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How Finland copes with an ageing population: adjusting structures and equalising the financial capabilities of local governments

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ABSTRACT

The study focuses on the challenges of the ageing population in Finnish public policies related to municipal structures and finances. First, we review how the impacts of the ageing population have been identified and how necessary policy responses and reforms of the municipal division in particular have been prioritised by recent central governments. Second, we evaluate how state grant policy has equalised the financial capabilities of municipalities to cope with the financial consequences of the ageing population. Our findings indicate that ageing is believed to increase municipal expenditures because the demand for care services in particular is growing. The analysis also demonstrates that the state grant system is capable of substantially equalising the differences in tax bases and spending obligations between municipalities. Nevertheless, central governments have planned ‘big-bang reform proposals’, introducing a completely new tier of democratic government and regionalising the most burdensome welfare services of municipalities.

KEYWORDS Ageing population; municipal division; municipal mergers; inter-municipal collaboration; fiscal equalisation; state grants

Introduction

Finland is one of the most rapidly ageing societies among OECD (Organisation for Economic Co-operation and Development) countries and, according to Pirhonen et al. (2020), it is the fastest-ageing society in Europe. In 2000, 14.8% of the Finnish population was 65 and over, but in 2019, the share was 21.8%. The overall national statistics also show that the birth rate in Finland has declined worryingly, especially in recent years. Furthermore, urbanisation has made many outlying districts nearly empty, but the more recent migratory trend is that people are relocating from small and mid-sized cities to around ten growth centres.

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Finland is an interesting case in local government studies. Municipalities hold a wide self-government while having the extensive delivery and funding responsibilities of centrally regulated public welfare services, including basic education, social services and health care. However, the ageing population and demographic decline are threatening the stability of this highly decentralised and municipalised welfare service system, as many municipalities have faced issues against their vitality and solvency.

The study focuses on the challenges of the ageing population in public policies related to municipal structures and finances. First, it finds out how the impacts of the ageing population have been identified and how necessary policy responses and reforms of the municipal division in particular have been prioritised by recent central governments. The reviews outline the major restructuring propositions that enable us to specify and compare the aspirations of the recent cabinets to adjust and radically change municipal structures and functions, and to summarise the realised development of municipal mergers and inter-municipal collaboration.

Second, the study reviews the financial health of local governments by comparing disposable revenues between municipalities with heavily aged and less-aged populations. The aim is to find out how central government policy towards local governments has equalised the financial capabilities of local governments to cope with the financial consequences of ageing.

Our analyses of government propositions to parliament show that, as the central governments have become increasingly concerned about the abilities of many municipalities to function and maintain local welfare systems, they have used compulsory municipal mergers, subsidised some voluntary mergers and increased statutory arrangements of inter-municipal collaboration as the major readjustment strategies to renew municipal organisations. However, the current central government feels that the country needs a radical reform of local public finances and service systems; therefore, it proposes the creation of new regional governments that will take responsibility for all municipal social services, health services and fire and rescue services.

The statistical analyses of the study show that the state grant system has been reformed and fine-tuned so that the present system recognises the financial problems associated with the ageing population and effectively equalises the fiscal preconditions of all municipalities.

Analytical framework

Disputing views of the optimal structures of government

Centralised and decentralised governmental structures are the extreme ends of an administrative continuum where centralised public service functions are

considered to represent standardised and monolithic supply while municipalities inherently provide locally adjusted solutions. The European Charter of Local Self-Government mandates that public responsibilities shall generally be exercised, in preference, by the authorities which are closest to the citizen. This has been interpreted to prioritise locally decentralised political and administrative structures through municipalities as small as possible. The ultimate justification for municipalities is based on political theory arguing that local governments are not simply organisations of public service delivery; they must also secure public interest by facilitating representative democracy and enabling the participation of local residents (Bailey 1999).

Fiscal federalism looks for an optimal division of duties between different tiers of government and argues how taxation, inter-governmental grants, spending competences and regulatory powers should be allocated to national, regional and local governments. The normative theory of fiscal federalism argues how to share state and local functions according to the aim of promoting the efficient allocation of a nation's resources for both production and consumption – 'allocative efficiency' (Bailey 2008). Municipalities have a high potential in allocative functions by responding to local market failures, and by default, a decentralised service structure is considered to support allocative efficiency by enabling the production of public services to match the preferences of local citizens. However, the disadvantages of local decentralised service systems are their limited economies of scale and difficulty in exercising strategically co-ordinated public policies (Bailey 1999, 2008). The criterion of revenue adequacy and fiscal needs states that the ability to collect taxes should match the needs for budgetary expenditures as perfectly as possible in order to have fit-for-purpose accountability mechanisms (Oates 1972).

Public choice theorists have argued that if public services are divided between several tiers of government, the relative costs and achievements of each tier become transparent, allowing residents to make separate judgements and allocate their electoral support and payments of taxes accordingly. Having a large number of multi-purpose local authorities are considered to promote public interest by maintaining inter-local competition, enabling citizens to make choices and empowering local residents to participate in and learn democratic processes and take financial responsibility for collective decisions. These arguments are associated with the famous Tiebout model, assuming that a highly fragmented structure of local governments is a market-type condition creating competitive pressures to local policymakers to attract mobile families and enterprises as new taxpayers (Boyne 1997; Briffault 1996).

Advocates of large-scale local authorities diminish the benefits of inter-municipal competition as they consider that merged municipalities essentially enhance the economic efficiency of public duties; this enables

economies of scale to be gained in service production and externalities of municipal actions to be internalised. Anyway, the claimed benefits are not undisputed since many international empirical studies have not been able to demonstrate cost savings or benefits of that sort as the direct impacts of municipal mergers (Bish 2000 ref by Dollery and Johnson 2005; Roesel 2017; Lüchinger and Stutzer 2002). Opponents of municipal amalgamation point out that mergers have adverse impacts on local democracy by weakening effective representation and robust citizen participation and making the societal engagement of local communities more complex (Dollery and Johnson 2005; Boyne 1997). However, an appropriate local government structure has remained an unsettled issue not only in political science but also in public sector economics (Bailey 1999).

The paradox of the decentralised Nordic countries

The Nordic countries are so-called welfare states in which constitutions define the basic and equal economic, social and educational rights of citizens. The specific and relatively abundant entitlements of citizens are indicated through welfare legislation, which also demonstrates the statutory service duties of local and regional governments (Kröger 2011).

The Nordic countries are said to be the most decentralised among the European countries as their municipalities provide and fund most of the welfare and community services (Mäkinen 2017; Reichborn-Kjennerud and Vabo 2016). The ultra vires doctrine is not applied, as local governments have general powers that also enable them to provide various voluntary services to local residents. Wide local self-government is a long Nordic tradition, and in Finland, it is strongly guaranteed by the constitution of the country (Mäkinen 2017).

The paradox of the decentralised welfare countries is that self-government allows local choices and priorities, but the welfare schemes and services aim to provide equal benefits for all citizens. The paradox urges supervision of the applied decentralised public policies while creating conflict between the central government and regional and local governments. The decentralised administrative structures also need continuous stabilisation measures, but at the same time, they are exposed to various re-structural or rescaling aspirations (Mäkinen 2017; Kröger 2011).

The position of local governments is pronounced in Finland, as it is one of the few EU Member Countries whose public administration is organised by only two tiers of democratic government: central government and the municipalities. Finnish municipalities are responsible for providing public social welfare, education (except university education), culture, technical infrastructure and local public utility services, and unlike in the Scandinavian countries, Finnish municipalities are also responsible for organising and funding public

health services. Due to the intense decentralisation and relatively small size of the municipalities (the median Finnish municipality has only approximately 6,100 inhabitants), municipalities' societal role is remarkable but heavy.

Municipal taxation and the financial equalisation of municipalities

The Finnish municipalities' self-government is also guaranteed by the municipal taxation powers highlighted in [Table 1](#). Nordic municipal taxation is essentially based on an income tax, which is also the main source of municipal revenues in Finland. Furthermore, municipalities have the power to tax property owners (i.e., of real estate), but the share of property tax revenues among all municipal revenues is relatively small. Municipalities do not have the power to tax enterprises. Instead, they receive a share of the national corporate tax revenues, but these tax revenue streams have been unstable because of responsiveness to business cycles and tax policy changes.

As the differences between municipalities' revenues and cost factors have been remarkable, the revenue adequacy criterion is arranged through a state grant system providing grants that cover approximately 20% of the total municipal revenues. For a long time, earmarked specific grants to local authorities were bound by laws and regulations limiting local autonomy in practice before major reforms that transferred former earmarked grants to general grants took place in the 1980s and 1990s. In Finland, this reform happened in 1993, with the introduction of a grant system that consisted of equalisation schemes that levelled off differences in tax revenues and spending needs between municipalities (Oulasvirta 1997; Moisio, Loikkanen, and Oulasvirta 2010). There were also some other regulatory reforms, giving more power to local politicians to decide and allocate money according to local preferences. These reforms gave more leeway to realise the well-known potential benefits of decentralisation (Oates 1972, 2005).

Based on the spending needs criteria, each municipality has its own calculatory costs in the equalisation of municipal spending needs. All municipalities have the same financing share (€3599/inhabitant for the year 2018) of their calculated service costs. Formally, this is full equalisation between their

Table 1. Municipal autonomous taxation powers.

| | Municipal income tax | Municipal property tax |
|--|--|---|
| Subjects | Salaries, pensions, many social benefits, but not incomes from capital | Residential and business buildings and land except forests and farmlands |
| Tax rates | Municipalities have the right to decide the tax rate without limitations | Municipalities have the right to set the tax rates within the ranges defined for different property classes |
| Share (%) of municipal total revenues in 2018 | 41.8% | 4.0% |

own financing shares per capita and their calculatory service costs, which vary between municipalities based on their spending needs. If the real costs are higher than the calculated costs, this part gets no equalisation. If the real costs are lower than the calculated costs, the municipality still gets the whole grant (in other words, the difference between calculatory service costs and their own financing share per capita). This is an incentive to economise service production because the efficiency benefit is not cancelled via a corresponding grant decrease. The problem is that the state has raised the municipalities' self-financing share in recent years. If cabinets cut grants to low levels, then equalisation with grants will lose its force.

Revenue equalisation is operated by the Ministry of Finance, which equalises calculatory tax revenues that the municipality could raise if it used the country's average tax rates on taxable personal incomes and property tax bases. Revenue equalisation comprises municipal income tax, municipal property (real estate) tax, and the municipalities' share of corporate tax revenues. The revenue equalisation guarantees all municipalities 80% (compensation level of 80%) of the average per capita calculatory tax revenues (threshold of 100%) as a supplement to their block grants. Municipalities whose calculatory tax revenue is above the threshold must pay 37% as well as an additional percentage based on a logarithm of the surplus amount to the funding as a reduction in their block grants (Moisio, Loikkanen, and Oulasvirta 2010; The law of state grants to municipal basic services 29.12.2009/1704).

Materials and methods

We performed document analyses by reviewing official documents of the state government. The documents included law-drafting materials, especially governmental propositions to parliament from 1992 to 2019 published in full text in Finlex, an online database of Finland's Ministry of Justice. In these thematic reviews, we identified how the impacts and associated risks of the ageing society's development had been articulated by central governments and what kinds of structural rescaling measures have been prioritised. We also compiled statistical data from municipal central associations to illustrate the incurring of debt and the realised structural changes of the municipal sector.

Then, using financial data and demographic statistics from Statistics Finland (2020) and the Association of Finnish Regional and Local Authorities, we analysed the financial positions and service costs of different municipalities and the relationships between their demographic characteristics and their disposable tax and grant revenues. We divided municipalities into four groups according to the percentage of older people among the general population and calculated the averages of several variables in these four groups (Table 4–7). We also calculated correlations and ran regression

analyses (ordinary least squares, OLS) using the SPSS statistical software. In our first regression model, the dependent variable was the disposable tax and grant income per inhabitant, and in the second model, it was the surplus per inhabitant. The independent variables of the calculated regression models included mainly age and other population-based indicators, which are central factors associated with the financial capacity of municipalities.

Recognition of the ageing society development

According to some previous studies, the Finnish welfare state policies implemented through local authorities have met with growing problems. The deteriorating dependency ratio, uneven migration flows and different unemployment rates increasingly differentiate the service needs and abilities to collect local taxes between areas (Moisio, Loikkanen, and Oulasvirta 2010; Sjöblom 2020). The financial difficulties of local governments have increased, but their own means of responding to these challenges have remained limited, meaning that increases in tax rates and debt are the only potentially powerful revenue-based coping strategies (Nelson 2012; Ladner and Soguel 2015). Figure 1 highlights that municipal debt has more than tripled within two decades in Finland. The OECD (2018) has also emphasised that Finnish public finances are under pressure from the rapidly ageing population, increasing public expenditures, while globalisation and high unemployment and low employment rates create challenges in raising revenues.

According to our document analyses, the ageing population as a societal trend has been a source of serious concerns for recent cabinets, as it has been referred to in many governmental propositions to parliament (e.g. government bills to parliament). The development has been associated with the decreasing birth rate and the improving longevity of the population, while urbanisation and selective migration have been named as parallel phenomena, making small and rural local authorities and the Eastern and Northern parts of the country the worst-hit areas.

Recent central governments have considered that the ageing society's development increases demand for services, especially social and health services, accelerates the retirements of municipal workers, increases the demand for new municipal recruitment even though it may be difficult to find new workforces in service industries, increases municipal service costs and expenditures and causes difficulties in controlling municipal expenditures. In contrast, the ageing society's development also decreases demand on municipal education services. For example, in 2000, there were 4,009 comprehensive (primary and elementary) schools, compared to 2,279 in 2019.

Central governments have articulated varied public policy measures to change fiscal and related policies and how public authorities are organised and operate. They are considered a necessary means of coping with the

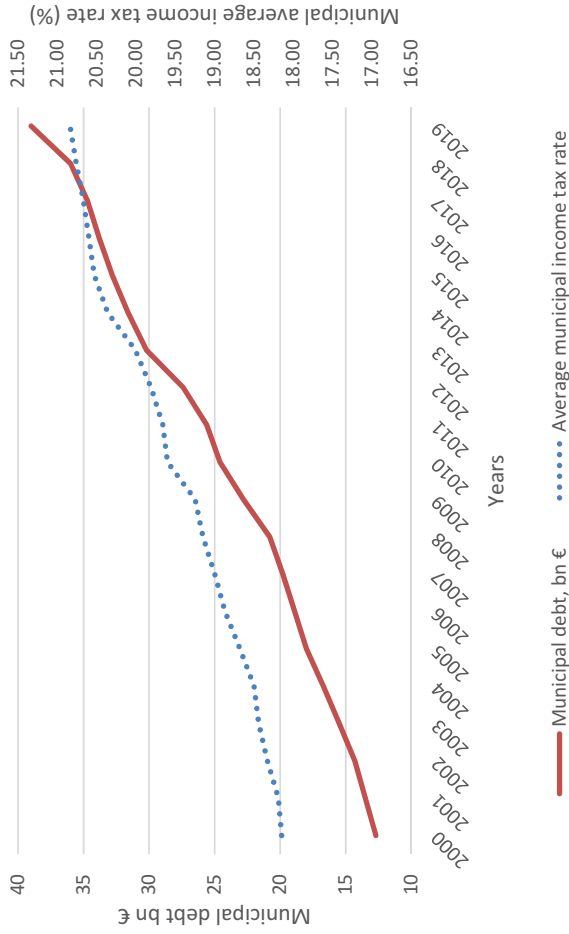


Figure 1. The development of total municipal debt and municipal average income tax rate, 2000–2019.

ageing population. Creating economic growth and improving cost-effectiveness and productivity are often named as vital but very generic policy measures for responding to the development. A remarkable and general reform directly associated with these aims was a new pension system, which passed parliament in 2015. The earliest eligibility age for old-age pension was raised from 63 to 65, and the forthcoming eligibility age for old-age retirement was linked to life expectancy. It's widely expected that the reform will extend work careers. According to the latest pension reports, average work careers became 3.4 years longer between 2000 and 2018 (Finnish Centre for Pensions 2019). Our analyses of government proposals also revealed that more specific but reasoned coping means would be the diversification of public service supply, digitalisation of municipal services, increased use of services on wheels, home help services, itinerants, and better utilisation of voluntary workers.

Ageing motivates efforts to consolidate municipal structures

Central governments have persistently focused on local government structures, while some members of the political elite have, from time to time, claimed that the municipal division is outdated, providing low value for money. The governmental proposals to parliament have included explicit and enhanced demands to renew the municipal division, increase inter-municipal collaboration and create wider catchment areas of municipal services. These reformist tendencies have accumulated into major reorganisation proposals based on the fundamental idea of consolidating and unifying the local government structures summarised in [Table 2](#). These proposals are accompanied by an OECD (2018) survey arguing that municipal social and health services suffer from inefficiencies partly because the service system is fragmented as statutory service responsibilities are decentralised to many autonomous local authorities.

As [Table 2](#) demonstrates, the central government's plans have been successive and ambitious. The Municipal and Service Structure Reform was a fixed-term national reform programme between 2007 and 2011 that successfully delivered voluntary municipal amalgamations by providing state government merge subsidies. By contrast, a couple of subsequent reform proposals have not been successful. The Social and Health Care Reform was the first proposal, which totally failed in 2015 (Valkama, Asenova, and Bailey 2016). However, the architects of the proposals considered that the potential impacts of the ageing population may be so serious that the municipal-based system of public welfare services would not be able to cope adequately. The next and even larger fiasco was the Regional Government, Health and Social Services Reform, which included a radical proposal to regionalise municipal social, health, fire, rescue and some other services by creating new, democratic and semi-autonomous



Table 2. Proposed and implemented regionalisation reforms as a response to the ageing society and related developments.

| | Vanhanen's cabinet | Katainen's & Stubb's cabinet | Sipilä's cabinet | Marin's cabinet |
|---------------------------------------|---|--|---|---|
| Name of the reform | Municipal and Service Structure Reform | Social and Health Care Reform | Regional Government, Health and Social Services Reform | Health and Social Services Reform |
| Published in | 2006 | 2014 | 2017 | 2020 |
| Highlighted impacts of ageing | Demand for nursing and caring will grow, municipal expenditures will increase, difficulties recruiting new social and health care workers will increase, needs for childcare and education services will decrease | Service demand will increase especially in social and health care sectors, municipalities have to hire more employees, expenditures on social and health care will grow, municipalities will raise taxes and incur debts | Remarkable expenditure pressures of local authorities, especially in social and health care, difficulties recruiting new social and health care workers | Increased demand for nursing and health services, remarkable expenditure pressures of local authorities, difficulties recruiting new social and health care workers |
| Main identified societal risks | Unstable economic preconditions, loss of regional vitality, rapid growth of the unit costs of public services | While population is ageing and service needs are growing, the municipal-based system of public welfare services is a risk itself, regional equality between citizens, customer and patient safety may be jeopardised | Equal access to municipal services is at risk | Unsatisfied service needs, regionally unequal service supply |
| Primary aims | To provide a sufficient structural basis in the future for the provision of municipal services, improve productivity, limit the growth of municipal expenditures, improve the steering of local public services | To guarantee equal social and health care services for the population | To improve productivity, save on public expenditures, limit the growth of social and health care expenditures | To decrease the differences in public welfare and health, guarantee equal and high-quality social and health care services for the population, improve security, improve availability and accessibility of services, guarantee availability of skilled labour, limit the growth of service expenditures |

(Continued)

Table 2. (Continued).

| | Vanhanen's cabinet | Katainen's & Stubb's cabinet | Sipilä's cabinet | Marin's cabinet |
|------------------------------|---|--|--|---|
| Major reorganisations | Regionalisation of municipal services through inter-municipal collaboration: subsidised and voluntary municipal mergers, compulsory inter-municipal collaboration to guarantee a sufficient population base (20,000 inhabitants in primary health care and closely related social services, 50,000 inhabitants in vocational education) | Regionalisation of municipal services through inter-municipal collaboration: creation of five inter-municipal joint bodies and catchment areas responsible for the organisation of public social and health care | Regionalisation of municipal services through new regional governments: 18 new state-funded regional governments with regional elections and limited self-government responsible for social and health care, fire and rescue services, regional planning and some other public services; regional citizens would have freedom of choice between many public and private social and health services | Regionalisation of municipal services through new regional governments: 21 new state-funded regional governments; City of Helsinki as a region and joint municipal authority of the Helsinki University Central Hospital; new regions would have regional elections and limited self-government responsible for social and health care and fire and rescue services |
| Implementation | Number of municipalities fell by 95 due to mergers implemented in 2006–2011 and new collaborative arrangements (i.e. catchment areas) introduced | Reform proposal failed in parliament in 2015 | Reform proposal failed in parliament in 2019 | To be seen |

regional governments and expanding the freedom of choice of patients, including inter alia the wider use of service vouchers and the introduction of personal care budgets.

The newest reform proposal, given to parliament in 2020, also includes a scheme for the regionalisation of municipal social, health, fire and rescue services through new regional governments. The proposal has many similar elements to the previously failed proposal, but this time the plans to expand the residents' freedom of choice are excluded.

As [Table 2](#) demonstrates, the central government has evaluated the impacts of the ageing population quite consistently by highlighting the growing demand for social and health care and increasing public expenditures. The potentially increasing inequalities among citizens have distressed the cabinets, as they have considered uneven regional development as a probable and very serious threat to society, jeopardising the egalitarian distribution of basic welfare. A common feature of the proposed and implemented reorganisation reforms has been a shared vision that the unification and consolidation of municipal services and structures is a solution, but the cabinets have had differences concerning the form, scope and scale of regionalisation and the powers of local residents as service customers.

Municipal mergers and development of inter-municipal collaboration

With Finland being the most sparsely populated country in the EU, the fundamental structural problem of local governments has been their small size (Bailey 1999). This long-term problem has been addressed by municipal mergers and inter-municipal collaboration. The mergers have been either voluntary or compulsory (i.e. top-down), for example, in the 1970s and again in 2014–2015, but this conceptual classification is somewhat rough or artificial. Namely, the central governments initially granted cost compensations and more recently special incentive grants to wheedle municipalities, at least formally, into voluntary mergers. The valid incentive grants are discretionary, in other words non-automatic, but some argue that state-funded subsidies are necessary because there is a need to consolidate municipal structures, especially because of the ageing population and the pressures of public finances. [Table 3](#) demonstrates how the number of municipalities developed from 1972 to 2017.

According to empirical studies, municipal mergers have not delivered the expected savings on municipal spending. Vartiainen (2015) and Saarimaa and Tukiainen (2018) compared changes in the expenditures of merged municipalities and non-merged comparable municipalities and could find no evidence of cost savings with municipal mergers. Furthermore, Saarimaa and Tukiainen (2015) demonstrated that mergers

generate considerable one-off extra expenditures since municipalities seem to hastily spend money between the amalgamation decision and the actual amalgamation.

As, practically, all municipalities have been too small to take care of the most demanding welfare duties, the legislature already made inter-municipal collaboration compulsory a long time ago, as so-called statutory joint municipal authorities (sometimes called joint municipal boards) were introduced for the first time in 1948 to improve the economies of scale of special health care. Later on, the use of these bodies was also made compulsory in regional planning and development and in the care of disabled people. Besides compulsory joint municipal authorities, municipalities have established some voluntary joint municipal authorities especially around local public utilities. However, the system of inter-municipal organisations has proven to be fragmentary and asymmetric (Mäkinen and Niemivuo 2014; Anttiroiko and Valkama 2017). Nevertheless, Table 3 demonstrates that the system has also had some flexibility, as the number of the joint municipal authorities has scaled up and down during previous decades.

The Municipal and Service Structure Reform extended inter-municipal collaboration by introducing statutory catchment areas in social and basic health care, but it also opened up an avenue for more flexible methods of collaboration through contractual commitments without the creation of separate legal entities. A special host municipality contract model was legalised, which means an outsourcing arrangement between local authorities combined with a shared governance system through a joint political committee with a co-ordination function.

Table 3. Development of the number of municipalities, average population size of municipalities, voter turnout in municipal elections, share of urban municipalities, and number of joint municipal authorities between 1972 and 2017 (Statistics Finland 2020; The association of Finnish local and regional authorities 2020).

| Year | Number of municipalities | Average population size of municipalities | Voter turnout (%) in municipal elections | Share (%) of urban local governments of all municipalities | Number of joint municipal authorities |
|------|--------------------------|---|--|--|---------------------------------------|
| 1972 | 512 | 9,089 | 75.6 | 10.2 | 321 |
| 1976 | 475 | 9,960 | 78.5 | 13.3 | 384 |
| 1980 | 464 | 10,318 | 78.1 | 18.1 | 403 |
| 1984 | 461 | 10,616 | 74.0 | 18.2 | 381 |
| 1988 | 461 | 10,747 | 70.5 | 20.4 | 422 |
| 1992 | 460 | 10,989 | 70.9 | 20.4 | 286 |
| 1996 | 455 | 11,280 | 61.3 | 22.4 | 250 |
| 2000 | 452 | 11,463 | 55.9 | 23.7 | 231 |
| 2004 | 444 | 11,794 | 58.6 | 25.0 | 217 |
| 2008 | 415 | 12,834 | 61.2 | 27.2 | 164 |
| 2012 | 336 | 16,151 | 58.3 | 32.1 | 130 |
| 2017 | 311 | 17,727 | 58.8 | 34.4 | 118 |

Effective fiscal equalisation of municipalities

We analysed the financial health of municipalities against municipal classes consisting of heavily aged municipalities, two medium classes regarding ageing and against the most favourable class of municipalities with a less-aged population. We used the financial health figures applied in Finland when assessing the financial health of municipalities: income tax rate (the main tax source of municipalities), accrued deficit or surplus and the debts of the municipal group. In these analyses, we used consolidated debts per inhabitant because municipalities have divided tasks differently between their own core organisation and municipally owned enterprises and other service producers. This combined (e.g. group) figure can be considered as a better indicator of local government solidity.

The average key financial figures do not differ greatly between the groups of municipalities. However, the accrued surplus per inhabitant is largest in the municipalities with the most aged people. It seems that, in this least favourable group, the equalising grant system added to the municipalities' own financial management policies is able to effectively compensate for the cost difference.

Although it is mostly aged municipalities that have confronted the strongest depopulation (Table 6) and highest social and health care expenditure per inhabitant (Table 5), their key financial ratios are not worse (Table 4) than those of other municipalities with more favourable conditions. This is an elementary finding in our study, its key reason being the strong equalisation effect of state grants on municipalities.

The equalising power of the grant system is illustrated in Table 7. Municipalities with the largest share of old people also have the highest grant and tax income per inhabitant.

The revenue equalisation system, which provides 80% of the average per capita calculatory tax revenues for all municipalities, supplements municipalities' block grants based on spending needs. Spending needs equalisation is financed by the central government, while tax revenue equalisation is financed partly by local governments. The basic services block grant uses the following criteria for social and health care and elementary school services: sizes of variable age groups,¹ unemployment and the morbidity rate of municipal inhabitants. Additional criteria are bilingual inhabitants, inhabitants with foreign language, island municipality, population density and low educational background.

The block grants for factors other than basic education and culture are based on the following criteria: for secondary and vocational schools, the criteria include calculative cost €/student varying between institutions and study programmes; other cultural institutions (museums, theatres, orchestras, etc.) and youth and sports activities are based on €/inhabitant or €/hour of teaching or €/person labour year.

Table 4. Municipalities classified by the size of the old people's group and some averages of financial variables of year 2019. (Source: Statistics Finland and the association of Finnish regional and local authorities, elaborated by the authors).

| Municipality | | | | Accrued | Debts of |
|-------------------------------|-----------------------|-----------------------|-----------------|-----------------|--------------|
| Percentage of people | Number of inhabitants | Number of inhabitants | Income tax rate | surplus/deficit | the group |
| Share (%) 65 years and older: | 31.12.2013 | 31.12.2018 | % | €/inhabitant | €/inhabitant |
| 34–43 (Group 1) | 3,663 | 3,354 | 20.88 | 1 876 | 4 503 |
| 28–33 (Group 2) | 7,311 | 6,908 | 21.03 | 1 204 | 5 113 |
| 21.8–27 (Group 3) | 11,565 | 11,221 | 20.90 | 1 120 | 4 967 |
| 9.9–21.7 (Group 4) | 48,447 | 50,893 | 20.24 | 1 190 | 5 286 |

Table 5. Municipalities classified by the size of the old people's group and some averages of current costs per inhabitant of year 2019. (Source: Statistics Finland and the association of Finnish regional and local authorities, elaborated by the authors).

| Municipalities | Percentage of people | Current net costs | Social and health care net costs | Elderly care | Special hospital health care |
|----------------|-------------------------------|-------------------|----------------------------------|------------------|------------------------------|
| N | Share (%) 65 years and older: | € per inhabitant | € per inhabitant | € per inhabitant | € per inhabitant |
| 56 | 34–43 | 7 344 | 4 816 | 938 | 1 538 |
| 82 | 28–33 | 6 620 | 4 123 | 712 | 1 393 |
| 96 | 21.8–27 | 6 168 | 3 616 | 565 | 1 316 |
| 60 | 9.9–21.7 | 5 482 | 3 002 | 380 | 1 170 |

Table 6. Municipalities classified by the size of the old people's share and some averages of demographic variables of year 2019. (Source: Statistics Finland and the association of Finnish regional and local authorities, elaborated by the authors).

| Municipality | People of age | | People of age | | Dependency ratio: | Population change |
|------------------------------|----------------|------|---------------|---|-------------------|-------------------|
| Percentage of people | Municipalities | 65 | 75 | Ratio of non-working group per working-aged group | | 2014–2018 |
| Share (%) 65 years and older | Number | % | % | | | % |
| 34–43 | 56 | 36.9 | 16.8 | 90.8 | | –8.13 |
| 28–33 | 82 | 30.9 | 13.9 | 81.0 | | –6.01 |
| 21.8–27 | 96 | 27.8 | 12.2 | 76.2 | | –4.24 |
| 9.9–21.7 | 60 | 18.5 | 7.5 | 63.3 | | 2.80 |

Especially in the block grant for social and health care, the age group of old people carries a strong weight. The combined group consisting of the three oldest groups of people have a 39% weight, and the 85 or older group has a weight of 28% of the calculated municipal basic social and health care and related expenses of which the grant is a share that is the same for all municipalities. This explains the strong equalising effect favouring municipalities with a disadvantageous age structure. The correlations give



Table 7. Municipalities classified by the size of the old people's group, tax income and grant income of year 2019. (Source: Statistics Finland and the association of Finnish regional and local authorities, elaborated by the authors).

| Municipality | Tax income €/inhabitant | Grant income €/inhabitant | Total Tax and grant income | Share (%) of Children (0–6 years old) | Share (%) of Old people (65 or older) |
|-------------------------------|----------------------------|------------------------------|-------------------------------|--|--|
| Old people share (%) by group | | | | | |
| Group 1 (34–43%) | 3 384 | 3 869 | 7 252 | 4.3 | 36.9 |
| Group 2 (28–33%) | 3 375 | 3 075 | 6 450 | 5.8 | 30.9 |
| Group 3 (21.8–27%) | 3 612 | 2 389 | 6 001 | 7.0 | 25.2 |
| Group 4 (9.9–21.7%) | 3 854 | 1 513 | 5 367 | 8.7 | 18.5 |

concentrated information on the variation between grant income per inhabitant and other variables (Table 8).

The larger the share of old people (people 65 or older) and the higher the income tax burden (rate) in the municipality, the more grant income per inhabitant the municipality has. This overall picture of correlations supports our observation of the strong equalisation effect of the grant system in relation to the ageing phenomenon. The share of old people was also the strongest explanatory factor for grant money in a regression analysis with the same variables as the independent variables (not shown here).

The share of old people was also the strongest explanatory factor for the combined variable of tax and grant income per inhabitant (Table 9).² The combined variable shows the main money source of municipalities (basic income) that is usable for social and health care and other obligatory tasks. With this regression analysis, we show that the age variable has a strong impact on the available main money resources per inhabitant in Finnish municipalities.

If the equalisation mechanism is efficient towards local governments, those municipalities with unfavourable circumstances and high spending needs caused by service provision will end up with a higher level of tax and grant money than those with favourable circumstances and relatively lower spending needs.

The results of the regression analysis show that the size or population density of the municipality does not explain the amount of tax and grant money per inhabitant. Furthermore, the income tax rate (variation range 16.5–22.5%) and all other variables except the surplus variable explain less than the share of old people.

Inhabitants with a foreign language is a variable that has a negative coefficient. Immigrants live mainly in big cities. In the whole equalisation system (consisting of both tax equalisation and spending needs equalisation) they end up as either net payers or modest net receivers. The coefficient should not be negative when the other variables are controlled, if the size measured with inhabitants is included, and if the grant system compensates for the spending needs of people with foreign languages.

The Nordic model of the equalisation policy is an important institutional factor. Reducing differences between municipalities helps all municipalities to have quite the same possibilities to provide basic welfare services: municipalities with the highest ageing problems also have more basic income per inhabitant to cope with their heavy social and health care costs.

We also ran a regression analysis using the accrued surplus per inhabitant as a dependent variable. Table 10, which also includes multicollinearity tests with acceptable results, shows that the share of old people also explains (with a positive coefficient) the financial condition.



Table 8. Correlations between grant income per inhabitant and other variables.

| | Inhabitants 2018 | Population change | Surplus per inhabitant | Debits per inhabitant | Income tax rate | Share of children | Share of old people | Share of people with foreign language | Population density |
|--|---------------------|----------------------|---------------------------|--------------------------|--------------------|----------------------|------------------------|--|-----------------------|
| Grant income per inhabitant | -.377* | -.301* | 0.074 | -0.008 | .366* | -.431* | .700* | -.464* | -.378* |
| Pearson correlation | 0.000 | 0.000 | 0.208 | 0.887 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Sig. (2-tailed) | 294 | 294 | 294 | 294 | 294 | 294 | 294 | 294 | 294 |
| N | | | | | | | | | |

*Correlation is significant at the 0.01 level (2-tailed).

Table 9. Regression model (ordinary least squares) of the dependent variable of combined tax and grant income per inhabitant. Data for variables were collected from the 2019 municipal statistics of the association of Finnish local authorities.

| Variables | UnStd | | Std. | | Collinearity | | |
|---|----------|----------|-------|--------|--------------|-----------|-------|
| | B | Error | Beta | t | Sig. | Tolerance | VIF |
| (Constant) | 2110.659 | 1126.474 | | 1.874 | .062 | | |
| Percentage population change (2014–2018) | –12.198 | 11.461 | –.070 | –1.064 | .288 | .339 | 2.949 |
| Accrued surplus per inhabitant | .133 | .029 | .212 | 4.529 | .000 | .659 | 1.517 |
| Debts per inhabitant | .061 | .023 | .107 | 2.590 | .010 | .851 | 1.176 |
| Income tax rate (%) | 76.447 | 52.572 | .078 | 1.454 | .147 | .507 | 1.971 |
| Share of old people | 82.596 | 8.063 | .621 | 10.244 | .000 | .394 | 2.538 |
| Share of inhabitants with foreign language | –47.145 | 16.476 | –.143 | –2.861 | .005 | .576 | 1.736 |
| Population density | .212 | .183 | .060 | 1.157 | .248 | .542 | 1.845 |

Number of observations: 294

Dependent Variable: Combined tax and grant income per inhabitant

Durbin–Watson 1.847

Adjusted R Square 0.576

Discussion and conclusion

Municipal finances have become increasingly unsustainable in recent decades in terms of both intergenerational equity and autonomous financial capacity. Municipal tax rates have risen and municipalities have run into debt while the share of 65 and over population has increased substantially. Although the municipal sector will receive some perceptible relief from the pension reform of 2017, which raises the retirement age and links it to life expectancy, it is widely believed that the fiscal stress of the municipalities will not only continue in general but also worsen in some particular municipalities.

Finnish national and local policymakers have responded to the pressures of municipalities by merging them, which has closed down the operations of many small and rural municipalities that are too small to survive alone in financial hardships. However, it is difficult to demonstrate methodologically how much the ageing population as such has contributed to local merging decisions, as many marginalised municipalities have also suffered a rapid decline of classic industries and outmigration.

Our findings also demonstrate that state-run policies of shared services have become more dominant as the obligatoriness of inter-municipal collaboration has increased. These findings parallel some other studies that have reported strengthened state control (Kröger 2011) and statutorily increased use of cooperative municipal services (Sjöblom 2020; Anttiroiko and Valkama 2017). The Finnish municipal restructuring strategy has progressed in the opposite direction of the public choice preference associated with the advantages of inter-municipal competition, as the municipal mergers have cut

Table 10. Accrued surplus per inhabitant in municipalities explained with a regression analysis (OLS). Data for variables collected from the 2019 municipal statistics of the association of Finnish local authorities.

| Variables | UnStd | | Std. | | | Collinearity | |
|---|------------|----------|-------|--------|------|--------------|-------|
| | B | Error | Beta | t | Sig. | Tolerance | VIF |
| Constant | 13,919.550 | 2107.803 | | 6.604 | .000 | | |
| Percentage population change (2014–2018) | −4.527 | 23.016 | −.016 | −.197 | .844 | .339 | 2.948 |
| Debts per inhabitant | −.069 | .047 | −.077 | −1.480 | .140 | .857 | 1.167 |
| Income tax rate (%) | −673.012 | 97.821 | −.429 | −6.880 | .000 | .591 | 1.692 |
| Share of old people | 56.158 | 15.850 | .265 | 3.543 | .000 | .411 | 2.431 |
| Share of inhabitants with foreign language | −55.988 | 32.924 | −.107 | −1.701 | .090 | .582 | 1.719 |
| Population density | 1.668 | .354 | .295 | 4.710 | .000 | .584 | 1.713 |

Number of observations: 294

Dependent Variable: Accrued surplus per inhabitant

Adjusted R Square 0.327

Durbin–Watson 2.015

down the number of municipalities, and municipal-municipal collaboration has woven local interests together. These developments are similar to other European countries which have had many small municipalities (Lowndes and Gardner 2016; Baldersheim and Rose 2010).

Interestingly, our study shows how the strong grant policy gives even poorer and ageing municipalities about the same financial starting points as others. We were able to identify that, although a large number of Finnish municipalities suffer one way or another from declining demographics, there are no remarkable differences in the financial ratios between the municipality groups. So far, the country has avoided the strong polarising effect observed, for example, in the United Kingdom (Gray and Barford 2018). Municipalities have increased their tax rates and collected more debt funding, but this has happened quite evenly in all municipalities. We are able to explain this by the state grant system, as it includes a strong equalisation of the tax base and spending needs between municipalities (Oulasvirta and Turala 2009).

The adaptive division of municipalities, scalable structures of inter-municipal organisations, flexible forms of shared services and the strongly equalising grant system have been effective and balancing policy instruments in the case of Finland. Together, these instruments have helped to avoid the phenomena of depopulation and ageing that cause radical polarisation in key financial health ratios. However, we must notice that even if financial health ratios are not distressingly polarised, the accessibility of health services has begun to differentiate regionally to a worrying degree (MDI 2020).

Our findings also suggest that the renewal of the municipal structures has been such a slow and modest process – including compulsory, state-

subsidised and fully voluntary mergers of municipalities and inter-municipal organisations – that the recent central governments have considered that more fast-acting and profound actions are necessary. National politicians acknowledge that the phenomena of the ageing population and demographic decline, especially due to a record low birth rate, are fundamentally changing society and are even somewhat existential threats to the welfare state model based on municipal funding and delivery of welfare services. All the recent central governments have identified the consequences of the ageing population in very similar ways, but their implemented and proposed public policy responses have differed, thus far illustrating incompatibilities in the preferences between political parties and national, regional and local interests. Like the previous government, the current government also plans to replace public social, health, fire, and rescue services currently run by local governments and joint municipal authorities with regionalised service systems.

The proposed big-bang reform does not necessarily change the constitutional position of local governments as democratic, multi-purpose and self-governing institutions with powers to levy taxes, but municipalities would have to somehow reinvent themselves as strongly streamlined local public authorities since the possible regionalisation would transfer a considerable part of municipal duties, revenues and expenditures to the new regional governments. The reform would radically change the classic character of the decentralised welfare state, and local authorities would need to reconceptualise not only their welfarist but also their policy-making role within the new system of three democratic governmental tiers.

Notes

1. The age groups are: 0–5, 6, 7–12, 13–15, 16–18, 19–64, 65–74, 75–84, and 85 years old and older people.
2. Number of inhabitants and share of children were removed from the model because of strong multicollinearity. The number of inhabitants correlated with the percentage change of the population and the share of children with the share of old people. Several different models were tried, and the share of old people had a positive significant coefficient in all of them.

Disclosure statement

No potential conflict of interest was reported by the authors.

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