

Excursion in Reality - The Nordic Model Revisited

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Abstract

Nordic countries have for a long time appeared at the top of global happiness and welfare comparisons. They combine this achievement with high scores in economic performance. This marvel may be due to shared history and culture, but it also manifests itself as a largely publicly financed welfare state in an otherwise liberal market economy – the Nordic Model. In reality, many aspects of the model have been drastically reformed in the past two decades. The welfare sectors themselves have in most Nordic countries been quite cost-effective according to international comparisons, but ageing of the population is expected to raise costs in all of these countries. In Denmark and Sweden, much of the emphasis has been in reforming the labor markets, while Norway, with its enormous oil wealth, is apparently mostly focusing on keeping Dutch disease at bay. Finland is about to start the biggest policy reform of her post-war history that re-shapes both the funding and organization of her health care and social service sectors, and has effects on the centralization of decision-making and, fundamentally, the welfare of the citizenry. The full extent of the reform is yet to be defined, but it is clear that it will result in a geographically more concentrated, if also more de-regulated, provision of many welfare services. This paper studies the aspects of centralization of specialised health care on the one hand, and the more cost-efficient provision of care for the elderly using a regional CGE model of Finland.

1. Introduction

Nordic countries have for a long time appeared at the top of global happiness and welfare comparisons. They combine this achievement with high scores in economic performance. This marvel may be due to shared history and culture, but it also manifests itself as a largely publicly financed welfare state in an otherwise liberal market economy – the Nordic Model. For a long time, the going was good indeed for countries that had adopted the Nordic Model. But in most of the Nordic countries, many aspects of the model have been drastically reformed in the past two decades. In most Nordic countries, the public sector had a role not only in the welfare sectors, but also in many industries, where it may have out-grown its usefulness as new technologies and the liberalisation of the financial markets and international trade, starting in the 1980s, rendered state ownership redundant. The welfare sectors themselves have in most Nordic countries been quite cost-effective according to international comparisons, but ageing of the population is expected to raise costs in all of these countries. This has been understood for a long time, and the Nordic countries have responded in various ways. In Denmark and Sweden, much of the emphasis has been in reforming the labour markets, and also on immigration policies. Norway, with its enormous oil wealth, is apparently mostly focusing on keeping Dutch disease at bay. Finland, in her turn, is focussing on trimming costs and is about to start the biggest policy reform of her post-war history that re-shapes both the funding and organization of her health care and social service sectors, and has effects on the centralization of decision-making and, fundamentally, the welfare of the citizenry.

The reform introduces a huge research and policy evaluation agenda: while even in the future, the health care and social service sectors are to receive most of their funding from the public coffers, the allocation of the funding is to be based much more rigorously than previously on objective criteria, reflecting extensive register data on the costs, effectiveness and equitability of the provision of these services in different regions of the country. These data are also to form a basis for the estimation of future resource – personnel and funding – requirements, as well as the sustainability of the regional, public finances. The National Institute of Health and Welfare is tasked with collecting most of these data and with monitoring the reformed health care and social service systems. The coverage of the data is unique, encompassing and linking data on individuals' health and financial records, as well as costs of service providers and administration, and also income transfers between the different agents. The tracking of the performance of the regional economies and the prediction of future public costs are to use regional simulation models in combination with register data. This paper describes the data bases and their use in governance and research, as well as the linking of the data to regional simulation models, especially a dynamic, regional AGE model of Finland. We also present the results of a preliminary evaluation of some of the economic effects of the health care sector reform.

The rest of the paper is organised as follows: The second section describes the scope of the health care and social service sector reform. Essentially, the reform places the responsibility for the organization of basic health care and social service provision in the hands of new, regional authorities somewhat reminiscent of the Swedish landscapes or even the German Bundesländer. However, the new Finnish counties cannot levy taxes but receive their share of the tax revenue directly from the central government. This is a major break with the past, where the 300+ municipalities were tasked with the organisation of the services, and levying municipal taxes to finance the services (albeit with heavy subsidization from the central government). It is easy enough to see how the new, 19-node organisation might be able to increase the rate of utilisation of the welfare sector resources, if the reform is successful in reorganising the sectors. Currently, it is clear

that the reform will facilitate the centralisation of e.g. specialized health care and probably with significant savings in costs. THL has an important role in the new organisation in the evaluation of progress and forecasting of the fiscal sustainability of the new organisation.

The third section deals with the various data sources. THL collect register data on health care and social services at the level of individuals and service providers. These registers cover the whole population and enable easy aggregation for different purposes. For the current study, we collect data on the costs and personnel requirements of health care and social service provision at the level of around two dozen entities and at the level of the 19 Finnish regions. The regional data also comprise pensions and income transfers as well as taxes on income and commodities.

The fourth section describes the two models used in the study. First, we use a simple simulation model building on register data to forecast the demography-driven development of expenditures on health care, social service, and income transfers. This model feeds into a dynamic, regional AGE model which is then used to analyse the effects of the reform from the pointis of view of welfare, regional growth and fiscal sustainability. The REFINAGE model has been extended in many ways for the purposes of the study: we have endogenised migration and linked migration and regional population forecasts using very recent register data on migration; we have also linked micro data on income transfers and welfare services to the CGE model; and finally, we have introduced the new institutions to the model.

The fifth section contains the results of our policy scenarios on the centralization of specialist health care, and on the potential for savings in the care for the elderly. We find that the reform is able to create savings at the national level via efficiency gains in the new, more centralized service network. However, the geographic centralization of public sector jobs will inevitably have adverse effects in many of the stagnating regions. The cost of dealing with these effects can be considerable. The reality of success may thus turn out bittersweet.

The final section concludes and discusses the reform process and the future research agenda it is creating.

2. The health care sector reform

The health and social care reform amounts to concentrating the responsibility for the provision of these services at a regional, county administrative level instead of the local, municipal level. It is part of a larger reform which aims at harmonising the State regional administration with county government administration, as well as rationalising the organisation of public-sector administration at State, regional and municipal levels. The government sees the centralization of the various functions of municipal and state functions in autonomous regions – the counties – as the primary solution in the search for economies of scale and efficiency. Thus the reform entails a re-assignment of the functions and responsibilities of local and regional responsibilities.

The Government has outlined the responsibilities that will be assigned to the counties as from the beginning of 2020. The new set of responsibilities of the counties the central government is a clear break from the past: At the moment the municipalities are responsible for organising health and social services. This responsibility will be transferred to 18 new counties in connection with the health and social services reform.

The objective is that everyone will have equal opportunities to get the adequate health and social services required by law. The counties are tasked with safeguarding the equitable availability to all people of these services. The reform will be gradual, and entails the integration of health and social services into well-functioning packages. It is hoped that this will help in shortening waiting times and facilitating access to local services, in part because of more efficient of transferring client information between services.

3. The data

THL is charged with hosting extensive data bases on health and health and social care. The data for our study stems from several sources that reflect the pace of the health care sector reforms of the past. Our focus on specialist level care also affects our data requirements.

The provision of specialist level care in Finland is predominantly a public statutory service. The municipalities' joint federations, i.e., hospital districts, run and finance a network of secondary and tertiary care facilities as well as separate psychiatric care institutions. Historically there have been 15 central hospitals on mainland Finland in addition to the five university level teaching hospitals in Helsinki, Turku, Tampere, Kuopio and Oulu. All of these 20 hospitals have offered an extensive scope of secondary level services to the residents in their catchment areas.

The reorganisation of specialist level services that started in the 2010s went into full force in December 2016 as the 2010 decreed Health Care Act was revised. This amendment centralises all 24/7 operative services to 12 major hospitals (5 university and 7 central hospitals). The remaining can have up to ten specialties and a joint on-call service with primary health care.

This amendment that was implemented in January 2017 with a transition period up to two years has profound repercussions for the hospital districts and their workforce. The shift of demanding urgent surgery to the 12 centres from the previous 20 facilities will relocate a considerable part of other

surgical services as the maintenance of high quality emergency care necessitates adequate daytime resources. Moreover, a study from year 2015 showed that hospital districts outsource the provision of secondary and tertiary care services to other hospital districts (range 2.5 to 20 %). The downgrading of hospital on-call operative services to less demanding has already been shown to affect the appeal of the employing hospital for other, more conservative specialties as well.

In this study, the information available from hospital districts was considered to correspond with that of the counties. Actual personnel person-years are not collected and reliably published by the hospital districts and direct calculations for assessment were thus not possible in this study. Aggregated estimations based on the services' volumes were used as proxy. Moreover, it is known that there is considerable variety in the production of surgical and other services in different parts of the country. Therefore the average level of all major categories of care was used to determine the theoretical optimal level of care provision. This information was used together with the historical trends of outsourcing (percentage of all care outsourced and the actual provider hospital district) and the estimates of care shifting with the on-call services reform. A projected total aggregated change in service provision level was deducted from these together with an estimate for workforce productivity change. The latter was used as a crude estimate of specialist care personnel changes wrought by the judicial revision.

4. The REFINAGE and CHES models

We use the REFINAGE model of the Finnish economy to study the effects of the health care sector reform on the regional economies in different parts of Finland. REFINAGE is a development of the VERM model (Honkatukia 2013) which in turn is a derivative of the Monash (Dixon and Rimmer) and TERM (Horridge) models which essentially combines the rich MONASH dynamics to the regional CGE core of TERM-like models. The model and its precursors has been used to evaluate the effects regional policy reforms and to evaluate regional labour demand and education policies. A recent study of the regional effects of the Defence Force reform contained several of the elements utilized in the current study. Specifically, the effects on regional labour markets of the reallocation of several Army and Air Force units was modelled as regional shifts in public sector demand for labour. Here, we model the effects of the relocation of specialist health care in a similar fashion.

We also use the CHES model (Centre of Health Economics and Social Sciences within the NIHW) for determining the baseline growth of social and health care volumes. The model is utilizing the detailed, region, age and gender-specific data on the prevalence of treatments and care over the entire Finnish population. While the model does not optimize the provision of health services, it does give a good first guess on how the aging of the population will change public expenditure on health care and social services. The model can also shed light on the possible effects of reforms via productivity gains in different parts of the country.

The study uses the results from an extensive study of the long term development of the economy as its starting point (Honkatukia and Lehmus 2016), using the industry level national forecasts to drive the regional forecasts in building a regional baseline, a device used in several earlier studies, such as Ahokas et al. 2012. Under this approach, the growth of the regional economies is determined in part by the exogenous demand for public services, the commodity level national forecast for export demand and world prices, the historical regional production capacity and the long-term availability of labour in different parts of the country. Population growth also plays a

large part in the determination of the public-sector expenditures, since these are very closely connected with population growth.

Figure 1 below shows the population forecast for the baseline. It is clear that the population is concentrating in certain regions, such as Uusimaa, Pirkanmaa, Pohjanmaa, and also to Keski-Suomi, Varsinais-Suomi and Pohjois-Pohjanmaa. Uusimaa, the capital region, is home to a third of the Finnish population, and a further three of the six counties listed above also lie in the southern part of the country, which contains more than two thirds of the total population. Pohjanmaa and Pohjois-Pohjanmaa are much smaller in terms of total population but they are characterized by thriving medium to large businesses which serve to make them nodes of economic growth. The baseline then depicts a picture of regional concentration with growing demand for health care and social services, but also with strengthening public finances, whereas the most of the country is characterized by a shrinking working-age population and growing old-age population, accompanied with rising public service costs and deteriorating public finances. It is these problems that the ongoing regional reform is geared to alleviate.

Figure 2 shows the baseline forecast for regional GDP growth between 2015 and 2030. It is clear that GDP growth is closely mirroring population growth. Growth is mostly driven by technological change but the aging of the population entails a decline in working-age population which coincides with increasing demand for health and social care sector labour force, limiting the access to labour of sectors with higher growth potential.

Figure 1

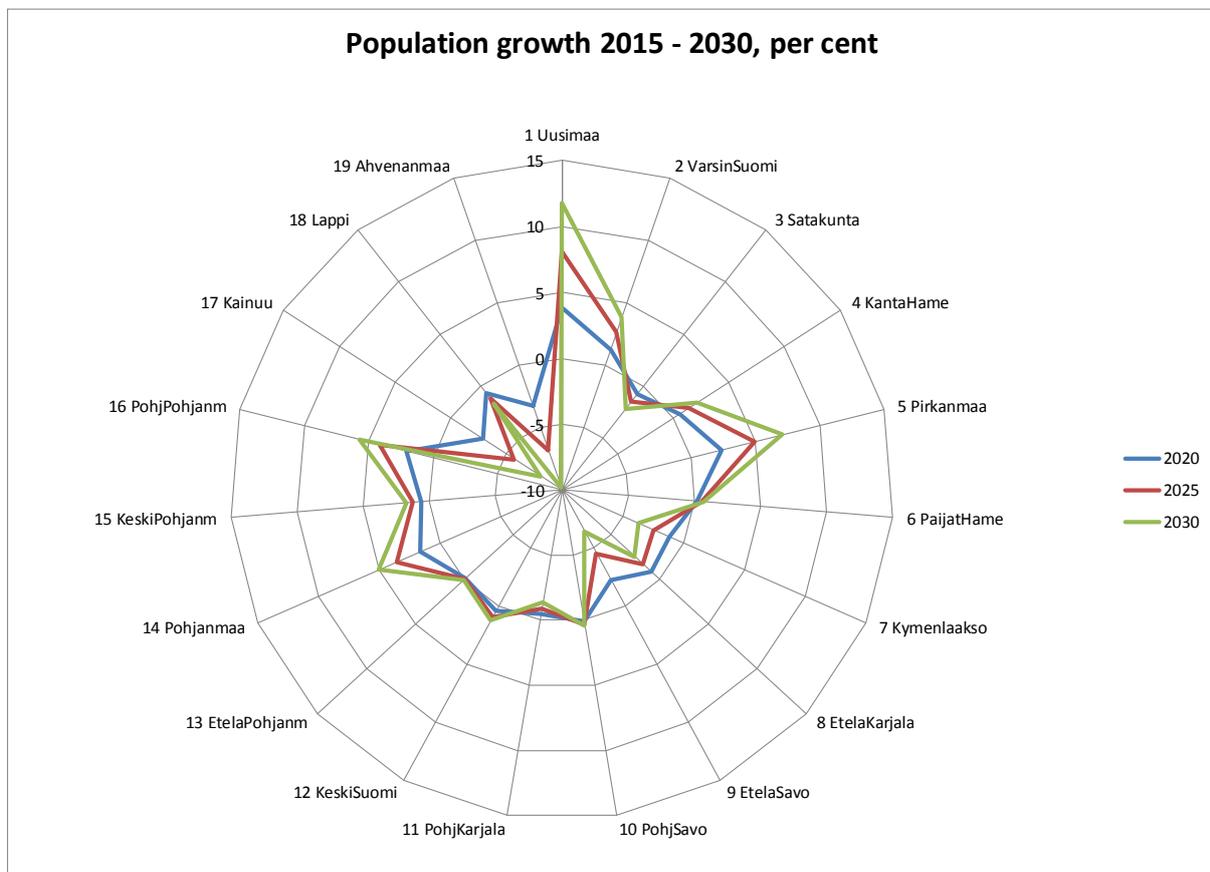
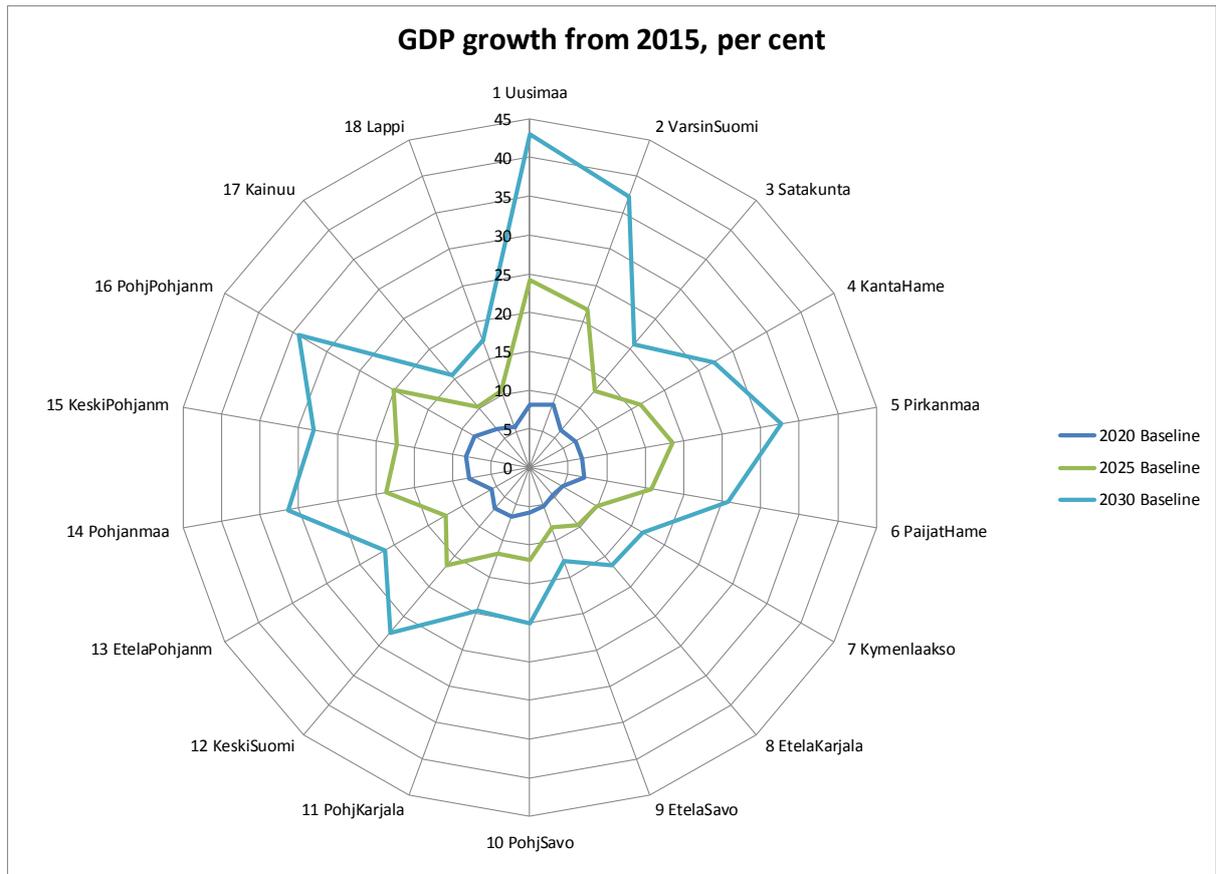


Figure 2



5. Policy scenarios

The study focusses on the effects of two likely outcomes from the health and social care reforms: First, the concentration of the provision of specialist health care (surgery, natal care and the like) in large, university hospitals (Policy 1); and second, the effects of a shift from institutional care of the elderly to sheltered housing-type care. Neither of these changes are firmly cemented for the moment, but our scenarios do reflect realistic possibilities and it seems certain that both of these paths will be followed when the reform gains momentum. Since these scenarios are complementary to each other, we introduce the policies in a “additive” fashion, with scenario 2 (Policy 2) encompassing the drivers of both policies.

In the first of the policy scenarios, we have combed through service provision in current hospitals, and evaluated how the same services could be more efficiently provided in a more centralized, larger university hospitals. Larger units are more efficient simply because they deal with larger volumes of patients, boosting their capacity utilization rate. A more subtle advantage the larger hospitals enjoy is that they may help to improve their staff’s skill via a greater degree of specialization, which may also benefit the patients. The network of these hospitals exists, but obviously the centralization of specialist care would entail investment in improving and enlarging these hospitals.

The care for the elderly represents a very rapidly growing expenditure in the Finnish social care system. The regional reform does not directly address the question of boosting social care sector productivity, but it aims at savings via a more coordinated use of resources and new technologies. A large potential is plausible on offer in the care of the elderly at home, via sheltered housing, instead of institutional care or old peoples’ homes. The key to these savings is in the increased ability to remotely safely monitor the health status and care needs of the elderly. We have used the CHES model to estimate, what the savings could be if the growth of the volume of institutional care of the elderly could be halted. Our findings suggest that the savings would soon amount to a billion euros annually (out of a total of roughly ten billion).

Figure 3 below shows the changes in regional employment in Policy 1 –scenario. In the figure, changes in employment in the public sector are almost entirely due to our assumptions on the regional centralization of health care service provision. To an extent, they also reflect the induced demand for health and social care services as well as education due to induced migration. The figures show significant growth in public sector jobs in several counties that house large university hospitals, though not all of them (for example Lappi, the northernmost county). The largest absolute losses occur in counties which have already encountered declining labour force and growth; in relative terms, the losses would be larger still. However, in some parts of the country (Keski-Suomi, Central Finland, for example) the reform in boosting an otherwise average job growth. The figure also shows the downside of public sector job growth: it may crowd out some of the baseline growth in the private sector, as in Uusimaa. On the other hand, in other cases, the induced domestic migration may induce even the private sector to expand, as in Etelä-Pohjanmaa.

Figure 6

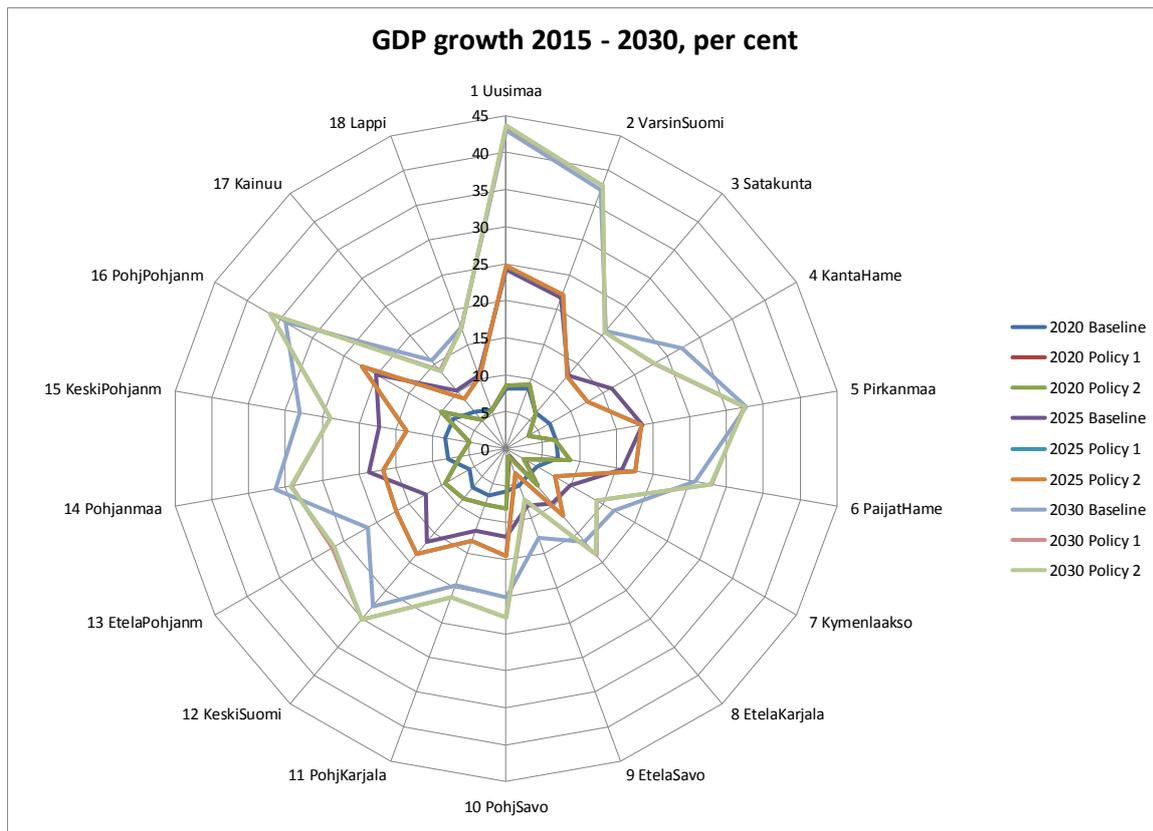
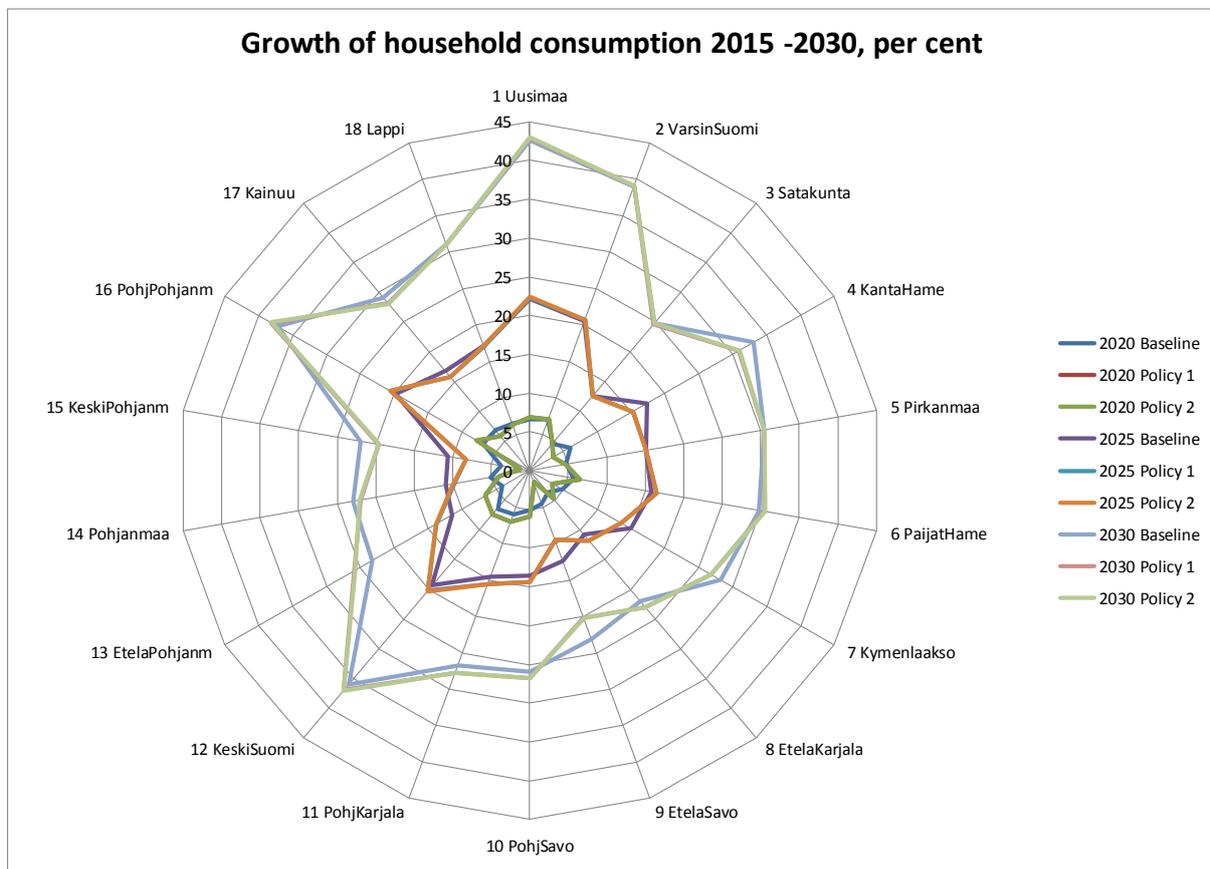


Figure 7



6. Conclusions

The Nordic model has managed to combine high economic growth with a welfare society. However, the aging of the population is bringing new challenges to the model in most of the Nordic countries, and Finland for one is attempting to secure the essence of the model by embarking in an extensive reform of regional governance that re-shapes both the funding and organization of her health care and social service sectors, and has effects on the centralization of decision-making and, fundamentally, the welfare of the citizenry. The full extent of the reform is yet to be defined, but it is clear that it will result in a geographically more concentrated, if also more de-regulated, provision of many welfare services. In this paper, we have studied some of the likely effects of the reform in two of the largest of the care sectors, namely, specialised health care, and care for the elderly, using a regional CGE model of Finland.

We find that there is likely to be a fairly large, regional, centralization of specialist level care jobs that will also trigger internal migration. New technologies, on the other hand, may raise productivity in elderly care, which enhances the growth potential of the economy (less crowding out) and may alleviate the effects of centralization. We find that the overall welfare effect is close to neutral, and thus it seems clear that the reform potentially can reach its goal of improving overall efficiency, while safe-guarding the universal availability of health and care services.

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