POVERTY DYNAMICS IN LITHUANIA: PERSISTENCE, TRANSITIONS, TRIGGERS

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Abstract. While Lithuania is among the countries with the highest at-risk-of-poverty rates in the European Union, poverty research has so far been dominated by cross-sectional poverty analysis. This paper is aimed at contributing to better understanding of poverty as a dynamic process in Lithuania by examining poverty risk persistence, transitions and triggers. The analysis is based on the longitudinal component of the Survey on Income and Living Conditions. The longitudinal at-risk-of-poverty rate within the four-year panels is estimated to be at around a third of the Lithuanian population within a period of 2005–2012. Poverty risk in Lithuania proved to be both widely spread and persistent. The major role of income events for poverty risk entries and exits highlights the importance of activation into work, especially as concerns secondary household earners and better income protection in Lithuania. While no robust evidence of poverty penalty was found for poverty exits, the incidence of poverty re-entries within the initial three-year period after poverty exit substantially exceeds poverty entry rates in the general population.

Keywords: poverty, dynamics, persistence, transitions, triggers

1. Introduction

Lithuania is among the countries with the highest at-risk-of-poverty rates in the European Union (EU). Poverty research in Lithuania is well-established, with a number of investigations on poverty incidence, prevalence among different socioeconomic groups, its territorial aspects and the effects of social policies on poverty [e.g. 11, 15, 16, 17, 20, 21]. Still, the static notion and measures of poverty dominate in Lithuania, with but a very few attempts to explore its dynamic aspects from a longitudinal perspective.

The analysis of long-term poverty dynamics and the shorter spells of poverty may give valuable insights into the understanding of the poverty process and factors associated with it. While this understanding bears academic significance, it is also important for policy practice [see e.g. 2]. In the sphere of social security, it is important to know whether policies should be oriented towards mitigating transient or persistent poverty. Better understanding of poverty transitions and triggers may help build preventive policies and policies facilitating poverty exits.

Furthermore, dynamic poverty research may help overcome negative stereotypes towards the poor as a concentrated group trapped in poverty for long periods of time. The evidence of poverty being a more universal experience compared to incidence conventionally shown in cross-sectional analysis may contribute to building a wider political and public consensus on the need for more effective and substantial poverty reduction efforts. It should be noted that, despite the debates on the best ways to tackle poverty, there is little doubt that a wider public and political consensus on the need for addressing poverty and higher degree of re-distribution result in better poverty outcomes, compared to liberal approaches with lower degrees of re-distribution [for discussion, see e.g. 12, 18].

This paper is aimed at contributing to better understanding of poverty as a dynamic process in Lithuania by examining poverty persistence, transitions and triggers. The focus is on the relative income poverty defined using a standard Eurostat's definition of the at-risk-of-poverty rate. The following questions for Lithuania are addressed:

1. To what extent poverty is a persistent and concentrated or transient and widely spread experience?
2. Which groups are more likely to experiencing longer spells of poverty?
3. How does the probability of poverty exit and re-entry relate to previous poverty experience?
4. What are the main events that trigger transitions into and out of poverty?

The empirical analysis in this paper is based on the longitudinal component of the Survey on Income and Living Conditions (SILC) for Lithuania. The paper refers extensively to the recent work of Jenkins [10] on poverty dynamics in the United Kingdom (UK). Applying a similar methodology for empirical analysis makes it possible to compare the results with those for the UK and other countries presented in the study. Looking from a methodological point of view,

the identification of non-overlapping poverty trigger events proposed by Jenkins [10] is extended in this paper by additionally taking into account poverty transitions due to 'non-events'. The latter refers to poverty entries and exits caused by a shift in the poverty risk threshold itself, rather than a genuine change in the household income.

The paper begins with a theoretical discussion of the three key notions: poverty persistence, transitions, triggers. The theoretical discussion is followed by a short overview of the Lithuanian context, data and methods used in the empirical part of the paper. It concludes with a presentation of the empirical evidence on poverty dynamics in Lithuania, discussion and implications for further research and policy development.

2. Dynamic poverty aspects and implications for social policy

Poverty is a complex phenomenon and one layer of its complexity is related to the passage of time. Looking from a dynamic perspective, poverty is understood not as a condition that people experience here and now but rather as a process, a moving picture rather than a snapshot, a flow rather than a stock. While there are many inter-temporal aspects of poverty that might be of interest to poverty researchers and policy-makers, the focus in this paper is on the three aspects of poverty dynamics: persistence, transitions and triggers. In this section, the three notions are discussed looking from a theoretical point of view, to be later followed by an empirical examination.

Poverty persistence

While cross-sectional view helps identify people who are currently poor, the dynamic perspective enables the researcher to distinguish between different poverty profiles. Depending on the spell length, the duration of poverty may vary between short, medium and long-term; depending on the pattern, it can also be characterized as occasional or recurrent [2, 10]. Additionally, the notions of persistent and chronical poverty can be used. A widely used notion of the persistent at-risk-of-poverty rate is the one currently adopted by Eurostat [6]: persistently poor are defined as those who are below the poverty-risk threshold for the current year and at least two out of the preceding three years. The notion of chronical poverty is based on the concept of 'permanent' income derived by averaging current incomes over longer time periods. Individuals and households whose permanent income proves to be consistently below the poverty threshold are considered to be 'chronically' poor in spite of the volatility of their income above and below the poverty line during the period in question [10]. Thus, both the 'chronical' and 'persistent' poverty may include a single episode of long-term poverty as well as multiple short-term poverty episodes, or a combination of those. The use of these different notions highlights the complexity of dynamic poverty profiles when both the duration and recurrence of poverty are taken into account.

In spite of the variety of ways poverty spells can be defined, it is mainly the differences between the short occasional poverty spells versus long-term and recurrent poverty that bear distinctive effects on individuals and policy design. There is persuasive evidence that the duration of poverty spells has important implications on both individual experiences and outcomes, as well as on the policy interventions designed to tackle poverty [see e.g. 2, 10]. For example, based on the previous research, Alcock [2, p.406] presents a hierarchy of poverty coping strategies 'that would be likely to be resorted to over time as periods of poverty become more extended'. Shorter poverty spells may be mitigated by means of dissaving, intra-household support or borrowing, as well as by means of social insurance and social assistance benefits, which are often more generous at the initial stage. Longer spells of poverty often lead to more severe poverty conditions and increasingly harsh experiences for people going through them. Increasingly destructive coping strategies may include selling essential possessions, pawning valuables, crime and begging. Negative consequences of long poverty spells may also include deterioration of one's health, human, social and material capital, family dissolution, migration, etc.

The differences between the short and long spells of poverty are significant not only for individual experiences but also for designing effective policies to tackle them. The argument goes in favour of less costly and less intrusive monetary interventions in cases of short poverty spells, while longer poverty spells may require increasingly paternalistic services and in-kind transfers [see e.g. 23]. The latter is especially true for the working-age population, and is less the case when speaking about the population groups that are not expected to be activated back into paid employment (i.e. people with high levels of disability, old-age pensioners).

The associated costs and the concentration levels of poverty in the population also bear implications for designing more targeted interventions versus a system of universal transfers [12, 18]. The dominance of persistent poverty signals of higher levels of deprivation and the concentration of poverty in particular groups or regions, while shorter spells indicate a wider dispersion across the population and milder conditions.

Finally, it should be noted that social services and active labour market policies do not remove the need for minimum income protection policies, with numerous authors highlighting their complementary nature [see e.g. 2, 5, 22], which makes persistent poverty both more difficult and more expensive to address.

Poverty transitions

As it was already mentioned, looking from a dynamic perspective, poverty is perceived as a process, a moving picture, a flow. Thus, changes in the poverty rate from a dynamic point of view may indicate either fewer transitions into poverty (i.e. poverty entries) or more transitions out of poverty (i.e. poverty exits). Social policies may be designed specifically to prevent people from entering poverty, to facilitate poverty exits, or both. The analysis of poverty transitions may thus provide insights for designing more effective policies for reducing poverty levels. For example, Jenkins [10] research on poverty transitions shows that there are systematic differences in poverty transition rates that can be linked to systematic differences in tax-benefit systems across countries. He finds that the liberal UK welfare system provides less support for children, compared to conservative Germany, with higher child poverty entry rates and lower poverty exit rates.

Another point of interest for studying poverty transitions is a possibility to demonstrate that poverty is a more fluid and universal phenomenon than people tend to think. Dynamic poverty research, starting with the pioneering study of poverty spells in the US by Bane and Ellwood [4], consistently demonstrated that poverty affects wider groups of populations within a period of several years, compared to a cross-sectional snapshot of poverty incidence in every single year. The analysis by Layte & Whelan [13] for eleven EU countries showed that the share of people experiencing poverty risk within a five-year period was, on average, 1.8 times higher, compared to the mean at-risk-of-poverty rate in any of the individual years analysed (with a poverty line set at 60% of the median equivalized disposable income). The difference between the cross-sectional and longitudinal poverty rates was the larger the lower income poverty line used. Research also revealed greater 'inertia' to the experience of poverty that can trap individuals and households for liberal Anglo-Saxon and 'sub-protective' welfare regimes of Southern Europe.

Inertia in poverty transitions may be also partly explained by the length and severity of the previous poverty experience. Jenkins [10 p. 226] highlights a 'repeated-poverty penalty' – a situation when the chances of exiting poverty are lower than average if one was poor in the previous year. He also demonstrated that the probability to exit poverty declines sharply with every next year spent poor in the UK, the decline being the highest during the initial poverty years. While the author does not discuss the mechanisms underpinning the poverty penalty, such cumulative disadvantage may be associated with the waste or deterioration of human and social capital over time, especially during the first years of being poor. This gives ground for strengthening social protection and other interventions to minimize the waste of material, human and social capital for those entering poverty. Policies boosting household resources for the initial years after poverty exit, on the other hand, may help prevent poverty re-entries.

Finally, a degree of dynamisms within the population of the poor may be high, even though the poverty risk levels are stagnating. Jenkins [10] argued against the notion of the fixed or unchanging group who constitute 'the poor', demonstrating that within a nine-year period fewer than one in ten are poor for more than six years in the UK.

Poverty triggers

The dynamic poverty analysis is important for developing social policies as it helps get closer to understanding the causes of poverty rather than treating poverty symptoms [2, 10]. Researching poverty trigger events can contribute to the development of policies that aim at supporting escapes from poverty and preventing poverty entries.

The idea that there are certain events that can trigger poverty entries and exits can be traced to the very early poverty research. Rowntree [cited in 4] argued that in the life of a 'labourer' there are 'five alternating periods of want and comparative plenty': early childhood, early career, early years of parenthood, middle-age, old-age. The periods may be associated with important life cycle transitions. The life cycle approach soon gained its popularity and is based on the

assumption that people are affected in similar ways by similar life cycle events and transitions, such as parenthood, unemployment, old-age. As life courses become more fluid, it can be argued that what the life cycle approach is ultimately concerned with are risks that accompany important transitions individuals face at different periods of one's life.

Understanding risks associated with wide-spread socioeconomic transitions helps design encompassing social protection systems. Jenkins [10], following the approach adopted by the pioneering research by Bane and Ellwood [4], distinguishes among the demographic events triggering poverty transitions and income-related poverty triggers, which can be grouped into labour market and non-labour market events. Research by Jenkins [10] for the UK revealed that changes in the household labour market earnings associated with unemployment, decreases in wages and other income-related shocks accounted for the largest shares of poverty transitions for almost all socioeconomic groups. Demographic events proved to be more important for poverty entries. While comparing the role of trigger events between countries, he also noted that non-labour market events, including social benefits, played a more important role for the non-liberal welfare states and for the specific groups of population [10].

3. Lithuanian context and available longitudinal poverty risk estimates

While Lithuania stands among the EU member states with the highest prevalence of poverty risk, the longitudinal research on poverty dynamics in Lithuania is scarce. Some insights may be gained by looking into the poverty persistence indicators produced for Lithuania by Eurostat. Below, these statistics for Lithuania are overviewed, together with information on the economic situation and functioning of the national tax-benefit system during 2005–2012. Together this serves as contextual information for interpreting poverty persistence, transitions and triggers in Lithuania.

The onset of the period analysed (2005–2008) in Lithuania can be characterized as a period of rapid economic growth following the EU accession. The period is distinguished by relatively generous levels of social transfers, compared to the previous years. Hit by the global economic crisis in 2009, the economy contracted, and the unemployment rates in Lithuania more than doubled, compared to the previous year, and stayed at above 10% up to 2014 [7]. Similar to numerous countries in the EU, the tax-benefit system in Lithuania experienced a period of austerity, with most of the cuts in the tax-benefit system and public wages implemented between 2009 and 2011 [3].

The most important changes to cash benefits in 2005–2014 included: growth in pensions before 2009, temporary cuts to social benefits and pensions in 2010–2011, and a partial restoration of pensions in 2012. Unemployment, child and family benefits have been all subject to cuts since 2010. Social assistance benefits historically were at the levels well below the poverty risk threshold and not generous enough to lift people above the poverty risk line. The most recent changes in social assistance in 2012 and 2014, among other, involved tightening of the equivalence scale used for calculating assistance benefits, reducing the coefficients for children and adults other than the household head. The combination of the changes in the tax-benefit system resulted in the elderly being relatively better-off during the economic crisis and less protection for the unemployed and families with children [3, 19].

The welfare state in Lithuania possesses many traits of the conservative welfare state regime, with social insurance funded by employee's and employer's contributions being the major social protection mechanism [9]. However, low spending, low generosity and privatisation trends in social protection makes Lithuania more similar to the liberal welfare regimes. The previous research showed small overall contribution of social benefits towards the reduction of the current at-risk-of-poverty rates in Lithuania [e.g. 11, 14, 17, 21]. Similar is to be expected speaking about the capability of the Lithuanian tax-benefit system to reduce the persistent poverty risk.

The persistent at-risk-of-poverty rates reported by Eurostat so far are the sole source of information on poverty persistence in Lithuania. The prevalence of persistent poverty in the total population in Lithuania is roughly comparable with the average rates in the new EU member states. The current at-risk-of-poverty rate in the total Lithuanian population in the period after the EU accession in 2004 remained largely unchanged at around 20 per cent, with the total persistent poverty rate fluctuating at around a half of this rate. The 27 member states of the EU (EU-27) have a lower average at-risk-of-poverty rate within the period since 2004 (at 16.6%), while the average rate among the new member states was slightly higher (at 17.2%), but still below the Lithuanian average (19.8%). The average persistent poverty rate stood at 9.3% for the EU-27 and at a slightly higher level of about 10% in the new member states and Lithuania. Besides the year 2012, the share of the persistently poor among the currently poor in Lithuania was slightly lower, compared both to the EU-27 and to the new members' average. This can point towards a poverty profile in Lithuania being more dynamic, compared to the EU averages.

To sum up, the theoretical discussion on poverty dynamics, as well as the contextual information and persistent poverty estimates available for Lithuania, suggest several insights. First, poverty risk measured within the four-year window can be expected to be a much wider-spread experience in Lithuania than cross-sectional figures suggest. Poverty may also be expected to be a persistent experience in Lithuania for population groups relying on welfare provisions, since income protection and other welfare state interventions are relatively weak. Finally, within the prime-age group, market incomes and demographic events are expected to be among the factors contributing to poverty transitions in Lithuania the most, while the contribution of the changes in social benefits and taxes is expected to be relatively small and comparable to that in other liberal welfare states rather than more generous welfare regimes.

4. Data

The empirical analysis carried out in this paper is based on the longitudinal component of the Survey on Income and Living Conditions (SILC) for Lithuania. The reference period of the panel SILC data used for the analysis is 2005–2008, 2007–2010 and 2009–2012. The three datasets are pooled together, and the average estimates over the period after Lithuania's accession to the EU are presented in this paper. Pooling the data helps overcome the problem of the sample size when analysing poverty triggers and transitions, especially in cases of less frequent trigger events or in smaller subgroups. Pooling the data also smooths poverty dynamics over the different periods of the economic cycle, as the analysed timeframe of 2005–2012 includes both economic expansion, crisis and the start of recovery in Lithuania. While poverty dynamics during the different economic periods are of interest, it would require a more detailed analysis and is not discussed in this paper.

Talking about the survey design, the SILC is a rotational panel. Each year, one quarter of all respondents are replaced by new respondents, followed for four consecutive years[1]. While relatively short, the SILC panel of four year has some advantages over long panels. With an increasing length of the panel, the derived estimates may become less reliable due to drop-out, smaller sample sizes or changing personal characteristics, making it more difficult to undertake subgroup decompositions. The four-year window arguably reduces these problems; it is also commonly used in the official EU and national statistics.

Next, it should be noted that the target population of the SILC data is private households, with persons living in institutional households excluded from the sample frame. In Lithuania, households are selected from the Residents' Register using a stratified sampling design with a simple random sample in strata. SILC data for Lithuania are collected using face-to-face interviews of all respondents aged 16 and over. In the Lithuanian SILC, additional information on income, social insurance contributions and taxes is obtained from national administrative sources, such as the State Tax Inspectorate and the State Social Insurance Fund Board.

SILC data should be interpreted with care as the demographic and income variables refer to different time periods. Demographic variables mainly refer to the time of data collection (May–June). Some of the demographic information (e.g. age variables) and socioeconomic and labour variables reflect the *status quo* at the end of the income reference period *t-1*. The information on incomes refers to the calendar year of *t-1*. This disconnection may not be problematic for the demographic variables that are not likely to change over time. Otherwise, individual and household characteristics (i.e. labour market status) may be verified based on the income information in addition to the self-reported socio-demographic variables. It is also important to bear in mind the one-year gap when interpreting changes in income within a wider socio-economic context or changes in social policies.

5. Measurement

The following strategy for empirical analysis is used to evaluate poverty persistence, transitions and triggers in Lithuania. The focus is on analysing the dynamic aspects of the at-risk-of-poverty rates as officially defined by Eurostat. A threshold of 60% median equivalized disposable income is used as a poverty line, if not specified otherwise.

Individuals and households that fall below that poverty line in any given year are defined as currently poor. Using an approach similar to Layte & Whelan [13], the longitudinal at-risk-of-poverty rate in Lithuania is estimated. The longitudinal at-risk-of-poverty rate is defined as a fraction of people identified at risk of poverty in at least one of the four years available in the panel dataset.

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[1] See EU-SILC quality reports for details here: http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/quality.

While the longitudinal poverty measure gives insights into the spread or concentration of poverty in the population, additional measures are required to get a better picture on poverty persistence. Complimentary to the official figures on persistent at-risk-of-poverty rates in Lithuania published by Eurostat [8], a more detailed distribution of poverty spell length and the number of times the person was poor over a four-year period is presented in this paper.

Next, the measures of poverty transitions are explored. Those include poverty entry and exit rates and conditional transition probabilities. Jenkins [10] defines the poverty exit rate as the fraction of people poor in year *t* who are no longer poor at year *t+1*. Similarly, poverty entry is defined as the fraction of non-poor in year *t* who are poor at year *t+1*. These rates are however difficult to interpret as the number of people in poverty is relatively small generating larger exit rates, with an opposite being true for the poverty entry rates. To avoid this, poverty entry and exit rates are calculated as a share of the total population of the poor and non-poor. This makes the measure more intuitive to interpret and gives a meaningful transition saldo – a balance between the entry and exit rates for a period in question.

The problem of the relatively small sample sizes is addressed by estimating 'average' poverty exit and entry rates over pooled data of the three panels. Sensitivity analysis is done by setting the tolerance level of 10% change in income for the transition to be considered substantial, rather than due to a marginal shift in income, poverty threshold or a measurement error. The 10% sensitivity level is set following Jenkins [10], who however found that such manipulation did not change the direction and magnitude of his results, but had a price speaking about the decreased number of transitions and the related problem of sample sizes.

The poverty penalty is estimated using conditional transition probabilities by spell length. Those reflect how poverty transition rates vary with the length of time spent poor or non-poor. The conditional poverty exit or re-entry probabilities were estimated using the non-parametric Kaplan-Meier survival function. Left-censored spells were excluded from the analysis.

Poverty triggers are defined as changes in household characteristics that coincide with poverty transitions. Following Jenkins [10], we distinguish between changes in demographic characteristics and incomes. In addition, transitions due to changes in the poverty risk line are also singled out. For poverty entries, it is a situation when the household disposable income increases, though in absolute terms the increase is below the observed increase in the poverty line. Similarly, for poverty exits, it is a situation when the fall in disposable income is less than the one of the poverty line.

In this paper, a method of distinguishing between the mutually exclusive events is chosen. According to Jenkins [10], the method was pioneered by Bane and Ellwood [4] and first applied to the US data in 1970s and 1980s. Its main advantage over the approach identifying mutually non-exclusive events is that the common effect of all mutually exclusive triggers sums up to 100% of poverty exits or entries in the population. It is therefore easier to interpret the relative importance of a single trigger or a group of triggers for poverty transitions.

The construction of the hierarchy of the mutually exclusive trigger events however requires assumptions. The classification used by Bane and Ellwood [4] and Jenkins [10] is based on the assumption that the change in the demographic structure of the household is particularly important and drives further behavioural changes and changes in income. Thus, the change in household headship is argued to be at the top of the trigger event hierarchy. For the purpose, the household head is defined using information on home ownership and age. As our data does not include information on the home ownership, and it is usually shared in Lithuania, we use a definition of the household head recommended by Eurostat – a person above the age of 15 who contributes the most to the total household income and is the oldest (if there are several such individuals in the household)[2]. The arrival or exit of the prime earner into or out of the household, arguably, might bear important implications on poverty transitions.

The next on the trigger event hierarchy is a demographic change that includes an increase (for poverty entries) and decrease (for poverty exits) in household 'needs', compared to the concurrent change in income. The 'need' is summarized by a proportional change in the households' equivalence scale. The demographic trigger events for poverty entries include exits of earners other than the household head from the household or arrival of new dependents into the household – either children or adults. Similarly, for poverty exits, the arrival of new earners or other contributors into the household is identified, as well as departures of the adult and under-aged dependents.

The remaining poverty transitions are identified as triggered by income events. The priority of the income trigger event is identified by its absolute magnitude. All identified changes in income are negative when analysing poverty entries and positive for poverty exits.

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[2] For EU-SILC descriptions of target variables, see http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions.

Finally, it should be mentioned that while the causal trigger-transition relationship is assumed, the opposite may also be true and is difficult to verify empirically, since the exact timing of trigger events and transitions is difficult or impossible to define in the annual SILC data. In spite of this limitation, the analysis of poverty trigger events has a strong potential for providing valuable insights into poverty transitions and the poverty process in general.

6. Results

Before discussing the results, it should be stressed that all the estimates presented below are calculated over pooled data and reflect average dynamics during the period of rapid economic expansion in Lithuania of 2005–2008, the economic crisis of 2009–2011 and the start of the recovery in 2012. While it can be acknowledged that poverty dynamics may have different characteristics during different periods of the economic cycle, disentangling this would require a further, more detailed analysis.

Poverty risk – a widely spread and persistent experience (especially for singles) in Lithuania

The first question to be answered is whether poverty risk as defined by Eurostat is a persistent and concentrated experience or a transient and widely spread phenomenon in Lithuania. Table 1 shows that the longitudinal at-risk-of-poverty rate in Lithuania – a fraction of people at risk of poverty in at least one of the consecutive four years – between 2005–2012 was 33.2 per cent. Thus, on average, around a third of the population experienced at least one year of poverty risk during any consecutive four-year periods between 2005–2012.

Table 1. Current and longitudinal at-risk-of-poverty rates for Lithuania, 2005–2012

	All, %	*Prime age (18-64), %*
Current at-risk-of-poverty rate :		
2005	20.5	19.0
2006	20.0	17.8
2007	19.1	15.6
2008	20.0	16.8
2009	20.3	18.4
2010	20.5	22.2
2011	19.2	20.2
2012	18.6	17.9
Average [A]	*19.8*	*18.5*
Longitudinal at-risk-of-poverty rate [B]:	**33.2**	**30.7**
Ratio [B/A]	**1.7**	**1.7**

Source: Eurostat for current at-risk-of-poverty rates; elsewhere: author's calculations.
Note: Poverty threshold at 60% of the median equivalized disposable income; full panel observations only, weighted estimates; average longitudinal at-risk-of-poverty rate estimated over SILC panels for Lithuania: 2005–2008; 2007–2010; 2009–2012.

The prevalence of poverty risk measured longitudinally is similar in the total as well as in the prime-age populations and exceeds the average at-risk-of-poverty rate as measured cross-sectionally by a factor of 1.7 for both the total and the prime-age population. This ratio is slightly below the average ratio of 1.8 reported by Layte & Whelan [13] for the selection of 11 EU member states. It should be however noted that the prevalence of the current poverty risk for their period of reporting (1994–1997) was at the level comparable to the one observed for Lithuania only in the countries of Southern Europe (Greece, Spain, Portugal, Italy) and the liberal UK and Ireland. The average current poverty rate for the named countries was at 20.5 per cent, while the longitudinal at-risk-of-poverty rate ranged from 35 to 38.7 per cent, with the average of 36.8 per cent. Thus, the longitudinal poverty rate for Lithuania reveals a wider spread of poverty risk in the population than conventionally shown by the current poverty risk estimates.

The aggregate longitudinal poverty rates however hide substantial differences in the levels of persistence of poverty risk and its prevalence across groups. In Table 2, the longitudinal at-risk-of-poverty rates in Lithuania are disaggregated by spell length and household types. The household types selected are based on the characteristics recorded in the first year of the panels and are similar to those chosen by Jenkins [10]. Additionally, the distribution of poverty spell lengths is analysed through disaggregating by household work intensity levels. In contradistinction to Jenkins [10], who

classified households according to the economic status of the family recorded in the first year of the period, the average work intensity rate across the whole four-year period recorded in each panel dataset is used[3]. Such estimates arguably present a better picture as the labour market was highly volatile within the period analysed.

Table 2. Distribution of the durations of poverty risk spells, 2005–2012, %

	None	*One year*	*Two years*	*Three or four years*
All individuals	66.8	12.1	8.3	12.7
Household type:				
Pensioner couple	80.3	13.8	3.7	2.2
Single pensioner	28.9	17.5	22.5	31.2
Couple with children	67.6	13.5	8.2	10.7
Single with children	37.0	13.9	14.9	34.2
Couple, no children	76.1	9.2	5.8	8.9
Single, no children	52.8	13.3	4.2	29.8
Household work intensity:				
Low (0–0.45)	31.5	12.4	15.1	41.0
Medium (0.45–0.55)	58.5	22.9	9.5	9.1
High (0.55–1)	79.9	10.2	5.6	4.4

Note: Full panel, spells pooled over the 2005–2008, 2007–2010, 2009–2012 SILC datasets; left and right censored spells included; weighted estimates. Household type as recorded in the first year of the survey. Pensioners identified based on their reported economic status and income from pensions in the household. Categories of couples and singles with/without children exclude pensioners. Work intensity estimated based on the official Eurostat's definition.

Table 2 shows that couples – both pensioner and non-pensioner – are the groups most resilient to poverty risk within the time window analysed. Single households were doing worse than the population average, with the highest shares of people experiencing at least one episode of poverty risk in households of single pensioners (around 71%), single parent with children (around 63%) and single adults with no children (around 47%). The persistence of poverty risk is high among all three latter groups.

The situation observed in Lithuania is somewhat similar to the numbers reported by Jenkins [10] for the late 90th in the UK, especially as concerns couples with and without children as well as singles with children. Single pensioners and single adults without children are however much more vulnerable in Lithuania, compared to the UK. The high degree of persistency of poverty risk among single adults without children is especially worrying. Actually, the analysis for the UK for the 90th as well as the first decade of the 21st century showed that single adults were among the groups less vulnerable to poverty risk in the UK, with the rates of persistent poverty not exceeding 8% during the whole period. The poverty persistence levels being more than three times higher in Lithuania (29.8%) may indicate low work intensity, precarious labour market condition, low earnings or a combination of those, as well as weak social protection of single adult households.

The analysis of the poverty risk by work intensity provides further insights. The distribution of persistent poverty spells across households with different average work intensity levels within the period of 2005–2012 (see Table 2) suggests a strong relationship between work intensity and duration of poverty spells in Lithuania. Individuals living in households with low average work intensity were around 4.5 times as likely to be poor for 3 or 4 years out of four-year periods recorded in the longitudinal SILC data, compared to those belonging to households with medium work intensity, and around nine times as likely, compared to households with high work intensity. It should be however noted that high household work intensity did not prevent poverty risk completely, with around 20% probability to experience at least one spell of poverty risk within a four-year period. Poverty persistence profile among those with medium work intensity revealed around 40% chance of experiencing at least one spell of poverty during the four-year time frame within this group.

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[3] According to Eurostat, work intensity is the ratio between the number of months that household members of working age (aged 18–59, with the exclusion of dependent children in the age group between 18 and 24 years) worked during the income reference year and the total number of months that could theoretically have been worked by the same household members. For persons who declared that they worked part-time, the number of months worked in full-time equivalent roles is estimated on the basis of the number of hours usually worked at the time of the interview.

Poverty transitions: dynamic measures reveal precarious conditions of lone parents

Next, the measures of poverty transitions are explored, including poverty risk entry and exit rates. The average poverty risk transition rates presented in Table 3 show that a similar change in the prevalence of the at-risk-of-poverty rate may hide substantial differences in the poverty risk dynamics across groups. For example, within the period analysed, the relative poverty risk among both couples with no children and singles was stable as reflected by the poverty risk transition saldo being close to zero. The latter group of singles with no children had a more dynamic poverty risk profile – with higher poverty exit and entry rates – compared to couples with no children.

Table 3. Average poverty risk transition rates and saldo for the period of 2005–2012, *% of group total*

	Average poverty risk transition rate			*Average poverty risk transition rates (10% tolerance level)*		
	Entry rate [I]	Exit rate [II]	Saldo [I–II]	Entry rate [III]	Exit rate [IV]	Saldo [III–IV]
All individuals	6.2	6.5	-0.3	5.0	5.9	-0.8
Household type:						
Pensioner couple	4.8	3.6	1.2	2.8	3.1	-0.3
Single pensioner	9.7	15.0	-5.3	5.1	9.6	-4.5
Couple with children	7.3	7.3	0.1	6.3	7.1	-0.8
Single with children	9.1	10.8	-1.7	7.8	10.2	-2.4
Couple, no children	4.7	4.3	0.4	4.3	4.3	0.0
Single, no children	7.4	6.9	0.4	6.2	6.3	-0.1

Note: Full panel, transitions pooled over 2005–2008, 2007–2010, 2009–2012 SILC datasets; transition rates estimated as percentages of the total number of individuals in each group; transition saldo is a difference between the average poverty entry and exit rates. Pensioners identified based on their reported economic status and income from pensions in the household. Categories of couples and singles with/without children exclude pensioners.

It can also be noted that while poverty risk exits in the population of lone parents exceeded the share of entries during the period in question, high vulnerability to poverty risk in this group is worrying. High prevalence and persistence of poverty risk among single parents shown in Table 2 also indicates that a relatively large fraction of this vulnerable group struggle to quickly exit poverty and get sucked into it for extended periods of time.

The position of pensioner couples, on the other hand, was relatively stable between 2005–2012, with but a few poverty transitions. Indeed, pensioners on low pensions were better protected during 2005–2012 and were better-off during the latest crisis as their income was affected less, compared to earnings [3]. Thus, relative poverty indicators show negative poverty transition saldo for pensioners. The effect is most profound when speaking about single pensioners – the group at the forefront of the high share in poverty risk reduction among pensioners in 2009 and 2010.

Poverty penalty: weak evidence for poverty exits and high incidence of poverty re-entries

Conditional probabilities of the poverty risk exit and re-entry rates were further estimated using the Kaplan–Meier survival function. After excluding left censored spells, the number of remaining transitions is relatively small (1230 observations for poverty re-entries and 1241 observations for poverty exits), so results should be treated with some caution.

The probabilities of remaining poor conditional on previous poverty experience show that around 77% of individuals exited poverty within a two-year period after becoming poor (standard error of 1.9%). As expected, the probability of escaping poverty gives a weak indication of the existence of poverty penalty in Lithuania: after a one-year poverty risk spell, the conditional probability of exit was at 54%, with a 49% probability after two-year spells (standard errors of 1.9–2.2%).

The estimated probabilities of poverty re-entry conditional on time since the last poverty spell show that 40.8% of those who escaped poverty re-entered it within a consecutive two-year period (standard error of 2.4%). The latter poverty re-entry rate substantially exceeds the estimated poverty entry rates in the general population. Furthermore, the probability of re-entry increases slightly with time after the latest poverty spell and is at around 19.8% for those with at

least one-year non-poor spell and 26.1% for those with two non-poor years (standard errors of 1.9–2.4%). It can be thus argued that keeping above the poverty line for longer time periods is difficult for those with previous poverty experiences in Lithuania, with high levels of poverty recurrence.

Poverty risk triggers: major role of income events, importance of secondary earnings

Finally, the role of trigger events for poverty risk entries and exits in Lithuania is analysed. Following an approach by Jenkins [10], income-related and demographic trigger events are identified in Table 4. Additionally, transitions due to changes in the poverty threshold are singled out (for methodology, see Section 4).

Table 4. Poverty risk entries and exits by main trigger event, 2005–2012

Poverty risk entries, % of all entries		Poverty risk exits, % of all exits	
Shift in the poverty threshold:			
disp. income increased less than poverty line	12.5	disp. income dropped less than poverty line	3.1
Demographic event:			
prime earner left	3.1	new earner in the hh	3.0
other earner left	4.7	other new contributor in the hh	0.6
new child	2.5	child left	0.6
other new dependent	11.3	other dependent left	5.9
Decrease in money income from:		**Increase in money income from:**	
head's net earnings	36.6	head's net earnings	26.0
other members' net earnings	8.7	other members' net earnings	21.2
Old-age and survivor pensions	5.6	Old-age and survivor pensions	20.7
other benefits	9.5	other benefits	15.2
other income	5.4	other income	3.7

Note: full panel, transitions pooled over 2005–2008, 2007–2010, 2009–2012 SILC datasets; net earnings include employment and self-employment income; child is defined as a person below 14 years old in accordance with a definition used for estimating equivalence scale; household head is the eldest prime earner in the initial survey year; dependent members defined as adults whose entry into household increases needs relative to the disposable income; change in needs is calculated based on the equivalence scale.

As it can be seen in Table 4, income-related poverty events played major role in poverty transition in Lithuania in 2005–2012. All the income triggers taken together accounted for an absolute majority (around 2/3) of all the poverty risk entries and almost 90% of poverty risk exits. For entries, this is similar to the situation reported by Jenkins [10] for the UK and indicates a relatively low level of income protection in both countries. Indeed, almost half of all poverty entries and exits were related to decreased earnings in the household, especially those of the primary earners. Interestingly and different to the conventional understanding of poverty determinants, work-related income of secondary earners plays an important role for poverty exits. This demonstrates the importance of secondary earners in Lithuania, as income of sole earners is often insufficient to lift households above the poverty threshold in the Lithuanian context.

Among other income-related events, raising old-age and survivor pensions played major role in around 20% of all poverty exits in 2005–2012. The progressive nature of cuts on pensions during the recent crisis determined that the prevalence of poverty entries due to reduction in pensions was low, while the living standards of pensioners at the lower end of the income distribution in Lithuania had improved relative to the rest of the population during 2009–2012 [3].

Changes in benefits other than pensions also played a non-negligible role for poverty risk transitions during 2005–2012. As it was highlighted in Section 3, the period of 2005–2008 in Lithuania was distinguished by relatively generous and increasing levels of social transfers, compared to previous years, contributing to poverty risk exits. The later period of austerity resulted in cuts on non-pension benefits, especially child, family and unemployment benefits. The prevalence of poverty entries due to a reduction in non-pension benefits may also be explained by the insufficient length of unemployment benefits to cover long-term unemployed during the recent crisis in Lithuania.

Poverty exits occurring due to changes in the poverty threshold itself, rather than genuine changes in the households' economic or demographic characteristics, played a minor role within the period analysed. The changes in the

poverty line have, however, affected the entries into poverty to a more substantial degree (12.5%). The latter trend may be interpreted in the context of rapid economic expansion during 2005–2008 in Lithuania, when the rapid growth in the poverty line was not accompanied with the corresponding growth in income at the bottom of the income distribution.

The demographic events identified played a substantial role for poverty risk entries and contributed to 21.6% of the latter. Among the most widely spread demographic triggers into and out of poverty was, correspondingly, the entry or exit of new dependents – children and especially adults – into the household. The new dependent adults entering households may include elderly, disabled or jobless or job-poor relatives or unrelated adults, etc. The entry of a new dependent member not only increases the household's financial burden but may also trigger negative changes in the labour market attachment among household members, especially if the new entrant needs special care. The relatively high incidence of new dependents entering non-poor households and dragging them below the poverty line was in line with the harshening economic conditions towards the end of the period analysed in Lithuania, with unemployment on a raise and cuts on pensions and benefits. It may thus indicate a coping strategy of the adult children and other relatives as their labour and non-labour market income got affected by the crisis.

7. Conclusions

The four questions raised in this paper concerned the degree of concentration and persistence of the poverty risk in Lithuania, its spread across different population groups, the main events triggering transitions into and out of poverty, as well as the impact of the previous poverty experience on the poverty exit and re-entry probabilities.

The analysis showed that within any four consecutive years between 2005 and 2012, the poverty risk touched upon a third of the Lithuanian population. The share of longitudinally estimated poverty risk was around 1.7 times higher in Lithuania, compared to the official cross-sectional at-risk-of-poverty rates for any single year. While spread widely, poverty risk in Lithuania can also be characterized as a persistent experience, with the highest persistence rates among the single parents, single pensioners and single prime-age adults without children.

The major role of income events for both poverty risk entries and exits provides further evidence of the importance of activation into work, especially as concerns secondary household earners, and better income protection in Lithuania. The estimated share of poverty transitions triggered by demographic events between 2005 and 2012 in Lithuania was relatively low. Among the most widely spread demographic triggers into poverty was the entry of new dependents (children and especially adults) into households. Shifts in the poverty line itself within the period were accompanied by a substantial number of poverty entries, but had marginal effects on poverty exits.

Finally, while the evidence of the poverty penalty in Lithuania is statistically weak for the period in question, the chance of poverty re-entry at a rate of around 40% within the three years after the last recorded poverty spell substantially exceeds the poverty entry rates in the general population.

Talking about the limitations, the current analysis performed on the pooled data for the period of 2005–2012 in Lithuania reflects the poverty dynamics smoothed over the economic cycle. A detailed analysis of poverty transitions during the economic boom, recession and recovery in Lithuania, while not included here, has strong potential for providing additional evidence and insights. While the analysis of poverty trigger events comes close to understanding poverty causes, accompanying rather than causal effects should be assumed, since the exact timing of events and transitions is difficult to verify in the annual SILC data. The four-year SILC panel is also limited in its duration. Despite this, the paper demonstrates a strong potential of dynamic poverty research for providing valuable insights into the poverty process and for improving social protection design in Lithuania.

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SKURDO DINAMIKA LIETUVOJE: ILGALAIKIŠKUMAS, PERĖJIMAI, POSTŪMIAI

Jekaterina Navickė

Santrauka. Nors Lietuva yra viena iš ES šalių, išsiskiriančių aukštu skurdo rizikos lygiu, kiekybiniai skurdo tyrimai Lietuvoje daugiausia apsiriboja statiška skurdo rizikos samprata ir skerspjūvio duomenų analize. Šiuo straipsniu yra siekiama prisidėti prie skurdo dinamikos tyrimų Lietuvoje plėtros. Empirinė analizė remiasi trimis išilginio pjūvio Pajamų ir gyvenimo sąlygų apklausos bangomis po ketverius metus, kurios apima 2005–2012 m. laikotarpį. Praplėtus analizės langą iki ketverių metų laikotarpio, skurdo rizika pasirodė esanti gerokai labiau paplitusi Lietuvos populiacijoje nei įprastai rodo statistika – apima net apie trečdalį Lietuvos populiacijos. Kaip rodo analizė, skurdo rizika Lietuvoje yra plačiai paplitusi ir ilgalaikė patirtis. Pagrindinis vaidmuo skurdo perėjimuose atitenka su pajamų pokyčiais susijusiems įvykiams. Tai rodo darbo rinkos aktyvacijos priemonių, ypač nukreiptų į nepagrindinius pajamų gavėjus, bei pajamų apsaugos stiprinimo svarbą Lietuvoje. Nustatyta, kad pakartotinų skurdo rizikos epizodų tikimybė trejų metų laikotarpiu po išėjimo iš skurdo rizikos smarkiai viršija patekimo į skurdą rizikos rodiklius bendroje Lietuvos populiacijoje.

Reikšminiai žodžiai: skurdas, dinamika, ilgalaikiškumas, perėjimai, postūmiai.