysis, be justified by a sufficient analysis based on the New Economic Geographic Theory. A general debate on increasing the global commuter´s allowance like the debate in Germany in Spring 2012 is not economically justified. Agglomeration effects and inadequate internalization requires internalization strategies to enhance the first best outcome and also the social welfare. In other words, subsidies can improve the social outcome so we get another view on subsidies. For city states in Germany it can be an advantage if they operate with sufficient tools including efficiency-enhancing subsidies. Finally, it has to be taken into account that decentralized competences to subsidize commuters can lead to a “subsidy competition”. The question here is whether jurisdictions and also city states are “two-sided markets” were the price structure matters and therefore subsidies in general not bring another source of inefficiency (Borck and Wrede, 2009, 32). However, we see a further need for an institutional interjurisdictional competition framework if the interjurisdictional competition between “jurisdictional platforms” is affected because of imperfect mobility or immobility respectively and the existence of utility-maximizing governments.

REFERENCES

Baldwin, R. E. and P. Krugman (2004). Agglomeration, Integration, and Tax Harmonisation. European Economic Review 48(1), 1-23.

Bareis, P. (2004). Begrenzung auf durchschnittliche Kosten des öffentlichen Personennahverkehrs. Ifo Schnelldienst 57(5), 9-11.

Borck, R. and M. Wrede (2009). Subsidies for intracity and intercity commuting. Journal of Urban Economics 66 (1), 25-32.

Borck, R. and M. Wrede (2008). Commuting subsidies with two transport modes. Journal of Urban Economics 63(3), 841-848.

Borck, R. and M. Wrede (2005). Political economy of commuting subsidies. Journal of Urban Economics 57(3), 478-499.

Bruckmeier, K., Zarth, M. and D. D. Schnitzlein (2009).Eine regionale Betrachtung der Sozialversicherung und raumwirksamer Bundesmittel - Wer partizipiert wie? In: Öffentliche Finanzströme und räumliche Entwicklung (H. Mäding, ed.), Vol. 232, pp. 105-133. Akademie für Raumforschung und Landesplanung, Hannover.

Brueckner, J. K. (2005). Transport subsidies, system choice, and urban sprawl. Regional Science and Urban Economics 35(6), 715-733.

Buettner, T. (2001). Local business taxation and competition for capital: the choice of the tax rate. Regional Science and Urban Economics 31(2-3), 215-245.

Buettner, T., Schwager, R. and D. Stegarescu (2004). Agglomeration, population size, and the cost of providing public services: an empirical analysis for German states. Public Finance and Management 4 (4), 496-520.

Döring, T. and J. Schnellenbach (2006). What do we know about geographical knowledge spillovers and regional growth? A survey of the literature. Regional Studies 40(3), 375-395.

Ellison, G. and E. L. Glaeser (1999). The geographic concentration of industry: Does natural advantage explain agglomeration? American Economic Review 89 (2), 311-316.

Ellison, G. and E. L. Glaeser (1997). Geographic concentration in U.S. manufacturing industries: A dartboard approach. Journal of Political Economy 105 (5), 889-927.

Färber, G. et al. (2009). Die regionale Inzidenz von Bundesmitteln. In: Öffentliche Finanzströme und räumliche Entwicklung (H. Mäding, ed.), Vol. 232, pp. 9-48. Akademie für Raumforschung und Landesplanung, Hannover.

Francis, J. (2009). Agglomeration, job flows and unemployment. Annals of Regional Science 43 (1), 181-198.

Gasche, M. (2004). Abschaffung der Entfernungspauschale ökonomisch nicht sinnvoll. ifo Schnelldienst 57 (5), 15-19.

German Council of Economic Experts (2005). Seize the chance – Boldly advance the reforms. Annual Report 2005/2006.

German Council of Economic Experts (2003). Consolidate public finances – Reform the tax system. Annual Report 2003/2004.

Haughwout, A. F. and R. P. Inman (2001). Fiscal policies in open cities with firms and households. Regional Science and Urban Economics 31(2-3), 147-180.

Hauptmeier, S., Mittermaier, F. and J. Rincke (2012). Fiscal competition over taxes and public inputs. Regional Science and Urban Economics 42(3), 407-419.

Henderson, J. V. (1974) The size and types of cites. American Economic Review 64 (4), 640-656.

Kono, T. et al. (2012). Optimal regulation on building size and city boundary: An effective second-best remedy for traffic congestion externality. Regional Science and Urban Economics 42(4), 619-630.

Krause-Junk, G. (2007). Ein Dauerbrenner der Steuerpolitik: Die Pendlerpauschale. Wirtschaftsdienst 87(11), 725-727.

Krugman, P. (1991). Geography and trade. MIT Press, Cambridge, Massachusetts.

Lyytikäinen, T. (2012). Tax competition among local governments: Evidence from a property tax reform in Finland. Journal of Public Economics 96(7+8), 584-594.

Richter, W. F. (2004). Pendeln, Entfernungspauschale und allokative Effizienz der Einkommensbesteuerung. ifo Schnelldienst 57(5), 5-8.

Rosentahl, S. S. and W. C. Strange (2003). Geography, Industrial Organization, and Agglomeration. Review of Economics and Statistics 85(2), 377-393.

Vandyck,T. and S. Proost (2012). Inefficiencies in regional commuting policy. Papers in Regional Science 91(3), 659-689.

Wrede, M. (2004). Kürzung der Entfernungspauschale sinnvoll! ifo Schnelldienst 57(5), 12-14.

Wrede, M. (2003). Tax deductibility of commuting expenses and residential land use with more than one center. CESifo Working Paper No. 972.

Wrede, M. (2001). Should commuting expenses be tax deductible? A welfare analysis. Journal of Urban Economics 49 (1), 80-99.

Wrede, M. (2000). Tax deductability of commuting expenses and leisure: On the tax treatment of time-saving expenditure. Finanzarchiv 57(2), 216-224.

Wren, C. (2012). Geographic concentration and temporal scope of agglomeration economies: An index decomposition. Regional Science and Urban Economics 42 (4), 681-690.