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Ageing municipalities, gerontocracy and fiscal competition

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ABSTRACT

We develop a simple model of fiscal competition among ageing municipalities. When ageing advances, gerontocracies and social planners gradually substitute publicly provided goods aimed at the mobile young population for publicly provided goods for the elderly. This substitution process does not only depend on the ageing itself but also on crowding effects and on the regional distribution of the elderly population. We show that fiscal competition prevents the exploitation of the young. When the share of the elderly is sufficiently large, the utility of the young is even higher in gerontocracies than in welfare maximizing societies. Due to fiscal competition, the gerontocracies will provide even more of the publicly provided good for the young than the social planner.

1. Introduction

Low birth rates and increased longevity lead to population ageing in many developed countries. This demographic transition will have wide-reaching political, economic and social consequences. Economics literature has so far mostly discussed the macroeconomic impact of ageing societies. This paper focuses on the local level and asks how demographic change will affect the provision of publicly provided goods. On the one hand, as the median voter's age increases the provision of publicly provided goods may shift toward those goods appreciated mostly by the elderly population. On the other hand, the competition among municipalities for the young and mobile intensifies, thus forcing the municipalities to provide more of those goods that make the location attractive for the younger population. In a model of fiscal competition among gerontocratic municipalities, we demonstrate that goods for the elderly may be excessively provided in the early phase of a gerontocratic regime. However, when the share of the old population becomes sufficiently large, the effect of fiscal competition dominates and an inefficiently high amount of publicly provided goods for the young population is supplied.

In the next decades, many European economies will undergo significant demographic changes. According to UN projections (United Nations, 2007), the countries in central and eastern Europe will experience the most rapid population loss. In southern and western Europe, the more significant demographic process will be ageing. Germany's population will only shrink by 0.12% by 2020.[1] However, the median age is projected to increase by as much as 5.2 years from 42.1 years in 2005 to 47.3 years in 2020.

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[1] All values pertain to the medium variant of the 2006 revision of the World Population Prospects Database by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, accessible at: http://esa.un.org/unpp.

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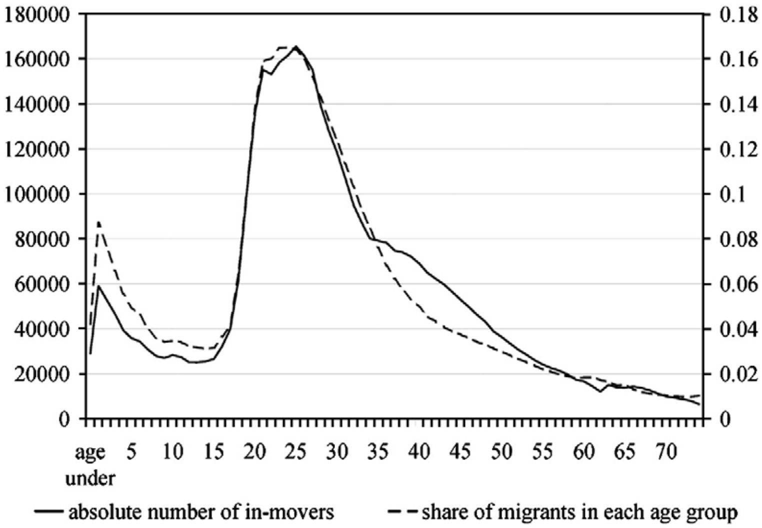

Fig. 1. Age distribution of intermunicipal migrants in Germany (2007).
Source: Federal Statistical Office.

Then only Italy is projected to have an even older population with a median age of 47.5 years. These shifts in the size and age structure can have significant consequences for the economy as a whole. In particular, the impact on capital markets (Abel, 2001; Börsch-Supan et al., 2002; Krueger and Ludwig, 2007; Poterba, 2001, 2004) and on public pension schemes (Breyer and Stolte, 2001; Casamatta et al., 2001; Demange and Laroque, 1999; Fehr, 2000; Sinn and Uebelmesser, 2002) has been extensively studied.[2] The focus on the aggregate demography often hides that even more pronounced demographic changes occur on the regional or local level.

The changing size and composition of the population poses many challenges for local policy makers. Downsizing of the infrastructure is needed in order to maintain fiscal balances. The portfolio of publicly provided goods has to be adjusted while taking into account the changing age structure. While the younger population may mostly desire access to jobs, schools or child care facilities, the elderly may prefer affordable public transport and access to specific recreational opportunities and cultural offerings. The necessary adjustments in the public budget may create conflicts between generations. As the median age increases, majority voting outcomes may shift to benefit the elderly population at the cost of the younger generations. Such generational conflicts in local service provision have been addressed in other contributions, in particular with respect to the provision of public education (e.g. Poterba (1998) for the US and Grob and Wolter (2007) and Cattaneo and Wolter (2009) for Switzerland). Konrad (1995) shows that gerontocracies have an excessive incentive to invest in immobile infrastructure as opposed to mobile human capital. Our model also contains a strategic investment motive on a subnational level. Haupt and Peters (2003) consider an overlapping generations model in which the contribution rates to public pension schemes lead to interregional competition. When the young can strategically migrate, their exploitation by the gerontocracy is limited. The exit option of migration also plays a crucial role in our model. Finally, the studies by Borge and Rattsø (1995, 2008) are closely related to our paper. They mainly focus on local services, such as child care and elderly care, and analyze the negative effect of ageing on the per capita spending on services for the younger cohorts. In contrast to our paper, the influence of local interaction and fiscal competition plays no role.

Fiscal competition arises in the context of generational conflicts since the young population is mobile, while the old are immobile. This is corroborated by empirical evidence on intermunicipal mobility. Fig. 1 illustrates the age distribution of intermunicipal migration in Germany in 2007. The solid line depicts the absolute number of in-migrants (left scale). The dashed line shows the percentage of intermunicipal migrants in each age group (migrants at age t/population at age t, right scale). Most migration occurs between age 20 and 35 when young people relocate because of job opportunities and family formation. Given the decision to move, the ensuing choice is made between alternative municipalities, e.g., in the vicinity of the workplace. Here, local amenities and publicly provided services clearly play a decisive role.

Our contribution examines the effects ageing has on the provision of publicly provided goods at the local level. The young population faces a threat once the elderly gain the majority, as a gerontocracy wants to provide less of the impure public goods for the young. However, the young will finally receive even more than under welfare maximization, if the share of elderly is sufficiently large. This seemingly counterintuitive result appears as fiscal competition for the young intensifies. As municipalities are often financed to a large extent through per capita grants, the local budget depends on the population size. To attract young families, even gerontocratic municipalities are forced to provide goods for younger cohorts. When ageing proceeds, fiscal

[2] Breyer and Stolte (2001) and Sinn and Uebelmesser (2002) take a political economy point of view on public pension reforms. Similar to our paper, Sinn and Uebelmesser (2002) consider the power of the old in a gerontocratic society. According to their calculations, Germany will be a gerontocracy in 2016 as pension reforms benefiting the younger cohorts will then become politically unfeasible.