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Identifying the poor

Indicators of financial vulnerability in Norway
Prepared by the Statistics Norway[1]

Abstract

It is a well known fact that traditional household surveys have their limitations when it comes to producing reliable poverty estimates for smaller sub-groups of the population, for example ethnic minorities or people living in a particular geographical location. Statistics Norway's national household income statistics is today totally register-based where all income and demographic data are collected from various administrative registers. This data source offers the possibilities to carry out small domain analyses and to identify sub-groups that are of particular concern in respect to financial distress. In particular, this statistics is a useful tool to local governments in their effort to combat child poverty.

The aim of the paper is to show the build-up of this statistics and to present some examples of its uses. We present several statistical indicators that cover various dimensions of financial poverty, and identify social groups and regions that have a high concentration of financial vulnerable households.

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Statistics Norway bears no responsibility for the conclusions and analyses in this paper, which are solely those of the authors.

I.   Introduction

Social indicators can be a useful tool to identify vulnerable groups and to evaluate the impact of social policy. Like so many other European countries, Norway saw the need for regular social reporting following the implementation of EUs National Action Plans on Social Inclusion in the early 2000s. In 2001, Statistics Norway was given the task to develop a set of national indicators focusing on income distribution and other indicators related to living conditions and well-being. Through the years the selection of indicators have remained more or less stable, but the introduction of an annual census-like household income statistics in the mid 2000, opened for a wider use of these indicators. It now became possible to carry out small domain analyses and to identify sub-groups that are of particular concern in respect to financial distress. In recent years, there has also been an increased demand from local governments for poverty indicators in their effort to establish local action plans to combat child poverty.

The aim of the paper is first to give a brief outline of the build-up of the comprehensive data source that are used to provide these indicators. We then present the list of indicators that cover various aspects of social welfare, for instance in respect to employment, level of education, financial difficulties, indebtedness and persistent low income. We close of the paper by presenting some results based on the most recent data available. We give examples of its uses and identify social groups and regions that have a high concentration of financial vulnerable households.

II.   The data

From income year 2004 Statistics Norway's household income statistics changed from being based on data from a sample survey to be a census-like statistics covering all private households. The possibility to replace the survey with a census-like household income statistics, was facilitated by Statistics Norway's decision to move from a questionnaire-based census (2001) to a totally register-based census (2011). In order to do so, a household register would have to be established. In 2005 the first population figures were published based on this new register.

In this new household register, household composition is based on the legal address of each individual. All persons that according to the Central Population Register (CPR) are registered at the same address and sharing the same dwelling unit, are considered members of the same household. In addition to information from the CPR, information about their place of education is used to identify student households and tax registers are used to identify cohabiting couples who are co-owners of a dwelling.

Today the household income statistics is fully integrated with the household definition used in population statistics, i.e. the household definition used in censuses.

With the demographics in place, next step is to compile income and wealth data for all household members. This is done by linking each individual belonging to a private household to various administrative registers, by the use of a unique personal identification number. Statistics Norway has a long tradition of collecting income data from registers. Even the earliest Income Distribution Surveys from the 1970s and 1980s were based on register data, primarily data from tax registers. With the computerization of public administration, increasingly more income data has become available in recent years.

Table 1: Administrative data included in the Household Income and Wealth Statistics

Administrative register	Income & wealth components
Tax-return register	- Wages & salaries, Self-employment income, Taxable pensions, Property income, Interest payments, Non-financial wealth, Financial wealth and Liabilities
Tax registers	- Taxes and Social Security contributions
The Labour & Welfare Administration	- Sickness benefits, Tax-free transfers
The State Educational Loan fund	- Scholarships, Student loans
The State Housing Bank	- Dwelling support
The Register for End-of-the-Year Certificates	- Unemployment benefits, Fringe benefits, Pensions
KOSTRA (Municipality-State-Reporting)	- Social assistance

Table 1 gives a crude overview of all the inputs to the register-based income statistics, in respect to income and wealth data. The main data providers are the Tax Authorities and the Norwegian Labour and Welfare Administration. The single most important source is the Tax Return Register. This register gives detailed information on all kinds of taxable income, e. g. wages and salaries, self-employment income, income from property and taxable pensions. In addition information on non-financial and financial wealth is collected from the Tax return, as well as liabilities. Another important source is the Tax Register, where information on personal income taxes and social security contributions are collected. From the Labour and Welfare Administration, all types of tax-free transfers (e.g. family allowance, support to single parents) are collected as well as different types of pension income (e.g. old age and disability). In addition to tax registers and social security registers some minor income items are collected from other administrative sources, for example dwelling support (The State Housing Bank) and scholarships (The State Educational Loan Fund). It should also be noted that register data are even used to collect some biographical data for individuals, such as highest level of completed education, formal marital status, citizenship, immigrant status and municipality of residence.

Even though being close to the internationally recommended definition of household income (e.g. UNECE 2011), there are still income components that are missing or poorly covered in register data. This is, for obvious reasons, the case for all types of income earned from informal work or illegal activity. In addition some non-taxable income components like inter-household transfers are missing in registers, and this is also the case for some tax-free rental income. It should also be noted that register data are vulnerable to administrative changes, for instance in tax rules.
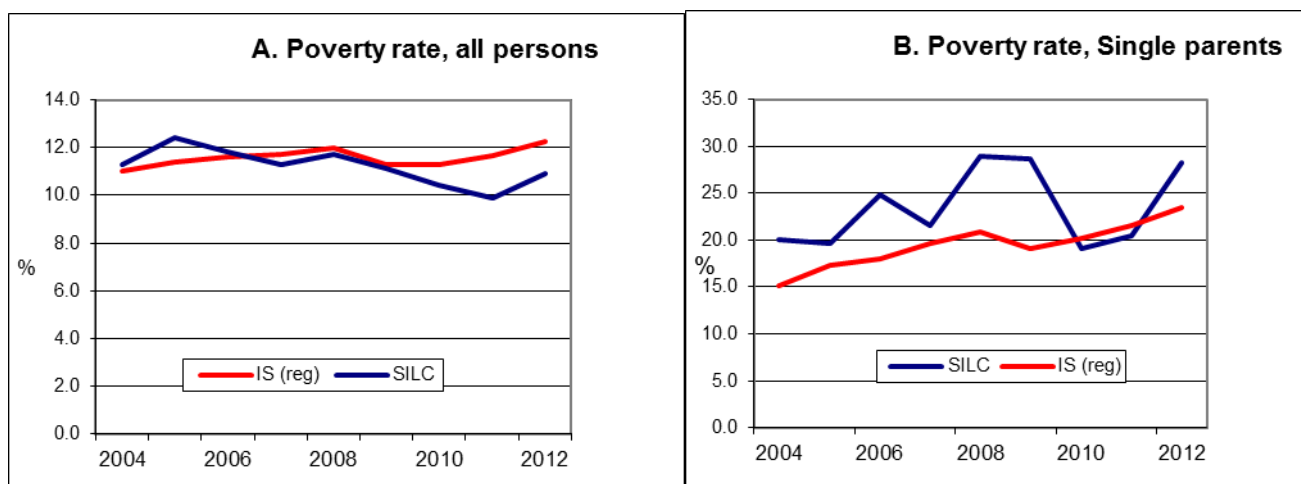
Despite these shortcomings, register data are particularly well suited to monitor changes in income distribution indicators for small groups and at sub-national levels. We illustrate this point by comparing the 'poverty rate', i.e. the proportion of people living in a household with an equivalent disposable income below 60 per cent of the median equivalent household income in Norway, from two different sources: The sample survey of the EU SILC and the totally register-based Household Income statistics.

Figure 1 (Panel A) shows the trend in poverty rate for the total population for the years 2004-2012. There seem to be good overlap between the two sources, particularly for the years 2004-2009, where both sources estimate a poverty rate of roughly 12 per cent. At the end of the period the estimate based on EU SILC shows a decline in poverty rate that is not supported by register data, but both sources indicate a rise in poverty in 2012.

Turning next to a small sub-group of the population, namely single parents (Panel B), there is much less agreement between the two sources. In particular, the changes in poverty rates from one year to the next are much more drastic when being based on survey data (EU SILC). While the totally register-based household

income statistics more or less shows a steady increase in poverty between 2004 and 2012 for single parents, the trend based on SILC-data is more inconclusive.

Figure 1: Poverty rates for the total population and for single parents. Data from EU SILC and from the national register-based Household Income Statistics (IS). Per cent

Source: Statistics Norway and Eurostat

III.   The indicators

Statistics Norway's annual Social Reporting uses indicators based both on EU SILC and the national Household Income Statistics. The indicators based on EU SILC resembles those non-income-related indicators used in international reporting, for instance by Eurostat. They cover different aspects of living conditions like self-reported health condition, deprivation, housing quality and indicators of subjective well-being. Due to sample sizes these indicators cannot be presented for smaller regions or for marginal groups of the population.

For all income-related indicators the data source is the totally register-based Household Income Statistics, which allows for a more detailed breakdown both geographically and in respect to groups of particular interest. The following indicators are currently used in social reporting:

Low income indicators

- The proportion of the population with annual equivalent disposable household income below 50 or 60 per cent of median equivalent disposable household income of the total population.

- The proportion of the population where the average equivalent disposable household income over a three year period is below 50 or 60 per cent of the average median equivalent disposable household income for the same three-year period (persistent low income, 3-year panel).

- The proportion of the population with equivalent disposable household income below 50 or 60 per cent of median equivalent income in the current year and in at least 2 of the preceding 3 years (persistent low income, 4-year panel).

Indicators of employment

- The proportion of the population that belong to a household without any economically actives (i.e. no household members have an income from employment larger than the minimum pension from Social Security).

- The proportion of the population that belong to a household where employment income is the main source of income.

Low level of educational attainment

- The proportion of the population that belong to a household where the main income earner has a formal education equal to or less than lower secondary education.

Financial difficulties

- The proportion of the population that belong to a household that is in receipt of dwelling support.

- The proportion of the population that belong to a household that is in receipt of social assistance (income support).

- The proportion of the population that belong to a household that is in receipt of both dwelling support and social assistance.

Indebtedness
- The proportion of the population that belong to a household where interest payments make up 15 per cent or more of total household income.

- The proportion of the population that belong to a household where the total sum of liabilities exceeds three times total annual household income.

Indicators of inequality

- The Gini coefficient

- P90/P10

- S80/S20

IV. Low-income households of particular concern

There are some sub-populations that are of particular interest in respect to social reporting. Many of these groups are small in numbers and difficult to capture in traditional social surveys. Register data, on the other hand, is able to identify these groups. In Statistics Norway's annual social reporting the following low-income groups are monitored:

- Single parents

- Couples with children in the lowest income class

- Young singles under 35 years of age

- Immigrants by country of origin

- People arriving in Norway as refugees

- People in receipt of Social Assistance or attending the Qualification Programme

- Long-term receivers of Social Assistance (6+ months)

- Single pensioner, receiver of the minimum state pension

- People on Disability or Survivors' Pension
- People on Work Assessment Allowance
- Long-term unemployed (6+ months)
- People in receipt of Supplementary benefit (support given to persons who have only lived a short period in Norway)
- Persons with reduced ability to work (identified by the Labour and Welfare Administration)

V.   Some results

The proportion of the population belonging to a low-income household has been relatively stable in Norway in recent years. This holds whether we choose to define low-income households on the basis of annual income or based on a multi-year approach. In Figure 2 we present the trend in low income based on the three different low income indicators described above. Based on annual income (below 60 per cent of the median) roughly 10 per cent of the population belong to a low-income household during the whole period from 1999 – 2013.[2] The three-year average income definition, sometimes referred to as the "chronic poor" definition (e.g. Atkinson et.al. 2002), gives a lower proportion of people in low-income households of roughly 8 per cent. The third definition of persistent low-income based on a household income below the threshold the current year and in at least 2 out of the 3 previous years, reports an even lower proportion of 5-6 per cent.[3] Thus, it seems apparent that there is income mobility among those at the bottom of the income distribution. With the passage of time the share of people that belong to low-income households is reduced.
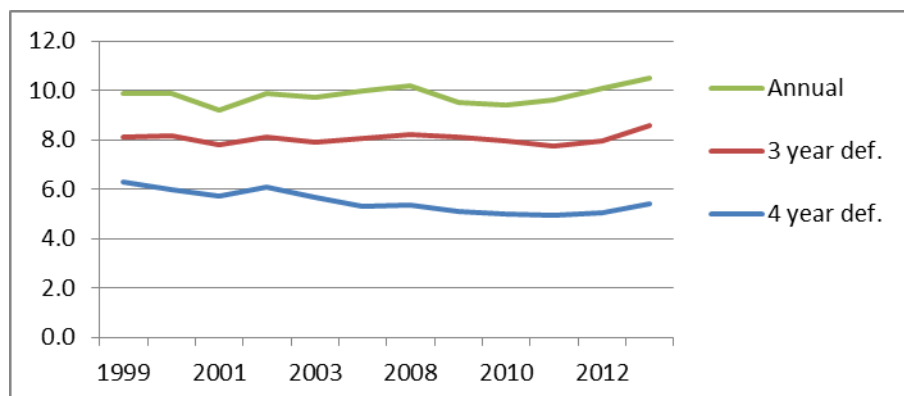
It should be noted that register data are particularly well suited to perform such panel studies due to no initial non-response and no attrition.

Despite there being a relative stable trend in the proportion of low-income households in recent years, there has been a substantial demographic change in the composition of the income poor. Figure 3 shows the proportion of people in low-income households in different age groups. The income definition is based on a three-year average. What is most striking is the sharp decline in low-income among the elderly. In a relatively short span of time, from 2006 – 2013, the share of people 67 years or older at-persistent-risk-of-low-income dropped from 17 per cent to 10 per cent. On the other hand, during the same period there was a steady rise in the share of children and young adults in low-income households. Among the various groups, children are generally of particular concern when it comes to risk of financial distress. Thus, we shall exploit our register data further, in order to find out more about what kind of children that are most at risk for living in households that experience financial difficulties.

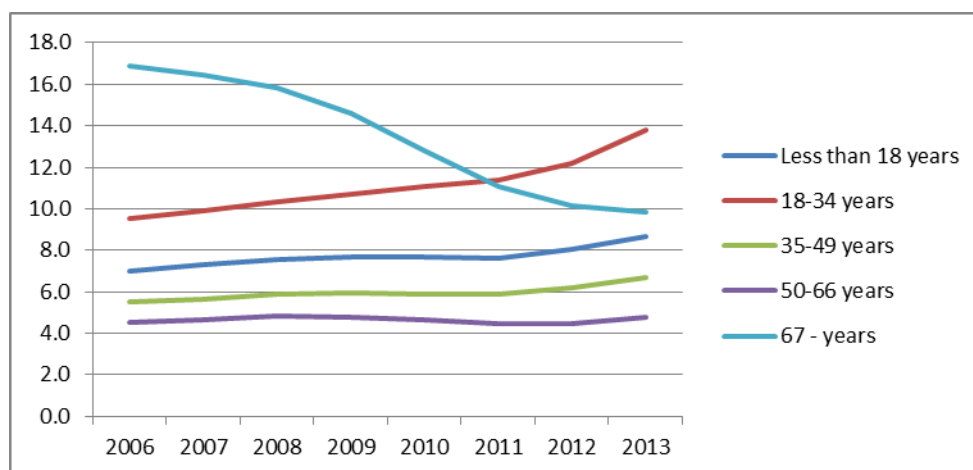[2] People living in student households are excluded from these numbers.
[3] The equivalent scale used in all low-income indicators is the 'modified' OECD scale.

Figure 2: The proportion of people belonging to households at risk of annual and persistent low-income. 1999-2013. Per cent
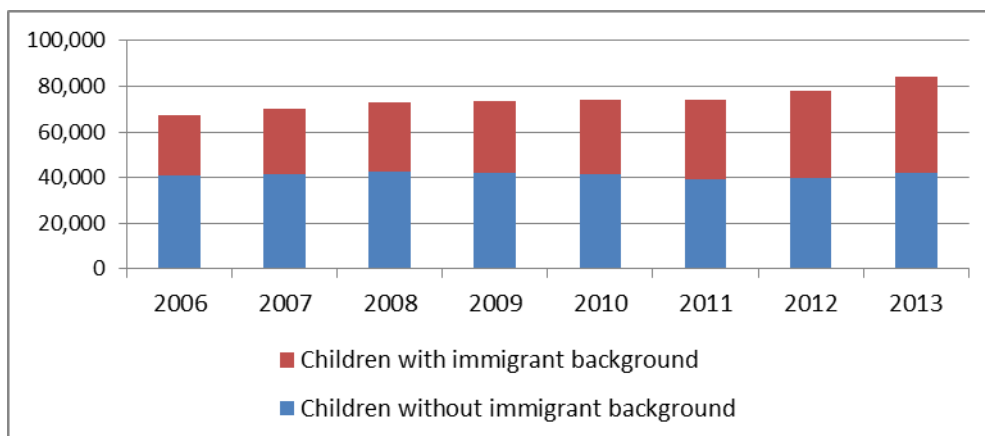

Source: Statistics Norway

Figure 3: The proportion of people in different age groups with at-persistent-risk of living in low-income households. 2006-2013. Per cent

Source: Statistics Norway

Children with an immigrant background are becoming increasingly more overrepresented at the bottom of the income distribution, and they are the main reason for the rise in the number of children living in families at-risk-of-persistent poverty in Norway. Immigrant background is defined as either having immigrated to Norway or being born in the country by parents who have immigrated. The proportion of immigrant children among those at-risk-of-persistent poverty was 50 per cent in 2013 compared to 39 per cent in 2006 (Figure 4). Measured in number this was an increase from 26 100 children to 42 500 children. Children with an immigrant background constituted about 12 per cent of all children in Norway in the three-year-period 2011-2013. During the same period, the number of at-risk-of-persistent-poor children without immigrant background has been stable around 40-42 000.

Figure 4: The number of children in households at-risk-of-persistent low income. Children with and without an immigrant background. 2006-2013
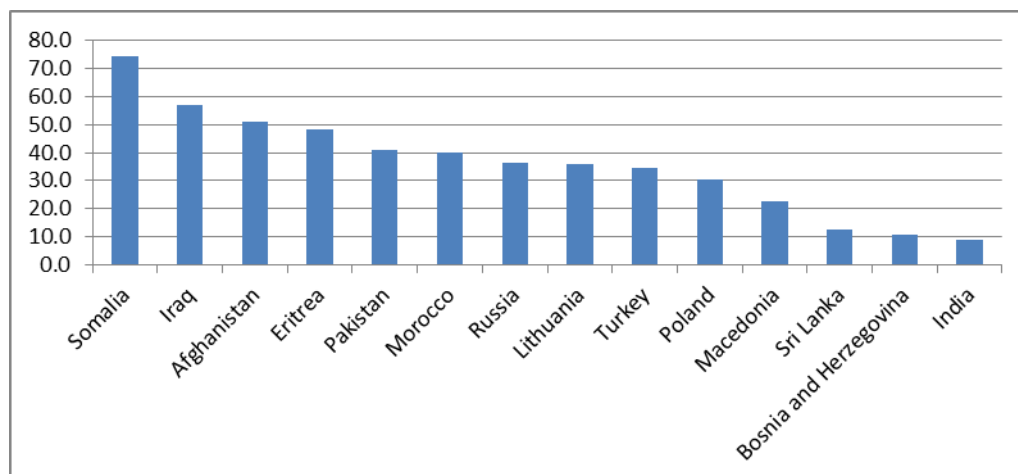

Source: Statistics Norway

Register data gives information on the country of origin, for all persons immigrating to Norway. We can use this information to get a more detailed picture of from which countries those children come from, that are most at risk of living in low-income households. As Figure 5 shows, there are considerable differences in the risk of persistent poverty by country of origin. Immigrant children from Somalia, Iraq and Afghanistan stand out with a much higher risk of poverty, compared with other immigrant children. Almost 75 per cent of all Somali children in Norway lived in households with at-persistent-risk of low-income in 2013. The corresponding figures among Iraqi and Afghan children were 57 and 51 per cent, respectively. The proportion of financial vulnerable children with a background from these countries, are increasing. These families have often a weak labour force attachment, low income mobility and many family members to support. It is a different story for children that have India, Sri Lanka or Bosnia and Herzegovina as their country of origin. Immigrant children from these countries have a risk of persistent poverty in line with non-immigrant children.
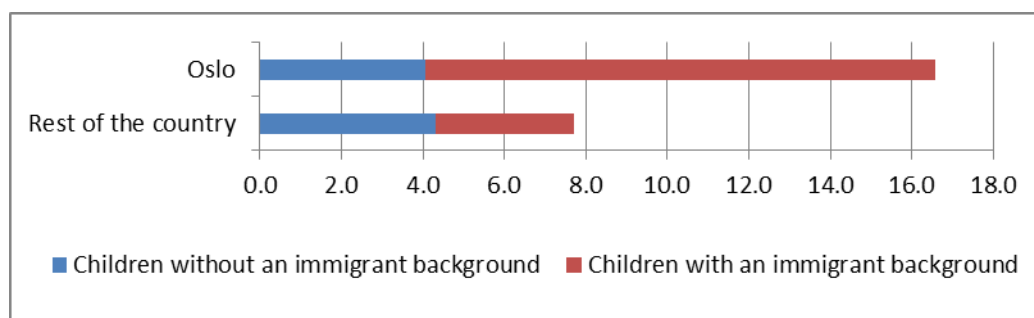
In Norway, there is a strong correlation between having an immigrant background and living in the capital region. This is particularly true for children in low-income households. As shown by Figure 6, the proportion of children in low-income households is more than twice as high in the capital region compared to the rest of the country. This is mainly caused by the very high proportion of children with an immigrant background in the capital region. In fact, in the Oslo region children with an immigrant background make up 3 out of 4 children living in low-income households.

Figure 5: Children with an immigrant background living in households at-risk-of-persistent low income. By country of origin. 2013. Per cent

Source: Statistics Norway

Figure 6: Children at-persistent-risk of living in low-income households. Oslo and the rest of the country. 2013. Per cent
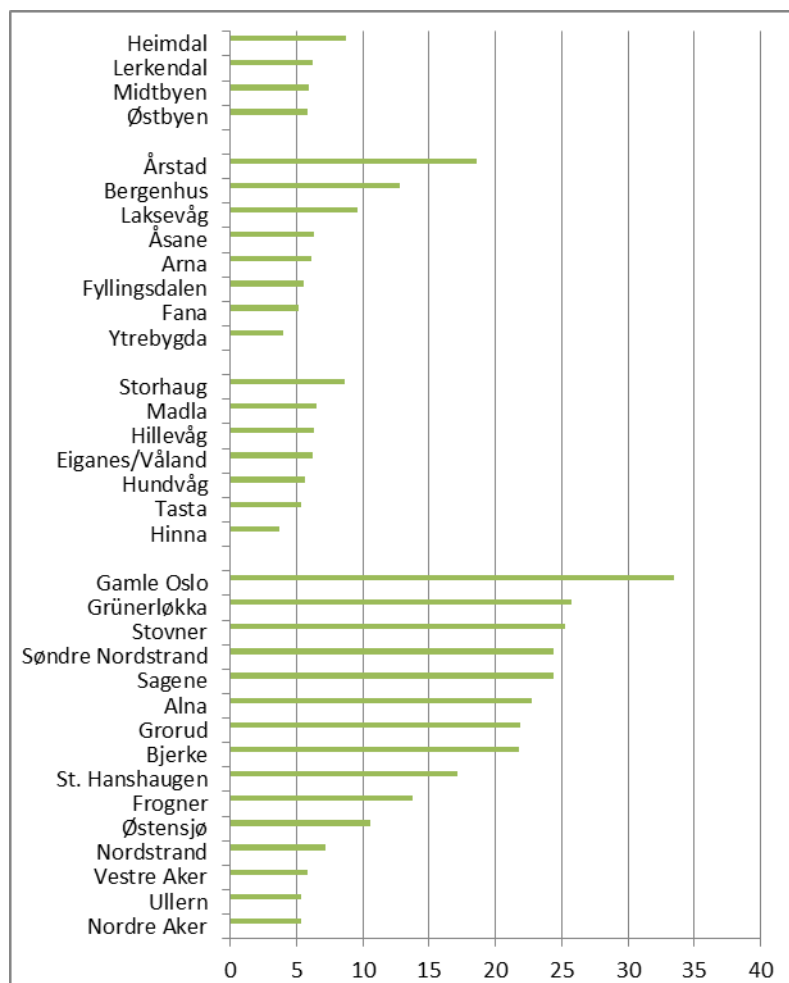

Source: Statistics Norway

While the risk of poverty in most European countries is higher for people living in thinly-populated areas than for those living in more densely-populated areas (Eurostat, 2014), this is not the case for households with children in Norway. However, it would not be fair to say that child poverty in Norway is in particular an urban problem. It would be more accurate to describe it as a problem primarily restricted to the capital region. When we look at the risk run by children living in the largest cities in Norway, for belonging to a jobless household or living in a household experiencing financial distress, it is the capital region that deviates from the rest. There is a much higher risk for children living in the capital region to belong to a jobless household or to live in a household that is in receipt of dwelling support or social assistance, compared to children living in one of the other larger cities in the country or the country at large.

When we use register data that comprises the total population, we are able to analyse the income distribution at a very low geographical level, for instance down to the various districts of the largest cities. This is particularly useful when we analyse the poverty risk of children living in the capital region. As already mentioned, households with children in Oslo face a much higher risk of poverty compared to other cities in Norway. Roughly 20 per cent of all children in Norway that belong to a household at-persistent-risk-of low income live in the capital. At the same time Oslo only has 10 per cent of the total number of children in the country. The capital is, furthermore, increasingly becoming a city divided and segregated with major differences in economic living conditions between the eastern and western districts of the city. For example, the risk of persistent child poverty is more than six times higher in the eastern district of Gamle Oslo compared to the wealthy western district of Ullern (Figure 7). All eastern districts in the capital have a risk of child poverty far above the country average. The main cause is the high concentration in these districts of immigrants with a background from countries in Africa, Asia, Eastern-Europe or South and Central America. In the other larger cities in Norway, such as Bergen, Trondheim and Stavanger, the differences in economic living conditions within the districts are minor compared to the capital.

Figure 7: Children living in households at-persistent-risk-of low income. Districts within the four largest cities (Trondheim, Bergen, Stavanger, Oslo). 2013. Per cent

Source: Statistics Norway

VI.   Concluding remarks

The aim of the paper was to present the national data source used to monitor changes in the incidence of financial poverty as well as other social indicators. The introduction of a census-like household income statistics in the mid 2000, offer the possibility to identify social groups and geographical areas that are at particular risk of experiencing persistent poverty and social exclusion.

In this paper we have particularly focused on children and the risk they face of living in low-income households over a period of several years. The children most at risk of persistent poverty, according to our data, are identified as having an immigrant background and living in particular districts in the capital region. This is useful knowledge in order to design effective policies for ameliorating child poverty, targeted especially at this group of children.

Statistics Norway delivers on an annual basis detailed income statistics to the city administration in Oslo. These statistics include for instance indicators on poverty broken down to both districts and sub-districts in the capital, and also specified for immigrant groups. The aim is to better target different policies for combating poverty, since a high risk of poverty may prevent a successful integration of especially non-western immigrants. For example, income indicators are used to monitor the effects of a 10-year action plan

(2007-2016) on improving living conditions in four of the eastern districts covering more than one fifth of the resident population in Oslo. Even local governments in other municipalities are currently requesting household income statistics from Statistics Norway, in order to combat child poverty within their region. In addition, increasingly more data on low-income households and income dispersion are available from Statistics Norway's website at a sub-national level.

VII. References:

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