

Simola, Antti; Honkatukia, Juha; Kinnunen, Jouko; Ahokas, Jussi

Conference Paper

Coping with Structural Change – the Regional Effects of Decentralisation in Finland

52nd Congress of the European Regional Science Association: "Regions in Motion - Breaking the Path", 21-25 August 2012, Bratislava, Slovakia

Provided in Cooperation with:

European Regional Science Association (ERSA)

Suggested Citation: Simola, Antti; Honkatukia, Juha; Kinnunen, Jouko; Ahokas, Jussi (2012) : Coping with Structural Change – the Regional Effects of Decentralisation in Finland, 52nd Congress of the European Regional Science Association: "Regions in Motion - Breaking the Path", 21-25 August 2012, Bratislava, Slovakia, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/120560>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Coping with Structural Change – the Regional Effects of Decentralisation in Finland

Juha Honkatukia¹

Jussi Ahokas¹

Jouko Kinnunen²

Antti Simola¹

52nd ERSa Congress in Bratislava

¹ Government Institute for Economic Research VATT, Finland

² Government Institute for Economic Research VATT, Finland, Statistics and Economic Research Åland, ÅSUB

Contents

Abstract	3
1 Introduction	4
2 Material and Methods	6
3 Computation of the transfers	6
4 Decentralization	9
5 Results – the decentralization of Agency for Rural Affairs	10
6 Conclusion	18
References	20

Abstract

Regional, structural change is currently among the greatest challenges facing the public sector in many EU countries at the moment. In countries like Finland, where the public sectors have a large role in providing educational, health and social services, structural change rapidly becomes a fiscal problem. Demography is directly linked to the demand for public services and to the potential growth of regional economies. On the one hand, ageing increases the demand for age-related services; on the other, it decreases labour supply, limiting the growth potential of many regions.

The state's main tools for regional policies consist of both direct subsidies to the regions, as well as a mechanism reallocating tax revenues between poor and rich municipalities. However, the welfare costs of funding subsidies to poorer regions may be considerable. Thus, instruments not involving changes in spending have been preferred. Here, we consider the relocation of certain functions of the central government to the periphery – decentralization – as an instrument for coping with regional structural change. An improvement in regional municipal finances should also reduce the transfers received from the central government.

This study aims at evaluating the effects of decentralization on regional development in recent years and in the near future. The study is related to an on-going evaluation of the financial relations between the central government and local authorities.

Decentralization has in practice meant the relocation of central government jobs. We can cover the relocation of jobs quite accurately, and we also have the data of the number of employees that actually relocated with the jobs. Moreover, we are able to calculate state transfers to municipalities at the level of individual municipalities within each region. However, to capture all the implications of relocation to regional economies, we extend the model to take into account the average size and age profile of the families of those relocating. In this way, we obtain an estimate on the effects of decentralization on demand for public services locally, as well as on the overall effect on local population, labour supply and state, municipal and social security funds' budget balances.

We analyse decentralization at the level of the twenty regions of Finland, using a dynamic, regional, AGE model. We find that while decentralisation has been beneficial for many regions by creating new jobs and increasing municipal tax revenues, it has also entailed double efforts since there is only limited obligation for the employees to relocate with the jobs. Interestingly, however, this effect is partly off-set by a reduction of transfers to municipalities.

Keywords: regional policies, structural change

JEL codes: R13, R53

1 Introduction

Regional, structural change is currently among the greatest challenges facing the public sector in many EU countries. Often, structural change is driven not only by economic factors, but also by demography. In countries like Finland, where the public sectors have a large role in providing educational, health and social services, structural change rapidly becomes a fiscal problem. Demography is directly linked to the demand for public services and to the potential growth of regional economies. On the one hand, ageing increases the demand for age-related services; on the other, it decreases labour supply, limiting the growth potential of many regions. Many regions are also heavily affected by changes within a specific industry.

The fiscal arsenal for coping with the implications structural change is limited. In Finland, the public sector consists of three main subsectors: the central (state) government, municipalities and the social security funds. Both the central government and municipalities collect income taxes and have various other tax-like instruments, whereas the social security sectors' revenue consists mainly of employers' and employees' payments. The state's main tools for regional policies consist of both direct subsidies to the regions, as well as a mechanism reallocating tax revenues between poor and rich municipalities. However, the welfare costs of funding subsidies to poorer regions may be considerable. Thus, instruments not involving changes in spending have been preferred. Here, we consider the relocation of certain functions of the central government to the periphery – decentralization – as an instrument for coping with regional structural change, as it does not in principle involve direct changes in spending. An improvement in regional municipal finances should also reduce the transfers received from the central government.

This study aims at evaluating the effects of decentralization on regional development in recent years and in the near future. The study is related to an on-going evaluation of the financial relations between the central government and local authorities.

Decentralization has in practice meant the relocation of central government jobs; for example, the ministry of the interior relocated some of its jobs from the capital to northernmost Finland in 2006.

We can cover the relocation of jobs quite accurately, and we also have the data of the number of employees that actually relocated with the jobs. Moreover, we are able to calculate state transfers to municipalities at the level of individual municipalities within each region. However, to capture all the implications of relocation to regional economies, we extend the model to take into account the average size and age profile of the families of those relocating. In this way, we obtain an estimate on the effects of decentralization on demand for public services locally, as well as on the overall effect on local population, labour supply and state, municipal and social security funds' budget balances.

We analyse decentralization at the level of the twenty regions of Finland, using VERM, a dynamic, regional, AGE model of the Finnish economy. The model is based on the well-known TERM model, but has been extended in several aspects.

We find that while decentralisation has been beneficial for many regions by creating new jobs and increasing municipal tax revenues, it has also entailed double efforts since there is only limited obligation for the employees to relocate with the jobs. Interestingly, however, this effect is partly off-set by a reduction of transfers to municipalities.

The study is organised as follows. Section two describes the model used, while section three explains the computation of the transfers. Section four describes decentralisation by government function. Section five shows our simulation results, and section six concludes.

2 Material and Methods

We analyze decentralization at the level of the twenty regions of Finland, using VERM, a dynamic, regional, AGE model of the Finnish economy. The model is based on the well-known TERM model, but has been extended in several aspects. First, we use very detailed data on the outlays and incomes of the central government, the municipal level, and social security funds to realistically study the provision and financing of public services and social security transfers and pensions. Secondly, we use occupational data to study the demand for labour especially in service provision. Thirdly, the model is closed and uses MONASH-type dynamics.

We found an AGE model to be very suitable tool for analyzing the issue. With an AGE model, we can easily model complicated interactions between the relevant agents and isolate the effects from other developments in the economy. This cannot be easily done from observed data. Regional model was obviously needed since the relocations happen between regions and we were particularly keen to know how different regions fare due to this policy. The model operates at NUTS3 level wherein Finland is divided in 20 regions. In reality, the jobs are relocated to much smaller regional entities, but we found this regional classification sufficient since the new locations are mostly the regional centres in these regions. However, we reckon that the relative effects for the municipalities are probably slightly more pronounced than the ones we present here for the 20 NUTS3 regions. Nevertheless, what comes to the overall regional development, we believe that the NUTS3 classification well illustrates the effects these policies have.

3 Computation of the transfers

State support to municipalities amounts to two thirds of the level of total tax revenues of the municipalities. Hence, they are indispensable when one wants to study the development of financial

standing of municipalities. Of this support, more than two thirds are special, rule-bound state transfers to the local government. The state transfers are directed to different functions of the local government: general allowance education and culture, health and social care, and redistribution of tax revenues. The final third of state support consists of several, more disparate transfers with less unified payment rules. We assume that this final third of the state support is the policy variable that is varied in the simulations. The transfer system itself is assumed to continue according to rules that were in place at the time of the analysis. In reality, minor changes are introduced to the transfer system annually.

As the base year of VERM is currently 2004, that point of time is also our point of departure in the description of the transfer system. In 2010, the state transfer system was renewed, but the practical consequences of the reform were limited. Calculation of the transfers still follows basically the system as earlier (see e.g. Moisio et al, 2010). However, the changes have been taken into account here. The most remarkable change was related to education, where transfers were earlier calculated according to factual number of pupils, but from 2010 it was replaced by population in school age. Our model uses this renewed base for calculations from the beginning. However, factual numbers are imposed to the model between base year and years with available statistics (2004-2011). To reiterate, the basic parts of the state transfers to municipalities are:

- General allowance
- Health and social care transfer
- Education and culture transfer
- Redistribution of municipal tax income

The general allowance is calculated on the basis of population size, lagged changes in price level. In addition, several indicators measuring how peripherally the municipality is located affect the allowance. However, these measures hardly change over the course of time. It is rather different

political decisions on the size of different parameters and weights that have changed more during 2004-2011.

Health and social care transfers are calculated by using age-specific cost coefficients for the services. The inhabitants are classified into five age groups:

- 0 -6 years
- 7-64 years
- 65-74 years
- 75-84 years and
- 85 years or more.

Furthermore, we divide the 7-64-year-olds into two categories (7-15 and 16-64) in order to readily have a measure for the school aged population.

Redistribution of the municipal tax income is a 'Robin Hood' system where a municipality receives a redistribution transfer if its tax income per capita is less than 91.86 per cent of the national average tax income per capita (redistribution cut-off level). The redistribution transfer amounts to the difference between the cut-off level and the tax income per capita. If the tax revenues of a municipality surpass the national average, 37 per cent of the tax income surpassing the average per-capita level is claimed by the state to finance the transfers to poorer municipalities. Due to this asymmetry in the system, we decided to create a municipal dimension to the model, just for the calculation of the redistribution transfer. Factual statistics of each municipality is being used for the period of 2004-2011 (payments in 2011 are based on 2009 figures), while from then on each municipality is assumed to follow the development of its corresponding region.

4 Decentralization

The use of decentralization as a tool of regional policy in Finland dates back to 1970s. In its current form the decentralization efforts were stated in Government's strategy in 2001. The legislation has been updated few times since then and the current goals were set in 2008. However, the issue has not been extensively researched thus far. Honkatukia et al. (2007) used regional AGE model to evaluate the previous decentralization efforts along with the governmental functions' productivity program. The study focused on time period 2001-2006 and consisted of relocation of 3378 government jobs. Although the study generated reasonable results, the data of the costs of the decentralization process was much sparser than in our present study. The input data merely consisted of the information about the relocated jobs in the receiving regions. The actual number of employees moved from Helsinki to the other parts of the country was not known in the study. In overall, the study suggested that the decentralization efforts have at least slightly positive effects on supporting the general regional policy goal of decreasing regional disparities.

Ministry of Finance, the coordinator of the effort, recently published a study of the economic effects of decentralization (Ministry of Finance, 2011). The study was based on surveys and cost-benefit analysis and largely omitted general equilibrium effects. Our present study will complement and maybe shed new light to the results presented by Ministry of Finance.

As the official goal of Finnish central government, some 4000-8000 government jobs are to be decentralized until 2015. Current decentralization plan consists of moving more than 5200 jobs from Helsinki to other locations. Almost 4400 jobs were already relocated by the end of 2011. This figure amounts to less than one percent of all the government jobs. The share is even smaller when compared to the overall employment figures in the regions. Therefore, we did not anticipate seeing huge effects in our policy simulations. However, it was worthwhile to see whether there will be efficiency gains or losses due to the decentralization. Equally important is to see whether these

policies can make significant improvements to advancing the regional policy goals. This would be valuable information in assessing how the projects have lived up to their expectations. We believe that our method can well capture these effects.

For our study, we could cover only half of the relocated jobs, since more complete data was available only for the largest government agencies. Additionally to the number of jobs moved from Helsinki to the other parts of the country, we needed to know more precise valuation of the costs involved. These include the wages, the costs associated with the premises, the other costs associated with the personnel (e.g. re-education costs), the transportation and communication costs, and other costs. Furthermore, for our dynamic model, we preferred to have the data on yearly basis. Ministry of Finance supplied the data on these aspects for the selected sample of the most important relocated agencies. Additionally to the jobs moving from Helsinki to a new location, some other family members are likely to move along, which needs to be taken into account in the simulations. Unfortunately, there was no data available on this front and we had to rely on a guesstimate of our own: we multiplied the amount of relocated jobs with 2.3 as an approximation of people moving from one place to another. This figure approximately reflects the family size of an average employed person in Finland.

5 Results – the decentralization of Agency for Rural Affairs

In this chapter we summarize the results we got in a pilot phase for one particular relocated government agency. Agency for Rural Affairs (ARA) is decentralized between 2008 and 2015 from the capital city of Helsinki, Uusimaa region to Seinäjoki, Southern Ostrobothnia region. In total, 165 jobs will be relocated after the transition period. Table 1 summarizes the data on the decentralization process of ARA.

We can also see from the data that the decentralization causes some extra costs during the transition period. Nevertheless, there will be some savings due to the decreased costs in the long run. When the decentralization is completed in 2015, the costs will be almost 11 % lower than in the first year of decentralization and 23 % lower than in the peak year of the transition period costs, 2010. Most of the cost reductions are in the personnel costs. Some of the reduction might be due to lower wage level in the new location, especially for non-expert occupations. This can also be partly explained if the new workers that are recruited are less experienced and therefore require less salary. Unfortunately, we could not make any reasonable guesses about the consequences of new inexperienced staff for an agency's productivity. Other part of the cost reduction comes from the premises costs and can be mostly explained by the lower price level for the real estate in Southern Ostrobothnia region. The new location is more remote and therefore the transportation and communication costs will be slightly higher after the decentralization.

We used this information as the input data for the VERM simulations which we ran in order to analyze the economic effects of the decentralization. In our business-as-usual base case simulation we do not have any information about the whole decentralization project as the base year of the model is 2004 which predates the current decentralization efforts. Instead in our policy simulation we construct a case where the decentralization happens for ARA. And as in reality the decentralization is underway, our counter-factual simulation is actually the more factual one. We present our results as percentage changes between the base case and the counter-factual. First we summarize the public sector results, and then we move to the regional level results and conclude the chapter with the macro level results.

In figure 1 we present the results for the public expenditures. These results reflect very well the input data we used: the expenditures will increase during the transition period, but will eventually end up to a lower level than in the base case. As predicted, the magnitude of the effects is small.

Table 1. Information of Agency for Rural Affairs decentralization

	2008	2009	2010	2011	2012	2013	2014	2015
Man-years								
original locality	149	125	90	16	7	5	4	0
new locality	32	68	112	179	172	173	171	165
new recruited workers	0	1	6	9	0	0	0	0
total	181	194	208	204	179	178	175	165
Personnel costs (1000 €/year)								
wages for workers in original locality	6705	5625	4050	270	315	225	180	0
wages for workers in new locality	1440	3060	5040	7993	7740	7785	7695	7425
wages for new recruited workers	0	45	270	467	0	0	0	0
safety of change payments	47	72	66	385	0	0	0	0
education costs	11	53	56	30	0	0	0	0
total	8203	8855	9482	9145	8055	8010	7875	7425
Premises costs (1000 €/year)								
in original locality	1300	1010	790	250	200	200	200	0
in new locality	70	100	350	900	900	900	900	900
total	1370	1110	1140	1150	1100	1100	1100	900
Other costs (1000 €/year)								
transportation and communication costs in original locality	546	712	516	25	20	20	20	20
transportation and communication costs in new locality	117	153	676	799	800	800	800	800
other costs	0	0	0	668	0	0	0	0
total	663	865	1192	1492	820	820	820	820
Grand total	10236	10830	11814	11787	9975	9930	9795	9145

This figure shows the effects for the whole public sector expenditures in Finland, of which ARA is only a small fraction; the changes are less than one hundredth of a percent. Figure 2 shows the cumulative effects for the public debt in millions of euros. We see that the transition period increases the debt by 20 million euros but when the decentralization is completed the debt will be cumulatively 60 million euros lower than in the base case and will continue to decrease because of the lower public expenditures in the future.³

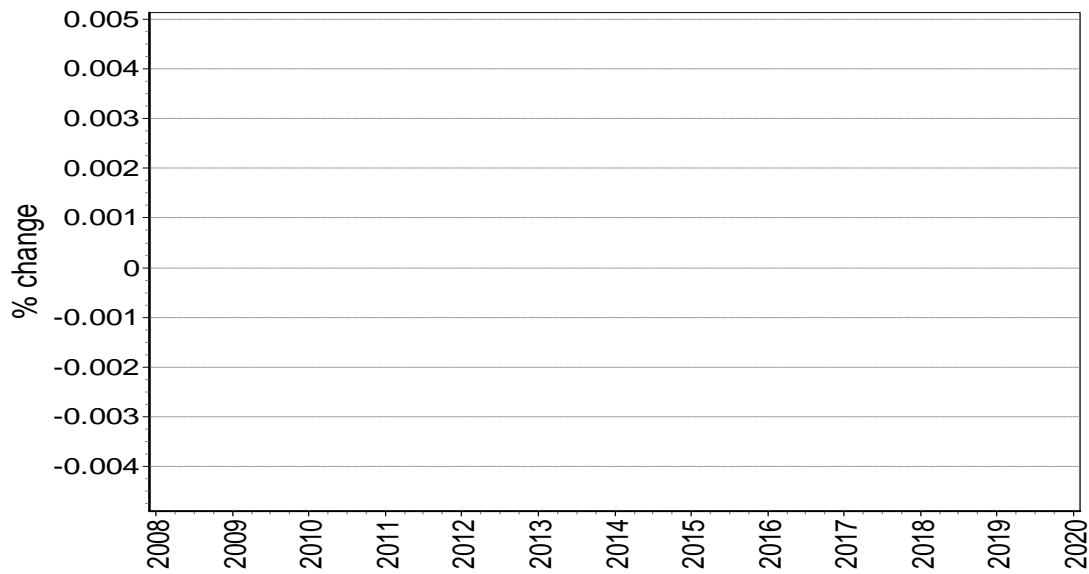


Figure 1. Public expenditures (%-change).

³ Total Finnish public sector debt was 93 billion euros in 2011.

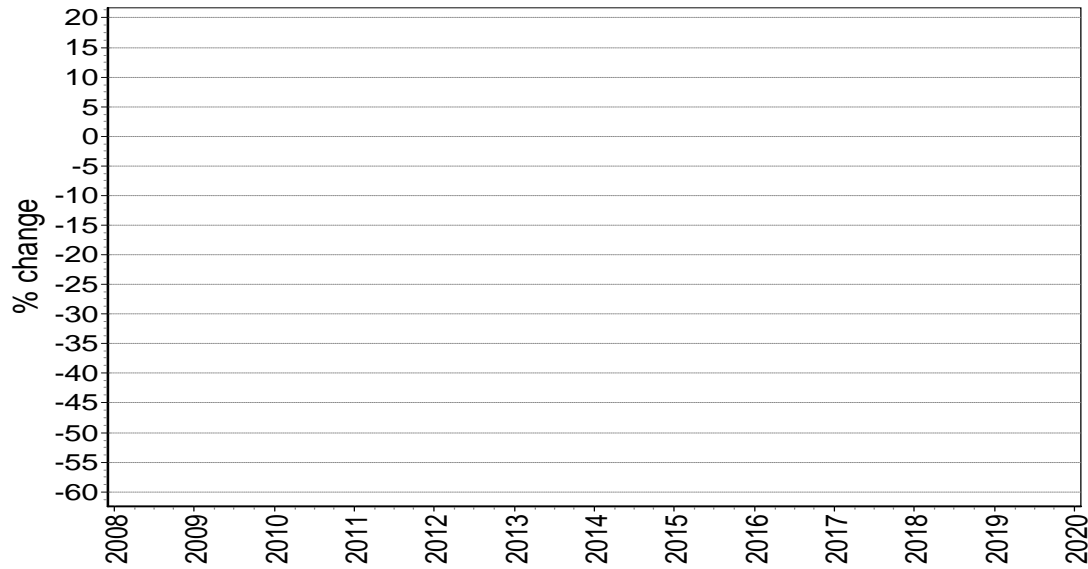


Figure 2. Public debt (millions of euros).

Figures 3 and 4 present what happens to the net tax income of the public sectors in Uusimaa and Southern Ostrobothnia, respectively. Uusimaa loses some of its tax income due to the decentralization whereas Southern Ostrobothnia increases its own. The increase for Southern Ostrobothnia is strongest during the transition period and will end up to a level higher than in the base case.

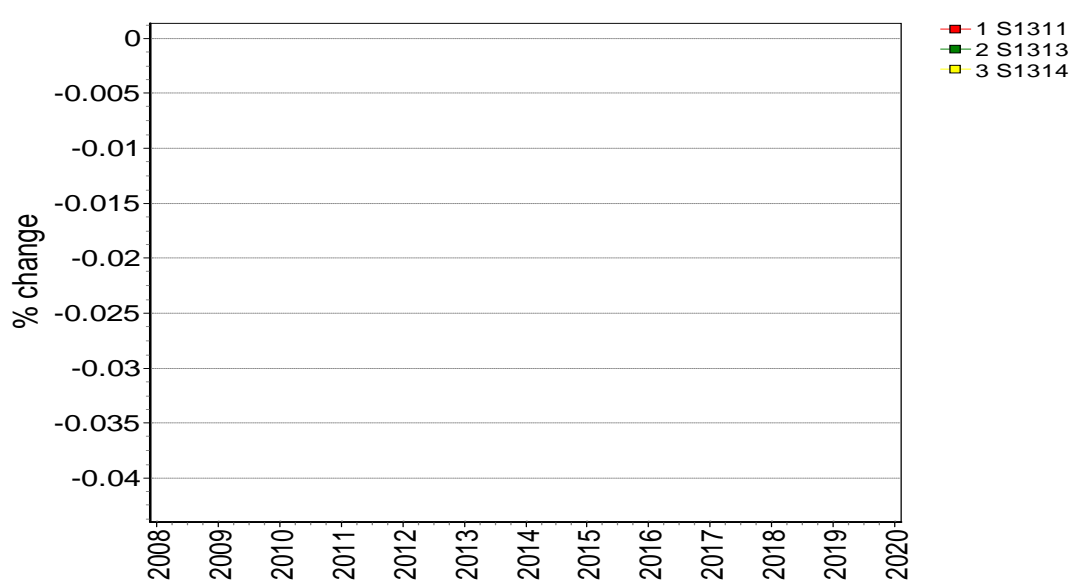


Figure 3. Net tax income in Uusimaa (S1311 = central government, S1313 = municipalities and 1314 = social security funds).

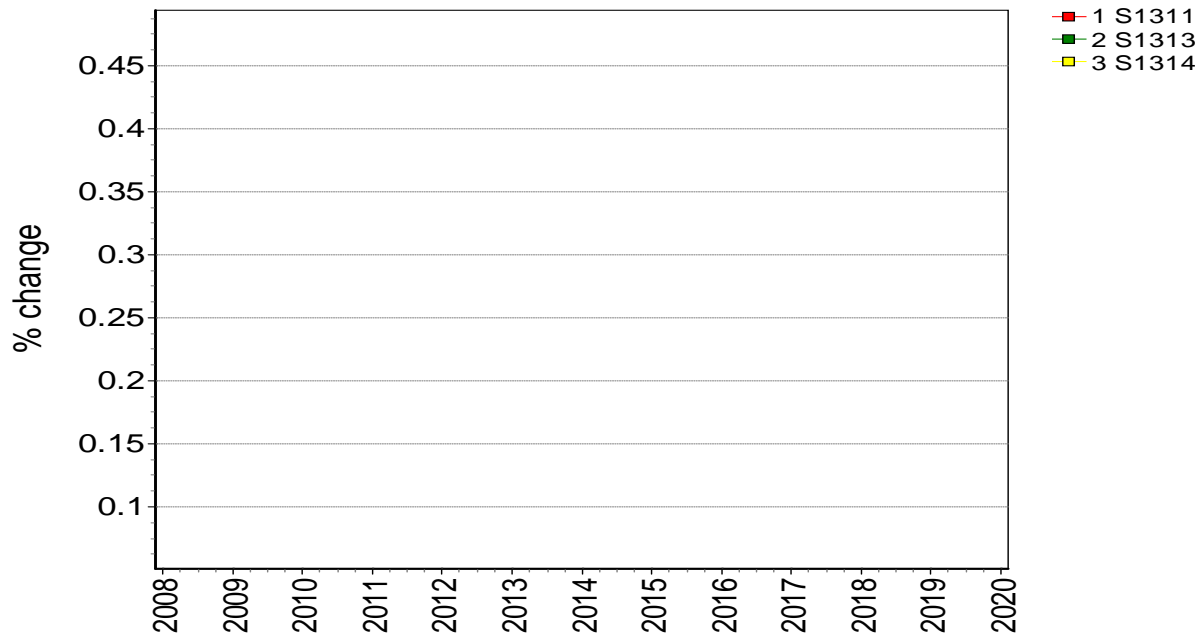


Figure 4. Net tax income in Southern Ostrobothnia (S1311 = central government, S1313 = municipalities and 1314 = social security funds).

Figures 5 and 6 show the effects for the end use in Uusimaa and Southern Ostrobothnia, respectively. The effects are naturally most pronounced for the public sector, which contracts in Uusimaa and expands in Southern Ostrobothnia. For the Southern Ostrobothnian public sector the effect is more than one percent permanent increase in the long run, which can be seen fairly significant change. Household consumption is derived demand from people moving to the new employment location and moves along with public sector spending. Investments react only slightly to the transition period. Exports increase in Uusimaa, which is due to the high share of the export industry in Uusimaa economy that will benefit from lower real wage level that is explained below.

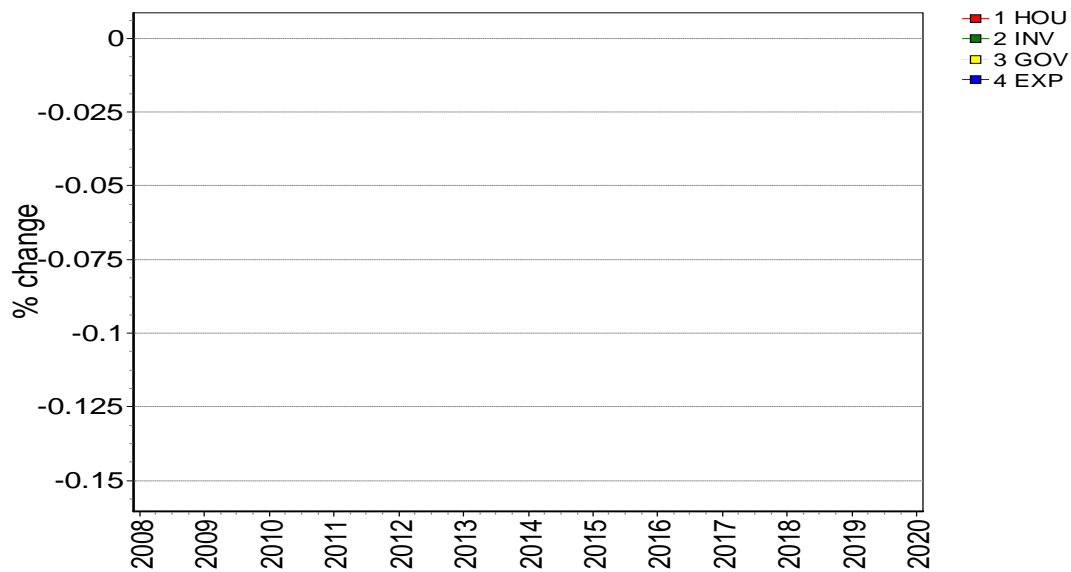


Figure 5. End use in Uusimaa (HOU = households, INV = investments, GOV = public sector and EXP = exports).

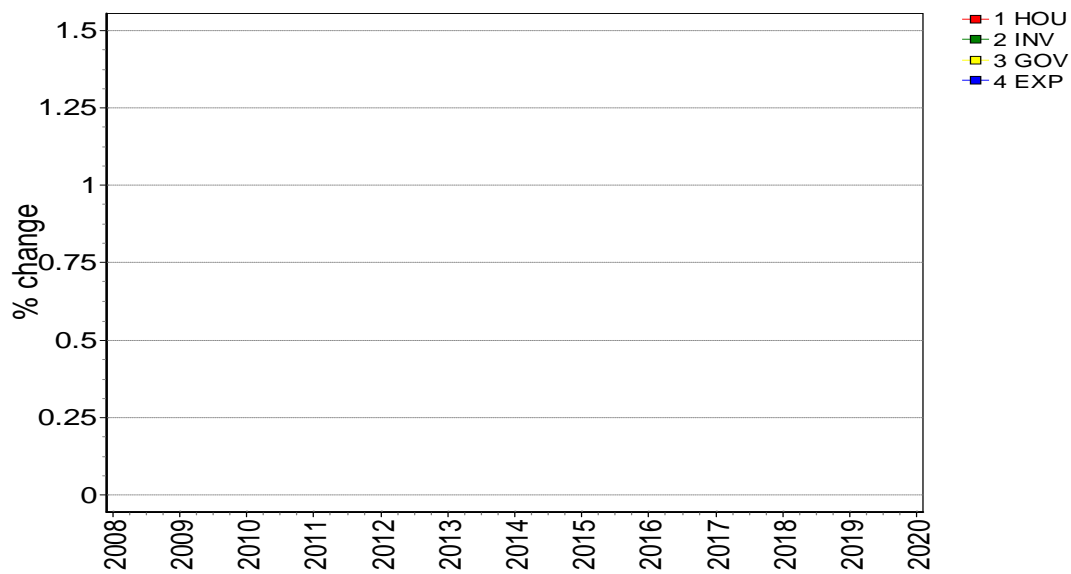


Figure 6. End use in Southern Ostrobothnia (HOU = households, INV = investments, GOV = public sector and EXP = exports).

Figure 7 shows the effect for employment, GDP and real wage level. The decentralization effort increases economic activity during the transition period because of the double effort and other extra

costs. This will lead to an increase in the real wage level. After the transition period the gains from cost savings become evident and the real wage rate ends up to the lower level than in the base case. Both GDP and employment will slightly increase. Figure 8 shows how GDP is decomposed and reveals that the decreases in the government spending are compensated by a slightly higher increase in the exports. Apparently, the export industries are able to make use of the lower employment costs. One of the rationales for the decentralization was to lessen the overheating and congestion of the Uusimaa economy. This result might give some credibility to the claim.

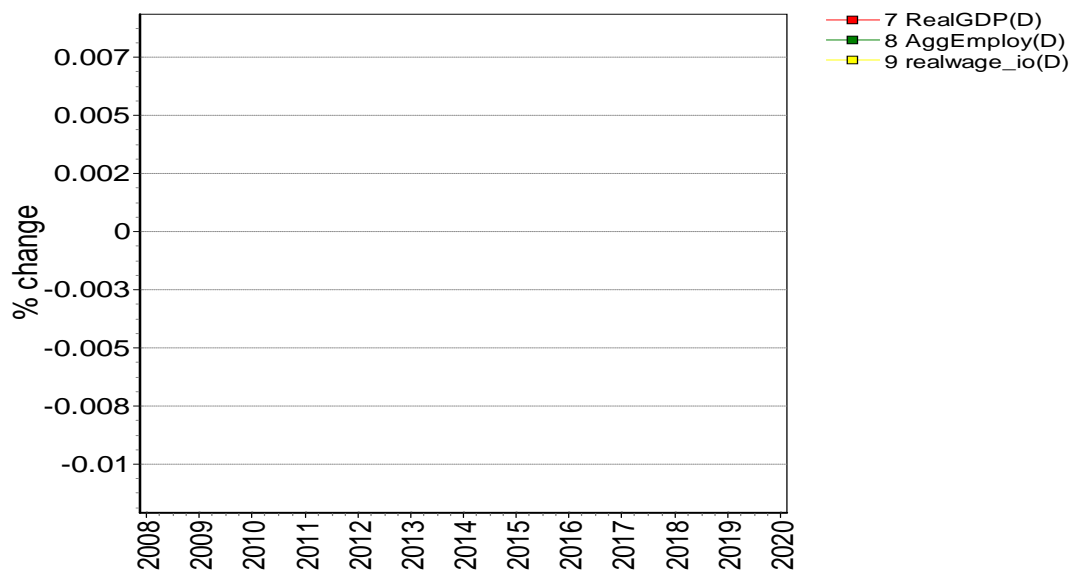


Figure 7. Some macro level results.

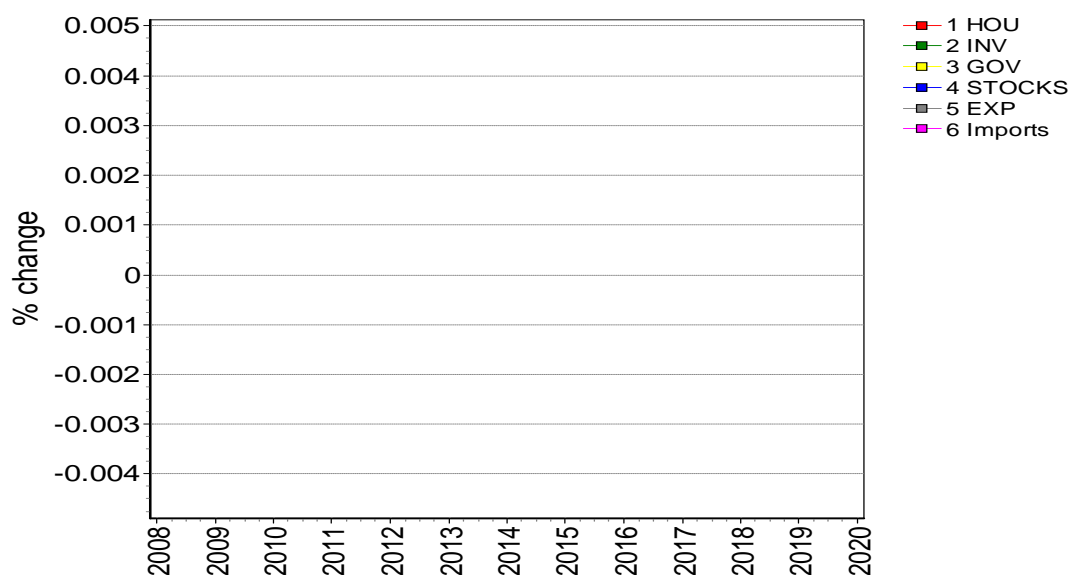


Figure 8. National GDP decomposition from expenditure side.

6 Conclusion

In this study we analyzed the economic effects of Finnish central government's decentralization program. We found that at least in our example case, the decentralization of Agency of Rural Affairs, the policy seems to be delivering its promises. We found that the cost savings in the public sector will positively affect the economy via increased possibilities in the private, especially export oriented, sector. Regional policy goals will be met as well, since the receiving region gains a boost in its economic activity while the detrimental effects of congestion in the original region are mitigated. Our study also suggests considering some issues when thinking about the timing of the decentralization. During the transition period there are some unavoidable extra costs that will expand the economy. Therefore it would be optimal to have the transition period to happen during an economic recession, which would contribute to expansionary policy. We could not fully account to what happens to the productivity of the relocated agency. Some claim that valuable human capital might be lost during decentralization process as a significant amount of core personnel is reluctant to move to a new location. However, according to the Ministry of Finance report (2011),

there is no productivity losses found thus far in the studied decentralization cases. We did not assume anything to happen for public sector productivity in our model. This is a reasonable assumption if we think that the productivity measurement in the aforementioned study has been adequate. The results are presented for one government agency only and might be derived to some special character of this agency. Therefore larger study with data from larger sample of agencies will still be required.

References

Honkatukia, J., Marttila, K. & Sulamaa, P. Budjetin aluevaikutukset – valtion alueellistamis- ja tuottavuusohjelman vaikutukset maakunnissa (In Finnish: Regional effects of the budget – the effects of the central government’s decentralization and productivity program for the regions). VATT Discussion Papers 427. 43 pp. Available via web: http://www.vatt.fi/file/vatt_publication_pdf/k427.pdf

Ministry of Finance 2011. Alueellistamisen taloudelliset vaikutukset – Alueellistamisen taloudellisten vaikutusten arviointityöryhmän (ATVA) loppuraportti (In Finnish: The economic effects of decentralization – the final report of the Committee for the economic effects of decentralization (ATVA)). Publications of Ministry of Finance 2/2011. 226 pp. Available via web: http://www.vm.fi/vm/fi/04_julkaisut_ja_asiakirjat/01_julkaisut/04_hallinnon_kehittaminen/20110113Alueel/ATVA_Finaali.pdf

Moisio, Antti, Loikkanen Heikki A., Oulasvirta Lasse (2010): *Public services at the local level - The Finnish way*, VATT Valmisteluraportit 2, Government Institute for Economic Research, Helsinki.