

KATARZYNA KOPYCKA  
Martin Luther University in Halle  
Polish Academy of Sciences

## **The Effects of Social Origin and Formal Education on First Job in the Process of Transformation to Market Capitalism: A Cohort Analysis of Data from the Polish Panel Survey**

*Abstract:* This paper analyses trends in social mobility in Poland in the process of system transformation to market capitalism. Using data from the Polish Panel Survey POLPAN, it compares social origin effects on educational attainment and on occupational status of the first job as well as the impact of formal education on the latter. The analysis is performed over four cohorts that have entered the labor market: (1) between 1983 and 1989, (2) between 1990 and 1998, (3) between 1999 and 2006, and (4) between 2007 and 2013. With regard to the impact of social origin on attainment of tertiary education upon entry to the labor market and on the status of the first job the analyses show stable social origin effects across time. Furthermore, there is evidence of a rising polarization of the effect of educational level on occupational position in the first employment.

*Keywords:* social mobility; labor market entry; educational attainment; system transformation; post-socialist countries; cohort comparison.

### **Introduction**

Almost three decades after transition from state socialism to market capitalism of countries in Central and Eastern Europe there is no consistent picture of how this societal transformation has affected the permeability of their social structure. A few studies existing to date on social mobility in transition economies give mixed evidence on the dynamics of the level of social openness. Some find that openness is growing (Breen and Luijkx 2004; Mach 2004), whereas others find that it is falling (Bukodi and Goldthorpe 2010; Gerber and Hout 2004; Robert and Bukodi 2004; Saar 2009) or remains stable over time (Domański 2000; Domański, Mach and Przybysz 2008). A common methodological limitation of these studies is that they cover only a short post-transformation period and/ or use cross sectional data, which makes it hard to detect cohort differences. To provide new empirical evidence on the dynamics of social mobility in emerging market economies, in this article I use panel survey data from 1988 to 2013 to conduct a systematic cohort comparison of social mobility trends in Poland, one of the largest of all transition economies in Central and Eastern Europe that has undergone a very rapid transformation. The paper considers the effects of system change on social mobility over a longer time frame than has been done hitherto thus accounting for the process character of transformation to market capitalism. Next, the study applies a cohort rather than a period perspective in order to make changes in mobility more

easily discernible. Lastly, inheritance of social advantage is measured utilizing three different scales that measure socioeconomic status (reflecting a general position in the social structure) and social prestige and material status (reflecting different dimensions of social stratification).

There are two theoretical propositions concerning the dynamics of social openness in transition societies: industrialization theory and “market versus meritocracy” thesis. Specifically, if we consider system transformation in 1989 as a beginning of a catch-up modernization process then we should expect to find rising educational effects on allocation of rewards in terms of social prestige, socio-economic status and earnings and a falling importance of social origin as a counterpart of this development (Treiman 1970). According to the second theoretical perspective social origin effects should rise under market capitalism as market economy offers more channels of intergenerational transmission of social advantage than a bureaucratic order of command economy (Bukodi and Goldthorpe 2010). This argument pertains also to the process of rolling back of the public sector in the course of transformation. The transition to market capitalism may have, therefore, rather resulted in a growing social closure. On top, an alternative source of change in social mobility patterns in many transition states may be a rapid expansion of tertiary education, which should decrease educational inequality but possibly also reduce the educational effect on occupational attainment in consequence of a falling signaling power of educational titles due to de-stratification of the educational system.

On the example of Poland, one of the largest post-socialist societies, the present article shows that neither industrialization theory nor the “market versus meritocracy” thesis is able to account for the development of social fluidity there. Instead, it offers support for a claim of basic stability in fluidity levels irrespective of changing institutional settings (Erikson and Goldthorpe 1993; Featherman, Jones and Hauser 1975; for counterevidence see Slomczynski and Krauze 1987). Furthermore, it offers support for signaling theory as the value of educational credentials decreases. The analyses apply the o.l.s. regression technique thus allowing for the usage of different measures of social origin depicting different dimensions of social stratification and their intergenerational reproduction (see also Hout 2015). Following recent research practice (Gugushvili 2015; Yaish and Andersen 2012) the strength of the social origin effect is treated as a measure of social (im)mobility. In accordance with the status attainment research tradition I assess first the strength of the overall social origin effect, which comprises all possible sources of social advantage that may be transmitted intergenerationally (Bowles and Gintis 2002). In the second step I control for educational attainment as a major path of social advantage reproduction and thus estimate the influence of parental social position on individual occupational status net of education. I use the terms social origin effect, social mobility, social openness and social fluidity interchangeably.

To date, empirical evidence on intergenerational mobility for present day democratic Poland is mixed. Mach (2004) finds stable relative mobility rates for men and growing mobility for women between the 1970s and the early 90s. Yaish and Andersen (2012) report for Poland declining intergenerational ISEI associations over the period from 1992 to 1999, placing this country approximately at the mean of the studied sample of 20 developed countries. In turn, Domański, Mach and Przybysz (2008) find fluctuations but no

stable trend towards either greater or lesser fluidity in the first 15 years after transformation, whereas Domański and Przybysz (2012) argue for stability in the level of social fluidity in Poland after transformation. Analyzing social reproduction in terms of educational attainment Kwiek (2015) classifies Poland among the four least fluid European countries (together with Italy, Ireland and Portugal) with regard to intergenerational transmission of tertiary education status. Yet, Wasielewski (2015) finds growing chances of achieving tertiary education by rural youth in the course of educational expansion. In the same vein Herbst and Rok (2014) report a major drop in educational inequalities. Admittedly, the cited studies differ in their methodology and analytical approach. Substantial results should be, however, more or less stable irrespective of a method applied (Breen and Jonsson 2005). The present article contributes to the mobility literature by extending the observation window up to the early 2010s and by applying a cohort design, which is better suited to detect temporal variation. Furthermore, the analyses use different measures of social status thus allowing for a more comprehensive view on social advantage reproduction in the market transformation process.

### **Theoretical Considerations and Hypotheses**

According to liberal theory of industrialism (Bell 1973; Treiman 1970) growing complexity of work will lead to a tightening of the education-destination association as free market forces will push towards allocations to occupational positions on the basis of individual merit, most readily expressed in educational attainment. At the same time origin effects on education are expected to decrease due to better access to education. Although challenged by a number of empirical facts, leading Hout and DiPrete (2006) to conclude that “modernity theory is wrong,” the theory again finds support in the recent paper by Yaish and Andersen (2012). With respect to transformation from socialism to capitalism and subsequent growth of market economy industrialization theory predicts on the one hand a steady, and even increased in pace, growth in importance of education for occupational returns and on the other hand falling social origin effects. This line of reasoning, which has been adapted to the context of post socialist societies by Nee (1989) in his market transition theory, has informed studies on stratification in Central and Eastern Europe and led scholars to expect an increasing importance of educational attainment on class positions and decreasing effects of social background. Indeed, in line with this theoretical approach, Domański (1999, 2011) finds for Poland a growing income premium on tertiary education. Similar increasing effects of education on social position have been found for China (Bian and Logan 1996; Li 2003; Zhang, Zhao, Park and Song 2005) and a number of post socialist European countries (Fleisher, Sabirianova and Wang 2005; Hoffman, Bićanić and Vukoja 2012; Newell and Reilly 1999; Orazem and Vodopivec 1995) with Russia as an important exception (Gerber and Hout 1998). In the light of industrialization theory we should therefore expect rising education-destination associations and falling both direct and overall social origin effects.

Proponents of a so called “market versus meritocracy” thesis claim, in turn, that with the transition to market economy social origin effects should get stronger and the educa-

tion-destination association should weaken (Bukodi and Goldthorpe 2010). They reason that capitalist societies offer better chances for a passage of social advantage to the children generation because a democratic order is generally less well suited to constrain it by political means. For example, a free market allows for a transformation of monetary resources into goods and services facilitating educational success. Furthermore, the linkage between educational attainment and occupational position should be weaker under the capitalist regime, because personnel decisions are less bureaucratized and private employers are generally free to choose whom they want to hire. Admittedly, stratification research on socialist countries has reported higher levels of social fluidity there than in western democracies (Andorka 1971; Meyer, Tuma and Zagórski 1979). Moreover, Bukodi and Goldthorpe (2010) find for Hungary declining social mobility rates as market capitalism stabilizes there. In the same vein, Gugushvili (2015) has most recently established for a range of post-socialist European countries that the level of social openness is negatively correlated with economic liberalization. According to “market versus meritocracy” thesis a transition to market capitalism should therefore lead to a rise in overall and direct social origin effects, growing educational inequalities and a drop in education-destination association.

Furthermore, the effects of education on occupational status are believed to depend on the institutional shape of the educational sector (Gangl 2004; Müller and Gangl 2003; Müller and Shavit 1998). Educational systems with a strong vocational orientation are believed to provide a better fit between the level of qualification and occupational position (Andersen and Van De Werfhorst 2010; Büchtemann, Schupp and Soloff 1993), but at the same time they are said to display also a higher degree of educational inequality (Allmendinger 1989). Therefore, expansion of general secondary schooling offering access to tertiary education and a corresponding expansion of the latter is expected to result in diminishing social origin effects on educational attainment (Breen, Luijkx, Müller and Pollak 2009). In the course of transition to democracy many former socialist countries of Central and Eastern Europe have witnessed a shift towards general programs at the secondary educational level at the expense of vocationally oriented lower secondary educational paths and a rapid expansion of tertiary education (Hanushek, Woessmann and Zhang 2011; Kogan, Gebel and Noelke 2012). Specifically in Poland the percentage of students eligible for tertiary education grew substantially from 45 in 1990 to 75 in 2013 (GUS 2014, GUS 2000). The capacity of tertiary level education institutions expanded accordingly, owing much to the development of the private sector. As a result the share of tertiary education graduates increased considerably. In 2011 almost 40 per cent of 25–34 year-olds had a tertiary qualification (OECD 2013). A decreasing share of students attaining lower secondary vocational programs not leading to tertiary education and an expanding tertiary sector should lead to a reduction of educational inequalities for two reasons. As the lower secondary “dead-end” educational path loses popularity, for a growing proportion of students the decision concerning their educational goals is being postponed and should be therefore less dependent on their family background (Mare 1980). Second, a very rapid expansion of tertiary education may have reached a saturation point at which interests of middle classes are satisfied and class barriers in access to tertiary schooling decrease also for lower classes (Raftery and Hout 1993). At the same time, as high level educational credentials become common, they lose their signaling power resulting in employers looking for other proxies of future produc-

tivity. This may be an especially valid point in a situation when this expansion is carried out by new and predominantly private institutions with no reputation. On the grounds of signaling theory (for a recent review see Connelly, Certo, Ireland and Reutzel 2010; Feltovich, Harbaugh and To 2002; Spence 1973) a possible result of such educational expansion may therefore be an increase in direct social origin effects. In sum, I expect a reform of the educational sector towards a more general schooling to result in a falling social origin effect on education, a falling effect of education on destination and rising direct origin effects, whereas the overall social origin effect on destination will depend on the development of the origin effect on educational attainment.

Table 1

**A Summary of the Theoretical Propositions Concerning the Dynamic of Social Origin Effects on Education and Position in First Employment**

The dynamic of:	Industrialization theory	“Market versus Meritocracy” thesis	Expansion of tertiary education (Signaling theory)
Overall social origin effect on first job status	indeterminate	rising	indeterminate
Direct social origin effect on first job status	falling	rising	rising
Social origin effect on holding a tertiary degree upon labor market entry	falling	rising	falling
Effect of educational attainment on first job status	rising	falling	falling

## Data and Methods

### Data

Data comes from the Polish Panel Survey POLPAN<sup>1</sup>. POLPAN, spanning from 1988 to 2013, is repeated in five year intervals with new cohorts entering the panel in subsequent years, and is the longest-running panel survey in Central and Eastern Europe on the topics of occupational careers, educational attainment, and inequality (Tomescu-Dubrow and Slomczynski 2016). The main focus of the panel remains the employment history with detailed information on the employment form, working hours and work conditions. It is asked retrospectively for the five-year period between the waves, thus providing a complete record of economic activity of survey participants. The panel structure of the data allows me to set a common point of comparison across cohorts in employment histories, in this case the first “serious” occupation, and hence to reduce variance due to effects of biographical time. I apply weights to the data in order to account for an overrepresentation of young persons (20–25 years) in the 2008 wave of the panel.

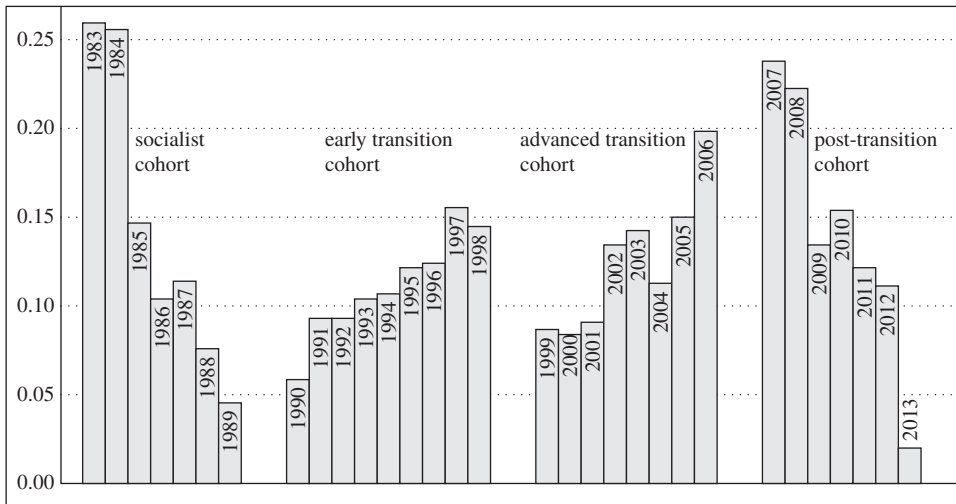
<sup>1</sup> <http://polpan.org/about-polpan/project-description>

**Analytical strategy**

I estimate a series of linear and logistic regression models regarding the relationship between social origin and educational and occupational outcomes applying interaction effects in order to assess changes over four consecutive labor market entry cohorts.

I distinguish four labor market entry cohorts: The socialist cohort has entered the labor market between the lifting of the martial law and the systemic transformation in 1989, i.e. spans the years 1983 till 1989. It represents the baseline for the developments in the three subsequent market transition cohorts. The early transition cohort consists of persons who have entered the labor market between the years 1990 and 1998. The Polish economy at that time has been undergoing fast structural changes. Many new occupational profiles have been emerging reflecting the changing labor demand in the emerging capitalist society. Consequentially, many vocational titles offered by educational institutions have turned obsolete. For this reason it is sometimes argued that in such transition periods allocations to occupational positions are more erratic and the value of educational credentials falls (Sackmann and Wiggins 1996). The advanced transition cohort has entered the labor market between 1999 and 2006, which has been the time of persistently high youth unemployment rates. Their fall by the end of this period is a result of an economic upturn following the accession of Poland to the European Union in 2004. The post-transition cohort consists of those entering the labor market between 2007 and 2013. This period has been characterized by better employment prospects for youth in spite of economic stagnation.

Figure 1  
**Relative Frequencies of Yearly Labor Market Entries by Cohort**



**Conceptualization of Dependent and Independent Variables**

The social origin variable corresponds to the status of a father’s occupation at respondent’s age of 14. The social destination measure reflects the occupational position of an individual

in his or her first “serious” job. I define this job as the first occupation that an individual holds for at least 3 months without interruption and performs with a weekly working time of no less than 20 hours. I decide to measure social destination at entry to the labor market in contrast to a measurement at “maturity” because I believe that the effect of social origin and educational attainment can be most accurately assessed at the point in the work career, in which individual work experience on the one hand, and such externalities as variable opportunity structures for promotion generated by economic dynamic on the other, do not blur the associations (Bills 2003). Furthermore, I omit difficulties associated with influences of other life course domains on work career, which may be especially glaring for young women (Aassve, Billari and Piccarreta 2007). Last but not least, in this way I consider younger birth cohorts, which allows me to observe the effects of changes in the educational system.

I assess the level of social status reproduction utilizing three different scales, while the scales for social origin and social destination variables are consistent within models. Following the research practice I make use of the socioeconomic status scale, which is the most widespread approach in social mobility research applying linear regression modeling (Gugushvili 2015; Sieben and de Graaf 2001; Yaish and Andersen 2012). Because information on father’s occupation for the earlier POLPAN waves has not been coded in ISCO, though, instead of the ISEI scale I use the Polish Socioeconomic Status Scale (Domański, Sawiński, Słomczyński and Słomczyńska 2009). The use of a SES scale, which combines mean educational attainment and income for occupational categories, is not straightforward if one of the main explanatory variables is educational attainment, however. In order to avoid this methodological ambiguity I apply also models utilizing the Polish Occupational Prestige Scale and the Polish Material Status Scale (Domański, Sawiński, Słomczyński and Słomczyńska 2009). Although they focus only on one dimension of social stratification, they are free from collinearity issues and together they offer a more comprehensive picture of social stratification. Originally developed along with the Polish SES scale in 1979 the Occupational Prestige and the Material Status Scale have been updated in 2009 in order to incorporate new occupational profiles that have emerged after system change. In spite of these amendments, both scales correlate highly with their earlier versions so that applying them to the socialist cohort is warranted.

Educational attainment is conceptualized as a categorical variable with six response options: 1) primary/ lower secondary general,<sup>2</sup> 2) basic vocational, 3) secondary general, 4) secondary vocational, 5) post-secondary vocational and 6) tertiary.<sup>3</sup> Educational attainment is recorded in every wave of the panel. However, in wave 1998 there is an extra question concerning being presently in education, which, if answered positively excludes from answering a question about present educational level. For a part of these respondents educational level has been recorded in the consecutive wave so that the missing values on education could be substituted with valid information. In the regression models I control for it with a dummy variable. Educational status is recorded only at the moment of survey and there is no record of educational trajectories between the waves. As valid is taken the

<sup>2</sup> Following the educational reform implemented in Poland in 1999 the 8-year primary school has been limited to 6 years and a new 3-year lower secondary school has been established as an intermediate level between the primary and secondary track.

<sup>3</sup> “Not accomplished tertiary education” has been recoded as secondary general.

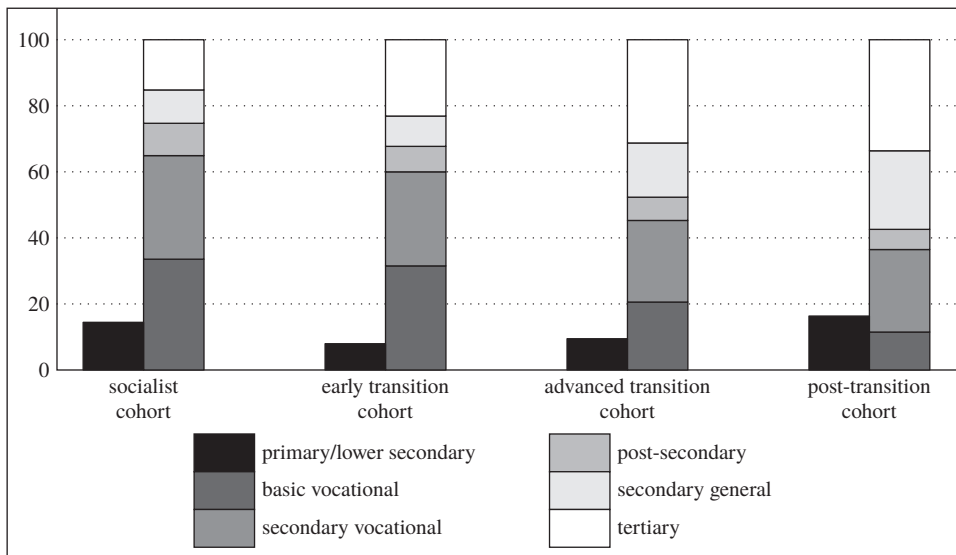
educational level that is reported in the survey wave directly after the year of entry on the labor market.

Regression models control for cohort specific gender effects and, where applicable, also for age at labor market entry (linear and quadratic term), substitution of educational attainment information and cohort specific effects of education.

**Results I: Educational Attainment, Social Status of the First Occupation and Social Background Distribution in Comparison across Cohorts**

Figure 2 presents the distribution of educational attainment in cohort comparison. For each cohort the left bar reveals the percentage of those with primary, respectively lower secondary general education, whereas the right one shows relative percentages of educational titles in the group of those educated above the primary level. There is a clear upward trend in the educational level across cohorts. There is a substantial drop in the share of those with basic vocational certificate whereas the percentage of tertiary education graduates rises. Furthermore, if we put cumulative shares of those with vocational education (bars for basic, secondary and post-secondary vocational titles) against those with general schooling (bars for general secondary and tertiary education) the data reveals a shift in the structure of educational attainment away from vocational training towards general education. Whereas in the socialist cohort there is a strong domination of vocational training (almost 75 per cent), in the most contemporary post-transformation cohort its share drops to approximately 45 per cent.

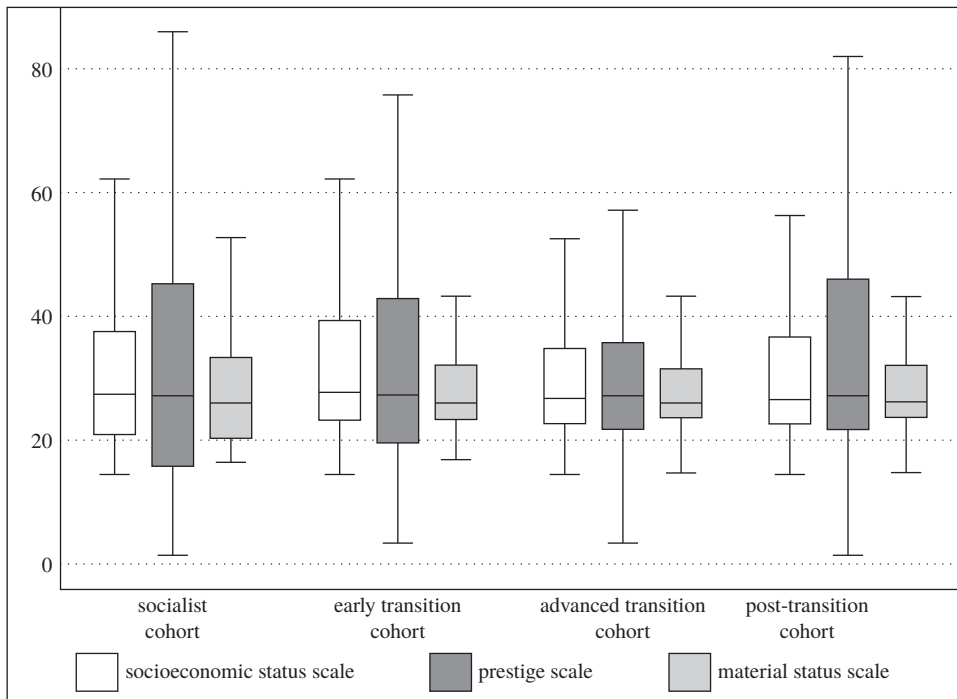
Figure 2  
Distribution of Educational Attainment Across Cohorts, in per cent





With regard to distributions of father’s occupational status across labor market entry cohorts (Figure 3) two facts stand out. First of all cohort differences can be discerned in the lower half of the distribution. It becomes more condensed in the younger cohorts reflecting structural changes in economy and a decreasing share of simple jobs. Secondly, and more interestingly, the upper ends of the distribution of parental occupational status are substantially lower in the advanced transition cohort than in the three others. This difference may be an effect of educational expansion. Apparently, individuals originating from higher status families have disproportionately often seized the new educational opportunities and prolonged their educational careers thus postponing their labor market entry. As a result, they are missing in the advanced transition cohort and reappear in the next thus turning the distribution back to “normal.”<sup>4</sup>

Figure 3  
**Distribution of Parental Occupational Status Across Cohorts**

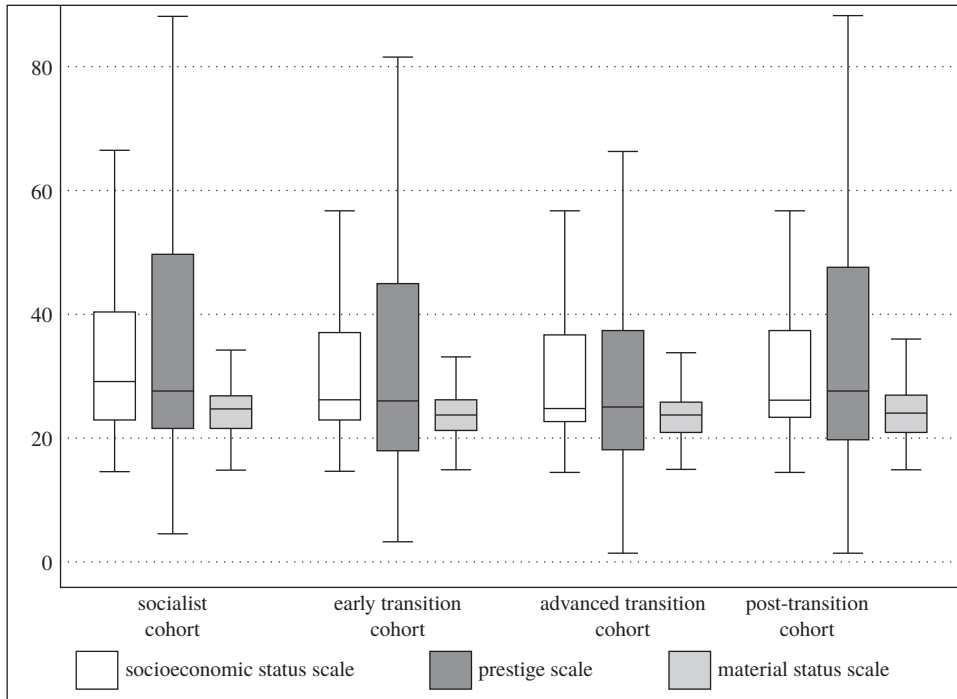


As for socioeconomic status of the first occupation across cohorts (Figure 4) we can see that young individuals in all three post-transformation cohorts occupy lower status positions at entry to the labor market than their counterparts under the socialist regime. The differences are most pronounced for the Socioeconomic Status Scale, but they are also discernible with regard to Occupational Prestige Scale. As far as the latter is concerned, the advanced transition cohort stands out. The difference to the neighboring co-

<sup>4</sup> I thank an anonymous reviewer for having pointed this out to me.

ports is most pronounced in the upper half of the distribution, which may suggest that under conditions of a slack labor market there are fewer allocations to higher status positions.

Figure 4  
**Distribution of Occupational Status of First Job Across Cohorts**



**Results II: Social Origin Effects on First Occupation and Educational Attainment and Educational Effects on First Occupation in the Transition Period from State Socialism to Market Capitalism in Poland**

**1. Social Origin Effects on Occupational Attainment in the First Job**

The point of departure for the discussion of social advantage reproduction in the period of transformation to market capitalism is the dynamic of overall and direct social origin effect on social status in the first job. According to industrialization theory the social origin effect should fall. The “market versus meritocracy” thesis and conclusions from signaling theory as applied to the situation of educational expansion make a contrasting prediction.

Table 2 displays the results of o.l.s. regression models estimating the main effect of social origin variables on occupational attainment and cohort differences in this effect. Model

Table 2

**Linear Effect on Social Status of the First Occupation**

	Socioeconomic status		Prestige		Material status	
	Overall b (se)	Direct b (se)	Overall b (se)	Direct b (se)	Overall b (se)	Direct b (se)
Social origin measure	0.33*** (0.05)	0.10** (0.04)	0.37*** (0.05)	0.11* (0.04)	0.07* (0.03)	0.04 (0.03)
Socialist cohort (ref.)						
Early transition cohort	-0.44 (2.62)	-1.90 (2.92)	-2.06 (2.98)	-2.35 (3.98)	-0.26 (2.07)	0.93 (2.42)
Advanced transition cohort	-0.82 (2.67)	-1.40 (2.57)	0.61 (2.79)	-0.81 (3.24)	-1.42 (1.41)	-0.96 (1.52)
Post-transition cohort	3.66 (2.49)	2.13 (2.32)	5.85* (2.80)	3.71 (3.01)	2.02 (1.54)	1.41 (1.64)
Interaction terms: social origin measure × cohort						
Socialist cohort (ref.)						
Early transition cohort	-0.06 (0.07)	0.04 (0.06)	0.01 (0.07)	0.12+ (0.07)	0.05 (0.06)	0.01 (0.05)
Advanced transition cohort	-0.04 (0.08)	0.04 (0.07)	-0.07 (0.08)	0.04 (0.07)	0.02 (0.04)	0.04 (0.04)
Post-transition cohort	-0.07 (0.07)	0.02 (0.06)	-0.11 (0.07)	0.02 (0.06)	0.01 (0.05)	0.01 (0.04)
Intercept	19.95*** (1.67)	19.22*** (1.67)	17.10*** (1.91)	14.61*** (2.27)	23.91*** (0.93)	21.94*** (1.13)
Adjusted R <sup>2</sup>	0.10	0.40	0.12	0.39	0.03	0.12

“Overall” and model “Direct” control for cohort specific gender effect; model “Direct” controls additionally for educational attainment.

It is clear that social origin exerts a substantial influence on occupational attainment in terms of prestige and socioeconomic status. With respect to temporal variance in the effect strength we see that only one interaction term of social origin variables with cohort is statistically significant and that is only at the 90 per cent level. It is therefore safe to say that generally social origin effects remain stable across the transformation period. The “outlier” is the direct effect of social prestige. It is significantly higher in the early transformation cohort than in all other cohorts. It is difficult, however, to draw any firm conclusions from this estimate with regard to social mobility dynamic as both alternative conceptualizations of social status do not follow this pattern.

Additionally, the table reveals a major discrepancy in the effect strength of social origin variables between different dimensions of social position. The intergenerational association in terms of material rewards is much lower than it is with regard to social prestige or socioeconomic status. In the light of the data the intergenerational transmission of social status in terms of work income is therefore almost nonexistent. Such picture contrasts with the regularity found in USA of generally higher intergenerational income than socioeconomic status elasticities.

## 2. Effects of Formal Education on Social Status in the First Occupation

Next, I turn to the education effects on destination measured here as social status of the first job. In view of industrialization theory we should expect rising educational returns in terms of social status of occupational position. In contrast, the “market versus meritocracy” argument predicts lower educational effects under the capitalist order than under the socialist rule. Following signaling theory educational effects should fall with rising access to tertiary education. According to this last argument we should expect a decline in educational effects to be most pronounced in the two youngest cohorts and to pertain especially to educational categories that have expanded: secondary general and tertiary education.

I have estimated o.l.s. regression models with social status of the first occupation measured on the three different scales as dependent variable. In order to achieve unbiased estimates of a cohort specific change in the effects of education on social destination models contain a triple interaction term of gender by cohort and by educational level along with controls for age at entry to the first job (together with a squared term) and for imputation of educational information. For the ease of interpretation I present estimated results from these models together with their goodness of fit statistic. Regression tables can be found in Appendix.

The left side of Figure 5 displays the changing effect of different levels of educational attainment across cohorts. It is clear from the graphs that as far as socioeconomic status and prestige of the first occupation are concerned higher educational credentials lose more on value from cohort to cohort than it is the case for lower level credentials. We can see that the effect of primary education does not change significantly across cohorts. The premium connected with a basic vocational title and a secondary vocational credential decreases only slightly. The estimated returns drop to the greatest extent for secondary general and post-secondary level graduates, whereas the fall for tertiary education credential is somewhat smaller. In cohort comparison the value of higher level educational credentials decreases after system change.

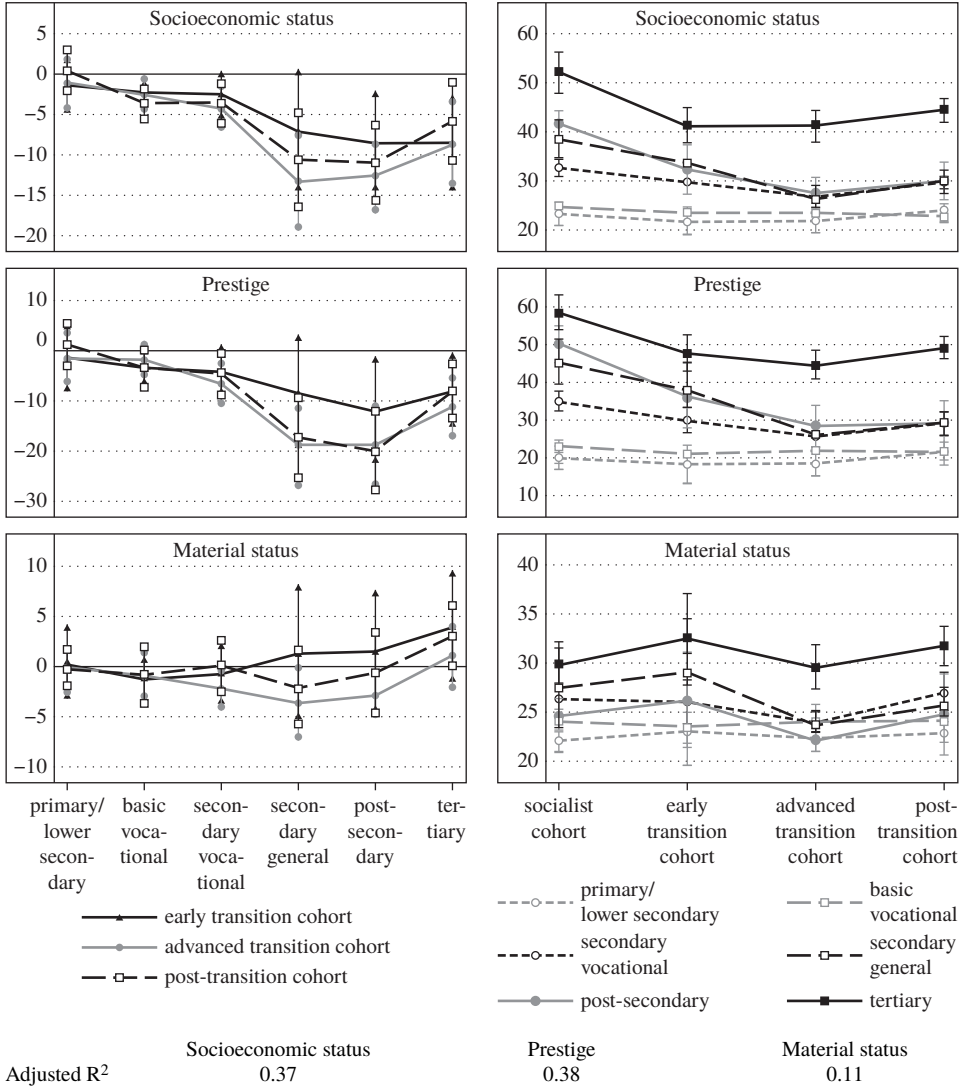
The estimates for the effect on the material status of the first occupation show a different picture. Neither of the educational levels changes the value of its estimated returns in a significant way. The estimated marginal effects, however, rise with the level of education, which is a reverse picture to what has been established for the two alternative scales. It seems, therefore, that whereas the effects of higher educational credentials in term of social prestige and socioeconomic status decrease significantly with transformation, there is tentative evidence that material returns to education rise.

The right hand side of Figure 5 shows estimated values of social status in the first occupation at each educational level. Whereas in the socialist cohort the differences in the effect on social status of the first occupation between consecutive educational levels are well pronounced and 95 per cent confidence intervals only slightly overlap, starting from the early transition cohort the coefficients for primary, basic vocational, secondary and post-secondary certificates are increasingly grouped together. The premium associated with secondary education over basic vocational educational titles almost disappears already in the advanced transition cohort. In the post-transition cohort it is no longer statistically significant at the 95 per cent level. Only the distance to tertiary education remains sharp and highly

Figure 5

Average marginal effects of cohort on social status of first occupation by educational level with 95% confidence intervals. Reference category is socialist cohort

Mean estimates of social status of first occupation by educational level and cohort with 95% confidence intervals



significant and displays an increasing tendency (with respect to secondary education). The estimates suggest a clear polarization trend of effects of educational credentials with time, which can be discerned for every measure of occupational attainment, although it is most prevalent for the Socioeconomic Status and Prestige Scales.

Noteworthy are, again, smaller effects and associations for the Material Status Scale. We see that the material status of the first occupation depends far less on educational attainment

than prestige and socioeconomic status. The indirect path of social advantage transmission is therefore very weak in terms of intergenerational reproduction of material rewards in Poland.

### **3. Social Origin Effects on Attaining Tertiary Education Upon Entry on the Labor Market**

With a rising dominance of tertiary education credentials over all other educational categories and with a rising distance between tertiary level education and the rest it is clear that as far as educational attainment remains a channel of social advancement it is only through tertiary education. Of importance for social mobility is therefore the degree of social inequality in completing this education level. Following a vast and rapid expansion of the tertiary educational sector in Poland it can be expected that the social origin effect on attaining a tertiary degree will decrease across cohorts. Table 3 presents model specifications for holding a tertiary degree in the moment of labor market entry with respect to gender, cohort and social origin measures.

First and foremost the models reveal that independent of measure social origin exerts an effect of a very similar strength on the log odds of being a tertiary graduate. Furthermore, it is evident from Model 1 in each panel that the mean chance of entering the first occupation bearing a tertiary degree rises across cohorts. The chances of tertiary education are also gendered, favoring women. At the same time the social origin effect on graduation from tertiary level education remains stable across cohorts. In fact, only the effect of social prestige decreases significantly by the most contemporary cohort, but it is not robust for the alternative model specification (see Model 2). Model 2 introduces a control for cohort specific gender effects which significantly changes the estimates. The main effect for female turns insignificant and negative suggesting that the relative advantage of women is present only in the three market capitalism cohorts. Furthermore, the chance of reaching a tertiary level degree upon entering the first occupation increases across cohorts only for women. Men, in contrast, display significantly higher chances of holding a tertiary degree only in the advanced transition cohort. Cohort specific social origin effects are insignificant across the board. The decrease in the effect of social prestige of a father's occupation in the post-transition cohort gets smaller and turns insignificant suggesting compositional differences between genders, but no substantially lower social origin effects.

## **Discussion**

The results of a comparison study of four consecutive labor market entry cohorts in Poland spanning the period from 1983 to 2013 concerning temporal trends in the effect of social origin on educational and occupational attainment as well as in the effect of formal education on the latter presented in this article are somewhat perplexing. Social origin effects neither rise, as the market versus meritocracy thesis would suggest, nor do they decrease, as the industrialization theory would predict. There is also no effect on social fluidity of the vast expansion of tertiary education in Poland, the empirical fact that has been also found in Denmark (Breen 2004), which speaks against the thesis of a compositional effect of ter-

Table 3  
**Log Odds of Entering First Job as a Tertiary Level Graduate**

	Socioeconomic status		Prestige		Material status	
	Model 1 B (se)	Model 2 B (se)	Model 1 B (se)	Model 2 B (se)	Model 1 B (se)	Model 2 B (se)
Social origin measure	0.04*** (0.01)	0.04*** (0.01)	0.04*** (0.01)	0.04*** (0.01)	0.03*** (0.01)	0.03*** (0.01)
Socialist cohort (ref.)						
Early transition cohort	0.62 (0.53)	-0.03 (0.60)	0.78 (0.48)	0.09 (0.57)	0.37 (0.45)	-0.33 (0.55)
Advanced transition cohort	1.41** (0.50)	0.85 (0.54)	1.39** (0.45)	0.86+ (0.50)	1.43*** (0.43)	0.90+ (0.48)
Post-transition cohort	1.56*** (0.45)	0.53 (0.51)	1.64*** (0.41)	0.67 (0.49)	1.28** (0.40)	0.32 (0.47)
Interaction terms: social origin measure × cohort						
Socialist cohort (ref.)						
Early transition cohort	-0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.01 (0.01)
Advanced transition cohort	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Post-transition cohort	-0.01 (0.01)	-0.01 (0.01)	-0.02+ (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.01)
Female	0.75*** (0.14)	-0.15 (0.32)	0.77*** (0.14)	-0.10 (0.32)	0.73*** (0.14)	-0.16 (0.31)
Interaction terms: female × cohort						
Socialist cohort (ref.)						
Early transition cohort		0.90* (0.46)		0.92* (0.46)		0.98* (0.46)
Advanced transition cohort		0.73+ (0.41)		0.67 (0.42)		0.70+ (0.41)
Post-transition cohort		1.39*** (0.39)		1.31*** (0.39)		1.35*** (0.38)
Intercept	-3.91*** (0.40)	-3.26*** (0.41)	-3.84*** (0.37)	-3.20*** (0.40)	-3.31*** (0.35)	-2.68*** (0.37)
McFadden's pseudo R <sup>2</sup>	0.10	0.10	0.10	0.11	0.07	0.08

tiary education on social openness (Breen and Jonsson 2007). Hence, no of the developed theoretical arguments is in congruence with the data. Instead, the data supports the residual theoretical position of stable social mobility levels irrespective of institutional variability.

The only robust inter-cohort change concerns the composition of returns to education. In consequence of the dismantling of the vocational track and of a rapid growth in secondary general and tertiary schooling the structure of educational returns evolves into a bi-polar pattern. Differences between educational levels below tertiary education decrease and turn insignificant, whereas the distance of tertiary level graduates to the rest in terms of occupational status becomes larger. Such a temporal pattern challenges further the industrialization theory, whereas it is in line with the market versus meritocracy thesis and with signaling

theory. As far as a similar declining importance of educational path as a mechanism of social reproduction has been found in other developed states, which have not undergone transformation to market capitalism (Breen 2004; Goldthorpe 2014) and in which this decline can be attributed to a shift in the composition of educational attainment along the lines of the signaling theory (Bukodi and Goldthorpe 2016; Bol 2015) it would be safe to assume a similar mechanism in Poland.

Last but not least, the presented analysis of the status attainment process and the role of social origin in it accounts for a multidimensional character of social stratification by applying three different measures of occupational status. The socioeconomic status of the occupational position, which is a standard conceptualization of occupational attainment may be regarded as the most general measure of social standing. At the same time this construct combines inputs and returns of the status attainment process, which is problematic from the methodological viewpoint, especially if one of the independent variables in the models is individual educational level. Therefore the analysis of intergenerational transmission of social advantage in terms of socioeconomic status has been supplemented in this article by two other measures of occupational position, each of them reflecting a specific type of societal rewards: social prestige and material gratification. Whereas the analyses point at a far reaching similarity in the effect strength as well as in the share of explained variance between socioeconomic status and prestige measures, the values obtained for the Material Status Scale are much lower. According to the data material status is less intergenerationally correlated in Poland. The question arises as to why prestige and socioeconomic status are more easily intergenerationally transmitted there than material status is. It is a well established empirical fact that in USA the opposite is the case. Such a discrepancy might be due to a different role of the educational path for different dimensions of status reproduction in both states. The data for Poland indicate a very weak origin-education and education-destination association with respect to material status, which may account for lower overall origin destination associations. Furthermore, differences in associations and effect strength suggest that material rewards and those in terms of prestige are not highly correlated in Poland. This may partly be a result of a perverse structure of material rewards in the socialist period, which pertains especially for high prestige public service professionals (education, medicine, public administration).

### Acknowledgment

The author gratefully acknowledges comments on previous versions of the text by Kazimierz M. Słomczyński, Joshua J. Dubrov, and Reinhold Sackman.

This paper is based on the analysis of the data from the Polish Panel Survey POLPAN, 1988–2013 supported by the National Science Centre Poland, grant No. 2011/02/A/HS6/00238.

This work was supported by DAAD (PRIME Program: grant number 57339733).

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*Biographical Note:* Katarzyna Kopycka is a post-doctoral researcher at the Polish Academy of Sciences and at the Martin-Luther-University in Halle, Germany. Her research interests lie in the fields of social stratification, life course sociology and social mobility.

E-mail: katarzyna.kopycka@soziologie.uni-halle.de