

## **Intergenerational educational mobility in the transitional period in Croatia: 20 years later**

### **Abstract**

In the past two decades, Croatia has undergone profound changes; war and transition have resulted in an altered socio-political context, changes in the social structure and an unfavourable economic situation. The social diversification which has emerged has led to sharp social stratification, in which the middle social stratum has almost vanished and a new, narrow, elite stratum been created. This paper will analyse patterns of intergenerational mobility in two periods (1984 and 2004), showing that Croatian society has been characterised by a relatively low degree of intergenerational mobility, with a high degree of social reproduction in both the socialist and transitional period.

**Key words: Croatia, transition, social stratification, education, intergenerational mobility.**

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## 1. INTRODUCTION

Some of the consequences Croatian population has faced in past twenty years are related to unequal approach to education and unequal chances at the labour market, with prolonged situation of social instability. At the end of the first decade of the 21<sup>st</sup> century, with Croatia on the threshold of joining the European Union, the social sciences face the challenge of explaining important trends in recent times, along with attempts to foresee coming trends. The analysis of social stratification presents one of the essential components of such investigations, i.e. one of the bases for reaching conclusions on the social realities and changes to which we are witnesses. We are interested in one particular aspect of social and economic development – the effect of the level of parental education (maternal and paternal) on the educational attainments of sons and daughters. In using this model to compare intergenerational mobility<sup>1</sup>, we will apply the approach which Johnston, Ganzeboom and Treiman (2005: 3-4) called the *individual model*<sup>2</sup>. In other words, in analysing the influence of the mothers and fathers educational status on their children's attainments we will observe these influences separately.

The main goals of this research are:

1. to confirm the directions of change in the educational structures of socialist and transitional Croatia;
2. to compare the results of educational attainment between the socialist and transitional period.

Our theoretical framework, among others, will adhere to *modernisation* and *political theory*. They suggest that variations in regimes of social mobility between different countries and different periods are systematic and can be explained by economic and political developments in a given society. According to the *modernisation theory* (Treiman, 1970), economic development will lead to the development of a labour market where jobs demand an ever increasing level of skills on the part of the work force. Therefore, meritocracy and not the social origin should influence the social and economic position of the individual. Industrialisation leads to fiercer competition between employers, more efficient selection on the labour market, and thus to the weaker influence of social background. Technological innovations and the process of industrialisation make a society more open, which means that family origins exert only a limited influence on educational attainment and

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<sup>1</sup> Intergenerational mobility, as a measure of the educational status of the research respondents, along with the educational status of their parents (most frequently the status of fathers), may be defined as upward mobility in the case of a shift towards a higher social stratum than that of the respondent's parents, while downward mobility occurs with a shift towards a lower social stratum.

<sup>2</sup> Johnston, Ganzeboom and Treiman (2005:1-2) established five models of intergenerational transfer status transfer: *the conventional model*, *the joint model*, *the individual model*, *the dominance model* and *the sex-role model*. We apply *individual model*, observing maternal and paternal influence independently.

occupation. Instead, individual characteristics such as aspirations, efforts, and formal education determine who will actually make progress (Blau and Duncan, 1967). On the other hand, the *political theory* (Parkin, 1971) implies that political and cultural conditions in a society will change under technological advancement, which will lead to variations in social mobility. Since Croatia had gone through profound changes of its social, political and economic order, it will be interesting to see whether *political* and *modernisation theory* can be validated. Therefore, this paper will analyse patterns of intergenerational mobility in two periods (1984 and 2004), aiming at: 1) identifying direction of social stratification in socialist and transitional period and 2) comparing systems of social stratification between socialist and transition period.

## 2. METHODOLOGY

In our research, we started from three general hypotheses:

1. there is statistically significant influence of respondents' gender and the education attainment of their parents on the educational attainment of the respondents;
2. there is statistically significant self-recruitment among members of different educational statuses;
3. total mobility is higher in the transitional period than in the socialist period.

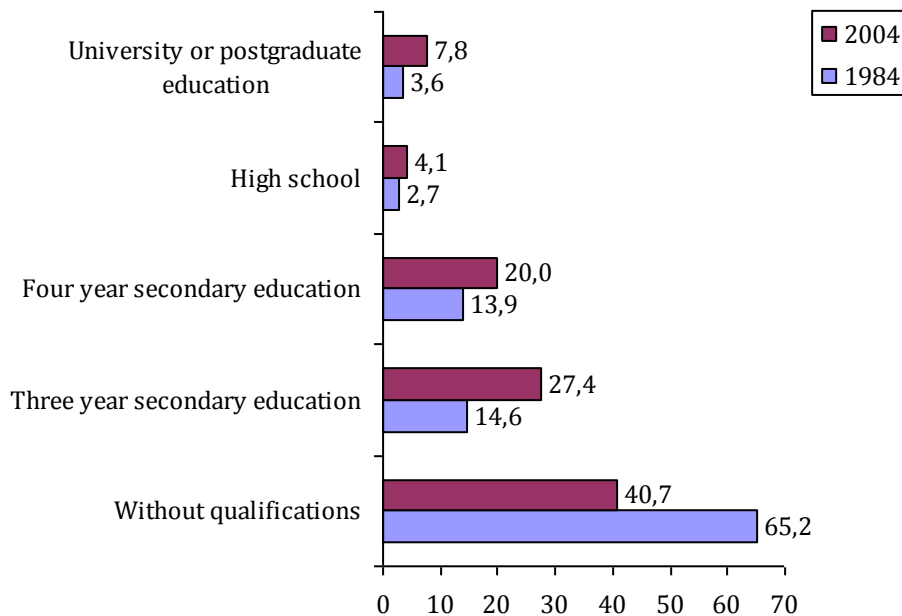
Data from two empirical research projects, investigating the problem of social stratification by quantitative data gathering were used in this analysis. Both questionnaires had equal core of the questions surveying social background of the respondents. These were the research projects conducted by the Institute for Social Research in Zagreb (IDIZ):

1. *Social development* (1984), conducted by several scientific institutions in Zagreb and other centres in the former Yugoslavia. The Croatian sample covered 4,407 respondents.
2. *Social and religious changes in Croatia* (2004), comprising 2,204 respondents.

The level of education of respondents was operationalised into five categories: no qualifications (primary school only, completed or not); three-year secondary school (vocational education); four-year secondary school (vocational education and general education – gymnasia); higher education (two or three year tertiary education), and university or postgraduate education. Since in the 1984 sample there were a very large number of parents who had not completed primary education and a relatively small number who had any form of tertiary education, we slightly changed classification of parental education. We separated primary education into complete and incomplete, while making higher education and university education a single category.

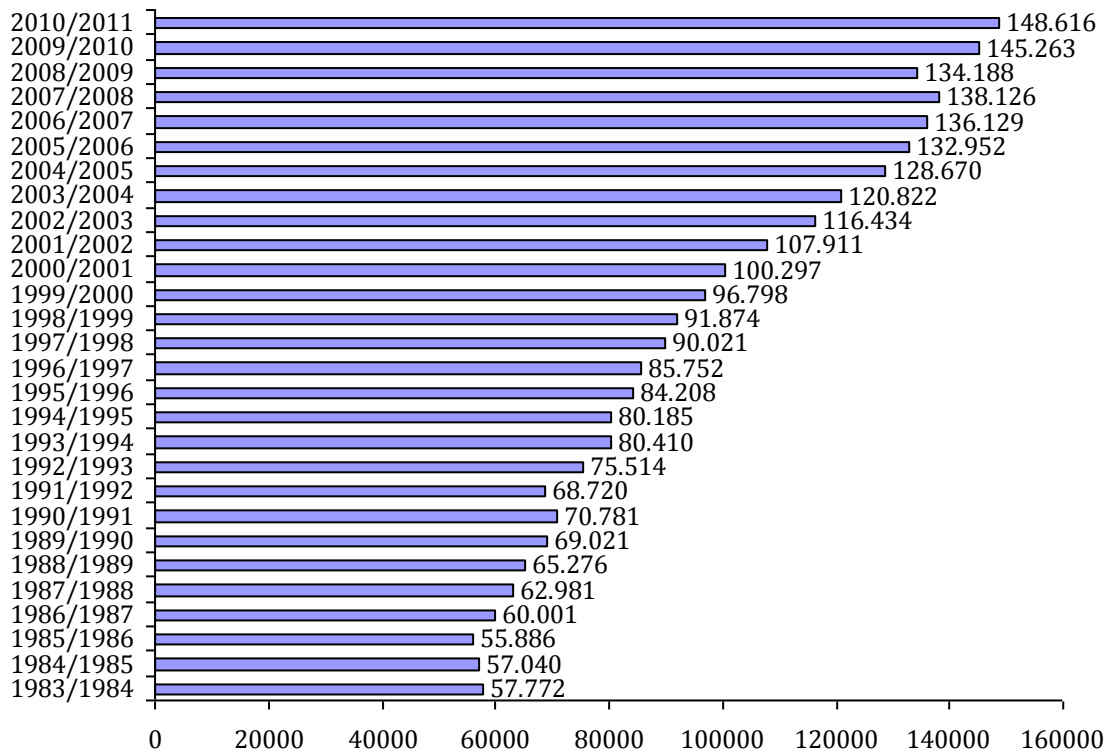
### 3. RESULTS: INTERGENERATIONAL EDUCATIONAL MOBILITY IN CROATIA IN LATE SOCIALIST AND TRANSITIONAL PERIOD

It can be assumed that in the early 1990s, due to changes in the economic and political systems, changes occurred in the channels of mobility, leading to changes in the patterns of social stratification. At the first level of our analysis we can look at the educational structure of respondents (Figure 1), based on IDIZ research from 1984 and 2004.



**Figure 1** Trends in educational attainment of the respondents in 1984 and 2004 (%)

The data presented suggest significant changes, where the significance to the fact that between the socialist and transitional period, the number of unqualified respondents fell drastically, from about two-thirds in the earlier study to about two fifths in 2004. A somewhat significant increase occurred in the category of academically qualified respondents and those who had completed high schools – an almost two-fold increase in the period under investigation. The number of respondents with the four year secondary education grew by two thirds, while the group that completed a three-year secondary education almost doubled. In accordance with the trend which prevailed from the mid 1990s onward, we can conclude that a sizeable increase in academic education is to be expected, particularly since this is the only category which has the capacity for increased growth, and also due to changes in the education system (primarily because of the increase in the number of educational institutions). This is supported by the increase in the number of students, which shows that the number of students almost tripled between 1984 and 2010 (Figure 2).



**Figure 2** Number of university and other tertiary level students at the beginning of the academic year (%)<sup>3</sup>

The impact of mother's and father's educational level on the respondents levels of education is shown in Table 1 for 1984 and 2004. We implemented one-way analysis of variance in order to show that differences in the educational attainments of respondents are influenced by the educational attainment of their parents. Obtained F-ratios and levels of statistical significance are also presented in the tables below.

Place here: **Table 1** Results of anova test on the effects of mother's and fathers level of education in 1984 and 2004

Looking at the results shown in Table 1 (1984), we were led to the clear conclusion that an increase of level of education of either parent leads to the increase in the educational attainment of respondents. In other words, it is clear that we were dealing with particular differences in the educational attainment of respondents, which were the result of different educational statuses of the family. These trends show that the influence of fathers' education is more distinct than the influence of the mothers' education. Comparisons of the difference in educational levels of respondents whose parents have lower or higher educational status show that the chances are

<sup>3</sup> Source: Croatian Bureau of Statistics

almost three and a half times greater that children will achieve higher results if they have higher or university educated fathers.

The least difference in educational attainment was noted among respondents whose fathers had completed either four-year secondary, or higher education. However, in the 1984 sample the influence of the level of maternal education showed an unexpected direction in a case of mothers who had completed four years of secondary education. These mothers had a more favourable influence on the educational attainment of their children than mothers with higher or university education. This is most probably a distortion due to the very small number of mothers with higher or university education in the 1984 sample (only 0.3%). If we examine or compare paternal and maternal influences in more detail, we can see that paternal higher or university education had a greater influence on children's improved educational attainment than maternal higher or university education.

The conclusions for 2004 were very similar: the children of highly educated parents attained on average a higher level of education than those whose parents had a lower level or three-year secondary education. The direction of difference was the same as in 1984, indicating that the educational attainment of children increases at the same rate as the educational attainment of parents. However, at the general level, the influence of the level of paternal education was weaker in 2004 than in 1984, while the influence of the level of maternal education was stronger. Again, the most distinct difference was noted between respondents whose parents had a lower level of education and those with university educated parents. The likelihood of attaining better education is two times higher for children of mothers with university educated than of mothers with lower levels of education. Also, this likelihood is two and a half times greater in case of paternal education. Followed by the F ratio, it suggests that in 1984 the difference between the influence of the mothers' and fathers' education on the educational attainment of children had been reduced, although paternal education still had a greater influence than maternal one. In contrast to 1984, the smallest difference noted in 2004 was in the influence of the educational level of both parents on the educational attainment of respondents whose mothers had three- or four-year secondary education, and whose fathers had four-year or higher education.

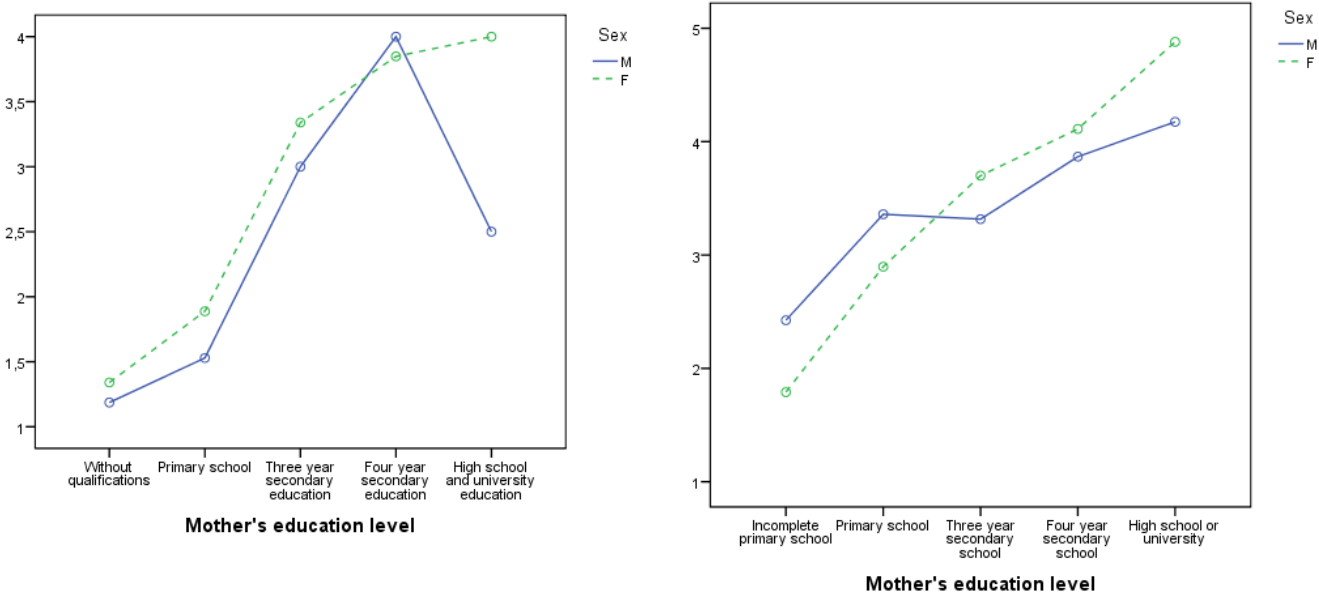
The following analysis will show the way in which the mothers' (Table 2 and Figure 3) and the fathers' (Table 3 and Figure 4) levels of education influenced the educational attainment of sons and daughters in the observed periods. From the results displayed, it can be seen that the influence of gender on the educational attainment of respondents was weaker in 2004 in terms of observing maternal levels of education, while the influence of paternal levels of education on the educational attainment of respondents was stronger in 2004. However, although the 1984 study showed no statistically significant interaction between the mothers' levels of education and the gender of

respondents, in 2004 this interaction was present (though with a relatively low F ratio). The interaction of the fathers' levels of education and the gender of respondents repeated the same pattern – in 1984 there was no statistically significant interaction, whereas in the later period it was present (though with an even lower value than that observed for the influence of maternal education).

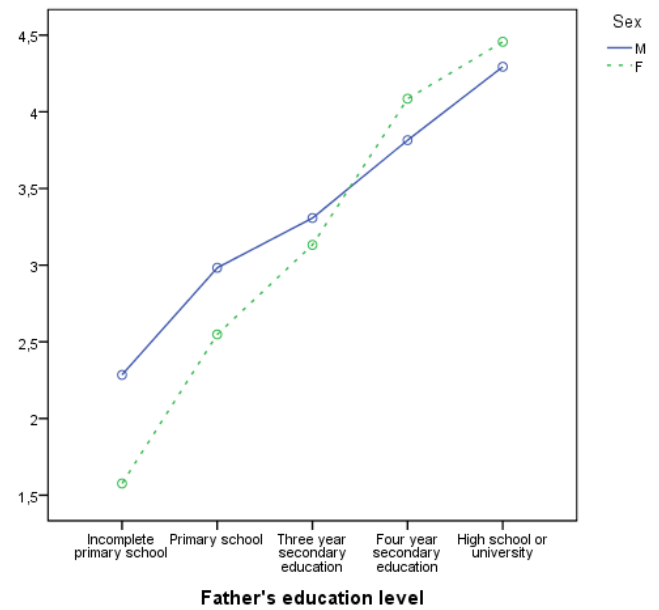
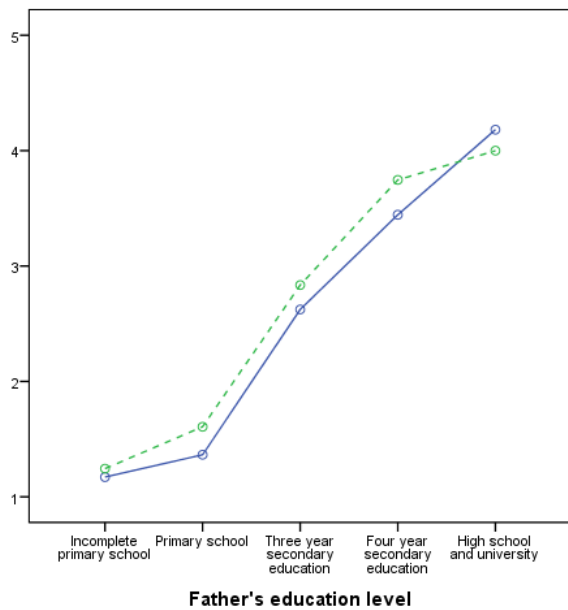
Place here: **Table 2** Results of anova test on the effects of respondent's sex and mother's level of education in 1984 and 2004

Place here: **Table 3** Results of anova test on the effects of respondent's sex and father's level of education in 1984 and 2004

The direction of the resulting interactional effects is clearly shown in Figures 3 and 4, concerning the influence of maternal education and the gender of respondents on their educational attainment, and in Figures 5 and 6, concerning the influence of paternal education and the gender of respondents on their educational attainment.



**Figure Results of anova test on the effects of respondent's sex and mother's level of education in 3) 1984 and 4) 2004**



**Figure** Results of anova test on the effects of respondent's sex and father's level of education in **5) 1984** and **6) 2004**

Starting with the interconnection of the level of the mothers' education and the respondents' gender on their education, we note that in 1984, the level of education had a significant influence on both genders, and it was more significant in the case of women than men. There is obvious almost linear growth as maternal levels of education increase. This growth is interrupted for male respondents in case of mother's higher education, which can again be explained by the small number of such mothers in the 1984 sample. The influence of the fathers' levels of education follows a similar logic. Again, the influence of paternal education is more significant regarding daughters than sons, but in this case, sons of highly educated fathers attain higher education to a greater degree than daughters.

The next period observed shows interesting trends, as the influence of maternal levels of education diversifies female respondents more significantly than the paternal influence. Concretely, daughters of vocationally educated mothers have a distinctly greater probability of attaining higher educational levels than male respondents, and a similar trend is present when observing the influence of fathers who have four-year secondary or higher education. The father's level of education interacts with the gender of the respondents in a way that differences in influence on sons and daughters are minimal. There is a somewhat better educational attainment of daughters whose fathers have four-year secondary education, while fathers with higher education have, in average, sons with just slightly better education attainment than daughters.



## 4. DISCUSSION: DIFFERENCES IN RESULTS OF INTERGENERATIONAL MOBILITY IN WESTERN EUROPEAN AND FORMER SOCIALIST COUNTRIES

### 4.1. Some insights on international variations in intergenerational mobility

Johnston, Ganzeboom and Treiman (2005: 1-2), following the framework set up by Korupp (2000) and Korupp, Ganzeboom and Van der Lippe (2002), have investigated the degree to which individual parental influence (maternal or paternal) dominates, and whether such influences relate specifically to the child's gender (*individual model*). They used data gathered between 1970 and 1999 from 29 countries and 151 studies. They established that a) maternal influence is stronger than paternal influence, if the mother is more highly educated than the father, b) that maternal influence is stronger in regard to daughters than to sons, and c) that it is necessary to include the variables of both parents' educations in order to explain the formation of most of their child's education. They also found that the effect of maternal education over a period of time not only decreased, but did so faster than paternal education. In applying their models, the authors concluded that the *individual model* best corresponds to the data provided by 21 of the 29 countries covered by the study (the exceptions were Finland, East Germany, Japan, Latvia, Malaysia, Portugal, Slovenia and Switzerland). Another research project that took into account the variable of maternal education was conducted in Ireland by Hayes and Miller (1991: 629-631), whose data showed that maternal influence was relevant to the education and vocations of both sons and daughters (although it influenced the status of daughters more than sons'). Corresponding results can be found in M. Kalmijn (1994) and S. E. Korupp *et al.* (2002).

Breen and Luijckx (2004) claim that the path from origins to destination status via education has an increasing effect on the equality, and thus the mobility of the inhabitants of European countries. According to their analysis, only two countries (the Netherlands and Sweden) displayed equalisation in educational opportunities and in results of intergenerational mobility in relation to origins. However, Breen and Jonsson (2005) found equalisation in other research studies concerning Germany (Henz and Maas, 1995; Jonsson *et al.* 1996; Müller and Haun, 1994), France (Vallet, 2004), Italy (Shavit and Westerbeek, 1998), Sweden (Jonsson and Erikson, 2000), the Netherlands (Sieben *et al.*, 2001), and possibly Norway (Lindbekk, 1998). Breen and Jonsson also list examples of Ireland (Breen and Whelan, 1993; Whelan and Layte, 2002) as countries and studies which confirm a constant connection between background and destination status, while Gerber and Hout (1995) found there was a mixed pattern in the Soviet Union, with statistically significant correlation between the social background and education.

During the socialist period, the countries of Eastern Europe attempted to reduce social inequalities by means of positive discrimination policies favouring working class children, especially in enrolling to universities (Ganzeboom and Nieuwbeerta, 1999; Robert and Bukodi, 2004). Support for such measures can be found at Western and Wright (1994) who noted that social fluidity remained fairly high in the former socialist countries of Hungary and Poland, and in the social democratic countries of Sweden and Norway. In addition, Ganzeboom and Nieuwbeerta (1999: 352) concluded that the strength of the connection between levels of parental education and years spent by children in education decreased by a third in Bulgaria between 1940 and 1985, while in Hungary and the former Czechoslovakia, the strength of this connection decreased by more than one half. Additionally, I. J. Sieben and P. M. de Graaf (2001), after analysing correlations between siblings in six countries, put forward the hypothesis that the increase in the number of socialist parliamentary representatives and the modernisation of these societies were related to the growth of equal opportunities. In Slovenia, S. Flere and M. Lavrič (2005) examined correlations between social inequalities (stratificational, relational and other) and education, including academic achievement. Their basic finding was the parallel between reducing inequalities and increasing the proportion of the population participating in education, while parental education was shown to be indicative in terms of children's educational attainments.

However, Mateju (1993), Szélényi and Aschffenburg (1993), Heyns and Bielecki (1993), Ganzeboom and Nieuwbeerta (1999) provide evidence of the failure of such egalitarian educational policies, both in Eastern and Western European countries, since the influence of social origins on educational attainment in most of the countries observed was not reduced over a period of time. This is supported by research by Titma *et al.* (2003) and Gerber and Hout (2004) in the former Soviet Union who discovered a decline in fluidity in post-Communist Russia. H. Domansky (1999 and 2005) also found no evidence of increased social openness in post-socialist countries. Instead, he concluded that patterns of social mobility follow their own logic, i.e. do not necessarily follow the logic of institutional transformation. Changes in mobility primarily result from transformation of the structure of occupations, i.e. the main force in changes to the structure of occupations in Western countries after the Second World War was economic progress, while in Eastern Europe it was mass spatial mobility accompanied by extensive industrialisation (Domansky, 1999: 464-467). He assumes that, in these countries, abandoning the socialist order led to an increase in inequality in terms of income, in which the economic resources of the family played a significant role in determining the destination status of individuals.

Flemming and Micklewright (1999) support this assumption, claiming that after the fall of socialist regimes there was an increase in educational inequality in the countries of Eastern Europe. However, a new study by Yaish and Andersen (2012:537) explains that connection between the SEI

and the destination status of individuals is weakest in former Communist countries, which implies the question of the potential role of the state as the regulator of economic opportunities. The current economic crisis brings back into focus the idea that the state can influence social mobility by taxation or social programmes that help individuals to shape their initiatives for gaining various educational degrees.

#### **4.2. Studies of intergenerational mobility in socialist and transitional period in Croatia**

A tradition of research on intergenerational mobility in socialist Croatia was quite well developed, but few studies have been conducted on social mobility in transitional Croatia. The research tradition in social stratification in the former Yugoslavia comprises results analysed by V. Psuljiz (1977, 1980), M. Lazić (1986, 1987), D. Sekulić (1984, 1987, 1991), V. Afrić (1987), A. Hodžić (1991) and V. Lay (1991). Since the early 1990s, analyses of social stratification have been found in the work of V. Katunarić (1996), B. Krištofić (1997), D. Sekulić, Ž. Šporer (2000), A. Hodžić (2000) and I. Tomić-Koludrović and A. Leburic (2002), D. Čengić (2005) and Z. Malenica (2007). The newest research on the Croatian social structure was lead by the research team of D. Sekulić at the Institute for Social Research in 2010<sup>4</sup>.

The socio-political system of the former Yugoslavia, including Croatia, was decentralised, more flexible than the Soviet model, and took into account some elements of market economy. Moreover, the right to universal education and the construction of the educational system in terms of both infrastructure and curricula formed the foundations on which a productive, successful system of production in socialist Croatia was built. As a result, better living conditions were created as early as the late 1960s, while the “soft border” policy allowed population migration and the flow of capital back to families remaining in Croatia. Lay (1991: 28) suggested that education was “an indicator of the quality of life, i.e. prosperity, for which we can note the relatively highest strength of correlation with the highest number of other indicators. Thus, the quality of education had a medium strength of correlation with the quality of working conditions, leisure and recreation, and housing, while there was a less significant correlation with the quality of health, and there was almost no correlation between the quality of diet and the quality of education.”

Sekulić (1980) and Puljiz (1977, 1980) provide an overview in their analyses of the main change during the socialist period – a change from agrarian to industrial society. Puljiz describes how agricultural households, as a result of younger generations migrating to urban centres, were transformed into either mixed households (agricultural and non-agricultural) or, increasingly, elderly

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<sup>4</sup> The results have not been published yet.

households (Puljiz, 1977, 1980). Sekulić claims that during this time industrialisation and development were the cause of the huge transfer of the population from manual to non-manual occupations, but, at the same time, mobility between these groups was reduced because "it became harder to move upwards (from manual to non-manual work) or downwards (from non-manual to manual work)", while the highly qualified manual workers had a slight, though positive stimulation to advance to non-manual occupations (Sekulić, 1984:85). Regulations in the former Yugoslavia from the mid 1950s to the late 1980s facilitated high employment among the population, leading some sectors to grow faster than others. Ž. Šporer (1990: 82-84), lists the main directions of changes in employment in the socialist period (1950-1970), when the number of those employed doubled in the secondary (from 11.8% to 23.6%) and tertiary (from 10.8% to 22.6%) sectors. The growth index was highest for experts and technicians (economists, engineers, teaching staff, lawyers, physicists, chemists and mathematicians) at 335-600%, the number of industrial workers and foremen grew by 180%, while the total growth of the active population was 113%. By the end of the 1980s, the highest level of economic growth had been achieved, and elements of future economic and political crises were appearing on the horizon. By the end of this period, the prosperity described by Lay (1991) collapsed within a few years. As Croatia moved into a transition period, the situation was exacerbated by the outbreak of the Homeland War, the break with political tradition and economic problems, while changes to the social stratification of the Croatian population were related to the influx of refugees and displaced persons. In the twenty years since independence, Croatia has gone through a transformation from a totalitarian to a democratic political system, a war and the occupation of the territory, and wide-ranging changes to the economic system – from planned economy to capitalism.

As far as the professional structure itself is concerned, the agricultural sector has been significantly reduced in comparison to the socialist period, while deindustrialisation affected workers who have had to change their professions: either they have succeeded in becoming self-employed (small businesses or traditional trades), or they have been unable to adapt and found themselves among lower ranked occupations. Z. Malenica (2007:125) holds that "due to circumstance, primarily due to great failures in the process of economic transition and the high costs of war, the social status of the majority of the middle class has worsened in relation to the 1980s, i.e. in relation to their situation during the socialism. It should be emphasised, however, that during the 1980s period the middle class were only just being formed in the sense of how they exist and function in the developed Western societies". This has led to the further polarisation of Croatian society and the accentuation of its asymmetric economic and social development. The trends we have mentioned have become more sharply defined as a result of the influence of the recent global economic crisis on the Croatian economy.

Analysts of social structure have also dealt with the formation of the new management élite, new working conditions and changes on the labour market - Krištofić (1997), Sekulić and Šporer (2000) and Hodžić (2000). D. Sekulić and Ž. Šporer (2000: 1), concluded that the development of the new system came about by means of *management capitalism*, in which the élite moves upwards without private ownership, and in which "... the construction of capitalism without a capitalist class is nothing new... - in a post-Communist transformation, the intelligentsia is a complex and extremely heterogeneous group consisting, on the one hand, of former dissidents of a mostly "leftist" orientation and different nationalist fractions. On the other hand there is the technocratic, managerial intelligentsia, with a modernist orientation, which finds itself in different types of conflict and/or cooperation with the dissident-nationalist intelligentsia, just as it used to be in conflict or cooperation with the political-bureaucratic administrative stratum during socialism". It is interesting to highlight here a finding made by D. Čengić (2005) and B. Kristofić (1997) that in a new group of entrepreneurs formed "top-down" those with no university education are significantly more represented. On the other hand, the business élite which was established in the transition from socialism to capitalism consists on average of a higher number of highly educated people.

To summarise the trends observed by our research in the socialist and in the transitional period in Croatia, there has been a persistent correlation between educational level of the respondents and educational level of their mothers and fathers. We might say that educational self-recruitment in the socialist and transitional period has shown itself to be closely related to maternal and paternal levels of education, and in the later period, with the gender of respondents as well. In other words, the correlation between parental levels of education and those of their children is most clearly seen in the self-recruitment of the more highly educated levels of the population, and in the reduction in mobility of children whose parents have lower or vocational education.

## 5. CONCLUSION

In accordance with the initial approach, conclusions can be made based on the *individual model* proposed by Johnston, Ganzeboom and Treiman ( 2005: 3-4). The model was confirmed by the results, i.e. it was confirmed that not only the fathers', but also the mothers' education had a statistically significant influence on children's educational attainment. It is somehow more difficult to make clear conclusion on adopting another theoretical frameworks in this work *modernisation theory* (Treiman 1970) and *political theory* (Parkin, 1971). Of course, it should be remembered that these theories belong to the realm of ideal types. Thus, intervening variables which may strengthen or weaken primary influences should also be taken into account when considering the progress of an

individual through the education system and his transition from the education system to the labour market.

However, elements which confirm both theories in socialist Croatia can be found in the following conclusions made by M. Lazić (1987: 165-166). "Party membership plays a decisive role in promotion in the political leadership, but formal (higher) education has also assumed a more marked significance. [...] The potential for making a direct leap from being a worker to a position in the ruling class has become marginal – narrowed down only to the class of political leaders – and highly selective: first through the party membership and then (even more strictly) through the unprofessional activities in the Central Committee." In transitional Croatia, for methodological reasons, similar conclusions about the elements of the *political theory* are not possible, but we can refer to individual reports of clientelism, nepotism and corruption, along with the rise of the "politically desirable" to privileged positions. Confirming these theories in the transitional period requires new research, in which the characteristics of party membership would be included in an analysis of patterns of social mobility. Due to changes in the character of the political order, i.e. the transition from socialism to capitalism, we would expect change in which status attainment would have greater weight than ascription of status, and this would mean that the *modernisation theory* would be confirmed to a greater extent. At the same time, we should bear in mind that processes which hinder the development of democracy and the efficient functioning of the market economy are still affecting Croatian prosperity, where the ascription of status still plays a relatively significant role. Finally, in considering whether the *modernisation* or *political theory* will prevail, we must say that, in the case of Croatia, there is no contradiction between the two theories since political changes have led to the restructuring of industry and economic development. Our findings are supported by comparative research carried out by Szelény and Treiman (1993) in six post-socialist countries, and Luijckx *et al.* (2002) in Hungary, which showed the existence of significant differences in social mobility in Bulgaria, the Czech Republic, Hungary, Poland, Russia and Slovakia, supported by both the *modernisation* and *political theory*. However, we must emphasise that in Croatia the results of our research speak more in favour of the reduced influence of status ascription than the increased significance of status attainment. Moreover, a reduction in social mobility has been registered, in the sense of an increasing trend towards self-recruitment in the upper educational echelons, and the persistence of self-recruitment among the lower qualified population. However, at the same time, upward mobility has been registered among the children of parents with vocational qualifications, who are now also recruited to a large extent in four-year secondary and university education.

Intergenerational social mobility in former socialist countries (with the exception of Slovenia) is relatively low (Iannelis, 2001), and the same is true of Croatia. It is to be expected that this trend will continue, for, as Burušić, Babarović and Marković (2010: 716) explain, "As the level of education

of either parent increases, the educational attainment of pupils increases in all the areas of class teaching examined. Thus, there is a clear trend in the increase of average pupil attainment in the function of the educational level of both parents. Moreover, there was not a single case in which a group of pupils whose parents had attained a lower level of education achieved higher average results than a group of pupils whose parents had attained the higher level of education.” This conclusion is strengthened by the fact that although Croatia has only 18% of highly educated citizens (according to the preliminary results of the 2011 census), the newest research data on students<sup>5</sup> show that 51% of students had fathers and 46.9% mothers with tertiary education, while only 3.3% of the students had fathers and 4.2% mothers with lower qualifications. We can conclude that due to the strengthening of self-recruitment in the lowest and highest categories of education the process of social stratification is getting more pronounced in Croatia.

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<sup>5</sup> Project conducted in 2010 by the Institute for Social Research<sup>5</sup> on a sample of 2,000 Croatian students.

## APPENDIX: TABLES

**Table 1** Results of anova test on the effects of mother's and father's level of education in 1984 and 2004. The educational levels are coded from 1 to 5.

Level of education	1984			2004		
	N	M	SD	N	M	SD
<b>Mother</b>	F=137,006; p=,000			F=179,163; p=,000		
1 - Incomplete primary school	1067	1,25	,804	1029	2,07	1,415
2 - Primary school	2070	1,74	1,249	543	3,11	1,487
3 - Three year secondary school	61	3,31	1,041	233	3,48	1,200
4 - Four year secondary school	64	3,89	1,156	285	3,98	1,380
5 - High school or university	4	3,25	1,500	113	4,49	1,377
<b>Father</b>	F=302,396; p=,000			F=198,721; p=,000		
1 - Incomplete primary school	675	1,20	,692	740	1,88	1,346
2 - Primary school	2315	1,50	1,078	448	2,77	1,490
3 - Three year secondary school	352	2,77	1,325	545	3,22	1,377
4 - Four year secondary school	93	3,69	,978	237	3,96	1,287
5 - High school or university	51	4,04	,979	201	4,37	1,426

**Table 2** Results of anova test on the effects of respondent's sex and mother's level of education in 1984 and 2004

Sources of variance	1984		2004	
	F	p	F	p
Respondent's sex	3,029	,082	0,373	0,542
Mother's level of education	97,385	,000	181,195	,000
Respondent's sex x mother's level of education	2,285	,058	14,136	,000

**Table 3** Results of anova test on the effects of respondent's sex and father's level of education in 1984 and 2004

Sources of variance	1984		2004	
	F	p	F	p
Respondent's sex	1,902	,168	7,108	,008
Father's level of education	224,243	,000	192,501	,000
Respondent's sex x father's level of education	1,193	,312	8,531	,000



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