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Human Development and Inequality
The Case of Regions in Latvia

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PREFACE

This paper has been written as a part of the program in Master of Science in Business Administration at Agder University College in Kristiansand, Norway, and is an extension of the paper written in 2005 as part of the Advanced Programme in Business Administration (Siviløkonom programme). The latter will be referred to as *Part I* throughout this paper.

While the goal of *Part I* was to explore and describe the approach to human development adopted by the United Nations Development Programme (UNDP), and the analytical tools created by the organization to measure human development, and to analyze the progressiveness of these tools through application to the Baltic States; the main task of the analysis performed in this paper is to use UNDP measurement tools for assessing the state of human development and the extent of inequality within Latvia.

I would like to thank my mentor Arild Sæther, professor at Agder University College, for guidance during the writing process of this paper. This paper could not have been written without reliable statistics; therefore, I am greatly appreciative of the data received from the Central Statistical Bureau of Latvia, as well as from UNDP Latvia and the State Regional Development Agency in Latvia.

The work on the first part of the paper was carried out throughout the academic year of 2004/2005, and the second part in the spring semester of 2006. I have learned a great deal about the issue of human development as a concept and the tools for measuring it, and I highly value the knowledge and insights gained about the state of human development and inequality within Latvia. I can only hope that my findings will be of interest and relevance to the readers of this paper.

Kristiansand, the 29th of June, 2006

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SUMMARY

The main goal of this paper is to address the wellbeing of the population in Latvia by using the tools created by the UNDP, as presented in *Part I*. The analysis is called for based on growing concerns over increasing inequality within Latvia, and the theoretical assertions about the negative effect of such a development on achieving sustainable economic growth in the longer term.

The paper consists of three main parts: Introduction, Analysis and Conclusions.

The INTRODUCTION lays out the background for the paper, the statement of the problem, and the focus and constraints of the paper.

The ANALYTICAL part of the paper is an extension of the analysis performed in *Part I*. Whereas in *Part I* I conducted an analysis of the level of human development achieved in the Baltic States in comparison to a group of Central European countries and the full league of countries covered in the *Human Development Report*, according to the analytical tools provided by the UNDP, the analysis in this paper examines the extent of inequality in Latvia, and discusses the implications of the findings for the state of human development within the country.

The CONCLUSIONS part gives my general assessment of the state of human development in Latvia. My main argument is for securing equal access and availability of education in Latvia, which is, as my analysis shows, the strongest determining factor for not only escaping poverty and social exclusion, but most importantly for providing each individual with the freedom to pursue one's own brand of happiness, which, in turn, brings about a more just and affluent society as a whole.

1. INTRODUCTION

1.1. Background

The unit of analysis in *Part I* of the paper was the hypothetical average person in Latvia, and the level of human development achieved for this person relative to other countries, measured by tools provided by the United Nations Development Programme (UNDP). In its global report for 2005, the UNDP raises the issue of inequality within countries, and discusses how deep disparities based on wealth, region, gender and ethnicity are detrimental for economic growth, democracy and for social cohesion (UNDP, 2005:51).

The findings in *Part I* demonstrated how the relative level of Gross Domestic Product (GDP) per capita in Latvia is predictive of the average human development level relative to those in other countries, or in other words, the country's relative standing in terms of human development can be most closely associated with changes in the average income level. The country has seen rapid increase in its GDP per capita during the last 15 years of economic transition. In order for this trend to continue in the longer term, and for the growth to be sustainable over time, high levels of social equity need to exist in the population.

It is argued by both the UNDP and Falkenberg (1998), that social equity, meaning equal access to resources needed for achieving one's own brand of happiness, is a prerequisite for efficiency (economic efficiency, productivity, material wellbeing) increases in the longer term. Thus, today's pattern of economic progress in Latvia may not reach its true potential in the future if disadvantaged population groups are unable to contribute due to lack in human capabilities.

1.2. Problem Statement

Disparities in the basic dimensions of human development within Latvia were briefly discussed in *Part I*, but the issue deserves much more of a thorough analysis considering the adverse effects of a high degree of inequality within a country on achieving sustainable development for the country as a whole.

Thus, the main task for the paper is the following:

To address the problem of inequality in Latvia by examining its magnitude and identifying the most disadvantaged population groups, as well as to discuss the implications of the findings for the state of human development within the country.

In carrying out this task throughout the analysis in this paper, I will continue to work within the human development framework created by the UNDP, as presented and applied in *Part I*. I will use the framework, more specifically the Human Development Index (HDI) and the Human Poverty Index (HPI-2), to uncover inequalities in human development primarily among regional populations in Latvia.

1.3. Focus and Constraints

The focus of this paper is the extent of disparities in the basic dimensions of human development within the country of Latvia. Most comparisons are made among Latvia's regions, but towards the end, the analysis leads to the discussion of national levels of poverty.

In order to be a conformable extension of *Part I*, the analysis is kept within the human development framework provided by the UNDP, as well as for the purpose of providing clear and consistent comparisons between the regions in Latvia. The statistical data used for analysis is drawn from two main sources – The Central Statistical Bureau of Latvia

and the UNDP. Therefore, any further application of the findings of this paper will be constrained by the accuracy of these statistical sources.

2. REGIONAL ANALYSIS

2.1. HDI Trends: National Average

In *Part 1* of the paper, I used data from the *Human Development Report 2004* for most of my analysis. In the report, statistics from year 2002 were used. Therefore, I would like to start this section with an overview of the Human Development Index (HDI) trends at the national level with newer data, which I have used to calculate HDI values¹ for the most recent years, namely 2004 and 2005.

Changes in HDI values and the values of its sub-indices, and also the underlying four variables are given in *Table 2.1*. The most recent *Human Development Report 2005* uses data from year 2003, and the year-on-year changes in the variables and the ranks for sub-indices and the final HDI are significant. The main differences from the 2004 report are the following:

- Latvia has improved its HDI rank from 50th in *Human Development Report 2004* to 48th in *Human Development Report 2005*.
- The Life Expectancy Index rank has improved from 81st to 74th for which, however, the cause seems to be better relative standing in the full league table rather than a significant annual increase in life expectancy at birth.
- The Education Index rank has improved from 34th to 25th, which is a jump up by nine places.
- The GDP Index rank has gone up by one spot from 56th to 55th.

These changes also reaffirm my conclusions from *Part 1* that GDP per capita rank depicts the closest association with the relative HDI rank of a country. Latvia's relative standing in HDI values is highly dependent on the level of its GDP per capita, if only because this variable depicts the largest differences among countries, in comparison to the other two HDI components.

¹ Method of calculation presented in *Part 1*, pages 11-15.

Table 2.1: Changes in HDI and its sub-indices in Latvia

	Life expectancy at birth	Adult literacy rate	Combined gross enrolment ratio for primary, secondary and tertiary schools	GDP per capita	Life expectancy index	Education Index	GDP index	HDI value
	years	% ages 15 and above	percent	PPP US\$ <i>b</i>				
1999	70.4	99.8	84.4	6 264	0.76	0.95	0.69	0.798
2000	70.7	99.8	87.8	7 045	0.76	0.96	0.71	0.810
2001	70.7	99.8	89.5	7 730	0.76	0.96	0.73	0.817
2002	71.1	99.8	90.5	9 210	0.77	0.97	0.75	0.830
2003	71.4	99.8	91.7	10 270	0.77	0.97	0.77	0.839
2004	72.1	99.8	92.3	11 622	0.79	0.97	0.79	0.851
2005	72.1 <i>a</i>	99.8 <i>a</i>	92.3 <i>a</i>	13 272	0.79 <i>a</i>	0.97 <i>a</i>	0.82	0.858

Notes:

a. Data from year 2004.

b. Data from <http://hdr.undp.org> and www.worldbank.org

Source: UNDP Latvia (2005:133)

The data presented in *Table 2.1* slightly differs from the data used in the global UNDP reports. For my calculations, I have chosen to use data provided by UNDP Latvia, which I assume to be more accurate when analyzing the human development situation in Latvia. However, the GDP per capita statistics are sourced from the World Bank which is also the source for the global UNDP reports. The reason for this is that UNDP Latvia does not publish GDP per capita data in Purchasing Power Parity (PPP) dollars.

Furthermore, I have used data from year 2004 for the calculation of HDI value for 2005. The only available statistic for year 2005 available was GDP per capita in PPP dollars. And finally, I have used the exact values of adult literacy rate (99.8) when calculating the

HDI, instead of the value of 99.0 percent used for the majority of high human development countries in the global UNDP reports.

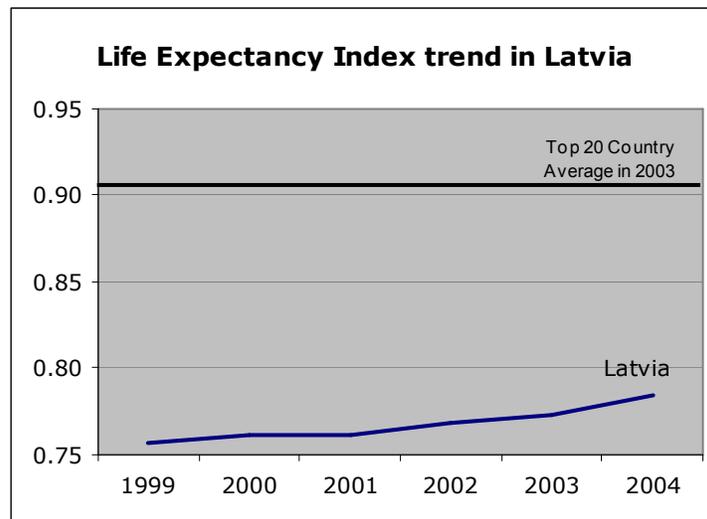
I have also chosen to calculate a *Top 20 Country Average* for each sub-index, the top 20 countries being the best 20 performers according to HDI values in year 2003, that is, in the 2005 global UNDP report². This level will serve as a reference for how much human development in Latvia has to improve in each component so as to reach average industrialized country levels at the least. It is calculated for the mere purpose of comparison.

² *Top 20 Countries*: Norway, Iceland, Australia, Luxembourg, Canada, Sweden, Switzerland, Ireland, Belgium, United States, Japan, Netherlands, Finland, Denmark, United Kingdom, France, Austria, Italy, New Zealand, Germany.

Life Expectancy Index Trend

As already discussed in *Part 1* of the paper, life expectancy at birth in Latvia is the weakest of all four variables included in the Human Development Index. Between 1999 and 2004, the statistic has improved by 1.7 years, as shown in *Table 2.1*. However, as the figure below demonstrates, there is major room for improvement, more precisely 9.9 years to reach the best performer Japan with 82.0 years in year 2003, and a 0.11 gap to close between the *Top 20 Country Average* in life expectancy index at 0.90 and the index at 0.79 for Latvia. Considering the pace of improvement during the last five years, it might take several decades to reach sufficient levels of life expectancy at birth in Latvia.

Figure 2.1: Life Expectancy Index trend in Latvia



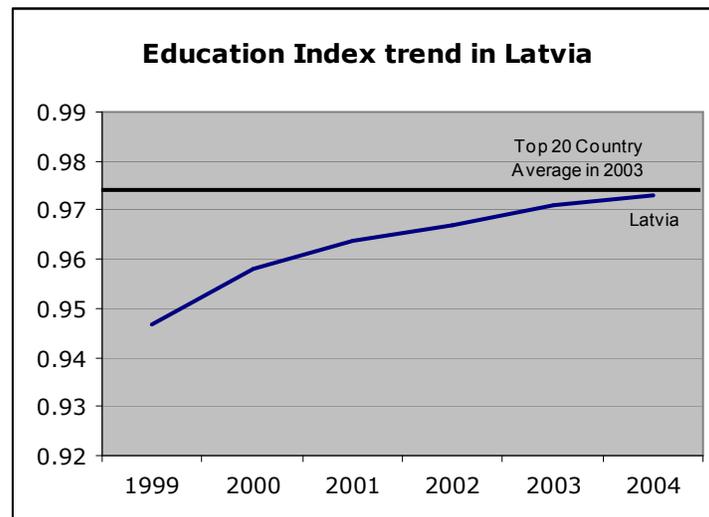
Source: UNDP Latvia (2005:133) and UNDP (2005:219)

Education Index Trend

Latvia's performance is considerably better in the education dimension of the HDI, for which the pace of improvement in terms of rank is also more rapid than in the index discussed above. Not only is Latvia in the top 25 in 2003 according to the education index, the country has reached the exact level of the *Top 20 Country Average* of 0.97.

Underlying the success are increases in the combined gross enrolment ratio for primary, secondary and tertiary schools over the last decade. Enrolment ratio for primary schools has increased from 89.3 in 1995 to 103.1 in 2004. Enrolment ratio for secondary schools has increased from 82.6 in 1995 to 97.6 in 2004. And finally, enrolment ratio for tertiary schools has experienced the most dramatic increase, namely from 26.6 percent in 1995 to 72.2 percent in 2004 (UNDP Latvia, 2005: 137).

Figure 2.2: Education Index trend in Latvia

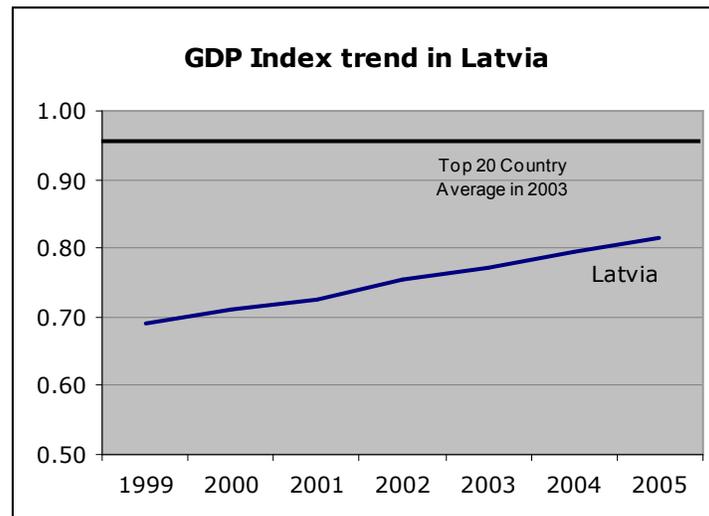


Source: UNDP Latvia (2005:133) and UNDP (2005:219)

GDP Index Trend

GDP Index value for Latvia is the one that has seen the highest increase. Between 1999 and 2005, the index's value has shot up by 11 percentage points, in comparison to 3 and 2 percentage points between 1999 and 2004 for life expectancy index and education index respectively. Although the relatively higher growth rate of GDP per capita has brought the country closer to the *Top 20 Country Average*, there are another 13 percentage points to climb until the GDP index level of 0.95 is attained. However, when approached in the light of the time it may take to reach the *Top 20 Country Average* in life expectancy index, the improvements in GDP per capita dimension might require a significantly shorter time period, assuming that the superior economic growth rate can be maintained in the future.

Figure 2.3: GDP Index trend in Latvia

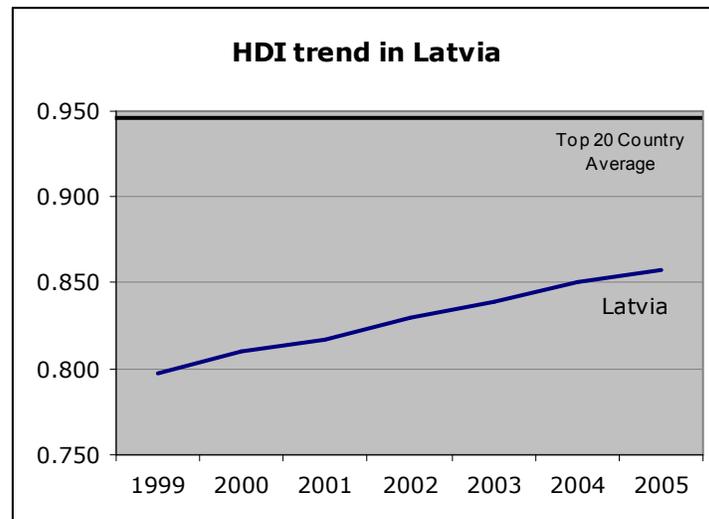


Source: UNDP Latvia (2005:133) and UNDP (2005:219)

Human Development Index Trend

Finally, *Figure 2.4* shows the developments in HDI values over the last few years. Latvia's HDI rank has not seen major changes, but the value itself has steadily increased. The exact values slightly differ from source to source, but if the HDI value of 0.858 is taken from *Table 2.1* for year 2005, then the gap between the *Top 20 Country Average* with value 0.944 in 2003 and the HDI value for Latvia would be 0.086. Due to the very low value of the life expectancy index and the considerable time it will take to improve on it, HDI for Latvia will not reach the *Top 20 Country Average* level in the immediate future, even if provided that GDP per capita doubles within the next decade and the education index increases to a level equal to 0.99.

Figure 2.4: HDI trend in Latvia



Source: UNDP Latvia (2005:133) and UNDP (2005:219)

2.2. Regional Human Development Index

Regions in Latvia

The territory of Latvia is divided into five regions. Riga region is the largest by population – 47 percent of the total; 16 percent live in Latgale region; 13.5 in Kurzeme region; 12.5 in Zemgale region; and 11 percent in Vidzeme region. The division of the territory, as exhibited in the picture below, is described as ‘planning regions’ as opposed to ‘statistical regions’. Thus, the data used for analysis in this paper applies to the division according to planning regions rather than statistical regions.

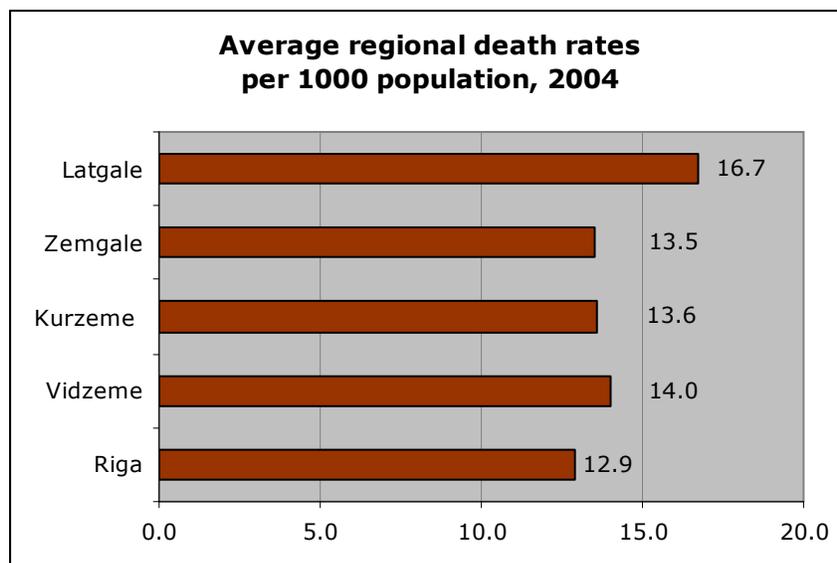


Life Expectancy at Birth in Regions

Life expectancy at birth is used to represent a long and healthy life and is the average number of years a newborn is expected to live. Life expectancy at birth is calculated by using crude death rates of people in the population at each age, from which then the probabilities of surviving at each age are calculated (www.wikipedia.org). Such detailed statistics are not being gathered by the *Central Statistical Bureau of Latvia* (CSB) and thus data on life expectancy at birth for each individual region are not available. Therefore, I will use data on death rates in 2004 to compare the regions in terms of this dimension.

Figure 2.5 exhibits average death rates in regions in year 2004. The levels are the number of deaths per 1000 of a region's population. On average people live longest in Riga region, followed by Zemgale, Kurzeme, then Vidzeme and Latgale being a relatively distant laggard. Latgale has an average death rate over all age groups of 16.7 people per 1000 population, which makes up the largest difference in comparison to any other region, whereas the differences in average death rates among the other four regions are relatively small.

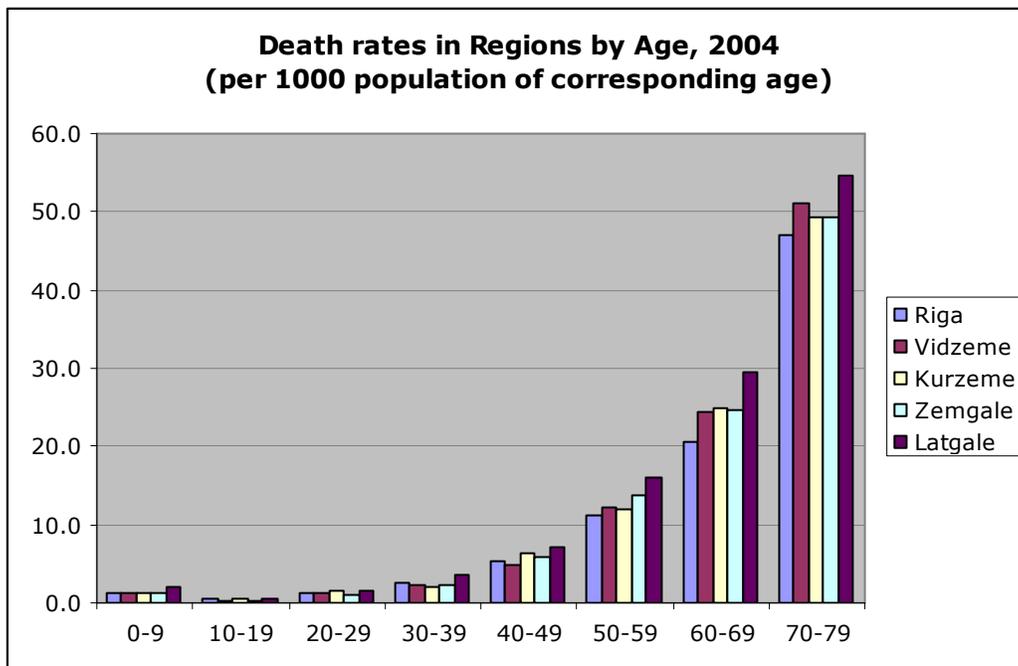
Figure 2.5: Average death rates in regions, 2004



Source: Central Statistical Bureau of Latvia

Figure 2.6 breaks regional death rates down by age group, where the rate is the number of deaths per 1000 population in the corresponding age in each region. Here, the graph shows that the most severe differences between Latgale region and all other regions exist in age groups that cover the ages of 50 to 79. In fact, '80+' age group (not presented in the figure) is the only group out of all nine, where Latgale region is not the worst performer. Thus, these statistics allow me to draw the conclusion that people born in Latgale region are expected to live by far the fewest number of years in comparison to people born in all other regions in Latvia.

Figure 2.6: Death rates in regions by age, 2004



Source: Central Statistical Bureau of Latvia

Education in Regions

The education dimension of the HDI consists of the adult literacy rate (2/3 weight) and combined gross enrolment ratio for primary, secondary and tertiary schools (1/3 weight). As already discussed in *Part I* of the paper, education is the critical factor that serves as the drive for regional cohesion in Latvia. Furthermore, there is no evidence of regional disparities in access to schools, and primary and secondary education institutions are spread evenly according to the size of regional population (UNDP Latvia, 2005: 58).

Tertiary schooling is also widely accessible with higher education institutions or their subsidiaries located in all regions, largely depending on demand, since most of these institutions are driven by commercial incentives. Another factor that contributes to the high share of people obtaining higher education is the readiness of university age individuals to be mobile (UNDP Latvia, 2005: 65).

There are no regional statistics available on the adult literacy rate. Based on the fact that I have found no mention of this indicator as a problem issue in any recent literature on regional development in Latvia that I have covered during my research for this paper, I would like to assume that the levels of adult literacy rates are similar in all regions.

Regional GDP per Capita

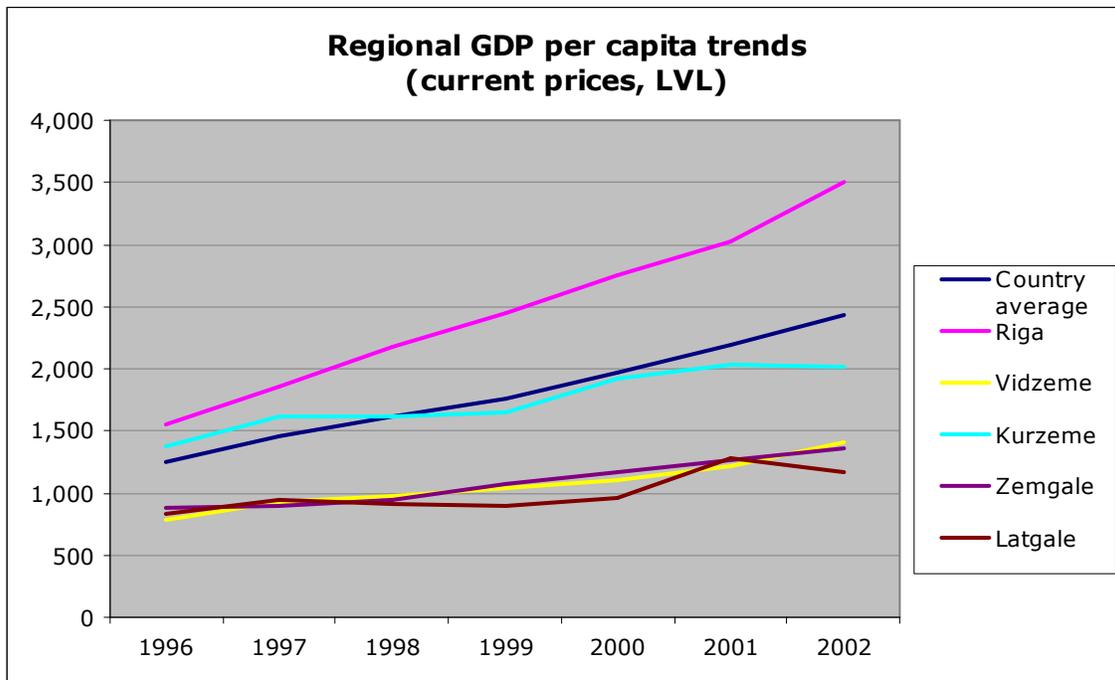
In cross country comparisons, relative GDP per capita is the dimension in the HDI framework that provides the most dynamic shifts in the relative standing of Latvia in terms of human development. GDP per capita values might provide an even more significant discriminating factor when the HDI framework is applied to Latvia's regions.

Figure 2.7 shows GDP per capita trends in Latvia's regions and also that of the national average. The pace of growth has been much higher in Riga region than those in all other regions. In fact, all other regions have experienced similar accumulated growth rates

between 1996 and 2002, with Vidzeme region performing slightly better, but from a relatively low level in 1996. Also, Kurzeme and Latgale regions have seen various, even negative, annual growth rates during the six year time period.

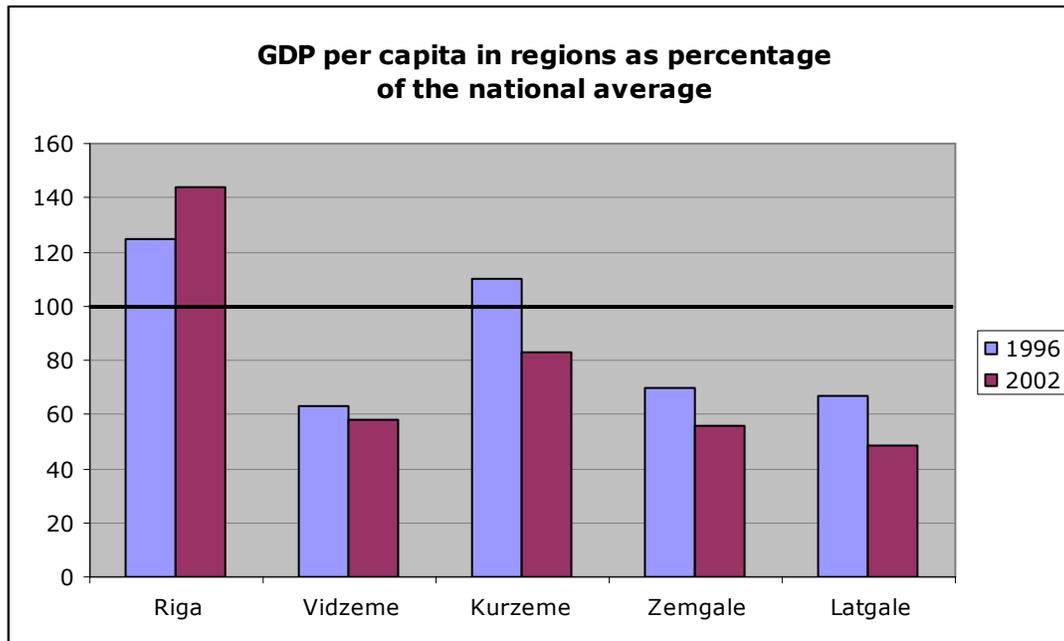
Figure 2.8 presents regional GDP per capita as percentages of the national average and the changes of this measure from 1996 to 2002. All four regions (except Riga) have seen a decrease in this measure during the time period, with Kurzeme region experiencing the largest fall. These GDP per capita developments have meant that all four regions have increased the gap with Riga region. However, it is important to take into account that Riga region started out on a much higher level of GDP per capita in the early 1990s relative to all regions, except Kurzeme region.

Figure 2.7: Regional GDP per capita trends



Source: Central Statistical Bureau of Latvia (2004:66)

Figure 2.8: GDP per capita in regions as percentage of the national average



Data used for calculation: Central Statistical Bureau of Latvia (2004:66)

For the purposes of discussing possible regional HDI values, I have calculated GDP per capita indices for all five regions by using the same formula as in the global UNDP reports³. However, there is a major limitation to this calculation, namely the lack of purchasing power parity (PPP) adjustments for regional GDP per capita values. If PPP data were available, it might reduce the degree of disparities in this measure among regions, since the cost of living in Riga region is significantly higher than in all other regions.

Therefore, the numbers found in *Table 2.2* should be treated with care when comparing regions in terms of GDP per capita index. The indices do present differences that cannot be ignored, especially when Riga region has an index level in 2002 equal to the national GDP per capita index I calculated for year 2005. And if each region was its own country then in the full league table of 175 participating countries, in 2002, Latgale would rank no higher than 103rd, Zemgale and Vidzeme – no higher than about 93rd, Kurzeme – 66th,

³ Method of calculation presented in *Part I*, pages 14-15.

and finally Riga region would place itself 40th at best (<http://hdr.undp.org>). Even if GDP per capita statistics overestimate the magnitude of regional disparities in terms of the standard of living, the large differences in these hypothetical ranks cannot be dismissed.

Table 2.2: Regional GDP per capita indices, 2002

National Average	Riga region	Vidzeme region	Kurzeme region	Zemgale region	Latgale region
0.75	0.82	0.66	0.72	0.66	0.63

Data used for calculation: Central Statistical Bureau of Latvia (2004:66)

Regional Human Development Index

Due to lack of some statistics, accurate HDI values for each region in Latvia are impossible to calculate. Nonetheless, I have attempted to compare the regions using the HDI framework, and would like to summarize the results in the table below by ranking regions according to each HDI dimension.

Table 2.3: HDI dimensions in regions

A long and healthy life	Knowledge	A decent standard of living	Human Development
Riga		Riga	Riga
Zemgale		Kurzeme	Kurzeme
Kurzeme	Latvia	Vidzeme	Zemgale
Vidzeme		Zemgale	Vidzeme
Latgale		Latgale	Latgale

The dimension of a long and healthy life is here represented by average regional death rates. Regional rankings are given in the first column. Knowledge is the second

dimension of HDI and, as discussed before, I assume regional levels of education to exhibit no major deviations from the national average. The third and final dimension is GDP per capita, which serves as the strongest regional differentiating variable in the HDI framework. Thus, Riga region, which ranks highest on both dimensions, has to also come up on top in the human development rank. Similarly, Latgale region performs substantially poorer in both dimensions, therefore, also comes out to be the last. Kurzeme region's economic performance places the region in the second place. And finally, since GDP per capita values in Vidzeme and Zemgale regions are very similar, only by 3.7 percent higher in Vidzeme in 2002, and given that Zemgale ranks second in the first dimension, I placed Zemgale third and Vidzeme fourth in the human development rank.

The ranking of regions according to relative levels of human development, as presented in *Table 2.3*, does not provide sufficiently descriptive information for determining the magnitude of regional differences in living standards. I believe that it deserves a more detailed analysis, especially the GDP per capita dimension of the HDI. In the following section, I will look more closely at economic activity and growth in regions, as I will argue that regional GDP per capita levels are deficient measures for representing the income differences among Latvia's regions.

2.3. Income Inequality in Regions

According to the findings of Badinger and Tondl (2005), determinants of economic growth in the regions of the European Union (EU) include:

- Capital accumulation, both physical and human;
- Higher level education attainment and changes of it;
- Growth performance of surrounding regions;
- Generation of technological progress through innovation activity and international technology transfer;
- Trade openness.

Of these five growth factors, the level of capital accumulation and growth performance of surrounding regions seem to serve best as possible explanations in differences in regional economic growth rates in Latvia. The combination of the lowest GDP per capita and the lowest rate of income per capita growth in Latgale may well be associated with the geographical location of the region. All other three regions border the most dynamic region – Riga, where the proximity might explain a part of their relatively better economic performance. Latgale is most remote and also farthest away from the coast of the Baltic Sea.

According to the neo-classical growth model, public investments in infrastructure foster higher growth rates by attracting private investment. In another study on EU regional growth, Canaleta, Arzoz and Gárate (2002) find that the major driving force behind regional income convergence is labor productivity. Thus, if economic growth in regions is determined by the rate of capital accumulation, which in turn determines the level of labor productivity, then the increasing differences among Latvia's regions in GDP per capita should stem from divergence in levels of productivity.

O'Leary (2001) uses gross value added (GVA) data for exploring “the extent of Irish regional income convergence” (p. 198). The author uses labor productivity for measuring and comparing living standards across regions. Further, labor productivity is measured by

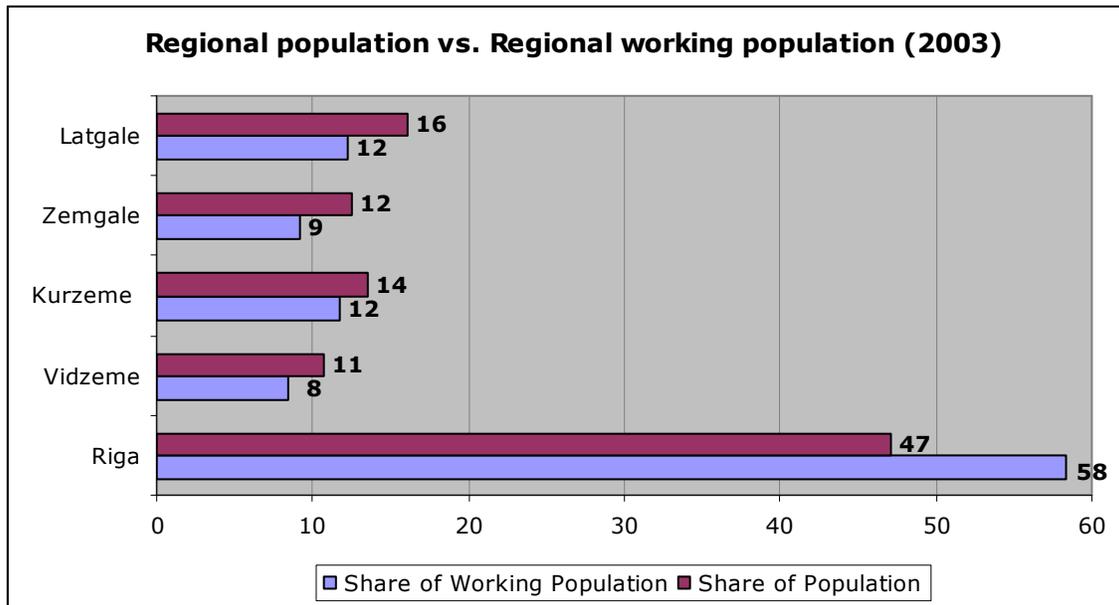
GVA per worker. GVA data for Latvia, which I will use here, is equal to GDP at current basic prices minus taxes and subsidies on the product (CBS, 2004).

Labor Productivity in Regions

Regional statistics on labor productivity should reflect the adjustment of gross production in each region for both daily commutes of the working population to the capital Riga and regional unemployment rates. Thus, labor productivity might serve as a better measure of the GDP per capita dimension of the HDI when comparing living standards among Latvia's regions.

In 2002, the city of Riga, the capital, accounted for 85 percent of production in Riga region, and 57.7 percent of the national GDP (SRDA, 2004: 30, 37). These figures do not merely point to the centralization of economic activity in the capital, but, as I have discovered from studying statistical data, Riga region, and thus the city of Riga also draws in the highest share of the working population in comparison to all other regions. *Figure 2.9* shows regional population and regional working population as shares of the national figures. 58 percent of the national labor force (excluding the unemployed) is working in Riga region, whereas the region's share of the national population is 47 percent. All other regions have higher shares of statistical resident population than their corresponding shares of the working population. These figures give ground to the assertion of high daily/weekly labor force commutes in and out of the capital. Also, they do reflect differing levels of unemployment rates among regions, but more on that later.

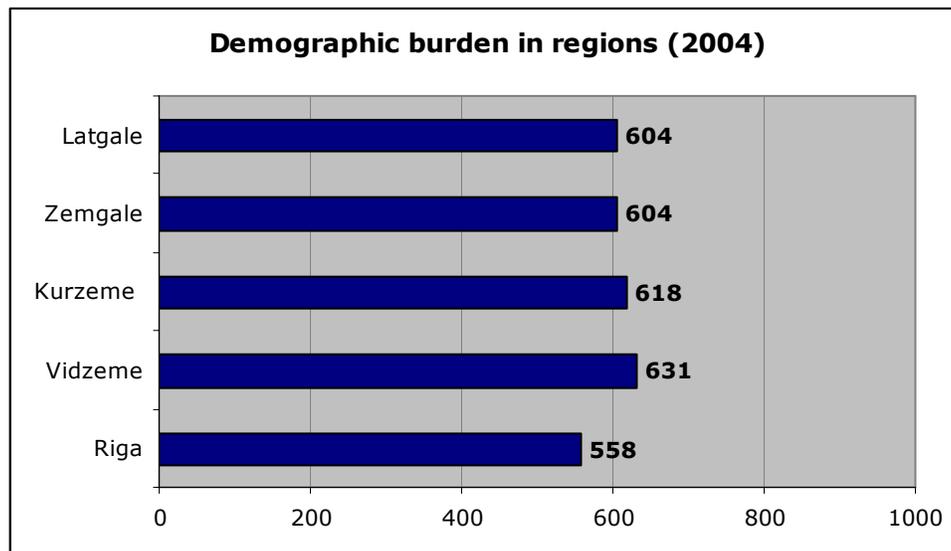
Figure 2.9: Regional population and regional working population, 2003



Data used for calculation: Central Statistical Bureau of Latvia (2004:14, 35-41)

However, it is important to argue that the regional labor force figures above do not originate from regional differences in the size of economically active population. Demographic mobility over time is quite stable in Latvia, and the regional levels of demographic burden are very similar. Demographic burden is expressed by the ratio of population under and over working age to 1000 population of working age (SRDA, 2004: 29-30). The figures given in *Figure 2.10*, allow for the conclusion that regional GDP per capita differences cannot be associated with levels of demographic burden.

Figure 2.10: Demographic burden in regions, 2004

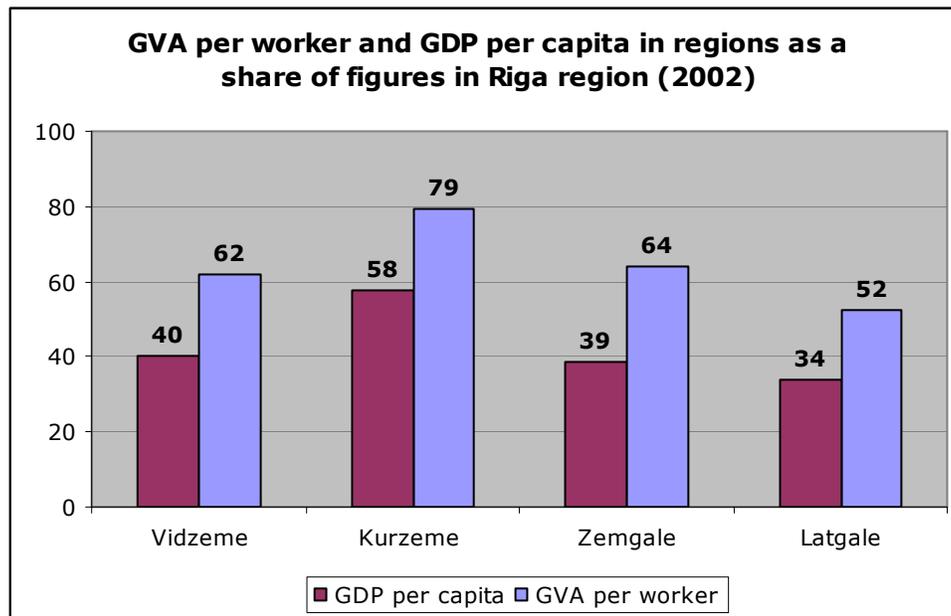


Source: Central Statistical Bureau of Latvia (2004:19)

Gross Value Added (GVA)

Regional gross value added per worker should serve as a better tool for comparison of living standards across Latvia's regions. *Figure 2.11* depicts the levels of regional GVA per worker and GDP per capita as a share of the corresponding figures in Riga region. For all four regions, GVA per worker shares are significantly higher than their GDP per capita shares. For example, whereas GDP per capita in Latgale is equal to a third of that in Riga region, the share of the region's labor productivity is more than a half of that in Riga region. Although labor productivity statistics do not shift the relative performance among the four regions, the extent of their inferior performance relative to Riga region is considerably reduced when using data on labor productivity instead of regional GDP per capita.

Figure 2.11: GVA per worker and GDP per capita in regions, 2002



Data used for calculation: Central Statistical Bureau of Latvia (2004)

So if living standards should rather be measured by labor productivity, then what are the measures that should be used in explaining regional inequalities in the levels of human development?

Before suggesting and looking into additional statistical tools for explaining regional differences, it is worth mentioning an institutional factor that is associated with the high degree of economic centralization in Latvia. It is argued by Zacesta and Pukis (2005) that the public governance system in Latvia, which is characterized by high centralization, has strongly contributed to the increasing dominance of the city of Riga in economic activity and its rate of growth. The authors further argue that until a regional institutional reform that gives more autonomy to directly elected regional governments (currently under development) is completed, the existing pattern of economic development cannot be altered. What is more, the authors point out that solving “social assistance and medical treatment problems in a centralized way have not come up with expected results” (p. 7). Thus if the health system suffers enormously from a highly centralized system, this

institutional factor may also explain the poor performance of more distant areas in the long and healthy life dimension of the HDI.

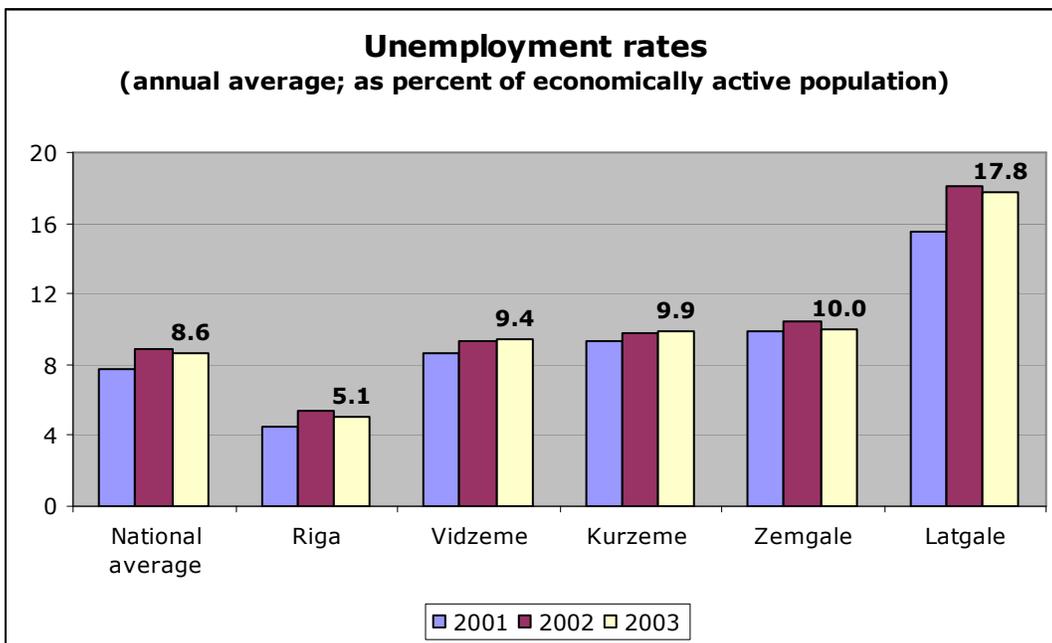
As already mentioned before, regional labor productivity statistics are an adjustment of regional GDP per capita values for the distribution of the labor force across regions and the rates of unemployment in regions. Regional differences in labor productivity might be explained by differing levels of capital accumulation and thus capital per worker, and the types of industries that dominate in each region, but analyzing these factors would be a deviation from the focus of this paper.

Rather, it is the extent of differences in the relative values of GVA per worker and GDP per capita that could further explain regional inequalities in the decent standard of living dimension of human development. Having already found that the levels of production per worker show smaller disparities among regions than when GDP per capita values are used, and further also shown that this could be associated with the significantly higher share of the total working population in the city of Riga, it is now necessary to look into whether regional unemployment rates might also serve to explain the considerable regional differences in GDP per capita.

Unemployment in Regions

Figure 2.12 depicts unemployment trends in Latvia's regions and the national average. While unemployment rates are quite similar in Vidzeme, Kurzeme and Zemgale, Latgale has by far the highest unemployment rate, 17.8 percent in 2003, which is nearly twice as much as in the three mentioned regions. Riga region had an unemployment rate of 5.1 percent in 2003.

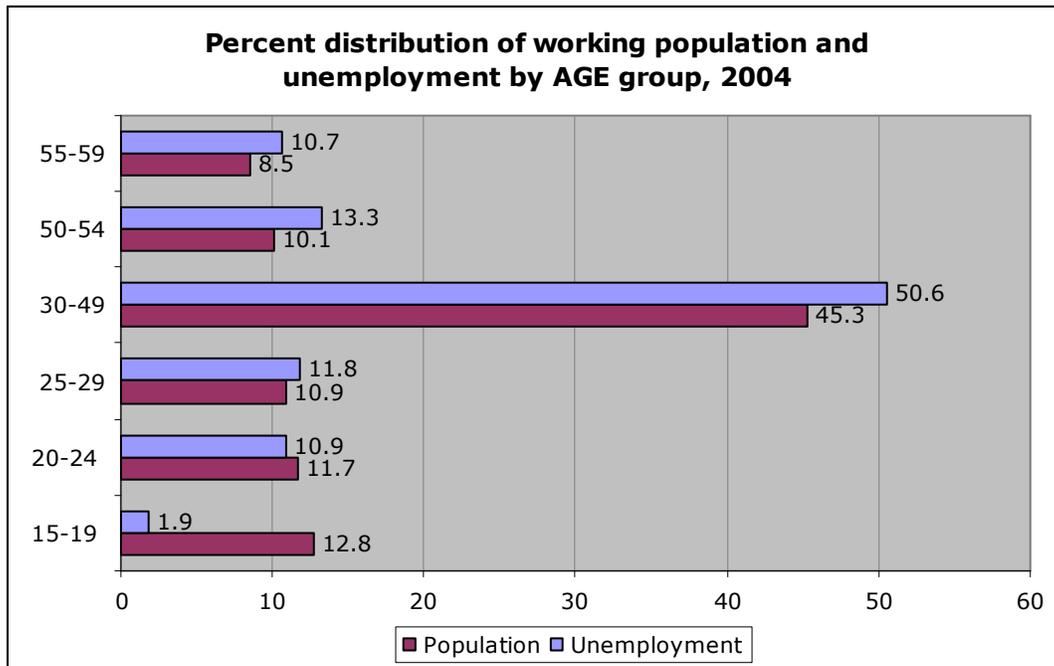
Figure 2.12: Unemployment rates in regions



Source: Central Statistical Bureau of Latvia (2004:45)

The following three figures provide more insight into which groups that are most likely to be unemployed in Latvia. Figure 2.13 gives the distribution of the working population by age group and the corresponding distribution of unemployment. The distributions are quite equal with no significant deviations. However, one has a somewhat higher probability of being unemployed the older one is.

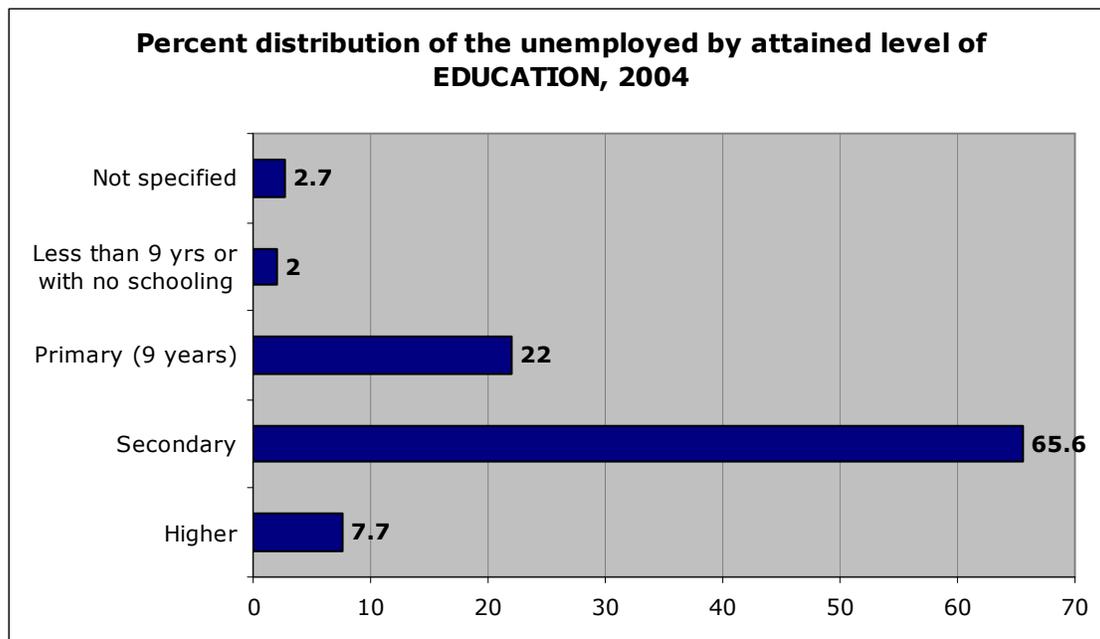
Figure 2.13: Percent distribution of working population and unemployment by age



Data used for calculation: Central Statistical Bureau of Latvia (2004)

When it comes to the factor of ethnicity, the data shows, in *Figure 2.14*, that one has a slightly higher probability of being unemployed if one is of Russian or Byelorussian origin. However, this might be more associated with the fact that Russians make up 40 percent of the population of Latgale region, where also the unemployment rate is significantly higher than in all other regions. What is more, Russians make up also a similar share of the population (35 percent) of Riga region where unemployment is lowest; therefore, the relatively higher share of the unemployed among Russians may be linked to the regional factor rather than ethnicity per se. However, Hazans (2005) does find that “unemployed representatives of ethnic minorities have lower chances to find a job within a year, other things equal”, but ethnicity does not matter where the “transition from employment to unemployment is concerned” (p. 45).

Figure 2.15: Percent distribution of the unemployed by attained level of education



Source: Central Statistical Bureau of Latvia (www.csb.lv)

To sum up, one is most likely to be unemployed in Latvia when one has not attained higher education, lives in Latgale region and is between the ages of 30 to 59.

Implications for the Income Dimension of the HDI

The purpose for analysis in this section of GDP per capita, labor productivity and the differences between the two measures in Latvia's regions was to explain the large regional disparities in the income dimension of the HDI, which also then implies inequality in overall human development among regions.

As assumed, disparities between the values of GDP per capita and labor productivity in Vidzeme, Kurzeme, Zemgale and Latgale regions as a share of the corresponding values in Riga region are associated with labor force commutes and regional unemployment rates. The analysis of labor productivity in regions has shown that regional income

inequality is greatly reduced when the employed population is considered. Further, since unemployment rates are at almost equal levels in Vidzeme, Kurzeme and Zemgale regions and are equal to about a half of the rate in Latgale, it can be concluded that while commuting explains more of the difference between GDP per capita and labor productivity in these three regions, the high level of unemployment explains more of the disparity for Latgale region. This in turn implies that Latgale region faces the highest income inequality not only relative to Riga region, but also to all other three regions; and that income inequality in this group of three regions relative to Riga is not as severe as GDP per capita figures would suggest.

With these findings, a strong link between income inequality and unemployment can be established. In fact, national statistical data of 2004 shows that 54 percent of the unemployed population lives under the official poverty line, with no other population group depicting a higher share of the poor (CSB). For this reason, I consider it necessary to look more closely at the extent of poverty in Latvia and how it might consequently affect the human development framework applications to both Latvia's regions and the country as a whole. This is the task for the following section of the paper.

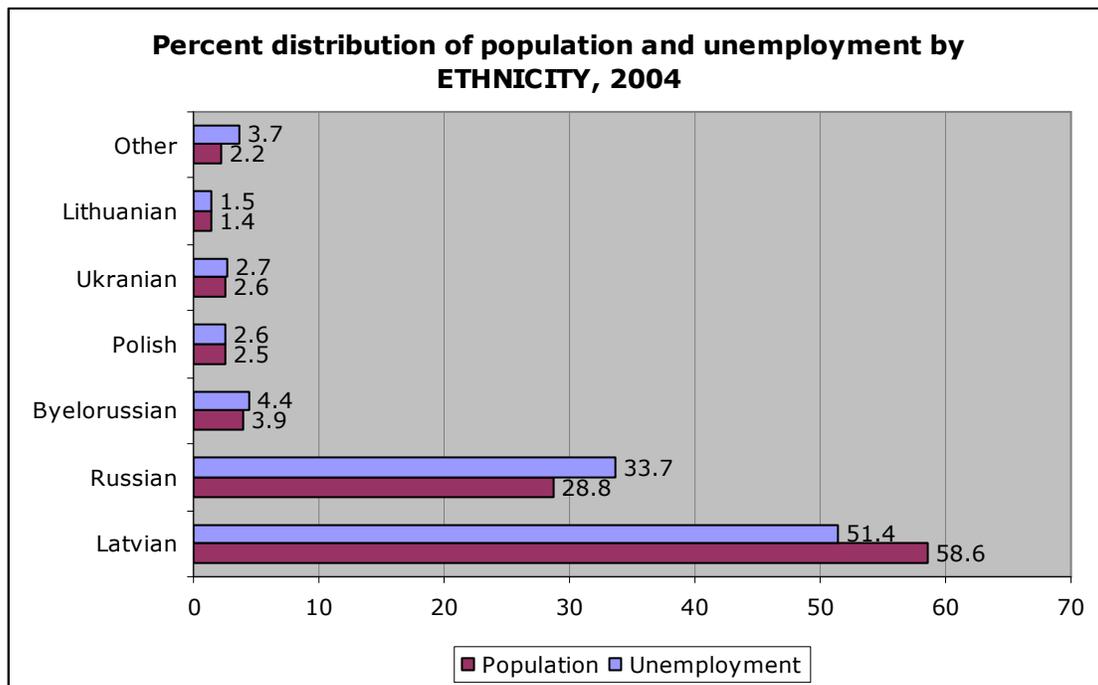
2.4. Poverty in Latvia

Latvia's transition from a centrally planned economy to a market based has been quite successful when GDP growth rates over the last decade are considered. However, the transition has left some population groups, if a minority, more vulnerable than before in terms of relative income levels, and consequently reduced opportunities of securing a high quality of life. *Table 2.4* gives three tools for measuring income inequality in a population. Share of the country's population living below the national poverty line has increased from 16 percent in 1996 to 19 percent in 2004. That means that as much as a fifth of the population is very poor, and the share has been increasing while the country's GDP has been rising at an average annual rate of 6.4 percent over the same period of time (UNDP Latvia, 2005: 140).

Second set of figures in *Table 2.4*, show an increase in the ratio of income share of the richest 20 percent of population to that of the poorest 20 percent from 5 to 6 over the eight year time period. This change means that the richer population has increased its share of the rapidly growing national income relative to the share held by the poorest. However, in comparison to other countries, the ratio level of 5.5 in 2000 placed Latvia 40th among 124 countries surveyed, while Lithuania was 28th and Estonia was 65th. 87 countries out of the 124 covered, had a ratio value of less than 10, and Japan was the best performer with a ratio equal to 3.4 (UNDP, 2005: 270).

The last set of figures in the table below describes the national Gini coefficient trend between 1996 and 2004. The coefficient has increased from 31 to 35, which means that the share of national income captured by the poorest people in the country has decreased, or in other words, inequality in income distribution has increased. Again, when comparing to the same list of 124 countries, based on data from 2000, the ranks for the Baltic States are similar to those for the ratio discussed above. The cross-country data also reveals that income inequality in Latvia has gone from a level that was equal to the *Top 20 Country Average*, which most recently was 31 percent, to a level of inequality seen in the worst end of that high human development country group (UNDP, 2005: 270).

Figure 2.14: Percent distribution of population and unemployment by ethnicity



Source: Central Statistical Bureau of Latvia (www.csb.lv)

Education level, along with the region of residence, seems to be the strongest factor in determining the likelihood of unemployment. People with higher education make up only 7.7 percent of the unemployed in 2004, whereas people with secondary education or lower comprise nearly 90 percent, depicted in *Figure 2.15*.

Gender-related differences in unemployment rates are not significant in Latvia. However, “well-educated women tend to receive lower wages than men with similar characteristics” (Hazans, 2005: 45).

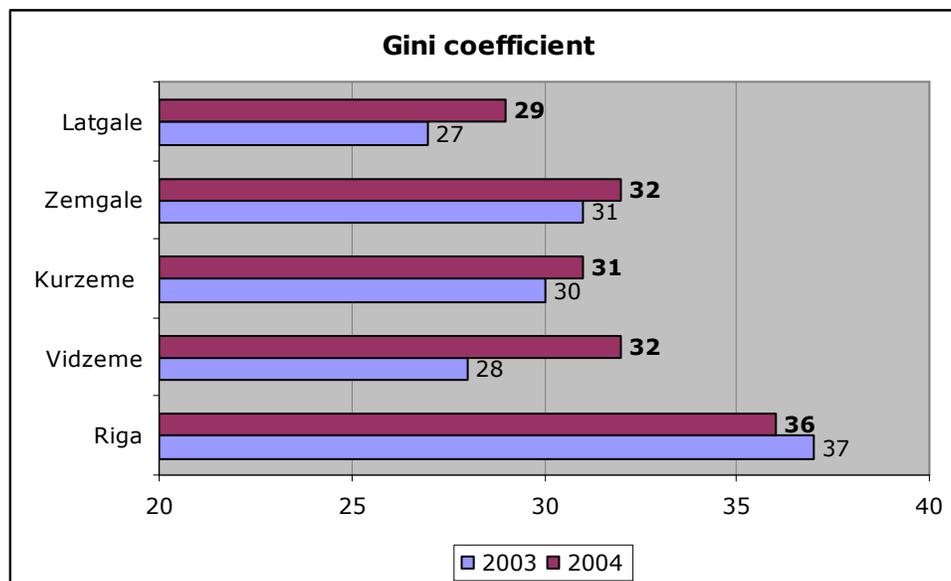
Table 2.4: Income inequality figures in Latvia

	1996	2004
Share of population living below the national poverty line (%)	16	19
Ratio of income share of the richest 20 percent of population to that of the poorest 20 percent of population	5	6
National Gini coefficient	31	36

Source: Central Statistical Bureau of Latvia (www.csb.lv)

Figure 2.16 depicts annual changes in the Gini coefficient in Latvia's regions representing the extent of income inequality within each region. Riga region has the highest level of income inequality, while Latgale has the lowest. This could be explained by a negative association between the levels and growth rates of regional income and the distribution of this income. However, the combination of regional productivity and the national Gini coefficient is more useful in analyzing the extent of poverty within the country as a whole.

Figure 2.16: Gini coefficient in regions



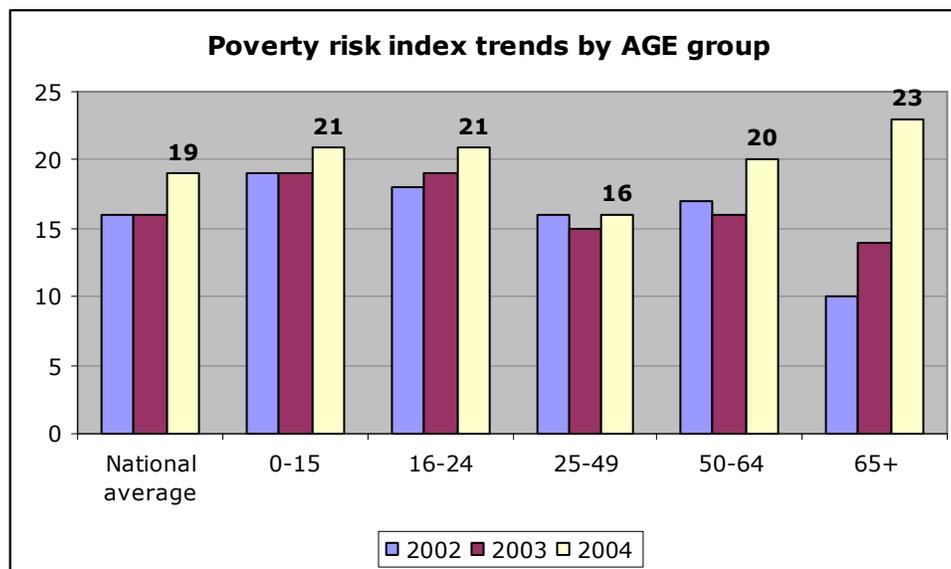
Source: Central Statistical Bureau of Latvia (www.csb.lv)

Poverty Risk Index

Poverty risk index represents the share of population living below the national poverty line. The following three figures uncover the social groups that have become most vulnerable in terms of securing or maintaining a decent standard of living as a result of major economic and social change in the country.

The largest deviations from the country average of 19 percent in 2004 are for age groups of 25-49 and 65 and over, as seen in *Figure 2.17*. While the former group, which also represents the working population, experiences the lowest share of people living below the poverty line, the latter has seen its poverty risk index increase the most, from the lowest value of 10 percent to the highest of 23 percent in only two years. Thus, people most vulnerable to falling into poverty are the elderly.

Figure 2.17: Poverty risk index trends by age group

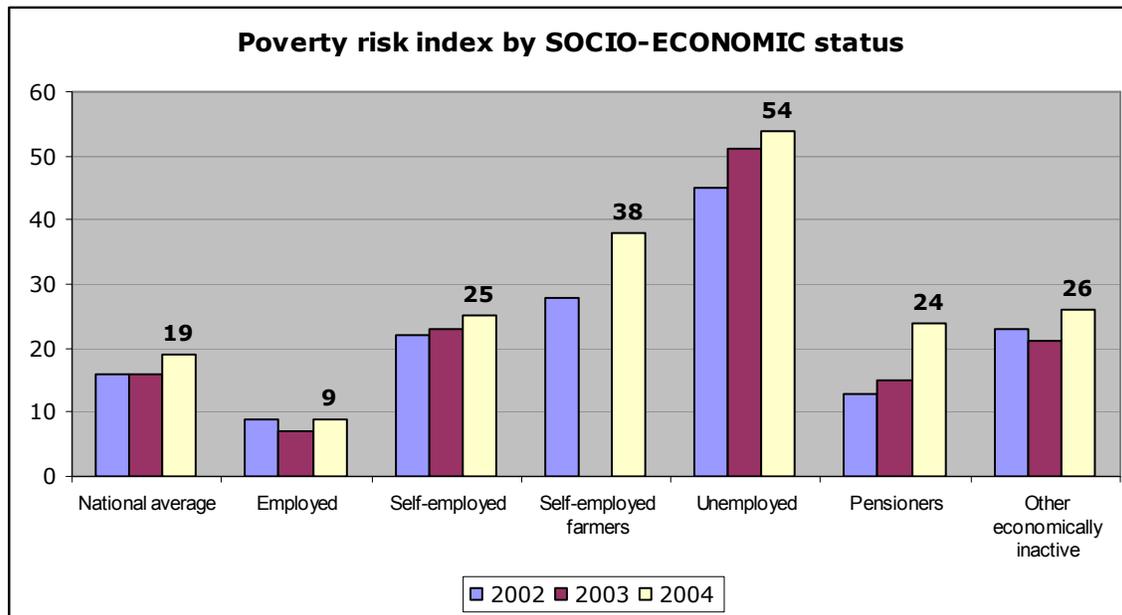


Source: Central Statistical Bureau of Latvia (www.csb.lv)

The levels of vulnerability to poverty vary to a much greater degree when looked at according to socio-economic status of the population. As *Figure 2.18* shows, only those

in paid employment have a poverty risk index lower than that of the national average, namely 9 percent in 2004. The socio-economic groups facing the highest risk of living below the poverty line are self-employed farmers with over a third of them living below the national poverty line, and the unemployed population with more than a half of people finding themselves in this group living below the national poverty line.

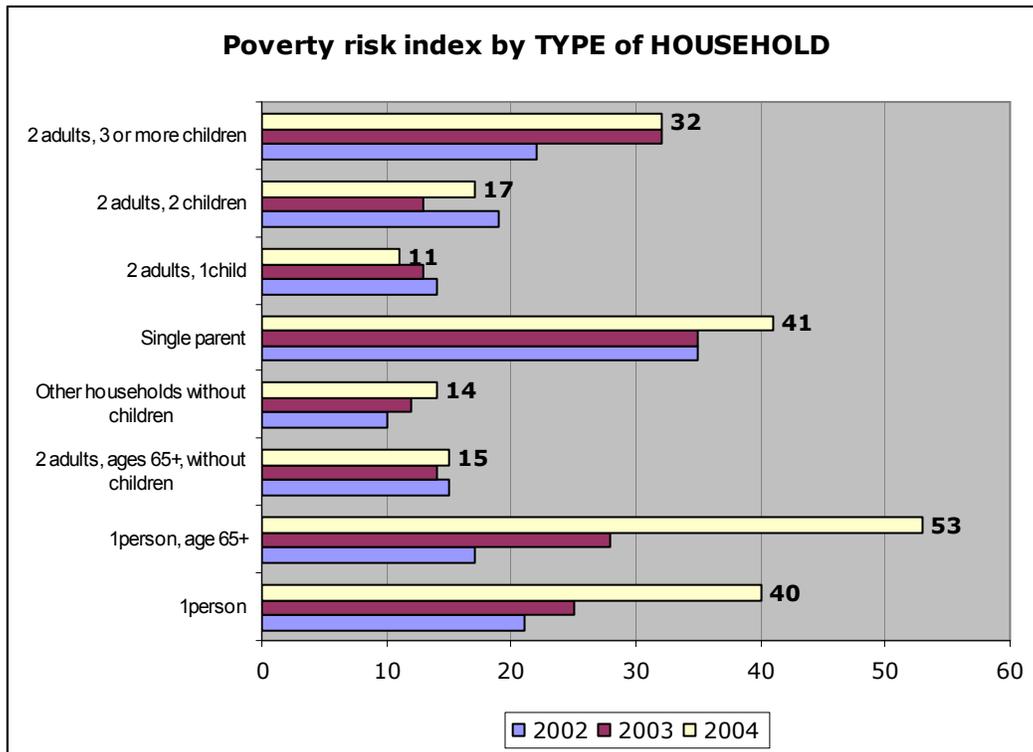
Figure 2.18: Poverty risk index trends by socio-economic status



Source: Central Statistical Bureau of Latvia (www.csb.lv)

Four groups facing high risk of being poor stand out when the population is divided into types of household, presented in *Figure 2.19*. Again, the largest increase in poverty is seen for persons aged 65 and older, especially when they live alone. Even more generally, any person who lives alone has a high possibility of falling into poverty, as seen by the increase from 21 percent in 2002 to 40 in 2004. Also, households with one or more children where only one adult provides sources of income face difficulties in escaping poverty. Finally, a third of families with three or more children lived below the national poverty line in both 2003 and 2004, an increase from 22 percent in 2002.

Figure 2.19: Poverty risk index trends by type of household



Source: Central Statistical Bureau of Latvia (www.csb.lv)

To sum up, the societal groups, which have been most negatively affected by economic and social change during the past decade, are the elderly, any resident living alone, the unemployed and self-employed farmers; single parent households and families with three or more children.

Poverty among the elderly is a direct result of the major economic transition in the country. The source of income for this societal group is primarily state pensions, and on average these are at levels close to the national income subsistence level. Furthermore, the rapid growth in the share of the elderly living below the poverty line can be associated with the just as rapid increase in the cost of living, represented by an annual inflation rate of 6.2 percent in 2004 (UNDP Latvia, 2005:140).

The high share of self-employed farmers living below the national poverty line can also be linked to the factor of economic transition. In this case, the transition may not yet be complete, meaning the economy has not fully redistributed resources to their most productive applications. Gassmann (1998:7) also finds that poverty is more widespread and deeper in rural rather than urban areas across Latvia. Furthermore, the high incidence of poverty among the unemployed population can be associated with the factor of urban versus rural residence. It is the rural areas in Latgale region that have by far the highest unemployment rates in Latvia. There are 26 districts in Latvia, and six of them comprising Latgale region have unemployment rates in 2004 that range from 18.9 percent in Kraslava district to 27.3 percent in Rezekne district. In the 20 districts making up the other four regions, unemployment rates range from 5.5 percent in Riga district to 13.6 in Madona district, which is located in Vidzeme region. For urban versus rural comparison, the highest unemployment rate found in Latvia's cities in 2004 is in Liepaja (Kurzeme region) and is equal to 13.5 percent (CBS, 2004: 48). Thus, the unemployed and the self-employed farmers residing in rural areas, especially those of Latgale, are extremely vulnerable to falling into poverty and staying there.

When it comes to the high share of households with children living below the national poverty line, there are a few important points to mention. The breadwinner/or –s of these households are likely to belong to the socio-economic groups discussed above. Therefore, in addition to public measures for reducing poverty by boosting the employment rate for instance, due attention should be paid to secure equal access to quality education for all children, especially in rural areas. Children living in poor conditions today must be given the opportunity to have a better standard of living than their parents who have been adversely affected by the economic transition of the last 15 years. As also found by research on the degree of social mobility for children in numerous developed countries, it is the Nordic countries that perform best in providing poor children with the tools for attaining a better life than their parents. It is not only the tax and welfare systems of the Scandinavian countries that have such positive effects on social mobility in comparison to the levels seen in the United States, Great Britain or even continental Europe. In fact,

“education has long been recognized as the most important single trigger of social mobility” in the four Nordic countries (*The Economist*, 2006).

Neither gender nor ethnicity is a determining factor for poverty risk in Latvia, as confirmed in a study performed by Aasland (1998). The author does find that “when controlling for other variables, ethnic Latvians tend to be slightly better off economically than ethnic Russians and other ethnic groups, but differences are not large enough to be statistically significant” (p. 29). The largest gender differences in the poverty risk index are among the elderly. While 28 percent of women ages 65 and older live below the national poverty line, only 14 percent of men in this age group do (www.csb.lv).

In the research work by both Aasland (1998:29) and Gassmann (1998:12), educational level is the strongest determinant of the ability to escape poverty. This conclusion is also perfectly consistent with the findings in this paper, where poverty risk, and thus income inequality, is most strongly associated with unemployment, and where, in turn, unemployment is most closely linked to the lack of higher education.

Human Poverty Index

Section 2.9, in *Part 1* of the paper, provides a description of the Human Poverty Index (HPI) created by the UNDP. The index is calculated for the purpose of assessing the extent of poverty in a community and of comparisons across countries or any other set of communities. Global UNDP reports argue that the HPI, just like the Human Development Index, goes farther than measures of income poverty in representing the proportion of people finding themselves below a threshold level in basic dimensions of human development.

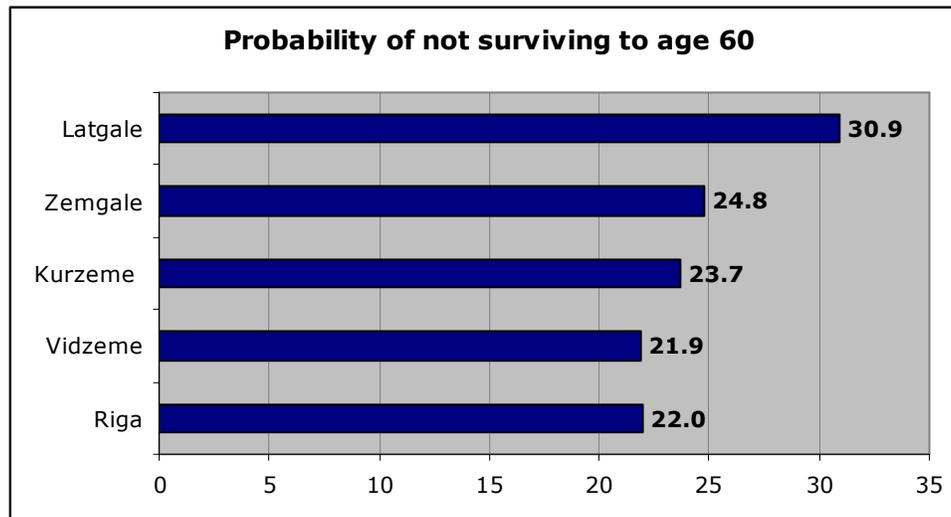
In this section, I would like to apply the HPI framework to Latvia and its regions. The country has never been included in the global UNDP reports according to this index. As mentioned in *Part 1*, global UNDP reports distinguish between HPI-1 for developing countries and HPI-2 for OECD countries, Eastern Europe and the CIS (Commonwealth of Independent States). Thus, I will use the HPI-2 to assess the extent of poverty in basic dimensions of human development in Latvia.

HPI-2 consists of four dimensions and thus four indicators. The first dimension is a long and healthy life, which is measured by the probability at birth of not surviving to age 60. The national average value for this indicator for Latvia is given in the 2005 global UNDP report, and is equal to 21.5 percent. Again, when set against the *Top 20 Country Average*, the deviation is tremendous, namely 21.5 percent probability at birth of not surviving to age 60 in Latvia against an average of 8.7 percent in the top human development group of countries. All three Baltic States perform very poorly in this dimension of human development. In Lithuania, the probability at birth of not surviving to age 60 is 20.6 percent, and in Estonia it is the highest – 21.7 percent (UNDP, 2005: 230).

Official regional data for this indicator is not available, but if regional data on death rates, already discussed in *section 2.2*, is used for calculation, then regional probabilities of not surviving to age 60 would be those found in *Figure 2.20* below. Predictably people

residing in Latgale region have by far the highest probability of not surviving to age 60, and thus are least likely to have a long and healthy life.

Figure 2.20: Probability of not surviving to age 60 in regions



Data used for calculation: Central Statistical Bureau of Latvia

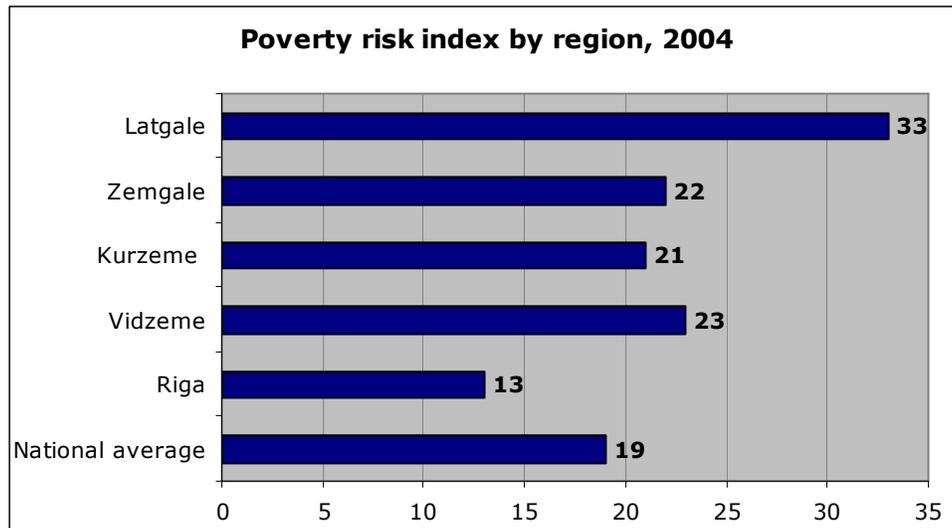
The second dimension of HPI-2 is knowledge, which is measured by the percentage of adults lacking functional literacy skills. There is no survey data for this indicator for Latvia. Since the knowledge dimension of the HDI, represented by the education index discussed in *section 2.1*, is at the same level in Latvia as it is in the *Top 20 Country* group, I will also assume that the knowledge dimension in the HPI-2 for Latvia will take the same value as the *Top 20 Country Average*, which is 15 percent⁴ (UNDP, 2005: 230). The value will also be assigned to all five regions in Latvia due to lack of information, which means that the dimension of knowledge will serve as a somewhat equalizing factor when comparing regions in terms of the extent of poverty in basic dimensions of human development. It should be mentioned, however, that areas where ethnic minorities make up relatively larger shares of the population, might come out worse in the dimension of knowledge in the HPI-2. This assertion is based on the fact that the economic and social

⁴ The average is calculated based on statistics from 14 countries. Data is not available for Iceland, Luxembourg, Japan, France and Austria. Italy is not included in the calculation due to the relatively high value of 47 percent.

transition in the country over the last 15 years has affected adults of ethnic minorities most adversely, more specifically those lacking functional literacy skills in the official language.

The third dimension of the HPI-2 is a decent standard of living measured by the percentage of people living below the poverty line. The national figure for this indicator is equal to 19 percent in 2004, as already mentioned in the beginning of this section. For comparison, the average proportion of people living below the poverty line in the *Top 20 Country* group is 9.8 percent (UNDP, 2005: 230). Regional poverty risk indices are given in *Figure 2.21*. The extent of income poverty in regions suggests a close association with relative GDP per capita figures. Namely, GDP per capita in Latgale region is about one third of the figure in Riga region, and the share of people living under the national poverty line in Latgale is nearly three times as much in comparison to Riga region. The three other regions fall between the two extremes, and have quite similar levels of income poverty. However, Kurzeme region stands out in regards to this association by having a higher relative level of GDP per capita than both Zemgale and Vidzeme, while the poverty risk index in the region is as high as in the two regions. This observation reveals a more unequal distribution of income in Kurzeme in comparison to those in Zemgale and Vidzeme.

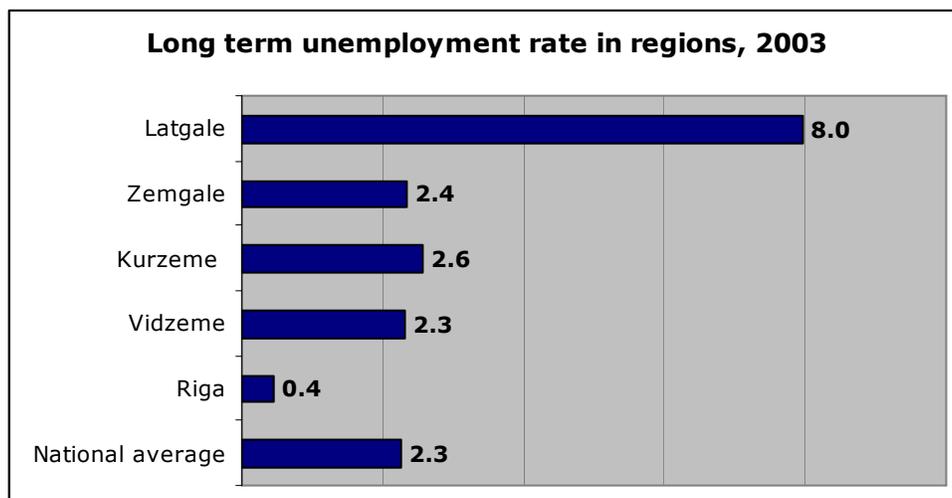
Figure 2.21: Poverty risk index by region, 2004



Source: Central Statistical Bureau of Latvia

The fourth dimension of the HPI-2 is social exclusion, which is represented by the long-term unemployment rate. Regional long-term unemployment rates and also the national average value are given in *Figure 2.22*. For the purpose of reference, the *Top 20 Country Average* in this indicator is equal to 1.8 percent (UNDP, 2005: 230).

Figure 2.22: Long term unemployment rate in regions, 2003



Source: Central Statistical Bureau of Latvia (2004:43)

National HPI-2

The formula for calculating HPI-2 can be found in *section 2.9* in *Part 1* of the paper. The following is a calculation of the national Human Poverty Index for Latvia.

$$\text{HPI-2} = [1/4 (21.5^3 + 15^3 + 19^3 + 2.3^3)]^{1/3} = \mathbf{17.2}$$

In Latvia, 17.2 percent of the population is found below a threshold level in basic dimensions of human development. For comparison, the *Top 20 Country Average* is 12.1⁵ percent, and 11 percent when Italy is excluded (the country has a HPI-2 value of 29.9 percent, which is significantly higher than all other countries in the group and also much higher than the value for Latvia). In fact, Italy is the only country with a higher value than that for Latvia (UNDP, 2005: 230). It can be concluded from the HPI-2 levels that improvements in all dimensions of HPI-2 are necessary in order to approach the *Top 20 Country Average*. More precisely, the probability of not surviving to age 60 is 60 percent higher in Latvia than in the high human development group of countries on average; the percentage of people living below the national poverty line is higher by 48 percent; and the long-term unemployment rate is by 22 percent higher in Latvia. These cross-country comparisons show that, while the rapidly rising GDP per capita in Latvia might be bringing the country closer to the *Top 20 Country Average* according to the Human Development Index, the distribution of these economic gains, represented by HPI-2, suggest serious economic and social problems in the country, most notably in regards to health, poverty risk and long-term unemployment.

⁵ New Zealand, Austria and Iceland are not included in the calculation of the average value due to lack of data.

Regional HPI-2

In *Table 2.5*, I summarize the four dimensions of the HPI-2 and give the respective index values for Latvia's regions, which I have calculated according to the formula. The regional HPI-2 values are also depicted in *Figure 2.23*.

Table 2.5: Human Poverty Index and its dimensions by region

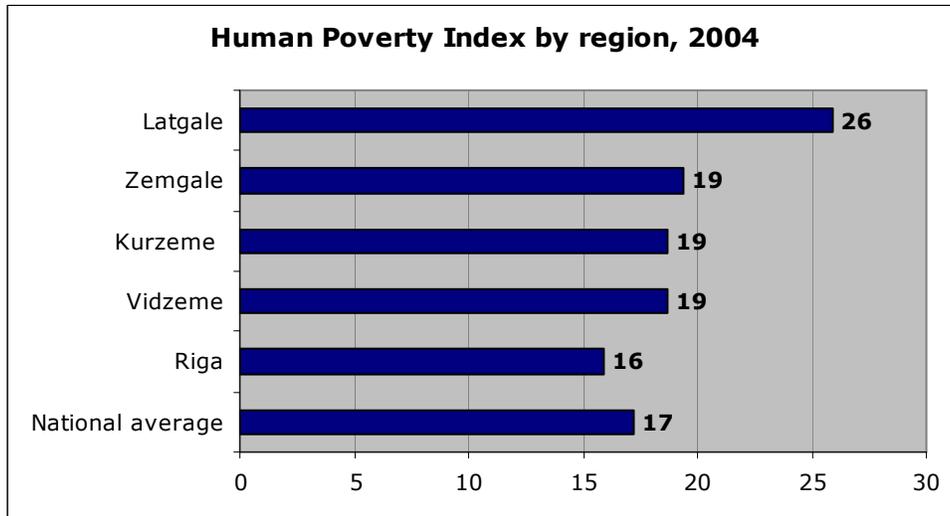
Region	Probability at birth of not surviving to age 60	Population lacking functional literacy skills	Population below income poverty line	Long-term unemployment rate	HPI-2 value
	2004		2004	2003	
Riga	22.0	15	13	0.4	15.9
Vidzeme	21.9	15	23	2.3	18.7
Kurzeme	23.7	15	21	2.6	18.7
Zemgale	24.8	15	22	2.4	19.4
Latgale	30.9	15	33	8.0	25.9

The figures reveal significant regional differences in all dimensions of the HPI-2, except the dimension of knowledge. Yet again, Latgale region performs most poorly, with slightly more than a quarter of the region's population living below the poverty level defined by the UNDP. Those residing in the remote region have by far the highest probability of not surviving to age 60 and also the largest likelihood of being unemployed in the longer term.

The extent of poverty, measured by HPI-2, is at very similar levels in Vidzeme, Kurzeme and Zemgale, which continues the pattern seen throughout the analysis in this paper. The pattern that does seem to be broken, however, is that regional deviations are smaller when this measurement tool is applied as opposed to the differences either in GDP per capita or productivity levels among regions, or even the poverty risk index. This means that the

extent of poverty is at unacceptably high levels across Latvia, and is only partially associated with the pace of economic growth or the level of GDP per capita; and the overall national proportion of people without basic dimensions of human development, according to HPI-2, is high and increasing.

Figure 2.23: Human Poverty Index by region



Data used for calculation: Central Statistical Bureau of Latvia
Method of calculation for HPI-2 presented in *Part I*, pp. 28-29

CONCLUSIONS

The analysis in this paper builds on *Part 1*. While in the first part I examined the level of human development achieved in Latvia in comparison to other countries, in the second, I have used the same theoretical framework for performing analysis of the state of human development within Latvia.

One of the main findings from *Part 1* was that in cross-country comparisons, the average GDP per capita level, in the case of Latvia, was quite a good predictor of the relative level of human development, measured by the Human Development Index (HDI). While regional GDP per capita ranks are also the strongest determining factor in the ranking of regions according to HDI, the analysis in this paper has shown that regional GDP per capita levels have a much lesser ability of predicting the extent of inequality in Latvia's regions.

The overall level of human development in Latvia has increased in recent years as a result of rapid growth in the income dimension of the HDI, along with relatively smaller improvements in the dimension of knowledge and that of a long and healthy life. But these improvements have not been distributed across the population in a sufficiently equal manner. In fact, inequality in Latvia has markedly increased, and it does not only concern income inequality, but also the share of the population lacking in basic dimensions of human development is unacceptably high.

Nearly a fifth of the population in Latvia live below a threshold level in basic dimensions of human development, as defined by the Human Poverty Index (HPI-2), and the geographical distribution of this disadvantaged group is quite evenly spread among regions. Latgale region does, however, perform most poorly in three of the four dimensions of the HPI-2, namely in the long and healthy life dimension, the income poverty dimension and the social exclusion dimension, and thus more than a quarter of the region's population lives below the poverty line set out by this measurement tool.

When considering the high levels of poverty in Latvia, there is a need to distinguish between poverty as a consequence of the economic and social transition of the country in the last 15 years, and the inequality based on unequal access to resources for individual human development existing today. As in the case of income poverty, the proportion is highest among the elderly, the unemployed, and households with children. In turn, the likelihood of being unemployed is most strongly associated with the level of education, age and location. Considering the high share of people obtaining higher education today, unemployment rates should experience significant reductions in the future. The widespread and universal access to education at all levels present in Latvia today, gives reason to believe that children living in poverty today, possibly due to parents' inability to adjust to the transition, will be able to secure a better life for themselves than that of their parents. Thus, the main association originating from the analysis is that one is least likely to be poor in Latvia if one is employed; and one will most likely be employed if one has attained higher level of education.

Providing equal access to education and securing the affordability of it for everyone is the most effective tool for reducing future inequality in income, health and opportunity in Latvia. The country's institutions, regardless of how centralized they are, need to embrace the fact that investments in equity on a national level are desirable in themselves and also produce a healthier, better educated and more self confident workforce, which in turn is a drive for efficiency (Falkenberg, 1998: 24).

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