Material Deprivation, Social Class and Life Course in the Balkans, Eastern Europe and Central Asia

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Abstract

This paper employs the factor analysis technique and data from the UNDP/UNICEF Social Inclusion Survey to construct a material deprivation index for five transitional societies in the Balkans (FYR Macedonia and Serbia), Eastern Europe (Moldova and Ukraine) and Central Asia (Kazakhstan). The distribution of deprivation between these societies can be largely explained by their level of economic development, but within-county variance is not limited to monetary dimension. Controlling for settlement type, human capital and employment status in multivariate settings, the paper tests the hypothesis of the continuous importance of occupational social class and the emerging role of different life phases in individuals' welfare outcomes. The results reveal that all specified social classes and most of the defined life phases have diverse and statistically significant effects on the constructed deprivation index and the likelihood of being under 70 per cent of the median deprivation threshold. Belonging to non-skilled manual, farmers and skilled manual social class as well as being a child or lone parent were revealed to have the highest risk of material deprivation. These findings are in line with the conclusions made for the Western welfare democracies on the complementary nature of social class and life course dimensions in explaining social hardship.

Keywords: deprivation, Eastern Europe, social class, life course.

Introduction

This paper intends to widen our understanding of the role that the occupational social class and different life stages play in shaping patterns of poverty and social exclusion in less successful post-communist societies. Throughout the transition, poverty has been evaluated mainly in terms of the monetary dimension and its determinants were studied primarily by looking at standard economic explanations, while more sociologically-oriented comparative research has been missing. Simultaneously, in recent European poverty and social exclusion research, along with the dynamic interpretation of income poverty, some new tendencies can be identified. First, a greater role is attributed to material deprivation analysis in relation to household consumption, facilities and neigh-bourhood environment (Fahey 2007, Watson *et al*. 2006, Whelan & Maître 2008b). Second, based on the 'individualisation hypothesis,' which assumes that in the globalised world life-chances are increasingly shaped by personal biographies rather than social structures, investigation of the determinants of poverty in its various forms go beyond the traditional stratification explanations such as demography, human capital and social class (e.g. Layte & Whelan 2002, Vandecasteele 2007). The findings of this research reveal that material deprivation can be a better indicator of the command of resources and the chances of escaping poverty (Whelan *et al*. 2004), while individual life course events are just as important as structural parameters in determining individuals' wellbeing (Whelan & Maître 2008b).

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However, to the best of our knowledge in non-EU member states that are former socialist countries, for which relevant comparative survey data is generally unavailable, material deprivation and the importance of the life course on poverty has not been researched.

Among other factors, the lack of relevant comparative survey data is the major problem as the National Household Budget and Living Standards Measurement Studies are often restricted, incomparable and irrelevant for material deprivation, social class and life course analysis. The recent accessibility of the UNDP/UNICEF (2010) Social Inclusion survey opens an opportunity both to go beyond income poverty analysis and to test the various explanations of deprivation comparatively for some Central Asian and Eastern European societies. Taking into account that the 'old' versus 'new' social risks might have a different interpretation in the considered region (Cerami 2008), in this paper poverty and social exclusion as dependent variables are derived from the survey questions on the involuntary unavailability of basic human provisions, main household facilities, items and socialising opportunities. On the other hand, controlling for traditional stratification factors such as education and social class, several life course stages such as childhood, single parenthood, living alone or with a partner are aggregated and analysed in multivariate settings. The methods employed consist of factor analysis, which constructs deprivation in terms of clustered items, while the ordinary least squares regressions with continuous and binary dependent variables are used to test factors affecting poverty and social exclusion in the considered countries. The first sections of the paper review contemporary discourse on social class and life course dimensions of deprivation in welfare democracies, followed by the description of its relevancy in non-EU former socialist economies. The empirical part first operationalises material deprivation as a dependent variable, then describes the functional form of regressions and reviews dependent and independent variables employed in the analysis. The analysis of the results is followed by the conclusions derived from the paper.

Social class and poverty in welfare democracies

The notion of social class is one of the most important sociological variables that has been conceptualised in various terms such as ownership of the means of production, control of various assets within bureaucratic organisations, hierarchically arranged occupational prestige scores, or in the form of generalised social standing in society at large (Marshall *et al*. 1997). This paper limits itself to understanding social class as a cluster of occupational groupings whose members appear to be comparable in terms of their "sources and levels of income, their degree of economic security and chances of economic advancements; and... in their location within the system of authority and control governing the process of production in which they are engaged" (Goldthorpe *et al*. 1980: 39). In this sense, the class analysis of poverty and deprivation primarily involves the investigation of the interconnections between positions defined by employment relations and their outcomes for life chances (Layte & Whelan 2002). For decades, scholars have shown that social class affects economic performance. The earlier research referred mainly to Anglo-Saxon countries and revealed substantial income differences between social classes (George & Howards 1991, Savage 2000, Townsend 1979). The availability of international survey data since the 1990s allowed for cross-country comparative research on social class and poverty. Generally, the relationship between the position within the social class schema and the poverty and deprivation measures is characterised by a higher risk of poverty among those in lower technical and routine occupations and a much lower risk among large employers and higher professional/managerial/administrative employees (European Commission 2002, Watson *et al*. 2006). Additionally, by moving from static poverty to dynamic and life-style deprivation, the class pattern becomes more important in welfare outcomes (Vandecasteele, 2007).

However, the links between social class and poverty are not completely undisputed. At the end of the 1980s, some scholars began to claim that traditional factors of social stratification were losing their relevance (e.g. Beck 1992, Pakulski & Waters 1996). New perspectives on poverty determinants,

such as gender, education and social class, began to challenge traditional explanations of stratification. One of the most influential ideas is the life-chance individualisation hypothesis, which disregards the notion that welfare outcomes are predetermined and assumes that poverty becomes more a transient phenomenon associated with particular events and stages of the life course (Andreß & Schulte 1998). Life course perspectives, originally developed in the 1970s in response to criticisms of the traditional family-cycle approach (Dewilde 2003), particularly emphasise the distinction between 'new' and 'old' social risks, where the former tend to involve mainly horizontal redistribution across life course from working age groups to children and older people, while the latter most likely tends to affect specific sub-groups at particular life stages (Taylor-Gooby 2008). This hypothesis is related to the demise of the male breadwinner employment model and the growing insecurity in the labour market as a result of intensified global competition. The new risks are associated more with individuals who have a weak starting position in terms of age, experience, family relations and responsibilities, which also define their life course positioning. Respectively, transition from one life phase to another entails a substantial change in the level of social risk and might require public intervention (Whelan & Maître 2008b). The arguments against social class are also heavily based on the notion that, in line with economic and fiscal crisis, the period since 1970 has been marked by the rise in divorce and single parenthood that undermined the role of the family as an agent of social integration and socialisation, and individuals were forced to construct their own fortunes (Layte & Whelan 2002).

The empirical evidence presented by the opponents and proponents of 'the death of social class' argument has been mixed for separate countries and cross-nationally. Some scholars track the longitudinal data on poverty and evaluate the changing patterns of inequalities in the risk of poverty between different social classes. For the UK, Savage (2000) shows that from 1975 to 1998 the top two social classes experienced relative improvement in their wellbeing. However, the bottom two social classes have experienced relative deterioration in their income level. Using income poverty and an aggregated definition of social class, Layte & Whelan (2002) examine whether the difference in the risk of income poverty among different social classes narrowed from 1989 to 1995. Apart from Germany, the Netherlands and Luxembourg, all considered countries have seen either an increase or stability in the risk of the disadvantaged manual working-class compared to the non-manual group. Probably the most convincing evidence against social class came from Leisering & Leibfried (1999) who, based on analysis of the administrative data on social assistance in Germany, argue against the importance of traditional factors in explaining poverty and exclusion and insist that it is an experience or a stage in the life-course, which is not necessarily associated with a marginal position in society but also reaches well into the higher social classes. The third stream of studies emphasises the interaction of social class and life course perspectives. In her cross-country analysis, Vandecasteele (2007) revealed that the poverty entry chance is related to both life course events, such as partnership dissolution and leaving the parental home, as well as to traditional social stratification determinants. Whelan & Maître (2008b) also conclude that life cycle effects are not simply a by-product of social class differences, although the existence of such effects does not allow dismissing the impact of social class in life course outcomes either.

Deprivation, social class and life course in non-EU former socialist economies

The short literature review on deprivation and its social class and life course dimensions presented above only concentrates on developed nations because through the ISI database and Google Scholar we could not locate relevant studies beyond the former socialist countries that are now EU member states. Nevertheless, there is substantial research on poverty determinants in the states of the region, based mostly on survey data from the national surveys. These studies routinely provide poverty profiles for individual countries that identify the effect and significance of the standard explanations

of poverty such as gender, age, size of the household, educational attainment, health conditions, employment status and, infrequently, some idiosyncratic factors for the analysed societies. In some poverty research, occupational and family cycle dimensions are presented and discussed, but rarely beyond the analysis of poverty among individuals with different forms of employment in specific age groups. In addition, studies are typically restricted for the separate countries. Nevertheless, the presented European social exclusion discourse prompts that social class and life course analysis in terms of deprivation might be a fruitful exercise in this region and can fill the existing research gap. There is no reason to assume that stratification between different sets of occupations is irrelevant for material deprivation outcomes in this region. Social class research has been elaborated for the Western capitalist labour markets, particularly the UK, but the patterns, power relations and hierarchies on the labour market that are behind social class analysis should be largely comparable. Even though socialist countries were considered among the most equal societies in the world, their occupational structures have been always stratified in formal as well as informal ways, in addition to the inequalities since the beginning of the 1990s (Dikhanov 1996). The studies that investigated social class, albeit in terms of social mobility, demonstrated the high importance of occupational structures. Titma *et al*. (2003) find varying levels of intergenerational mobility in different parts of the Soviet Union with the highest rates in Belarus, Russia and the Ukraine and, to a lesser extent, in Estonia and Latvia. Similarly, Gerber & Hout (2004) show that social origin affected intergenerational opportunities in Soviet Russia, although it was the transition to a market economy that especially tightened the link between social origins and destinations.

Furthermore, social class analysis could be more relevant taking into account that transition triggered substantial reshuffling by destructing large industrial sectors and creating new service spheres with the resultant intense mobility of the labour force across sectors and occupations (Mickiewicz 2005). Almost twenty years of transition was probably enough to establish new social class relations in terms of occupational structures. Similarly interesting could be the life course perspective on poverty and deprivation because the less successful transition countries, in line with the economic change, experienced tremendous social transformations. It is intuitive to argue that the older people, especially those with completed education, family responsibilities, and specialised non-transferable labour skills were affected more than the relatively young, unsettled and adaptable individuals. However, implemented economic and political reforms, particularly in a welfare state, often consider the interests of the most powerful social parties, such as pensioners, at the expense of the less powerful groups such as children and single parents whose welfare could be easily overlooked. In addition, the last twenty years of transition was accompanied by intensive social changes. Events such as cohabitation and children born out of wedlock, divorce and single-parent families that were uncommon in the communist era have become commonplace, with the resultant changes in risks of experiencing particular life phases (Titma 2001, United Nations 2010). An additional factor to justify this paper is that we do not know of any other micro-data except the UNDP/UNICEF survey that would allow cross-national analysis of social class, life course and deprivation for this particular region. Considering the above, the remaining sections of this paper explore the following research question: controlling for other main explanations of deprivation, how do social class and life phases determine social stratification in non-EU former socialist countries?

Material deprivation as dependent variable

This section describes the method used to construct the dependent variable of this study. The UNDP/ UNICEF (2010) survey, which contains not only a rich set of questions on living standards but also reflects the interviewers' direct observations on the living conditions of households in Moldova, FYR

Macedonia, Serbia, Ukraine and Tajikistan. The latter country was excluded from the analysis because its level of socioeconomic development is substantially lower than in other societies. We use the principal component factor analysis to select appropriate items for the dependent variable.

Items of material deprivation

Initially the survey allowed us to identify 34 welfare-related items and dimensions that could theoretically serve as indicators of deprivation. For the first group of items, the survey respondents were asked if the following items were involuntarily unavailable/unaffordable to the households: television, computer, Internet, cellular phone, satellite/cable TV, car, washing machine, freezer/refrigerator, landline telephone, radio receiver, gas oven, electric oven, generator, electric iron, outdoor metal stove, electric sewing/knitting machine, electric room heater, kerosene lamp, microwave oven, bed for each household member, living room furniture, and vacuum cleaner. For all items, a household is considered to be deprived if the reason for not having an item is due to a lack of resources. For the next set of items, absence and affordability were addressed with the following survey question: "There are some things that many people cannot afford. For each of the following items on the card, can I just check how often your household could afford it in the past 12 months?" The list included buying food for three meals a day; regularly paying the bills; keeping the home adequately warm; buying required new clothes and shoes; buying required medication; paying for regular dental checks for every child in the household; buying school materials/books for every child in the household; having friends or family for a drink or meal at least once a month; paying for a week's annual holiday away from home/abroad; travelling to family celebrations/for family events; and buying books, cinema or theatre tickets. The answer options for this set of questions consisted of never, seldom, sometimes and often. We chose the first two answers as the indicator of deprivation.

There are also household items that are arguably required by all households and, therefore, a survey question intended to identify deprivation in terms of availability of the following: running water, flushing indoor toilet, central heating or a local heating system, electricity supply, sewage system, and central gas supply. The last part of the deprivation dimension used in this study relates to problems with accommodations and the household environment. Unlike other data employed, this information stems from the interviewers' own observations of the households' positions in terms of their neighbourhood categorised as poor or a slum; the street of the household address with no pavement or asphalt; the type of property as barracks or a slum house; condition of the property as a slum – extremely poor with very cheap clothes and run-down furniture and equipment. In each case, a score of 1 was assigned to a household if deprivation is experienced and a score of 0 when it is not. After listing all variables, the simplest way to proceed to a multivariate analysis is to construct a summary index of all deprivation items. However, this approach may produce misleading conclusions regarding the levels and determinants of deprivation, because ignoring dimensionality in deprivation analysis can either over- or underestimate deprivation levels with the resultant biased regression coefficients (Whelan *et al*. 2001).

Principal component factor analysis

To identify the items that represent the same dimension of deprivation, this paper employs factor analysis. Factor analysis is a statistical technique that reduces the number of variables in an analysis by describing linear combinations of the variables that contain most of the information (STATA 2009). Generally, the number of factors is determined by the Kaiser criterion, where those components with eigenvalues of less than 1 are not used in the analysis (Lipsmeyer 2004). Initially all 34 items described in the previous section were put together in a principal component factor analysis, which revealed that eight factors had eigenvalues of more than 1. However, of these eight factors three had eigenvalues
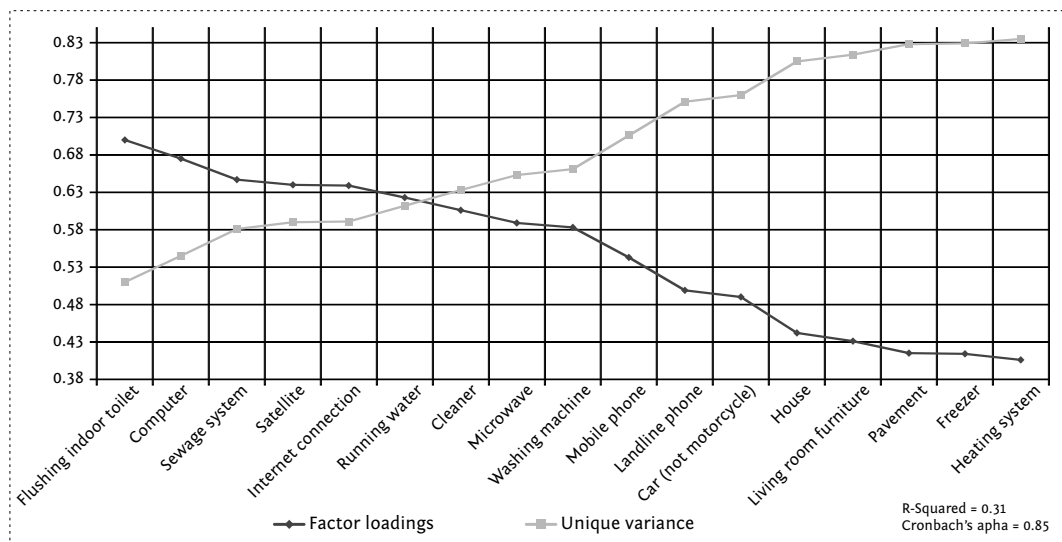
Figure 1: Factor loadings and unique variance of retained deprivation items (principal component factor analysis)
Source: author's calculations, UNDP/UNICEF (2010)

higher than 2. We reduced the number of factors to three. In line with the eigenvalues, factor analysis requires looking at the factor loadings, which show the importance of the specific item in the loading of a corresponding factor. The corresponding factor loadings extend from no relation between factor and variable with a value of ±0 to an almost perfect relationship between the two with a value of ±1. Although there is no formal rule on the cutting line of factor loadings, the rule of thumb with factor analysis is that factor loadings below ±0.4 show only weak correlations between factor and variable and are not used in the explanation. Therefore, we removed eight items from the analysis and reran the principal component factor analysis, which showed an even higher difference in the eigenvalues between the first factor with a value of 6.162 and the rest of the factors. This substantial difference prompted us to maintain only one common factor for further analysis of material deprivation. After excluding those variables that demonstrated factor loadings less than ±0.4, 17 deprivation items were maintained. The Gronbach's coefficient alpha level was revealed to be extremely high for the selected items with a value of 0.85.

Figure 1 shows the factor loadings and unique variance of all retained items. Here it can be seen that factor loadings, which demonstrate the items' correlations with the latent factor, are inversely related to their uniqueness of variance. In other words, the deprivation of possessing a computer is highly correlated with the deprivation of other items, although this reduces its unique variance. The remaining set of variables combine different dimensions of deprivation, such as the broadest levels of deprivation in terms of house and street conditions where households live, the utilities they use, the conventional technological items such as a freezer and washing machine, and more up-to-date communication and informational equipments such as cell phones and an Internet connection. Table 1 also presents the distribution of items within selected countries. The numbers in the rows show the percentage of respondents involuntarily deprived of the corresponding items. Among the retained items, the availability of a freezer and living room furniture is least problematic, since only in Moldova does their deprivation come close to 10 percent. However, the items that are most deprived in the countries are the availability of a central or local heating system, an automobile, and a sewage system. In Kazakhstan and Moldova, more than half of the households included in the survey revealed

Table 1: Prevalence of deprivation across the countries, percent of households

Item	Prevalence of deprivation in individual countries				
	Kazakhstan	Moldova	Macedonia	Serbia	Ukraine
Flushing indoor toilet	57.9	58.5	3.16	5.16	33.0
Computer	37.5	39.2	10.8	14.9	26.4
Sewage system	55.5	50.0	14.5	22.3	30.7
Satellite	30.7	26.9	6.75	19.0	23.0
Internet connection	41.9	41.1	13.5	19.7	32.2
Running water	42.7	38.0	1.15	3.56	19.7
Cleaner	16.0	21.2	1.00	2.60	6.97
Microwave	29.4	39.6	12.3	15.5	22.6
Washing machine	16.1	19.7	2.12	4.27	8.75
Mobile phone	13.9	14.6	2.12	3.18	6.63
Landline phone	20.5	7.48	7.09	4.93	11.7
Car (not motorcycle)	42.3	48.7	21.0	22.8	47.4
House	26.7	17.2	12.3	17.4	25.4
Living room furniture	6.29	11.9	0.56	3.81	5.11
Pavement	23.7	32.3	5.48	5.37	16.3
Freezer	3.63	8.49	1.52	0.71	1.23
Heating system	53.4	62.9	65.9	56.5	19.0

Source: author's calculations, UNDP/UNICEF (2010)

the unavailability of a functioning sewage system, while in Ukraine almost half did not have a car. The distribution of deprivation among the countries is unequal. Expectedly, Macedonia and Serbia generally show the lowest, while respondents in Kazakhstan and Moldova face the highest deprivation risks. To continue with our analysis, the next step includes generating a holistic deprivation index across all maintained items for separate units of observation. This allows us to examine how different dimensions of stratification affect material deprivation.

Material deprivation, the method of analysis and independent variables

One approach to conduct a multivariate analysis of deprivation is running an ordinary least squares regression with the dependent variable as a simple summative index of material deprivation for all units of observation. In this scenario, the material deprivation index goes form no deprivation with a minimum value of 0 to absolute deprivation with a maximum value of 17, which is the employed number of items identified in factor analysis. The simple form of regressions easily allows an observation of how much value the deprivation index is accorded depending on the changes in the set of independent variables. This approach has two shortcomings. First, the OLS with the continuous dependent variable treats every change in the number of deprivation items as equally important, but to analyse deprivation determinants it might be more interesting to reveal the covariates of being deprived of a certain number of material items that are considered a norm in society. In this case, the functional form of the material deprivation index is not appropriate. To address this problem, we created a binary dependent variable in which the value of 1 is assigned to individuals who experience a higher deprivation level than the households that find themselves below 70 percent of the median deprivation level with seven or more deprived items, while a value of 0 is assigned to observations that enjoy better deprivation records than a household at 70 percent of the median deprivation threshold.[1]

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[1] Of course, the selection of this threshold is always arbitrary, although 70 percent of a median household's welfare as a cutting line between better-off and worse-off individuals in society is frequently used in relative poverty research.

This binary dependent variable allows us to run binomial logistic models in their various forms, but for simplicity we used the least squares models, whose regression coefficients would show the effects of independent variables on experiencing relative material deprivation. This approach identifies only those factors that are conducive to deprivation at a certain minimum level.

An important point here is that the analysis of deprivation requires us to reshape the existing data. Since our interests are the traditional explanations of social exclusion as well as the life course perspective on material deprivation, it becomes necessary to conduct analyses at the level of individuals (e.g. Whelan & Maître, 2008a). In our data, individual observations are clustered in households and, therefore, in some key variables, including outcome variables on material deprivation, individuals are characterised in terms of combined household characteristics. For our dependent variable, which is the index of deprivation of material items, the usage of household characteristics should not be problematic, since the importance of the number of analysed items does not depend on the number of household members. For instance, the availability of an internet connection, furniture, or running water is equally important for one as well as for a greater number of household members. At the same time, households will be less prone to provide incorrect information on deprivation than on monetary factors, which are more difficult to verify. Figure 2 depicts the deprivation patterns in the analysed countries. Clearly, once the number of deprivations reaches 3 the number of deprived households sharply declines. Moldova and Kazakhstan are the only countries in which households are almost equally distributed across the various numbers of deprivation. Figure 3 looks at the relative deprivation rates at 70 percent of median deprivation across the countries. While there is a substantial gap between Macedonia, Serbia and Ukraine where relative deprivation rates reach only 4.1, 8.7 and 15.8 percent, respectively, the percentages of the deprivation level in Moldova and Kazakhstan are quite similar at 35.7 and 34.5, respectively. The next step is to identify independent variables that explain variation in the material deprivation of individuals.

Social class variables: As mentioned, there are many interpretations of social class across the social sciences, among which the Erikson-Goldthorpe scheme is considered to be the most influential conceptualisation of social class in European sociology (Marshall *et al.* 1997). The Erikson-Goldthorpe social class schema was originally developed in connection with social mobility studies, but has been used in various other contexts as well. The UNDP/UNICEF survey includes questions to reference persons on their main occupation in the current job. In most cases, the reference persons are the heads of the households, but the major problem is that we are able to define only the social class of the household reference person, which, in some cases, will not reflect the social class of other members of the household. Nevertheless, the paper employs a slightly modified version of the Erikson-Goldthorpe class schema in which the following seven categories are distinguished:

- *Farmers*: includes farmers and fishermen. This group comprises 3.81 percent of the households.
- *Petty bourgeoisie:* professionals (lawyers, medical practitioners, accountants, architects, etc.), shop owners, craftsmen, other self-employed persons, business proprietors, owners (full or part-ner) of a company. This group comprises 7.46 percent of the sample.
- *Higher level service-class:* employed professionals (employed doctors, lawyers, accountants, archi-tects), general management, director of top management (managing directors, director generals, other directors). 10.26 percent of the sample.
- *Lower level service-class:* middle management, other management (department head, junior man-ager, teacher, technician). 8.47 percent of the households.
- *Routine non-manual workers:* employed positions, working mainly at a desk; not at a desk but travelling (salesman, driver, etc.); in a service job (hospital, restaurant, police, fireman, etc.). 24.09 percent of the sample.
- *Skilled manual workers:* Supervisors, skilled manual workers, other (unskilled) manual workers, servants. 21.99 percent of the households.
- *Non-skilled manual workers:* All other unskilled manual workers and servants. 12.68 percent of the sample.
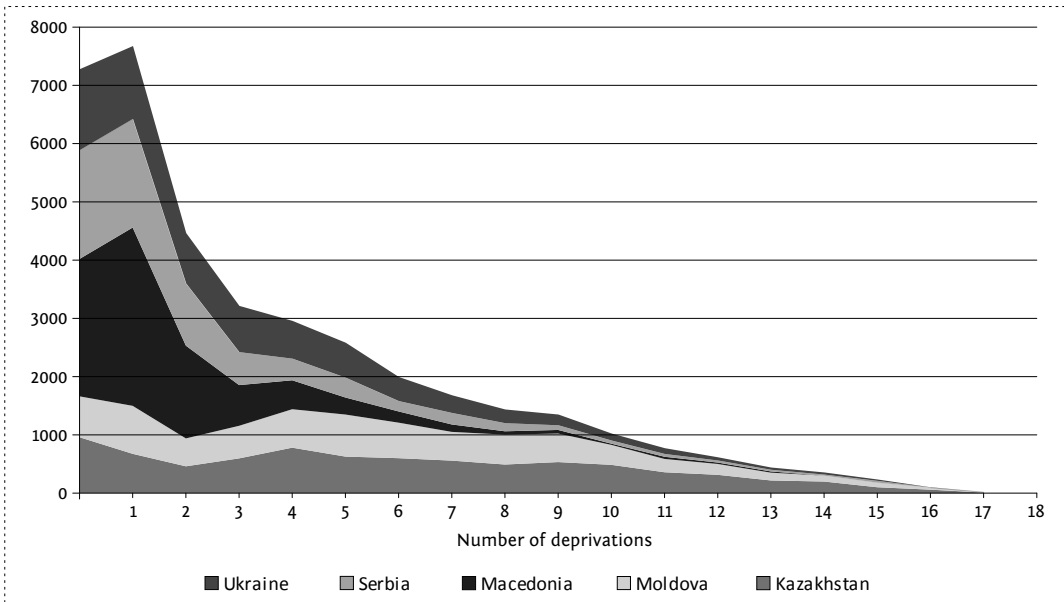
Figure 2: The number of deprivations and the frequencies across selected countries
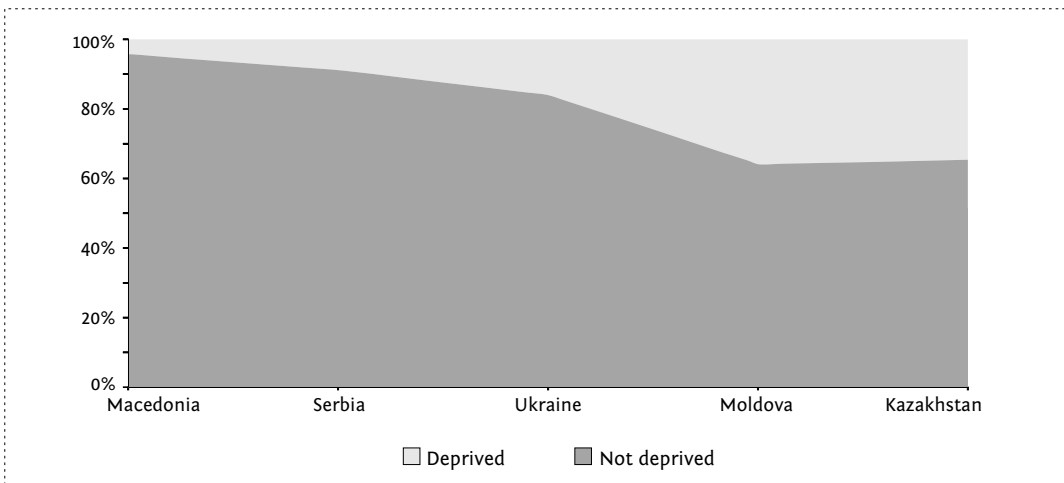Source: author's calculations, UNDP/UNICEF (2010)

Figure 3: The number of deprivations and the frequencies across selected countries with weighted deprivation
Source: author's calculations, UNDP/UNICEF (2010)

Life course variables: Life course variables are derived from information on the individual's age, household composition and their positions in the household. An example can help clarify this independent variable. For instance, if a household consists of a married couple and their child, then from the point of view of both partners, they live together with the partner and the child, while the child lives together with her parents. If a household also includes a relative, then she is considered to live with others (Cuyvers & Kalle 2002). It has to be mentioned that defining genuine life course

variables and tracking down individuals' fortunes would require a longitudinal quantitative or qualitative biographical life history approach, which is beyond the scope of what the available survey can offer. However, following Whelan & Maître's (2008) paper and given that our major objective in this study is to conduct a multivariate analysis involving the spatial, labour market, social class and life course distribution of material deprivation, all possible combinations of life course categories in pooled cross-sectional data are aggregated in a set of eight mutually exclusive dichotomous variables:

> *Children*
- Children younger than 5.
- Children younger than 5, but less than 18.
> *Working age individuals*
- Living with others (working age, 18-64).
- Living with partner (working age, 18-64).
- Single parent (working age, 18-64).
- Living with partner and children (working age, 18-64).
- Living alone (working age, 18-64).
> *Older people*
- Older people older than 65.

Control variables: To reveal the effect of social class and life course dimensions on deprivation, the analysis has to control for the variables assumed to significantly affect poverty and, therefore, material deprivation. We do not include income or expenditure into regressions as the controls because we are interested in other determinants of deprivation. However, even when the equalised expenditure per household member and/or quintile position of household in the respective country is included, the explanatory power of the models as well as the effects of the variables do not change significantly. Age and a dummy variable for being a pensioner is not included separately because these effects are captured in the life course variables. Gender has no effect on the regressions' specification phase and, therefore, has been removed completely.[2] Obviously, individuals are distinguished according to their countries of origin, and we expect that variation in material deprivation will depend largely on this dimension. The data allow collapsing all possible settlement types into villages, small towns, regional or economic centres and the capital cities of the respective countries. We control for the effect of education on deprivation by including in the models the dummy variables of a) no degree, primary or basic educational attainment; b) secondary, gymnasium or vocational education; and c) higher education of the household reference person.[3] The health condition of the household reference person is assembled into three dummy variables: a) fair or poor, b) good, and c) excellent health, which becomes a reference category in our models. We also controlled the effect of employment status for individuals with long-term illness or disability, those who are full-time homemakers/unpaid family workers or those who are in education.

Results

The results of the multivariate analysis are presented in such a way that for each set of explanatory variables, reference factors were selected if they were expected to demonstrate the most advantageous positions in terms of material deprivation. This approach underlines our primary interest in the determinants of material deprivation and simplifies the perception of the regression output. Table 2 presents the results derived from the regressions. As expected, the spatial dimension is the single

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2 Since deprivation is measured within households, the effect of gender disappears as the conditions are shared by both sexes.
3 Some authors do not use education variables in analysing social class as they consider them as intervening factors.

best explanation of deprivation patterns in all models, respectively explaining 20.4 and 32.7 percent of variation when only geographical effects are considered in Models 1 and 2. Large differences between countries derive from their varying levels of economic development. The results indicate that residing in Kazakhstan and Moldova increases the likelihood of experiencing 70 percent of median deprivation by 28.1 and by 22.6 percentage points in comparison to Serbia, while living in Ukraine increases this probability only by 7.9 percentage points. A slightly different picture is observed in Model 2, which shows the effect of independent variables on the index of material deprivation. The effect of Macedonia now becomes statistically significant, which indicates that those who are in the bottom of distribution face lower chances of being deprived than the whole sample. Within countries, the distribution of deprivation risks also demonstrates expected effects. The introduction of the settlement types into the models increases the explanatory power of the analysis almost twice (adjusted - R^2 reaching 22.1 and 33.9 percent for the models 1 and 2, respectively). Taking capital cities as the reference category in Model 1, residing in rural areas deprives individuals by 2.91 items when other covariates are controlled. This effect declines substantially when the individuals' residence is defined as a small town or a regional centre. Considering the educational attainment and the subjective health status of the household reference person improves the explanatory power of Models 1 and 2 by 2.3 and 4.5 percentage points. Having no degree or just a primary or basic education leads to a higher index of material deprivation (1.7 points) than having higher education, while secondary or vocational education increases the deprivation index to 0.88 points. When the household reference person assesses his/her general health as fair or poor, each member of the household, on average, experiences an .87 point higher deprivation index in comparison to the reference group with an excellent health assessment.

Although revealed tendencies are interesting in and of themselves, social class and life course variables are the primary interest of this paper. Controlling for spatial, human capital and employment characteristics, comparing occupational classes can reveal the important dimension of social stratification in society. The reference category for every employment and social class variable is petty bourgeoisie, which emerged as the most advantaged set of occupations in our regressions' specification analysis in Table 3. The regression output indicates that once individuals find themselves unemployed, the risk of material deprivation does not vary much among the different states of non-employment. Still, the most disadvantaged positions are occupied by those with terminal illness or by disabled individuals, who face a 14.6 percentage point higher risk of being under the 70 percent median deprivation threshold than those in the reference category. The difference in the deprivation risk between unemployed persons and homemakers is only marginal, although the latter holds a slightly disadvantaged position with a 2.0 percentage point higher likelihood of relative deprivation. Turning to social class, for both types of dependent variables – the continuous deprivation index and the 70 percent of median deprivation – employment among non-skilled manual workers, farmers and skilled manual occupations is associated with a significantly higher likelihood of material deprivation in comparison to those who belong to petty bourgeoisie. The non-skilled manual workers, on average, experience a 2.3 point higher deprivation index, while for the skilled manual class the risk of falling below the relative deprivation threshold is 16.3 percentage points higher than for the most privileged class. The lower and higher level service classes come close to each other in terms of deprivation risks in Models 1 and 2. The routine non-manual class, mainly including employed individuals working at a desk and in service jobs, demonstrate the second lowest deprivation risk with only a 4.1 percentage point higher chance of being under 70 percent of median deprivation and a 0.7 point higher value of the deprivation index. All employment and social class variables are highly significant at the p<.001 level. In addition, social class distinction turns out to be a more important explanation of deprivation than different employment statuses. Both the changes in F-statistics and adjusted R^2 after the introduction of social class block of variables are higher than the block of employment variables.

Table 2: OLS results of covariates of the continuous deprivation index and deprivation at 70% of median deprivation level

	Model 1 Deprivation bellow 70% of median		Model 2 Deprivation Index	
	Coefficients	t-statistics	Coefficients	t-statistics
Block 1: Controls				
Kazakhstan (Ref. Serbia)	.281***	43.88	3.06***	59.41
Moldova	.226***	34.34	2.58***	48.91
Ukraine	.079***	11.65	1.24***	22.76
FYR Macedonia	.000	-0.06	.11*	2.21
Village (Ref. capital city)	.232***	37.25	2.91***	58.08
Small town	.065***	9.27	.99***	17.52
Regional/economic centre	-.009	-1.41	.28***	5.16
No degree or basic education (Ref. higher edu)	.128***	19.03	1.66***	30.65
Secondary, gymnasium or vocational education	.067***	12.62	.88***	20.44
Fair or poor health (Ref. excellent health)	.084***	14.65	.87***	18.89
Good health	.030***	5.83	.37***	8.93
Block 2: Employment				
Long-term ill or disable (Ref. petty-bourgeoisie)	.146***	8.78	2.15***	16.10
Homemaker/unpaid family worker	.136***	12.26	1.66***	18.70
Unemployed	.116***	12.99	1.60***	22.24
In education	.035***	3.31	.59***	6.98
Block 3: Social class				
Non-skilled manual (Ref. petty-bourgeoisie)	.194***	17.65	2.33***	26.37
Farmers	.163***	10.09	1.97***	15.20
Skilled manual	.070***	7.00	1.09***	13.57
Lower service class	.065***	5.54	.84***	8.86
Higher level service-class	.057***	4.96	.80***	8.67
Routine non-manual	.041***	4.34	.70***	9.05
Block 3: Life course stages				
Children aged less than 5 (Ref. older people)	.077***	7.21	.64***	7.50
Children aged from 5 to 18	.085***	10.71	.62***	9.79
Living with others working age	.058***	7.98	.44***	7.47
Living with partner working age	.018	1.92	.00	-0.04
Lone parent	.107***	5.32	.94***	5.84
Living with partner with children	.045***	6.37	.20***	3.54
Living alone working age	.007	0.53	.01	0.05
Constant	-.269***	-20.86	-2.14***	-20.65
	Changes in F-Stat	Changes in adjusted R^2	Changes in F-Stat	Changes in adjusted R^2
Block 1	1064.13	0.2449	2042.29	0.3837
Block 2	41.43	0.0035	110.91	0.0075
Block 3	72.04	0.0089	145.85	0.0144
Block 4	24.58	0.0035	31.09	0.0036
Adjusted R^2	0.2602		0.4087	
Number of observations	36101		36101	

*significant at 5% (p<0.05); **significant at 1% (p<0.01); ***significant at 0.1% (p<0.001).

Source: author's calculations, UNDP/UNICEF (2010)

The last cluster of regression coefficients presents the associations between life course phases and material deprivation. If there is variance in material deprivation according to life course stages, it should be manifested in the analysis, which controls for traditional explanations of social stratification. Model 1, which looks at the effect of explanatory factors for being under 70 percent of the median deprivation threshold, reveals significant associations for five out of seven defined life course stages, which means that overall, controlling for spatial, human capital, employment and social class characteristics, transitioning from one life course stage to another does have a statistically significant impact on deprivation outcomes. Children in both age groups face one of the highest levels of deprivation and the associations are highly significant. While children aged <5 and 5-17 experience a 0.64 and 0.62 point higher value of the deprivation index, they also face a 7.7 and 8.5 percentage point higher chance than the elderly of finding themselves under 70 percent of the median deprivation line. Living with other working age individuals who are partners or children increases the likelihood of deprivation in terms of both relative and cumulative dependent variable. Living with a partner with children also appears to lead to a higher risk of poverty, shown in 0.14 points higher value of the deprivation index. This is in contrast with the experience of those who are working age and who live with a partner without children, as well as with individuals who live alone. Neither group demonstrates a statistically significant difference in deprivation risk from the reference category, probably indicating that having more members, particularly children, is detrimental for an entire household. The estimations also clearly show that when controlling for the most important dimensions of stratification in terms of settlement, human capital and employment, the most disadvantaged life phase in terms of material deprivation is single parenthood. Single parents face more than a 10 percentage point higher risk of being below the 70 percent median deprivation level than the elderly, while the deprivation index goes up .94 points. In addition to the highly significant associations of individual life course variables with deprivation, the overall input of the life course block for the models' explanatory power is almost identical to employment variables. Both contribute to 0.35 percent improvement in adjusted R^2, while changes in F-statistics are slightly lower for life course variables. Apparently, in line with traditional explanations of poverty, the occupational class remains a more important stratification dimension followed by life course variables.

Conclusion

This paper attempted to look at material deprivation as an alternative or complementary approach to the assessment of poverty and social exclusion by using it as a dependent variable in a multivariate analysis. The advantage of the material deprivation index in comparison to monetary measures is that the current incomes or spending only show how individuals are performing in one particular point in time, while the availability of material items such as running water, furniture, and an internet connection can better signal their potential to satisfy their material needs and avoid social exclusion. The survey data this paper relies on is extremely rich in terms of questions about living standards, which makes it challenging to properly select the most appropriate items for the deprivation index. The availability of material items selected through formal factor analysis overall coincides with the varying levels of economic development among countries, though on the individual level at least, current spending only marginally explains the availability of material items. In the second and the main part of the paper, in line with the recent European literature on welfare outcomes, the competing determinants of social exclusion were investigated. Presently, most of the available studies on social exclusion in transition countries emphasise the economic dimensions of hardship such as geographic location, human capital and employment status, while more sociologically relevant concepts such as social class and life phases are largely neglected. Even though this paper revealed that the largest share of variation in material deprivation stems from the spatial distribution of individuals among

and within countries as well as from their human capital and employment status, Serbia and FYR Macedonia being the most and Moldova and Kazakhstan the least affluent, the results also indicate the substantial importance of occupational social class and life course dimensions on deprivation. This is in line with the previous findings of a strong association between class and income security, short-term income stability and longer-term income prospects, rather than simply between social class and current earnings (Goldthorpe 2010).

It is clear that controlling for other factors, farmers, non-skilled and skilled manual workers face much higher risks of experiencing material deprivation, while individuals in several life course stages such as childhood and single parenthood are at particularly high risk of being materially deprived. If we consider the findings of this paper in terms of the 'individualisation hypothesis' emerging in the Western European context, which asserts that the importance of social class is diminishing while life biographies play a greater role, then our results can imply only that at the time of the survey the majority of life course stages had a statistically significant effect on the deprivation risk, but these associations did not suppress the effects stemming from social class variation in deprivation outcomes. The overall findings are in line with Western European findings on the complementarity of traditional social class and life course dimensions in explaining hardship. However, since data refer to one point in time we are not in a position to conclude whether the role of life course is gradually becoming more important. For broader research implications, longitudinal panel data or at least continuous attempts to conduct relevant surveys are required. The results also bring forward the notions of fairness, equal opportunities and social mobility. The life course approach refers to the growing importance of life phases as opposed to social class and the democratisation of poverty, which means that individuals gradually are more able to chose and transcend poverty based on their individual choices. This may also imply that societies that are marred by a restricted equality of opportunities also tend to be characterised by a greater role of the traditional dimensions of social stratification. The marginal importance of the life cycle may mean that, on average, people are more likely to remain on the same deprivation level as they move in and out of different phases of their lives. Interaction of the life course and other aspects of stratification could be a fruitful research area for future research.

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