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Economic Dynamics and Changes in Values and Attitudes among Finnish Regions

A Descriptive Analysis

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Economic dynamics and changes in values and attitudes among Finnish Regions: A descriptive analysis

Abstract

Finland is characterized by a substantial heterogeneity across its regions. Key economic indicators, such as the GDP per capita and the unemployment rate, vary widely for different areas, with Uusimaa, the region where Helsinki is located, being significantly richer than regions such as Kainuu and Savo. This heterogeneity, however, has not been stable over time. We find that many important indicators, namely the GDP per capita, the unemployment rate and real wages and salaries per employee, have been converging across regions over the years going from 2000 to 2014. Moreover, we examine regional values and attitudes, using surveys from the Finnish Business and Policy Forum, and find that there has been a strong regional convergence in terms of trust in political parties and in the EU. In particular, we find that the trust in these institutions has increased more in regions where there was a more negative attitude toward parties and the EU during the initial years of our analysis. On the other hand, we do not find a significant convergence with respect to the attitude towards immigration.

Key words: Convergence, Regional heterogeneity, Values and attitudes

JEL: A13, E02, O43 ja O47

Talouden dynamiikka sekä arvojen ja asenteiden muutokset Suomen alueilla. Kuvaileva analyysi.

Tiivistelmä

Suomessa on suuret alueelliset erot. Tärkeät talousindikaattorit, kuten bkt asukasta kohden ja työttömyysaste, vaihtelevat alueiden välillä merkittävästi. Esimerkiksi Uusimaa on merkittävästi rikkaampi kuin Kainuu ja Savo, kun mittarina käytetään bkt:n ja asukasmäärän suhdetta. Alueellinen heterogeenisyys on kuitenkin muuttunut ajan kuluessa. Tulokset kertovat, että alueiden väliset erot ovat kaventuneet useilla talousindikaattoreilla vuosina 2000–2014. Tutkitamme myös arvojen ja asenteiden muutoksia samana ajanjaksona käyttämällä EVAn kyselyaineistoa. Havaitsemme, että arvot ovat myös lähentyneet ympäri Suomeen, erityisesti luottamus poliittisiin puolueisiin ja EU:hun. Toisaalta asenteissa maahanmuuttoon ei ole esiintynyt alueellista konvergenssia.

Asiasanat: Alueellinen heterogeenisyys, lähentyminen, arvot ja asenteet

JEL: A13, E02, O43 ja O47

1 Introduction

The Finnish economy is characterized by a marked regional economic heterogeneity. In 2014, the GDP per capita of Uusimaa, the southern area which includes the Helsinki metropolitan area, was around 39,000 euro, while the one of Kainuu, the center-east region on the Russian border, was roughly 20,000 euro. Moreover, the Uusimaa unemployment rate in 2014 was 7.3 percent, with the Kainuu one reaching almost 17 percent during the same year, implying that Kainuu had more than double the unemployment rate of Uusimaa. Finally, there are strong differences between these two regions in terms of salaries, with the wage per capita for Uusimaa, in 2014, as high as 37,000 euro, compared to the substantially lower one of Kainuu, at 26,000 euro. These are just few examples of the strong economic differences among the Finnish regions. Regional diversities can have lasting effects and are put under scrutiny by policymakers, in order to devise supportive measure to areas that suffer from economic stagnation and that are lagging behind.

The study of the dynamics of regional heterogeneity has been the focus of multiple longstanding literatures, dealing with a wide number of aspects of local economies. Blanchard and Katz (1992) study the effect of negative employment shocks affecting U.S. states, looking at the subsequent wage and inter-regional migration dynamics. Another seminal paper which discusses regional (and cross-country) convergence and the interplay between economic growth and migration is Barro and Sala-i-Martin (1991), who find a significant albeit slow convergence among U.S. states and among European regions. Greenstone et al. (2010) analyze how the opening of a plant in a U.S. county impacts the productivity growth of local incumbent plants, through increasing agglomeration. Bellini et al. (2013) study the relation between cultural diversity and productivity at the regional level, considering the NUT3s of 12 European countries. They find that a higher degree of cultural diversity is associated with higher productivity, and that the former causes the latter. For the Finnish economy, Böckerman and Maliranta (2007) examine plant-level data and link it to the regional productivity gap. Their results point toward a fairly homogenous productivity growth among continuing plants, regardless of their location. On the other hand, there are substantial regional differences in terms of the productivity growth resulting from creative destruction, with Uusimaa being the region with stronger productivity-enhancing resource reallocation.

In this report, we describe Finnish regional dynamics, with a special focus on economic variables such as the GDP per capita, income per worker and the unemployment rate, together with a look at demographic variables and at other measures of the economic development of an area. One of the aspects that we are especially interested in, is whether there has been an overall convergence (or divergence) across regions, for different indicators of changes in economic development. The dynamics of economic and demographic development are not solely interesting in their own right: different patterns of economic growth can have an important impact on the social and political environment for the country (see, e.g., Aghion et al., 2016; Algan et al., 2017). Diverging economic conditions might create extremely differing political environments between regions, or between urban and rural areas, and these might in turn condition future policies. We investigate this issue by looking at regional values and attitudes and their trends, similarly to what we do for the economic indicators. To create regional values indices, we rely on the Finnish Business and Policy Forum (EVA) surveys. We describe this dataset in more detail in Section 3.3.

We structure this report in the following way. In Section 2, we briefly describe the variables that we are going to examine and how we define convergence or divergence. In Section 3 we report the results for regional economic and demographic variables. The discussion of the results is completed by an analysis of regional values' dynamics. Section 4 concludes.

2 Main variables and measures of interest

As mentioned in the Introduction, we examine a wide array of economic and demographic variables, specifically their trends between 2000 and 2014. We consider 18 Finnish regions, excluding Åland. We first report the regional averages of the variables of interest, in levels, and subsequently examine whether there have been convergent or divergent trends. For this latter part, we use graphical means (specifically scatter plots) and we report the coefficients obtained by regressing the growth rate of the variables of interest, from 2003 to 2014, on their initial values (the average values from 2000 to 2002). Of course, these regression estimates do not give a complete overview of the dynamics of regional economic development, let alone any sort of causal evidence, but they do provide a snapshot of how Finnish regions have evolved during the last 15 years.

Our set of indicators covers economic variables such as the regional GDP per capita, wages and salaries, disposable income and various measures of employment and hours worked. Moreover, we describe the trends of a number of demographic indicators, including total population, the economic dependency ratio and the share of population with foreign background. In addition, we depict indicators of migration flows (both inter-regional and to foreign countries).

After the description of these aggregate variables, we analyze regional values dynamics, such as the attitude toward national parties, immigration and the European Union, and how these changed over time across Finnish regions.

3 Regional trends

3.1 Economic indicators

We start by reporting the regional averages of our main economic indicators, obtained from the Statistics Finland database. At this point of the analysis, we give a static view of the heterogeneity among Finnish regions. While, this is not the main focus of the study, a description of the average economic conditions of different Finnish areas can give a beneficial background to the study of their dynamics.

Looking at Table 1, we can see that Finnish regions display major differences, in regards to important economic indicators. Uusimaa stands out as a being the region contributing the most to the Finnish economy, accounting for almost 40% of total value added. Moreover, we observe a big gap in terms of GDP per capita, where the value for Uusimaa is 33% greater than the one of the second richest region and it is twice the one of Kainuu, the region with the lowest average GDP per capita. A similar picture is obtained by looking at the unemployment rate, even though Pohjanmaa shows a figure comparable to the one of Uusimaa. Regions in the east and

northeast part of Finland are lagging behind, with high unemployment rates and low GDP per capita. It is interesting to see that the share of entrepreneurs follows a different pattern compared to the other economic indicators. In this case, Uusimaa has the lowest share of entrepreneurs (relative to the regional labor force), while South Pohjanmaa has the highest. However, this result could be driven by the fact that firms located in Uusimaa are likely to be larger and have more employees. As we mentioned before, these descriptive statistics are useful in order to understand the main regional differences, but do not show possible large changes over time. For example, the Great Recession of 2008–2009 might have had a larger impact on Uusimaa compared to more remote regions, given the high concentration of big companies and financial institutions.

In this study, we are particularly interested in whether there has been an overall convergence or divergence across Finnish regions, over the years going from 2000 to 2014. To verify this, we first report scatter plots where on the vertical axis we depict the (log) change of the variable of interest, while on the horizontal axis we have the initial value (in logs if the variable is not a rate) of the same indicator. To moderate the effect of possible outliers, for example the end year or the initial year might have been particularly good or bad in terms of economic conditions, we compute the average yearly log change for the years going from 2003 to 2014. We denote these changes as dY (dlY, if we take log-transformation). The initial value is then the average of the variable of interest between 2000 and 2002, denoted as $Y_{00\text{-}02}$ (or $lY_{00\text{-}02}$). The resulting plots are fairly easy to interpret, in terms of the convergence vs divergence question:

Table 1. Regional averages for main economic indicators, based on the 2000–2014 period

Region	*GDP, mill. eur*	*GDP per capita, eur (2000 prices)*	*Wages and salaries/labor force, eur*	*Unemployment rate, %*	*Entrepreneurs/ labor force, %*
Uusimaa	65,740	39,370	31,541	6.04	6.86
Varsinais-Suomi	16,206	28,946	25,257	7.72	10.18
Satakunta	7,882	25,440	24,516	8.24	10.69
Kanta-Häme	4,580	22,916	25,097	7.48	9.89
Pirkanmaa	15,266	29,502	25,406	9.04	8.90
Päijät-Häme	5,257	22,562	23,813	8.90	9.88
Kymenlaakso	5,493	27,501	25,200	9.40	8.84
South Karjala	4,091	28,458	24,352	9.19	9.57
South-Savo	3,750	19,734	21,601	10.05	13.05
North-Savo	6,476	22,031	22,896	10.11	11.30
North Karjala	4,062	21,208	21,072	12.94	11.18
Central Finland	7,332	24,250	23,264	10.56	9.65
South Pohjanmaa	4,779	20,800	21,741	7.68	15.15
Pohjanmaa	5,577	27,519	24,709	6.12	11.25
Central Pohjanmaa	1,857	22,106	22,547	7.58	13.87
North Pohjanmaa	11,496	27,840	24,351	10.26	9.79
Kainuu	2,071	19,683	21,914	14.34	9.53
Lapland	6,078	24,093	22,778	12.63	9.98

Source: Authors own calculation, data obtained from the Statistics Finland database.

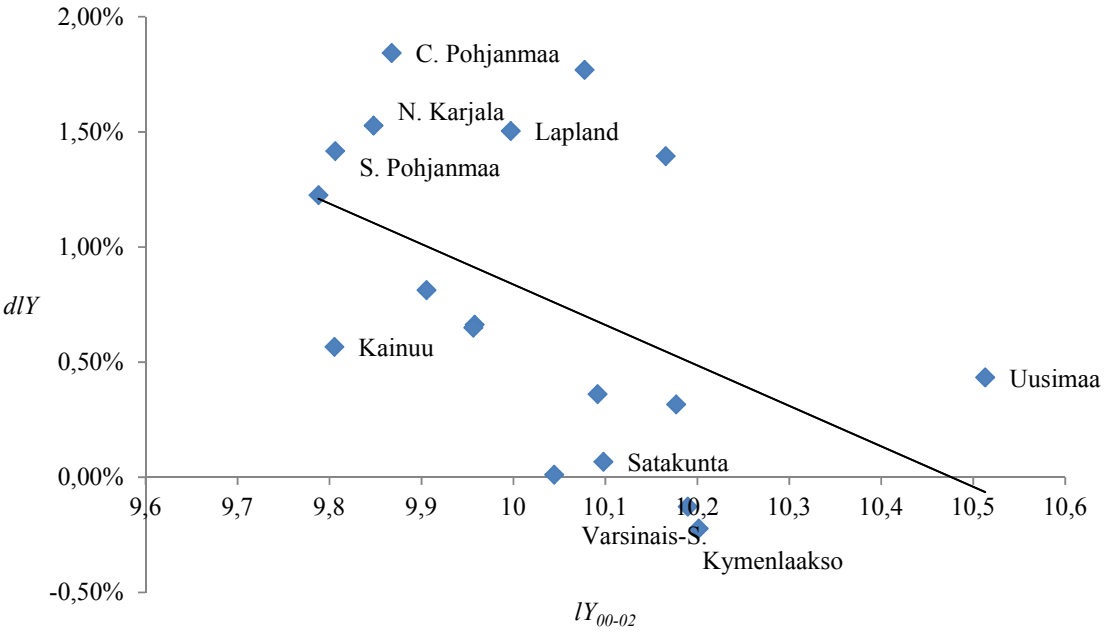
a downward sloping relationship indicates that there has been convergence among regions, while the opposite is true for divergence. This is because a downward slope signals that regions with higher initial levels of the variables of interest have experienced lower growth rates, while the converse holds for divergence.

We start by reporting the scatter plot of the GDP per capita, in Figure 1. We cover all the Finnish regions except for Åland.

Figure 1 highlights the presence of a convergent trend of the GDP per capita across the Finnish regions, between 2000 and 2014. While relatively richer regions like Uusimaa and Varsinais-Suomi have faced a moderate or negative yearly average growth of their GDP per capita (0.43% and -0.13% respectively), regions that were lagging behind during the early 2000s, such as North Karjala, South Pohjanmaa and Lapland, have experienced a more substantial increase (1.53%, 1.42% and 1.50% for these regions). Overall, it seems that regional GDP per capita has converged during the last couple of decades, even if this trend does not apply to every region. For example, the yearly growth for Kainuu, the region with the lowest average GDP per capita and highest unemployment rate, during the 2003–2014 period is only 0.57%. Another example is Satakunta, with a yearly log-change in GDP per capita of only 0.07%. This value is lower than the one of Uusimaa, even though the average GDP per capita of the latter is 50% higher.

We now turn to variables regarding the labor market, such as the unemployment rate and hours worked per person employed. As we have seen before, the unemployment rate differs drastically between Finnish regions, thus it especially interesting to see what kind of trends have characterized the regional labor markets. We report below similar scatter plots as the one

Figure 1. Regional log-GDP per capita, in 2000 prices



The vertical axis shows the average yearly log-change for the period 2003–2014. The horizontal axis displays the average of the first three years (2000–2002).

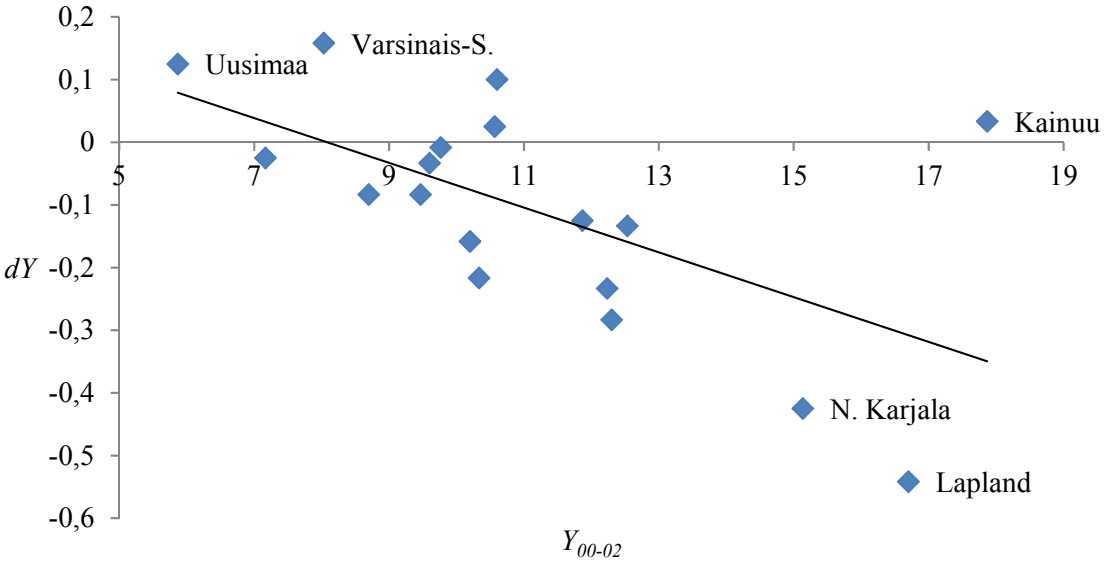
of Figures 1, for the unemployment rate, hours worked per person employed and the share of entrepreneurs.

Let's start by looking at one of the most important indicators of the economic health of a given region, i.e. the unemployment rate. The scatter plot depicted in Figure 2 shows a clear convergent path, which implies that regions that had a relatively higher unemployment rate at the start of our sample have experienced a substantially lower growth in unemployment. This convergence is mainly driven by an overall decrease of the unemployment rate across regions, with only a handful of regions, such as Uusimaa and Varsinais-Suomi, having a positive average yearly growth over the period of our analysis. On the other hand, the unemployment rate of regions like Lapland and North Karjala fell considerably, on average (-0.54 percentage point and -0.42 percentage point respectively).

Hours worked per person employed present a similar picture. As for the case of the unemployment rate, we find convergence, even though the trend does not seem as strong. Regions with a high amount of hours worked per worker in 2000–2002, such as Uusimaa and, to a lesser extent, Varsinais-Suomi have experienced a substantially lower average growth rate for the period 2003–2014, compared to regions such as Kainuu and Central Pohjanmaa. For example, the average growth in hours worked per employee for Uusimaa is around -0.3%, against the 0.71% growth for Kainuu.

Finally, we examine the entrepreneurs' share of total labor force. As we have seen in Table 1, a higher entrepreneurial rate does not necessarily indicate that the region examined is more economically developed. For example Uusimaa, the richest region, has the lowest share of entrepreneurs among Finnish regions. In terms of convergence vs. divergence dynamics, Figure 4 displays again a strong convergent trend. This is mainly driven by a substantial drop in the

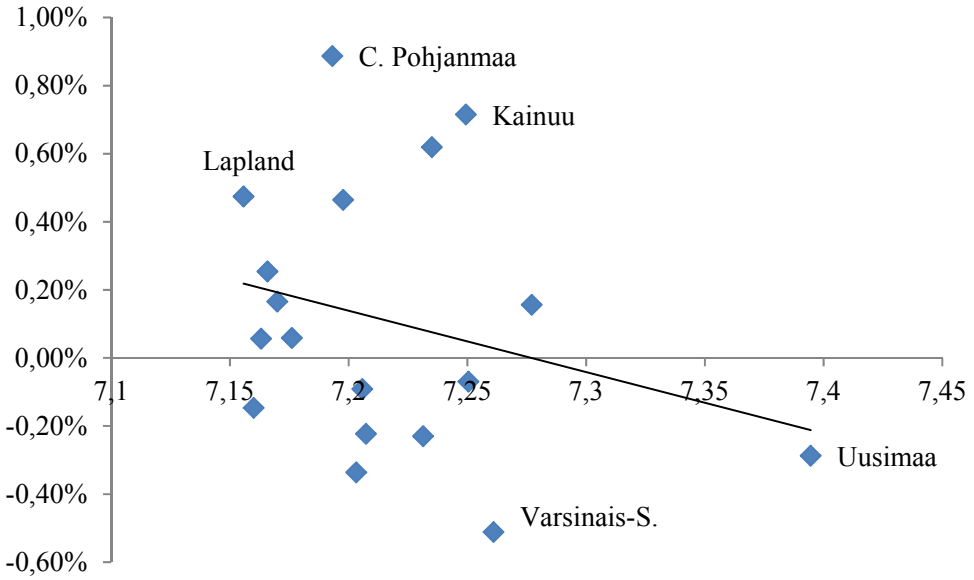
Figure 2. Regional unemployment rate



The vertical axis shows the average yearly difference for the period 2003–2014, in percentage points. The horizontal axis displays the average of the first three years (2000–2002).

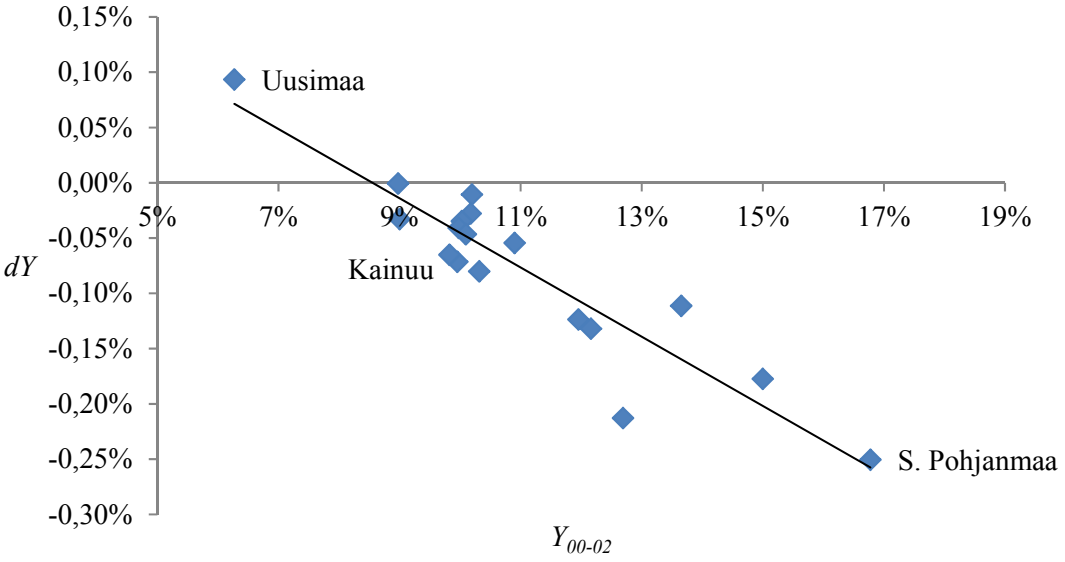
share of entrepreneurs in poorer regions, particularly in the eastern part of Finland. Interestingly, only Uusimaa has experienced an increase in the share of entrepreneurs. The decrease in entrepreneurial rate across Finland, especially for less economically developed regions, can be interpreted in the light of the general improvement of the unemployment rate. It is plausible

Figure 3. Regional hours worked (employees) divided by total number of employees, in logs



The vertical axis shows the average yearly log-difference for the period 2003–2014. The horizontal axis displays the average of the first three years (2000–2002).

Figure 4. Share of entrepreneurs for each Finnish region



The vertical axis shows the average yearly difference for the period 2003–2014. The horizontal axis displays the average of the first three years (2000–2002).

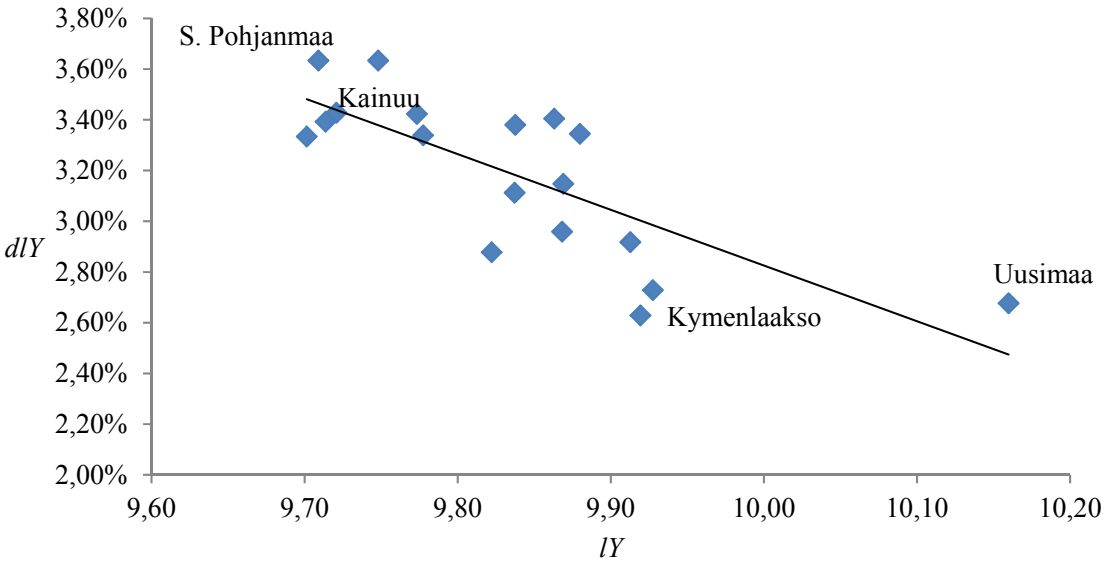
that many entrepreneurs in poorer regions are actually pushed to enter into self-employment because of difficult labor market conditions. As the labor market of regions initially lagging behind improves, evidenced by the substantial decrease in the unemployment rates of poorer areas, many self-employed individuals move to the formal labor market, shifting the distribution of the labor force to the employed share rather than self-employed one.

We now turn to wages and salaries, and disposable income, to complete the overview of the convergence vs. divergence dynamics for our economic indicators.

Based on Figure 5 and Figure 6, regional dynamics for salaries and disposable income show a convergent tendency. However, it is hard to see how statistically significant this convergence is, because the downward relationship between initial salaries level and its growth is rather flat. This consideration holds for all the variables we have considered so far: plots are extremely useful to give an overall picture of the convergence dynamics but it is hard to verify how quantitatively important these trends are, without relying on some statistical measures.

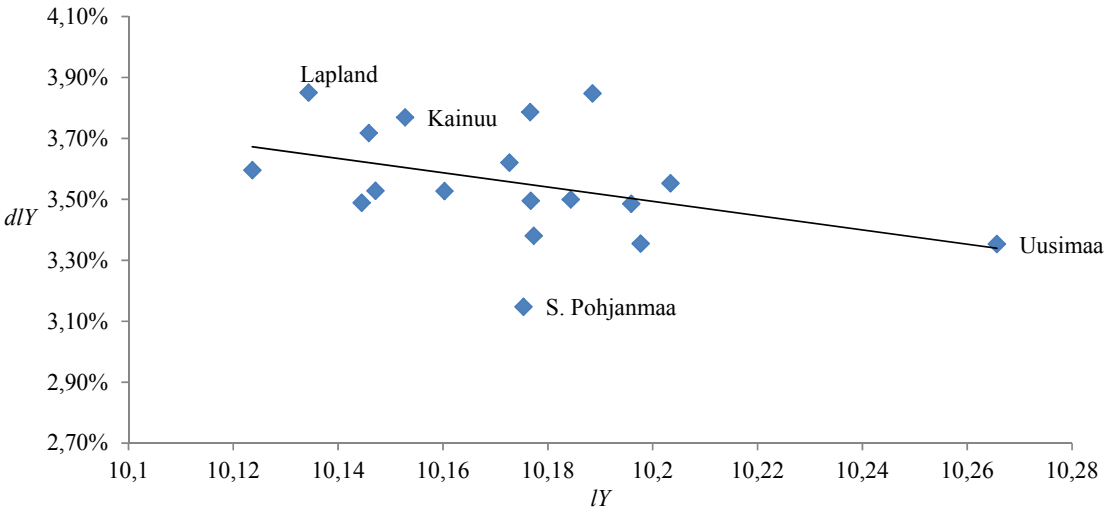
To do that we report the results of the univariate, regional-level, regression $dY_i = Y_i\beta + c + \varepsilon_i$. The dependent variable is the average of the yearly (log) change of the variable of interest for the years 2003–2014, while the explanatory variable is the average of the measure we examine over the initial three years, i.e. from 2000 to 2002. β and c are the slope parameter and the intercept, to be estimated through ordinary least squares, and ε is a regional-level error term. With this type of regressions, we are not attempting to estimate a full model which is able to explain regional dynamics comprehensively, let alone establish any causal link between initial conditions and growth of regional economic indicators. However, these regressions can be helpful in terms of understanding whether the dynamics we have examined graphically are significant in a statistical sense. In Table 2, we report the coefficient of these *growth regressions* and the

Figure 5. Regional wages and salaries (mill. euro) divided by total labor force, in logs



The vertical axis shows the average yearly log difference for the period 2003–2014. The horizontal axis displays the average of the first three years (2000–2002).

Figure 6. Regional disposable income (mill. euro) divided by labor force, in logs



The vertical axis shows the average yearly log difference for the period 2003–2014. The horizontal axis displays the average of the first three years (2000–2002).

relative R^2, a measure which indicates how much of the variation of the dependent variable is explained by the explanatory ones. We check for the statistical significance of the coefficients using the p-values of the estimates. Statistical significance at the 10% level is marked with *, at the 5% with ** and at the 1% with ***.

First, we look at those variables that do not show any particularly strong convergence or divergence pattern. Hours worked per employee show a non-significant coefficient and a very low R^2. This result confirms the intuition we gained from the plot of this variable, where the trend line is fairly flat and it is hard to determine whether the downward relationship between the initial values of the variable of interest and its growth is meaningful. Wages and salaries, and disposable income exhibits fairly high coefficient, even though the latter is statistically significant only at the 10% level. The results regarding the remaining economic indicators point toward a strongly convergent pattern. Regions where the initial level of GDP per capita, unemployment rate and the share of entrepreneurs were lower have experienced a stronger growth of these measures. These convergence trends are especially strong for the unemployment rate and the share of entrepreneurs. For the former, a 1% higher unemployment rate during the

Table 2. Cofficients and R^2s of the growth regressions for the variables examined in Section 3.1

	GDP per capita	*Unemp. Rate*	*Hours worked*	*Share entr.*	*Wages*	*Income*
ß	-0.017 **	-0.04 ***	-0.01	-0.03 ***	-0.021 ***	-0.023 *
R^2	0.23	0.36	0.07	0.85	0.58	0.16

*,** and *** indicate statistical significance at the 1, 5 and 10 % level.

years 2000–2002 is associated with a -0.04% drop in the unemployment rate's annual growth from 2003 to 2014. Interestingly, the unemployment rate and the entrepreneurial rates are the two variables for which the convergence trend is the strongest, as shown also by the large R^2 of the growth regression.

Overall, it is interesting to see that two of the most important indicators regarding the economic well-being of region, i.e. GDP per capita and the unemployment rate have shown strong converging trends. It is especially reassuring to see that regions with fairly low GDP per capita level during the 2000–2002 period have experienced sustained growth and the same goes for the unemployment rate. The labor market conditions for regions with high unemployment rate during the initial years of our sample have improved remarkably by 2014.

3.2 Demographic indicators

We now turn our attention to regional demographic variables and conduct a similar analysis as in the previous subsection. Firstly, we report the averages of the indicators examined here, at the regional level.

As for the economic variables of Section 3.1, we see that there is substantial regional heterogeneity also when considering demographic variables. Uusimaa stands out as the most populous region and it is the area with the highest share of persons with foreign background. Moreover,

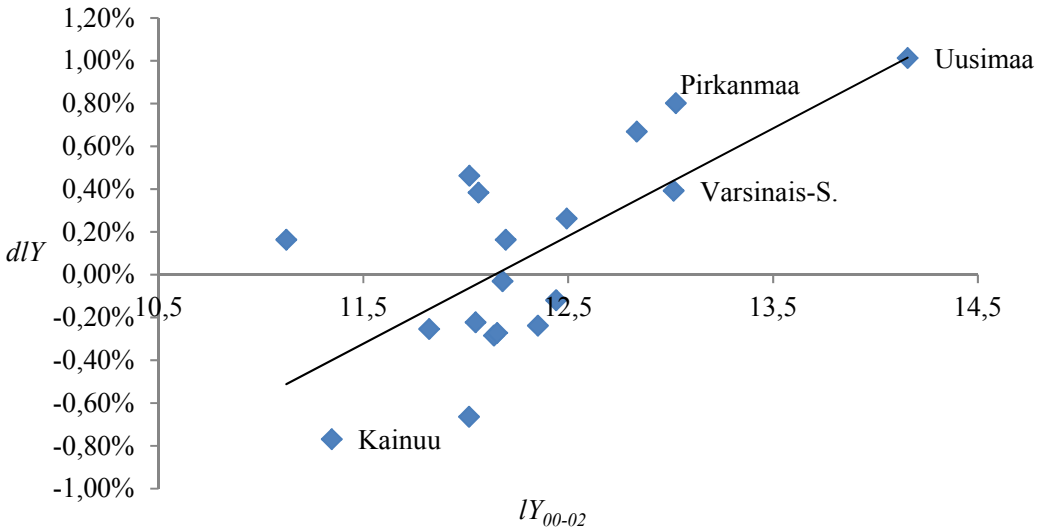
Table 3. Regional averages for main demographic indicators, based on the 2000–2014 period

Region	*Total population*	*Persons with foreign background, %*	*Net inter-regional migration*	*Net migration*	*Economic dependency ratio*
Uusimaa	1,490,087	7.02	3,215	4,779	105
Varsinais-Suomi	459,679	4.07	677	875	128
Satakunta	227,634	1.50	-657	295	146
Kanta-Häme	170,914	2.04	461	261	133
Pirkanmaa	477,088	2.78	1,985	795	132
Päijät-Häme	200,107	2.94	119	320	143
Kymenlaakso	183,746	3.21	-560	510	151
South Karjala	134,033	3.32	-267	317	152
South Savo	158,867	1.78	-621	229	162
North Savo	249,814	1.46	-503	283	155
North Karjala	167,518	2.11	-509	318	169
Central Finland	270,934	1.94	31	340	150
South Pohjanmaa	193,947	1.07	-479	234	145
Pohjanmaa	175,997	3.66	-447	631	127
Central Pohjanmaa	68,014	1.50	-298	99	144
North Pohjanmaa	390,290	1.48	-350	478	151
Kainuu	80,477	1.72	-724	187	176
Lapland	185,263	1.70	-1,151	335	164

Source: Authors own calculation, data obtained from the Statistics Finland database.

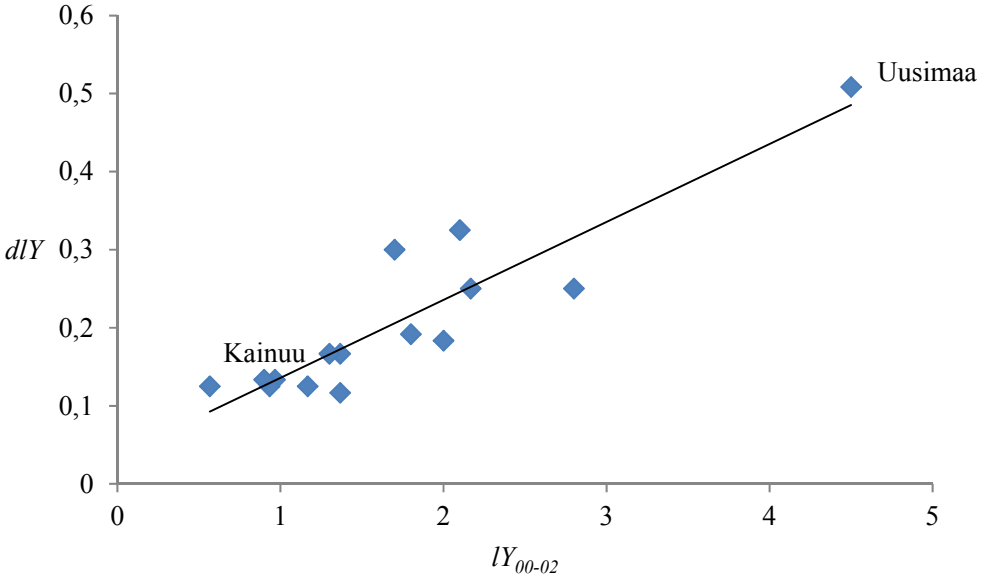
it has a very large net inter-regional migration rate, meaning that a high number of residents from other Finnish regions move to Uusimaa over time. Finally, it is the region that has the largest number of foreign immigrants. These latter points are expected, given the economic importance of the region. More peripheral areas such as Lapland and the eastern part of Finland have consistently negative net inter-regional migration and tend to have a lower share of

Figure 7. Total population at the regional level, in logs



The vertical axis shows the average yearly log difference for the period 2003–2014. The horizontal axis displays the average of the first three years (2000–2002).

Figure 8. Share of persons with foreign background



The vertical axis shows the average yearly difference for the period 2003–2014, in percentage points. The horizontal axis displays the average of the first three years (2000–2002).

foreign residents. However, on average, the net migration with respect to foreign country is positive for all regions. The economic dependency ratio is defined as the number of people aged 0–14 years and 65 and over, divided by the number of people aged 15–64, with a higher number indicating that there are relatively more residents outside the working age. This measure also shows important differences among regions: the ratio reaches its lowest value for Uusimaa, while the region with the highest economic dependency ratio is Kainuu, in eastern Finland.

Next, we present similar plots as the ones of Figure 1–6, i.e. we display the (log) change for the demographic indicators listed in Table 3 against the average of their (log) levels in the initial years of the sample. In Figure 8 and Figure 9, we report the scatter plots for the total population and the share of foreigners.

These two demographic measures display a fairly different pattern compared to the main economic indicators examined in Section 3.1. Here, both the total population and the share of foreign residents have a diverging trend, across regions. More populous regions in the early 2000s, as Uusimaa, Varsinais-Suomi and Pirkanmaa, have the highest growth of population over the 2003–2014 interval, while areas with a lower initial population have low and even negative changes. This result is fairly intuitive: larger regions, in terms of population, tend to have a higher concentration of enterprises and jobs, which implies that they are the most attractive to the working age population. Moreover, the presence of large Universities leads to the influx of students from other parts of Finland. Looking at the net inter-regional migration for different age groups can provide interesting evidence to support this intuition. For example, the average inter-regional migration for Uusimaa is around 3,000, but this is mostly due to the net inter-regional migration of people aged 20–34 (the average for this group is 4,500), while the same measure for people aged 35–50 is actually negative (-500).

In regards to the share of residents with foreign background, we find again a fairly strong diverging trend, where regions with a higher share of foreigners in 2000–2002 have experienced larger changes, with Uusimaa being the region with both the highest initial level and growth of the share of foreigners. Again, this divergent trend between regions is somewhat expected. A high initial share of foreign residents is a good indication of the opportunities available to the non-native population. New immigrants are then attracted to regions with more business opportunities and services targeted to foreigners. Moreover, the presence of a larger share of non-natives in a region can be considered beneficial by new immigrants, in terms of enclave economies and the presence of people who share language and culture.

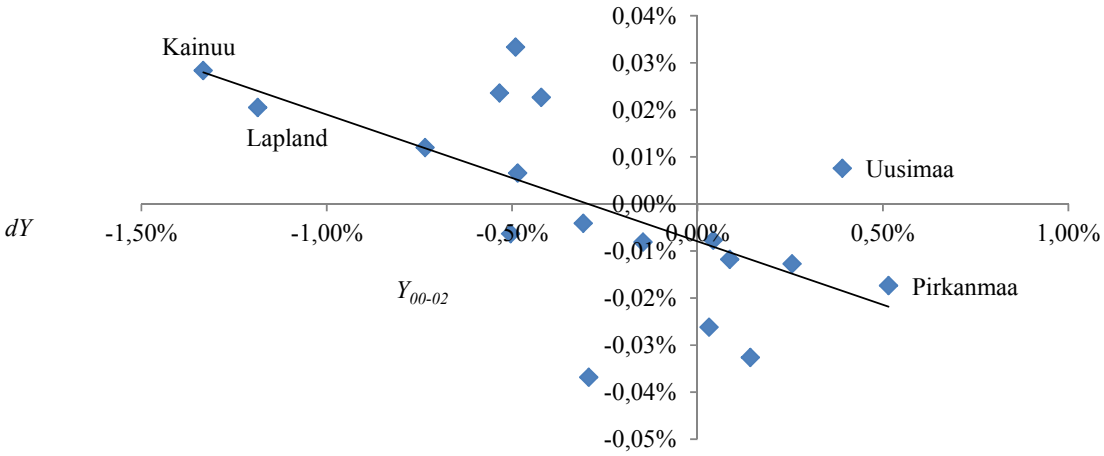
We now examine the net inter-regional migration and net migration for the Finnish regions, using similar scatter plots as the ones before. However, given that net migration values can be negative, we cannot take logs. Our strategy here is to evaluate the initial state of a given region by computing the ratio between the net migration and the region's population in 2000–2002, and the change is computed by the average yearly growth of this ratio from 2003 to 2014. In other words, we are looking at whether the net migration rate has grown or decreased over time, rather than looking at the net flows of population during a given year.

The net inter-regional migration rate exhibits a convergent trend. Regions which have a strong negative net inter-regional migration in 2000–2002 have experienced improvements, in terms of the net flow of population, even though the migration rate is still negative for many small-

er regions. For example, Lapland average inter-regional migration rate in 2000–2002 is -1.19% of its total population, with a yearly improvement of 0.03 percentage points during the period 2003–2014, on average. However, Lapland's inter-regional migration rate has stayed negative for every year in our data. The figure regarding net migration, i.e. the difference between immigration and emigration abroad does not exhibit particular trends.

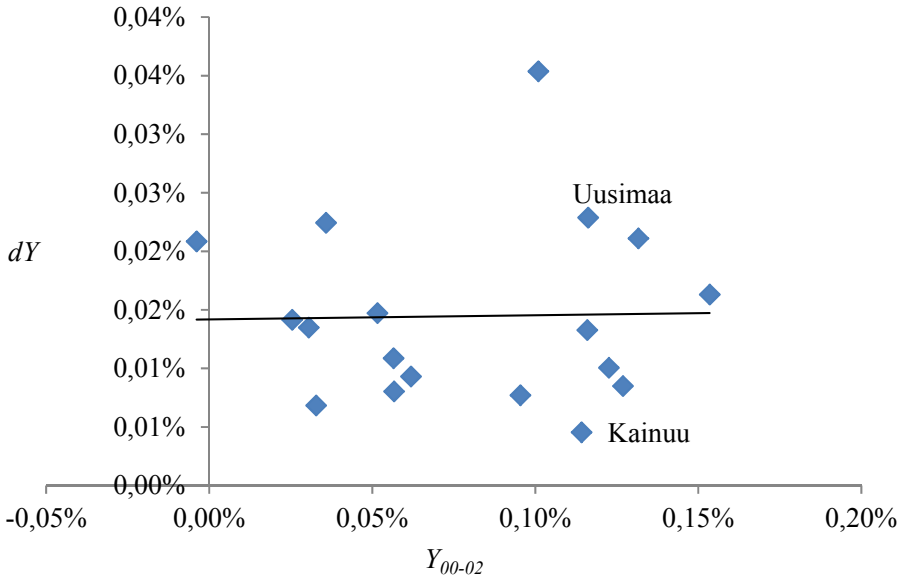
Finally we look at the economic dependency ratio and its regional dynamics. In particular we plot the log-change of this measure against its average during the first three years of the sample.

Figure 9. Net inter-regional migration, share of total population



The vertical axis shows the average yearly change for the period 2003–2014, in percentage points. The horizontal axis displays the average of the first three years (2000–2002).

Figure 10. Net migration, share of total population

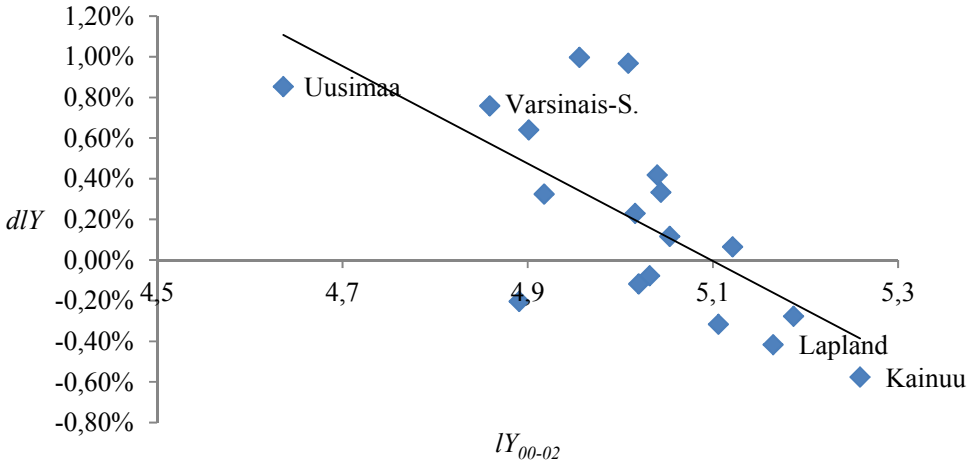


The vertical axis shows the average yearly difference for the period 2003–2014, in percentage point. The horizontal axis displays the average of the first three years (2000–2002).

The economic dependency ratio is characterized by a marked convergence among regions. For example, Lapland's initial economic dependency ratio is 179 and drops to 164 by 2014. On the other hand, this indicator grew considerably for Uusimaa, which has the lowest economic dependency ratio in 2000. The convergence of this measure can be a consequence of the convergent pattern of the net inter-regional migration rate, which seems to be much stronger for the 20–34 years age group. To give a practical example, a region such as Lapland, where the net migration rate grew over time, will benefit from the inflow (or in this case the milder outflow) of the working age population, which leads to an improvement of the economic dependency ratio. We now report the results from the growth regressions, as we did in Table 2.

The results of Table 4 highlight differing trends for the variables examined so far in this subsection. Firstly, net migration, i.e. the flow of people to and from abroad, does not show either a converging or diverging trend. On the other hand, the number of persons with foreign background has grown substantially more in regions with a higher initial share of foreigners, indicating strong divergence of the same variable. In particular, a one percent higher initial share of foreign residents implies a 0,10 percentage point higher yearly growth rate. The divergence of this indicator can have strong economic implications. As shown in works such as Kerr and

Figure 11. Economic dependency ratio, in logs



The vertical axis shows the average yearly log difference for the period 2003–2014. The horizontal axis displays the average of the first three years (2000–2002).

Table 4. Cofficients and R2s of the growth regressions for the variables examined in Section 3.2

	Total population	*Foreign background*	*Inter-regional migration*	*Net migration*	*Economic dependency ratio*
ß	0.005 ***	0.10 ***	-0.027 ***	0.003	-0.024 ***
R^2	0.49	0.84	0.37	0.00	0.49

*,** and *** indicate statistical significance at the 1, 5 and 10 % level.

Kerr (2016) and Bellini et al. (2012), a larger presence of immigrants (and cultural diversity in general) is associated with higher entrepreneurship rate, due to the higher self-employment propensity of the immigrant group, and higher productivity.

The economic dependency ratio exhibits a strong converging dynamic, which can be explained by the convergence of the inter-regional migration (evidenced by the significant negative coefficient of the growth regression). It is important to point out that this result is mainly due to the decrease in the dependency ratio among regions with high initial levels of the indicator. However, regions such as Uusimaa and Varsinais-Suomi have experienced a strong increase in this indicator.

Finally, we confirm the strong regional divergence regarding total population. More populous regions such as Uusimaa and Pirkanmaa have acted as gravitational centers, with an increase in their population larger than the one of smaller regions, relative to their initial size. This can be considered as a problematic trend, where larger regions keep on expanding and attracting workers and students from other Finnish areas, which in turn might suffer both in terms of public finances and economic growth capabilities. While the net inter-regional migration rate has been improving for many remote regions, such as Kainuu and Lapland, it is still substantially negative at the present time.

3.3 Regional values dynamics

We now turn to the analysis of the regional dynamics of values and attitudes. So far, we have seen that there is a substantial economic heterogeneity among the Finnish regions and that the trends underlying economic indicators have been converging. It is then interesting to see whether we find similar patterns when looking at social values, such as trust in institutions or openness to immigration. One can expect that attitudes are affected heavily by regional conditions. For example, it is likely that a region like Uusimaa, with its multiethnic background and its business' concentration, exhibits a more positive attitude toward foreigners. On the other hand, more isolated regions, both geographically and economically, are more likely to be distrustful w.r.t. immigration.

To measure regional values, we rely on the EVA Survey on Finnish Values and Attitudes. This is a series of surveys conducted by the Finnish Business and Policy Forum (EVA), where the respondents are asked a large number of questions concerning the political system, education, economic growth, immigration and many other topics. These surveys have been conducted since 1984 and they are usually biannual, even though they are occasionally available for multiple years in a row. The themes and questions contained in the surveys change considerably from year to year. However, a number of questions are present each year (at least during the time period of our analysis), which allows us to make a comparable description of regional values for different years. The surveys cover a number of individuals' characteristics, such as gender, income and region of residence.

We collect data from the EVA surveys for years 2000, 2002 and 2004, to represent regional attitudes during the start of our sample, and for years 2011, 2013 and 2014 to see how these measures changed over time. We create regional values' indices concerning three main themes. Firstly we evaluate the regional trust in parties, aggregating the individual responses

for the statements "No party promotes issues that are important to me" and "Political parties are drifting further and further away from the problems of ordinary citizens". Another theme that we consider is the attitude toward foreigners, where we use the statements "If more foreigners worked in Finland, our country would benefit from the useful international influences they bring" and "Finnish people's wariness towards foreigners is wise guardedness, not ignorance or racism". Finally, we look at attitudes toward EU, relying on the statement "Respondent's present attitude toward EU membership". We consider these questions and statements because they are present in each survey we examine and cover interesting aspects of regional values. The responses to these questions are originally ordered in a decreasing fashion, where a more open and trustful attitude is indicated by a lower value. We adjust the responses in order to have an increasing indicator, where a higher number represents a more positive (in the sense of more trusting) attitude toward the matter examined. For the themes concerning trust in foreigners and parties we first average the responses at the individual level and then, as we do for the attitudes toward EU, we take the regional mean, to obtain indicators that can take values 1 to 5 for each Finnish region. We first show the regional averages for the three indicators we consider in this subsection.

First of all, we must underline that we cannot compare regional values across themes, even if the indicators follow the same scale. For example, we cannot say whether Uusimaa residents display a higher trust in EU compared to national parties, even though the indicator related to the former is considerably higher than the latter. Different questions and statements can impact heavily how respondents see a certain topic and consequently their answers. However, we

Table 5. Averages of regional values and attitudes toward parties, immigration and the European Union

Region	*Trust in parties*	*Attitude toward foreigners*	*Attitude toward EU*
Uusimaa	2.58	3.06	3.39
Varsinais-Suomi	2.45	2.87	3.16
Satakunta	2.45	2.68	2.96
Kanta-Häme	2.45	2.81	3.10
Pirkanmaa	2.47	2.86	3.11
Päijät-Häme	2.39	2.81	3.17
Kymenlaakso	2.35	2.66	3.08
South Karjala	2.34	2.61	2.97
South Savo	2.38	2.84	2.99
North Savo	2.45	2.84	3.00
North Karjala	2.36	2.85	3.01
Central Finland	2.48	2.93	3.08
South Pohjanmaa	2.40	2.59	2.75
Pohjanmaa	2.47	2.85	3.04
Central Pohjanmaa	2.48	2.72	2.90
North Pohjanmaa	2.48	2.81	3.04
Kainuu	2.42	2.81	2.95
Lapland	2.34	2.88	2.96

The average is computed using surveys from year 2000, 2002, 2004, 2011, 2013 and 2014.
Source: Authors own calculation, data obtained from the EVA surveys on values and attitudes.

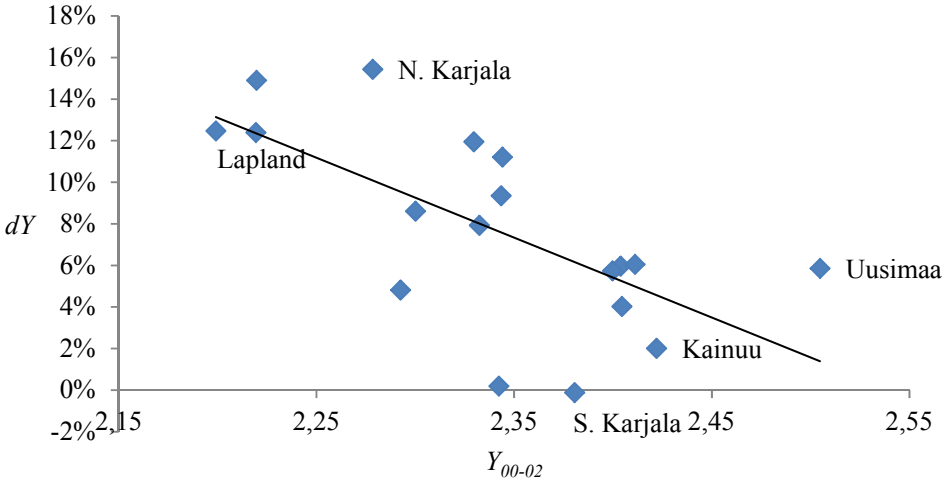
can be more confident in comparing the attitudes in regard to certain topics across regions and years. In practice, we implicitly assume that the samples available for each region and year provide a good representation of the population.

Looking at the results of Table 5, we find that values and attitudes differ across regions, even by a large margin in certain cases. Uusimaa displays the largest values for trust in parties, as well as a more open attitude toward immigration and the EU. On the other hand, regions like South Karjala or South Pohjanmaa have lower values for these indicators, implying a more pessimistic attitude toward the topics analyzed. It is also interesting to see that the indicators referring to the trust in parties have lower regional variability compared to the ones related to the attitude toward foreigners and the EU, but this might be due to the form of the statements and questions.

We now turn to the study of the dynamics underlying values and attitudes. Similarly to what we have done throughout Section 3, we plot the initial values of the indicators (calculated using the 2000, 2002 and 2004 surveys), against their change over time (where the final value is calculated based on the 2011, 2013 and 2014 EVA surveys). We report the scatter plots for the three indicators discussed in this subsection, in figures 12, 13 and 14.

Figures 12 through 14 indicate that the trend underlying our values and attitudes indicators has been convergent, even though there are discrepancies in terms of the intensity of this convergence process. The indices tracking the trust in the EU and in national parties show a stronger convergence than the one related to the attitude toward foreigners. Another interesting aspect is that this convergence is driven by an upward trend across regions: for most areas, all three indicators have increased over time and in certain cases the growth has been substantial (for example, the indicator concerning the attitude toward EU has increased by more than 10% between the beginning and the end of our period of analysis).

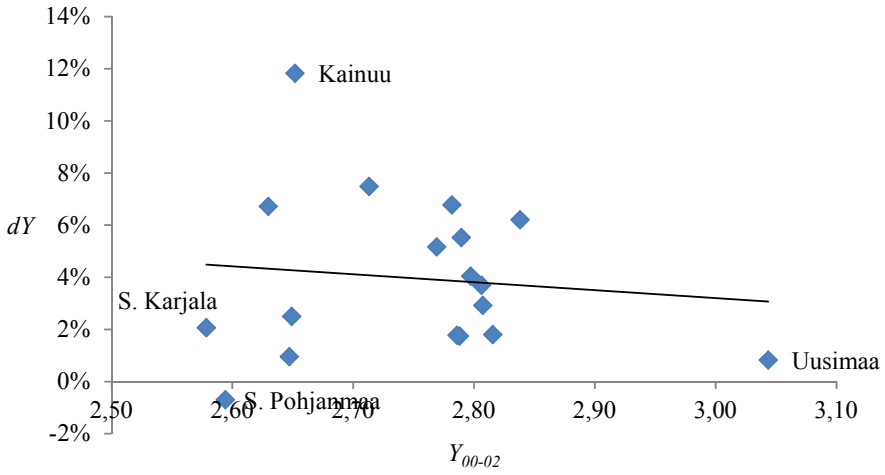
Figure 12. Trust in national parties, aggregated at the regional level



The vertical axis shows the growth rate computed over the last three surveys of the sample (2011, 2013 and 2014) and the initial years (2000, 2002 and 2004). The horizontal axis displays the average of the three surveys (2000, 2002 and 2004).

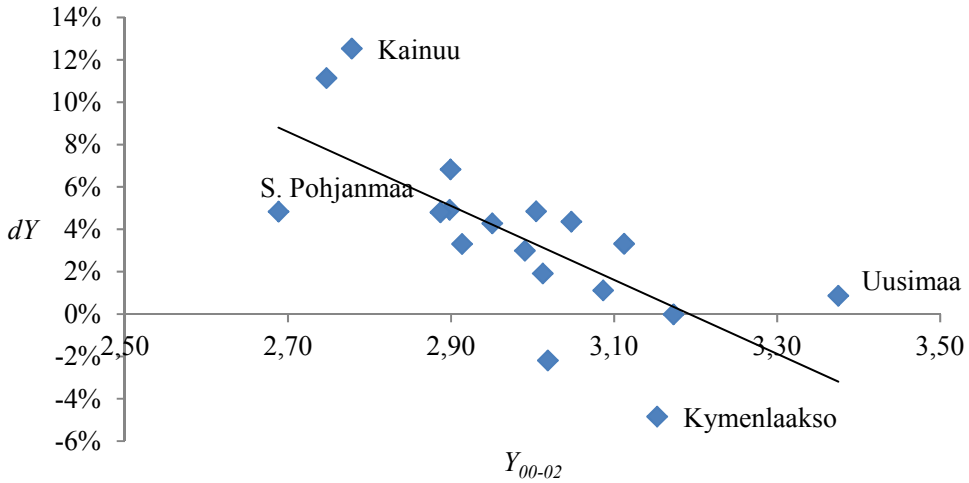
Based on these results, it seems that Finnish regions have grown closer in terms of the attitudes toward themes such as immigration and the European Union, with both phenomena seen in a more positive light. It is interesting to see that these converging trends are similar to the ones underlying the dynamics of the regional unemployment rate and GDP per capita. Even though the aim of this report is not to establish a relationship between economic trends and changes in values, the parallel between economic and value convergence can represent an interesting start for a more accurate analysis.

Figure 13. Attitude toward foreigners, aggregated at the regional level



The vertical axis shows the growth rate computed over the last three surveys of the sample (2011, 2013 and 2014) and the initial years (2000, 2002 and 2004). The horizontal axis displays the average of the three surveys (2000, 2002 and 2004).

Figure 14. Attitude toward the EU, aggregated at the regional level



The vertical axis shows the growth rate computed over the last three surveys of the sample (2011, 2013 and 2014) and the initial years (2000, 2002 and 2004). The horizontal axis displays the average of the three surveys (2000, 2002 and 2004).

Table 6. Cofficients and R2s of the growth regressions for the indicators concerning the regional trust in parties, the attitude toward foreigners and the EU

	Trust in parties	*Attitude toward foreigners*	*Attitude toward the EU*
ß	-0.3843 ***	-0.03	-0.17 ***
R^2	0.42	0.01	0.49

*,** and *** indicate statistical significance at the 1, 5 and 10 % level.

We finish this subsection by computing growth regressions, in order to evaluate the statistical significance of the results found so far.

Table 6 confirms the intuition we gained from the scatterplots. There has been a strong convergence trend with respect to the attitudes toward national parties (which can be interpreted broadly as trust in the overall Finnish political environment) and toward the EU. On the other hand, we find a converging pattern also for the indicator regarding the attitude toward immigration, but it is not significant. This result is fairly interesting, especially once connected to the findings around the dynamics of the share of residents with foreign backgrounds, evidenced in Figure 8. This latter indicator displays a strong diverging trend, meaning that the growth of foreign residents has been disproportionally stronger in more multiethnic regions. This divergence can be one of be one of the deciding factors driving the rather flat trend underlying the attitude toward foreigners.

Overall, we find substantial convergence in values and attitudes across regions. From the beginning of the 2000s until 2014, it seems that Finnish regions have experienced an increasingly positive attitude and higher trust in parties, immigration and the EU. However, we have to remember that survey data are not as easily comparable as the ones examined in the rest our analysis. The statements provided in the surveys are influenced by the respondent's interpretation and this can be reflected in the answers. However, our descriptive exercise provides a useful picture to study the connection between economic dynamics and values in more rigorous fashion.

4 Conclusions

The trends underlying the development of economic and demographic conditions of Finnish regions have not been parallel. We have seen that, over the period from 2000 to 2014, important economic indicators, such as the GDP per capita and the unemployment rate have been converging across regions. Areas that were lagging behind during the initial years of our analysis have grown more compared to richer regions. However, the total population and the share of foreign residents have diverged fairly strongly.

After analyzing these economic and demographic aspects, we look at a set of attitudes and values. We rely on the EVA surveys going from 2000 to 2014 and create indicators that track the attitudes toward political parties, immigration and the European Union, at the regional level. We find that there has been substantial convergence among regions, in terms of the attitude to-

ward parties and the EU. Regions that displayed a lower level of trust for these two institutions in the 2000, 2002 and 2004 surveys have grown a more positive attitude toward these matters, more so than for regions with an initially trustful propensity. On the other hand, we do not find a similarly strong convergence for the attitude toward foreigners, which can be partially explained by the divergence underlying the share of foreign residents.

This study is purely descriptive and it is aimed at providing an overall picture of the Finnish regional dynamics, without establishing possible links between variables. Future research should be direct toward linking the different aspects of the regional dynamics described so far, with a special attention to the possible relationship between the economic and demographic trends and the change in attitudes we have found. This can be done with a more accurate analysis of survey data, where we can take advantage of the wide array of individuals' characteristics and controls.

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