

## THE PARENTAL EFFECT ON EDUCATIONAL AND OCCUPATIONAL ATTAINMENT IN SLOVENIA DURING THE 20<sup>TH</sup> CENTURY

### ABSTRACT

*This paper empirically addresses social change and stability in Slovenia in the 20th century. After describing historical determinants and examining stratification research in Slovenia, it brings together information on long-term trends in intergenerational mobility, using the core of the Blau-Duncan model for estimating basic parental effect within occupational and educational attainment. The data, collected in a pooled data set, is representative of adults, aged from 21 to 64 years. They come from two different sources: firstly, from five (two-stage stratified) random samples of regular cross-section surveys, completed in 1968, 1973, 1980, 1989, and 1998 (Slovenian Public Opinion Poll, i.e. SPOP), and, secondly, from three other random sample surveys, namely, from the Time Use Survey (1967), the Social Justice Project (1991), and the ISSP Survey (1992). The research design allows for cohort analysis, embracing labour market entry years of respondents from around 1920 to 1998. By using standard scales and methods the issues tend to be internationally comparable. The findings support the IMS hypothesis, namely, the existence of a significant negative linear trend in the parental effect over time. Surprisingly, the findings of a more detailed time analysis also expose a rather drastic decrease of parental effect during socialism in comparison to other CEE countries, followed by a sudden increase after the end of socialism (1990). The significant variations in parental effect over time are mainly the results of structural mobility factors, especially of a stronger political intervention on the educational system (to a higher extent) and labour markets (to a lesser extent) during socialism. The return of a higher parental effect after the end of socialism, characterised by a more open economy, suggests that the former destratification policy could have been rather just (with more equal access to public services like education and employment), but economically less-efficient.*

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## 1. Introduction and Research Questions

In this paper we describe the trends and changes in the stratification pattern of Slovenia in the 20th century. The long-term pattern of this small country-state, with no more than two million inhabitants, might be of special interest. On the one hand, Slovenia is a linguistically homogenous region. On the other hand, in the past, it was only a region within several larger states; it gained its state sovereignty only recently, after around four decades of socialism. Although its social and political development in a broader sense during the past century was rather erratic, the end result is quite successful. In spite of structural imbalances due to several rapid changes, the country has achieved a solid economic development, a manageable level of social deviancies, and an adequate reconciliation of political tensions.

It would be interesting to uncover whether and how its path to the present state was similar/different in comparison to some other, especially larger and older states. In the case of Slovenia, which is/was mostly located at the developmental and political periphery of the Western economies, we might expect a lot of adjustments of people, organisations and institutions to a variety of historical changes in economic, social and political conditions. The country lies at the edge of both the economic and political impacts from Western Europe (North) and Eastern Europe (South). It not only underwent the inevitable economic and social modernisation of a society in the last century, but it was also constantly enlarging its political sovereignty<sup>1</sup>: within the Habsburg Monarchy (until 1918), within the Kingdom of Yugoslavia and Italy (between the wars), by opposing the different occupying governments (during WW2), and within Tito's Yugoslavia (after 1945). The country's state independence was introduced in 1991.

A variety of different external pressures required at least three-fold adjustment processes of the system actors. Firstly, inhabitants with their families had to adjust not only to the 'normal' developmental circumstances but also the ever-new structures of life opportunities. Due to the small size of the country, people in their daily work activities often crossed the near borders (Austria, Italy). Secondly, business organisations had to frequently reshape their configurations in order to adjust to major, though often delayed, technological changes. And thirdly, the social organization, by its institutions and governmental liabilities, had to accommodate its human, cultural and fiscal capacities to ever-new challenges, goals and demands, mostly originated in the power centres outside the country. All these events and obstacles disturbed - and sometimes nearly destroyed - the quiet path of dependency in the development pattern of the country.

We might expect that all the above kinds of accommodation could have their own, and perhaps distinctive impact, on the stratification and mobility pattern of the country. The temporal trajectories of different effects illustrating a mobility regime over time are probably oscillating more than in any of the larger industrialised countries. This might be due to the more solid capacity of the latter, concerning their human and other resources. In larger countries the internal development is usually more gradual, with fewer external shocks, which often shake the smaller, dependent state-units, and with a stronger capacity for absorption. For a small country highly dependent on its environ-

ment, historical shifts in the effects of factors are probably less stable and less researched in regard to size, too<sup>2</sup>.

Based on several stratification results we know that major political changes and other external shocks could hardly leave a trace on a long-term mobility regime, as perceived from modelling individual reactions of people within the status space and on labour markets. Temporal models of a mobility regime thus tend to expose average directions, as, for example, is the case with a linearity in parental effect, which assesses the long-term effect of the parental background net of changes in all but temporal factors. Within the long-term perspective it usually reveals a modest decline, referred to as a modernisation process (Kerr et al. 1960). The trigger question is, however, whether we theoretically agree upon which larger factors are generating this trend, apart from people's individual decisions: special types of de-agrarisation, educational expansion, institutional arrangements of school-to-work transitions, the extent of the marketisation of factors of production, the sustainable increase of positions in the public (service) and/or information sectors, special policies, or even the distinct political arrangements as such? Concerning the variety of underlying sources of variations in mobility outcomes, we could recall Goldthorpe who once claimed "that systems of social stratification are systems of differential power and advantage and therefore contain an inherently self-maintaining force" (cf. Müller & Mayer 1977: 367). Due to the small size of Slovenia, the problem of the size and capacity effects on the mobility regime is also an interesting question, though it probably belongs to the more recent challenges in comparative stratification research.

The underlying idea of this paper rests on a two-fold image of social mobility. Firstly, the mobility regime of a modern society is seen (and modelled) as an adjustment social mechanism of people to structural change and environmental pressure. Secondly, the temporal trajectory of the adjustment path is sensitive to several structural constraints and factors, as well. From the outset it must be said that the introduced structural factors will only indirectly be applied at the measurement level in this paper on Slovenia. Therefore, they will only be addressed descriptively herein. We have several reasons for this. Obviously, the relations and links between individual actions and structural constraints to them are not yet an agreed issue in stratification research. Consequently, the subject under investigation (i.e. individual mobility and its structural constraints) suffers from several conceptual weaknesses (Baron 1994). Also, the notion of 'structural change' is a mitigating concept in itself. It has a wide scope of meaning, as the term 'structure' (and the term 'change', as well) could be employed in many ways. As a consequence, stratification scholars from both main streams – the status hierarchy approach (Treiman & Yip 1989) and the class approach (Goldthorpe *et al.* 1987) - often share scepticism about the utility of macro-sociological variables, like the capacity of a country or a type of political regime, for explaining the differences in mobility regimes across countries. Perhaps the underlying social processes of mobility are more differentiated than the current state of knowledge is able to conceptualise. These reasons, and a lack of comparable classical results on the mobility regime of Slovenia, prevent us from undertaking more elaborate empirical testing of the structural impact on individual mobility in Slovenia.

In this paper we will mainly provide additional evidence to the above thoughts, questions and challenges. We are primarily interested in the temporal changes in parental effect, namely, the influence of the family on its offspring, which could be treated - despite its conceptual and methodological weaknesses - as a basic structural influence in a modern mobile society (Breiger 1990). The mobility regime as a complex adjustment mechanism will be based on the classical Blau-Duncan (1967) status-achievement model providing, by a cohort design, an account of parental effect during time. The trajectory of its temporal path will be modelled, firstly, by a linear trend, and secondly, by a non-linearity, detected from separate cohorts. By taking into account the basic developmental conditions of Slovenia as a small country and including them into mobility analysis, at least at the interpretation stage, we address the following rather general questions: How are/were long-term trends of parental effects in social mobility constructed within a rapidly changing social environment of a small nation? Could its temporal pattern tell us an interesting story about the hidden nature of its underlying mobility mechanism?

In addition, Slovenia is not really part of current international stratification research. Despite the wealth of (now already publicly available) survey data<sup>3</sup> the active appearance of Slovenian stratification researchers at international conferences is/was rather rare (except for a short period in the mid-70s). In this paper, by addressing classic questions on social stratification, by analyzing data on Slovenia, and by comparing the results with those from other nations, we also aim to give Slovenia (once again) a place on the map of international stratification research. Our plan is as follows. Before we enter an empirical analysis, we will provide a brief run-down on the key questions in stratification research, augmented with the most interesting findings from the Slovenian stratification research (rather a sociological perspective than any other). Further, through the developmental facts on Slovenia, organised under a special subheading, we aim to systemize only those contextual characteristics that might possibly influence its long-term mobility regime.

## **2. The History of Stratification Research**

To justify our approach in analyzing Slovenian social mobility it is worth mentioning, firstly, a few basic characteristics of (international) stratification studies in the past decades here, and secondly, some of the more interesting research findings from past and recent stratification research in Slovenia.

### **2.1. Main thesis in comparative stratification research**

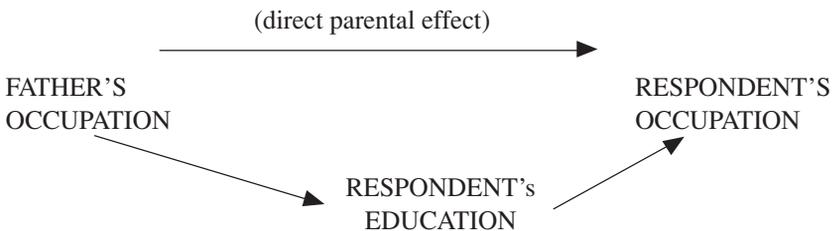
Two main ideas have continually guided the stratification research: the modernization thesis and the political intervention thesis. The hypothesis of modernization (Kerr et al. 1960) claims the process of modernization lowers social inequalities across the board (Treiman 1970, Treiman & Yip 1989). There are several variations on the hy-

pothesis; for example, we might talk of a more open society or of an increased merit-selective society (known as the IMS hypothesis). The political intervention thesis holds that variation in intergenerational social mobility patterns are due to rearrangements of the arenas in which intergenerational status transfers take place, in particular the school system and the job market, as well as (probably), the laws that govern the transfer of property between generations.

The second generation of mobility research (for more on research generations see Ganzeboom, Treiman, Ultee 1991) began with Blau & Duncan's status-attainment model. Their "American Occupational Structure" (Blau & Duncan 1967) brought several innovations to the study of social stratification. Among these were the use of a large national sample and the use of rigorously measured metric variables. The most important contribution was the indirect effect (path) model that allowed the analyst to dismantle the occupational mobility between generations into direct effects and indirect effects - via education.

If we reduce Blau & Duncan's five-variable model to its three-variable core (Figure 1), we can easily see why: the expectations of the modernization thesis would be that the direct effects of a father's occupation on educational attainment and occupational attainment are reduced over time. However, the same thesis would lead us to expect that the effect of education on occupation rises, which leaves the expectation about the indirect effect as well as the total effect of a father's occupation on his son's (or daughter's) occupation undetermined.

**Figure 1**  
**The Elementary Status Attainment Model**



As a consequence, assessing the trends in bivariate intergenerational occupational mobility tables, as had been done by the first generation, is theoretically pointless. Treiman (1970) fleshed out the industrialization thesis and Heath (1981) formulated the ancillary idea of how political and institutional intervention would change the status attainment pattern.

However, the second-generation models never became truly comparative, as almost all of the published comparisons of these models deal with a limited number of contexts. This was partly caused by the amount of work involved and the lack of comparative data. But even more important was the fact that stratification analysts turned away from continuous measurement and started to work with models for discrete data, after

the seminal publications of Hauser (1978) and Goldthorpe (1979) which employed loglinear analysis.

The third-generation studies established that intergenerational transfers of social status couldn't be sufficiently summarized by one coefficient that was like the characteristics of the second-generation studies<sup>4</sup>. Models for the bivariate association were broken down into several components, ranging between 2 to 8 parameters.

Also, the third-generation studies became much more comparative than the second-generation studies, by developing an internationally standardized class scheme and by the collection of mobility tables from dozens of contexts. But unfortunately, the major lesson to be learned from the Blau-Duncan model on the deconstruction of effects became forgotten, and it is only recently that researchers have been able to mesh discrete variable techniques with multivariate designs (Logan 1996; Hendrickx & Ganzeboom 1998).

While the pendulum of interests has in some respects swayed between the generations of stratification research, in other respects one can speak of continuity and of continuous growth and improvement. For example, throughout these generations, the underlying question, which directs stratification research, has basically remained the same i.e. how to describe the transmission of social status from generation to generation?

Not surprisingly, research on this thesis often takes the form of a comparison between patterns in market regulated societies and patterns in socialist planned economies, the latter ones being the prime historical example of political intervention in stratification patterns. The comparison between market systems and socialist planning becomes all the more interesting, now that the socialist regimes of Eastern Europe have been abolished. Not only are we now in a position to compare patterns of stratification before, during and after the transition periods, but also more data from the socialist period has become available.

## **2.2. Social stratification research in Slovenia: overview and key findings (within sociology)**

### ***2.2.1. The overall picture of stratification research in Slovenia between 1960 and 1990.***

Only a limited number of internationally comparable empirical stratification studies were completed in Slovenia during the period from 1960 to 1990; later on there were a few more. An initial empirical attempt, partly concerning Slovenia, is probably the paper on aggregate mobility in Yugoslavia, written by Milić (1961). On the other side, early philosophical thoughts on alienation and stratification processes in Slovenia (Pirjevec 1965, reprinted in Boh 1999), and two papers on several dimensions of stratification (Saksida 1967) still have not extended beyond the basic conceptual level. However, they already reveal an increasing interest in the stratification research among the Slovenian 'sociologists' (coincidentally, the pioneers of the field were educated mostly as lawyers, psychologists, and philosophers) at that time.

In the late 60s and early 70s the first empirical stratification research in Slovenia was completed, with a strong reliance on the Slovenian Public Opinion Poll, which began in 1968, headed by N. Toš at the Faculty of Political Sciences. But these early empirical attempts were hardly reported outside the country's borders nor in a language other than Slovenian. There are only two salient exceptions: the Time Budget Survey (Boh & Saksida 1969, a larger project description is available in Szalai 1972) and a set of imaginative stratification research papers presented in Saksida et al. (1974). During the 80s, a continuation of such sporadic efforts in stratification studies could be traced in Tomc (1983), and later on in occasional studies linked to a huge empirical project in Slovenia, namely, the Quality of Life project, which lasted over a decade, from around 1982 almost to 1996 (see exhaustive bibliography in Černigoj-Sadar 1992).

Until the late 80s, the 'hidden region of Slovenia' was still deeply covered by the State of Yugoslavia; all the above-mentioned efforts could not produce a sound academic account of its own stratification pattern. Often, the researchers were 'wasting' their time only to justify the distinctiveness (and discreteness) of Slovenia in comparison to other parts of Yugoslavia. Under political pressure and even an ordered request, they were often dealing with more ideological and attitudinal data, looking for actual gaps in cultural (dis)-integration and tensions. On top of this, the students involved were mostly using simple tabular, clustering and typology techniques rather than more confirmatory models for testing some of the more substantial stratification hypotheses.

As a consequence, Slovenia during the 80s was still not 'normally' involved in the echoed international stratification projects (like, for example, CASMIN, see more in Erickson & Goldthorpe 1992). Also, Slovenian researchers have missed nearly every opportunity to take an active part in important comparative discussions on stratification and social mobility - until very recently. The international project, the Meaning of Working, which Slovenia actively participated in (Antončič *et al.* 1987), could not really bridge the overall gap of the above-mentioned non-involvement.

### ***2.2.2. A short period of stratification research illumination: 1970-1976***

Until recently, the main body of quite a number of stratification researches in Slovenia belonged to the research of the first generation of stratification research. This approach studied bivariate tables, mostly crude cross-classifications of fathers' and sons' (offsprings) occupations. Through the decades, the main interest of Slovenian academic researchers was in simple descriptive research of social inequality and differentiation. Very seldom did the authors transform their brave ideas into sound empirical models. Only few of them were occasionally involved in international research. Even fewer among them were skilled enough to address more precise questions with the appropriate methodological tools.

However, there is an exception to this rule. From around 1958 until the 1990s, at the Institute of Sociology and Philosophy in Ljubljana (unfortunately established outside of the University), there worked a professionally strong interdisciplinary team of stratification researchers. These researchers were involved in a variety of innovative stratifi-

cation and mobility studies of the first and higher generation on time, without a scientific delay<sup>5</sup>, being especially active only during the 70s. Our own report on long-term mobility trends in Slovenia could be directly connected to their interesting research results - achieved in spite of the rather sporadic stratification research in Slovenia.

Unfortunately, their impact on academic teaching and research was rather weak, mainly because they did not publish a lot and they did not collaborate in the teaching process within high schools and faculties. Among their results, the most widely known and even influential were probably their contributions to the Toronto ISA Conference (1974), where they presented a special book with their recent methodological ideas and empirical results (Saksida et al. 1974). For example, the topics covered were the following: young and social inequality (Makarovič 1974), new models of inter- and intra-generational social mobility constructed under the general linear model of Gauss, Rao and Markov (Momirovič & Knap 1974), social stratification and mobility in Yugoslavia, the role of politics on mobility regimes and patterns, the formation of elites, status inconsistency (Saksida *et al.* 1974b), and the mobility of women (Mežnarič 1974).

For the Toronto report, they were using data from a special stratification survey done in Slovenia and Macedonia<sup>6</sup> around 1970<sup>7</sup>. Among their more interesting empirical results, concerning the topics of the present paper - the change in parental effect during the modernisation - are the following findings. First, the authors identified at least three distinctive stratification hierarchies: "... the hierarchy based on occupational roles, the hierarchy based on occupying political roles, and finally, the hierarchy of consumption roles." (*ibid.* 239). Second, the stratification mechanisms of the urbanised Slovenia and of the rural Macedonia were very alike (Saksida *et al.* 1974b: 234). Third, amongst all the three hierarchies, the consumption pattern in Slovenia is (was) the least determined by parental background. And, fourth, the general stratification hierarchy in Slovenia had a continued effect on the organisation of society since the pre-Revolutionary era (before WW2): "Although revolution changed the ownership relations of the pre-Revolutionary era, neither hierarchically ordered networks of roles in work subsystems or the adjustment of both other subsystems - socialisation and rewards - on the structure of work did not change." (*ibid.* 235). All together, parallel or, better said, opposing to the desired political changes in Yugoslavia, underlying and "intense processes of intergenerational and intragenerational social mobility were going on." (*ibid.* 256)<sup>8</sup>.

It is fair to admit that these findings were very up-to-date, as the group tried to distinguish, very early on, a life-style pattern (consumption) from a status heritage (intergenerational) pattern in stratification research. But after the late 70s, their otherwise weak impact on academic stratification research in Slovenia slowly vanished. The Institute itself was practically abolished in 1990 (it was partly integrated into the University). Meanwhile, the academic stratification researchers (within the University) oriented themselves more to a description of geographical mobility and of cross-border migration processes (Klinar 1974), and to basically non-empirical compilations of findings on classes, stratification and mobility from world-wide stratification research (Klinar 1987, Jambreč 1984).

### 2.2.3. *Interesting, though fragmented stratification research during the 90's*

A greater interest on the topic was raised around the turn of the CEEC regimes into post-socialism (Antončič *et al.* 1988) and mostly lead to innovative conceptual efforts and comments on the impact of the forthcoming transition on inequality (Bernik 1989). The findings on these past times somehow converged into an agreement (a good overview can be found in Bernik 1988, 1990), that during socialism status inconsistencies within the Yugoslav society were quite high, and that power hierarchies somehow deviated from the nuclear education-occupation hierarchy, and from the life-style (consumption) hierarchy, as well. An exception to the rule was probably the self-employment strata, which always exhibited quite a homogenous social group, especially in Slovenia. A lot of theoretical effort was devoted to the question of developmental and structural obstacles within the country, preventing a higher status crystallisation, and to the presence of a 'traditional egalitarian syndrome' within the society.

However, in spite of huge data surveys during the 80s, often funded by the weakened political regime (which was searching for 'the lost links between the classes and their value orientations'), only rarely did sound empirical accounts on the stratification processes appear. The numerous research results hardly exceeded the level of initial statistical description of the collected data material. Without a wish to be exhaustive, here we might mention those few attempts where authors tried to combine more precise questions with more demanding methodological tools.

The huge project, Class Composition of Yugoslav Societies (lasting for about five years between 1986-1990, and described in Toš & Jambreč 1987), was not even fully explored when Yugoslavia fell apart in 1991. However, with the help of the clustering approach, a clearer picture of the increasingly complex Slovenian social structure was elaborated on by Hafner-Fink (1988, with a later version in Hafner 1993), based on that survey. The author found that, above the lower classes (comprising around 60% of the population) and professionals (or upper classes), two different kinds of new elite emerged: a political elite (with a relatively low education) and an influential management elite (with the highest education). He then stated, somewhat contradicting himself, that those mobility channels between the lower and upper classes were nearly blocked, with the exception of the quite open educational channel (*ibid.*, p.29).

Stratification-by-studies flourished at the turn of 90s. Among the underlying reasons was also a key change in the rules of academic promotion, which required of academic researchers increased international communication and publication. Among the publications of that period the following pieces are good examples of rather diverse research interests: Boh (1989, 1990) and Černigoj-Sadar (1989b) were working on family life, Černigoj-Sadar (1989a) on leisure and life-style, Svetlik (1986, 1990) on employment and social policy, Antončič & Rus (1991), Antončič (1992) on social justice, Mandič (1990, 1992) on housing, Rus & Drobnič (1989) on the transition from school to work, and (Bernik 1994a, 1994b) on politics and society in transition. An interesting stratification result is found in Antončič (1989: 111), who rejected the general hypothesis of Lazič (1987) on a decreasing status openness within the former Yugoslav society. He

found instead that only the structural component of the whole mobility was in a relative decline, while other types of (pure, net) mobility were not.

Examples of a more demanding methodological approach, belonging to higher generations of stratification research, are rarer: loglinear models (on mobility patterns in Štebe 1991, on links to logit models in Trampuž 1993, on decomposition of the amount of mobility into structural and pure mobility in Antončič 1988, 1989), econometric regression techniques (on human capital in Vodopivec 1997), event history models (on labour markets in Drobnič 1996, Drobnič *et al.* 1998, on work autonomy in Antončič and Gnidovec 1996, on adult learning and work mobility in Ivančič 1998), and dynamic system modelling (institutional analysis of the internal university labour market in Omladič 1993).

After the 90s, a few research groups also joined some larger comparative projects: ISJP - International Social Justice Project, lead by Alwin *et al.* [summed up in Kluegel *et al.* (1995); ISSP - International Social Survey Programme, from 1992 and repeated in 1998 (general description in Davis and Jowell 1989; see also Toš *et al.* 1998)]; social stratification in Eastern European Countries - Elite Study Part (general description in Treiman and I. Szelenyi 1993, first results on Slovenia in Kramberger 1996). The Quality of Life project was strongly reduced in the mid 90s, though a compilation of interesting findings on the changes in quality of life during the 90s was published just recently (Mandič 2000).

On the whole, the scientific output of Slovenian (sociological) researchers on stratification subjects, as revealed from the publications in more prominent international journals, is still very weak, or at the least very dispersed. Real teamwork and a long-term co-operation are nearly absent. The researchers are inclined to report first results only (exploratory analysis) and comment on them from different theoretical angles. They seldom go on to test further their hypothesis with more rigorous models, in a comparable and paradigmatic way (confirmatory analysis). Unfortunately, it seems that the fragmented situation of Slovenian stratification research shows little sign of being improved in the near future. Moreover, there are no special courses on empirical (model based) stratification and mobility research, neither at graduate nor at post-graduate level.

### **3. The developmental and contextual facts influencing mobility in Slovenia**

A short description of history, educational, labour market and other institutional arrangements in Slovenia is presented below. It aims to provide the (foreign) reader with a better understanding of the current Slovenian context and the capacities of this small country. The overview emphasises specific features of the country's structural characteristics, which function as a kind of living underlying heritage for both enhancing and limiting the social dynamics. From a longer historical perspective, the development in Slovenia was substantially accelerated, during the 20th Century, by successive

waves of industrialisation, urbanisation and especially political changes (the main historical events of the last century are presented chronologically in Appendix 1).

### 3.1. Delayed and unbalanced modernization

*Location and Distant History.* Slovenia is one of the smallest nation-states in Europe (area: 22.000 km<sup>2</sup>). It lies in the most southeastern region of the Alps, with the Pannonian plain facing to the East and the Adriatic Sea to the South. During Slovenia's history ties have mostly been with Austria, but also with Lombardy, Veneto, Friuli, the Czech lands and southern Poland. Its relatively non-influential aristocracy and upper classes<sup>9</sup> were mainly German speaking until the beginning of this century, while the rural majority were mainly native speakers (Štuhec 1995). The industrialization process began very suddenly after WW1 and the demise of the Habsburg Austro-Hungarian Empire. At that time, Slovenia became part of the newly established Kingdom of Yugoslavia.

*Cultural Origins and Literacy.* The first books in the Slovenian language were published in the middle of 16th century, when for half a century the strong Protestant movement even intended to implement a 'public' network of primary educational institutions, which would use the native (Slovenian) language. After the re-catholicization of the region, accompanied by the efficacious extradition of mainly Protestant (German) upper classes (1600-1650), a basic 'public' education system was established very slowly, with a strong push during the episode of the Illirian Provinces (1809-1811, Napoleon) and again after 1848<sup>10</sup>. Public primary and secondary general and vocational education expanded quickly in the second half of the 19<sup>th</sup> century. There was a high rate of literacy (over 85% of adults) at the beginning of this century, which was perhaps one of the major advantages of Slovenian human resource capacity, brought into the new Kingdom of Yugoslavia (where, on the contrary, there was approximately an 85% illiteracy rate) after WW1 (Erjavec 1923). But the major educational expansion, including that of women, happened mostly during the socialist period, after 1945.

*Demographics and migration.* The population of Slovenia now approaches two million inhabitants within the current state boundaries. A strong emigration wave (estimates range from 220 000 to 300 000 inhabitants) happened at the end of the 19<sup>th</sup> century, mainly due to crises in agriculture and the lack of any employment opportunities. The very high female activity rate on modern labour markets probably derives from that era and is accompanied today with a rather low fertility rate (Sircelj 1998). The mean life duration of men (68 years) is almost ten years lower than that of the women (77 years). The rather high activity rate for both sexes is now already a long-term basic feature of the Slovenian labour force (participation of the 15-64 age group in the labour force was 72% for men and 62% for women in 1996).

*Modernization and the labour market.* Slovenia represents a case of late and, in a way, incomplete industrialisation. Until the end of WW1 the country was almost exclusively agrarian, despite its high level of literacy relative to other parts of Yugoslavia.

Among our respondents (see point 4 of the paper), in the earliest labour market entry cohorts that we studied (1920), about 80% came from a farming background. By the end of WW2, this figure had dropped to almost 50%. The early cohorts that entered the labour market during the initial transition to socialism reported a steep decline in farming backgrounds (from 50% to 30%). During the more mature socialist era, farming backgrounds gradually dropped to about 10%, which is similar to the numbers in Western Europe in 1980<sup>11</sup>. While farming appears to have dwindled over the century, real development may have been a bit slower than the official statistics suggest (table 1a).

**Table 1a**  
**Labour Force Indicators of Modernization in Slovenia**

Occupational distribution in Slovenia, Censuses 1931-1991 (in %)				
OCCUPATIONAL CLUSTERS (OECD)	1931	1971	1981	1991
Agricultural occupations	60.5	25.6	13.0	11.6
Industrial occupations	21.1	32.6	30.4	28.4
Service, adm. occupations	18.4	41.8	56.6	60.0
TOTAL	100.0	100.0	100.0	100.0

*De-agrarisation and urbanisation.* The above impression is also supported by the fact that industrialisation was implemented without the usual de-agrarisation and urbanisation processes (possibly due to the small country effect). Even nowadays, people are living and working within close distances; according to data from around 1990, on average, people are willing to spend no more than 20 minutes travelling from their homes to their work places. Besides, since people are geographically not very mobile, a stable portion of them (about one fifth) is still using a combination of agrarian and non-agrarian income sources for their livelihoods. A quantitative illustration of this softened modernization process, which keeps the conservative sentiment of ‘happy times-gone-by’ very much alive among the people, is presented below (table 1b).

To some authors, the recent patterns of urbanisation tend to be contradictory or even harmful to future development (Kos *et al.* 1998). During socialism the regional dispersion of living settlements remained high, as the concentration of work and urban facilities in numerous regional centres helped to equalise quite a lot the historical developmental differences in economic opportunities across the country. The rapid reductions in the agrarian sector encouraged people to move back to the best-cultivated land, solely to live and not to use the land for profit gaining activities. Therefore, the regional centres and especially Ljubljana, the capital, are becoming more and more empty for all others except the working functions (see the decline from 42% to 37% in the share of people living in urban areas, table 1b, part I). On the other hand, the best land is becoming increasingly built-up in a non-productive way (such as living quarters or the building of highways). In short, the cultivated space, as a rare resource of this small and hilly

country, is becoming strongly under-utilised (urban sprawl), causing troubles for agrarian as well as for other public policies.

**Table 1b**  
**Households' Indicators of Urbanisation in Slovenia**

I. "Urbanization-1": Housing structure of people in Slovenia, by types of HH settlements (Source: SPOP 1978-1998)						
TYPE OF HH SETTLEMENT	1931*	...	1978	1988	...	1998
Live in rural area	66		46	45		44
Live in urban area & suburbs (urban area only)	34 -		54 (42)	55 (36)		56 (37)
TOTAL (in %)	100		100	100		100
II. "Urbanization-2": Structure of households in Slovenia, by income sources (Source: SPOP 1969-1992)						
SOURCE OF INCOME OF HHs	...	1969	1978	1988	1992	...
Agriculture only		10	7	4	3	
Agric. & empl.- mixed income		18	18	19	18	
From employment only		72	76	77	79	
TOTAL (in %)		100	100	100	100	

\* *Rough estimates, by A. Kramberger*

### 3. 2. Institutional arrangements during socialism<sup>12</sup> (after 1945) - blocked market capacities

*Politics after WW2.* A general feature of the former socialist system of Yugoslavia was the peculiar combination of decentralization with political control at the local level. Enterprises and public authorities were closely interconnected, and specific institutions called 'self-management bodies' (their legal denotation was 'social ownership') were established in the early 50s to follow administrative and policy-making procedures in municipalities, schools, social insurance, employment offices, and elsewhere. Their initial goal was to promote social consensus on de-stratification, in accordance with the traditional rural (parochial) notion of limited individual welfare. However, over time the initial communist arrangements became more and more inefficient.

Typical of this situation was the relatively open flow of information between enterprises and public authorities. Such policy practice also had an important impact on the corporatist arrangements of policy decisions, and on a strong vocational design of educational links (diploma titles) to labor markets. However, this intended design was never successfully implemented outside the schools. In the labour market the recruitment autonomy of firms increased over the years<sup>13</sup>. Another feature of the political system was that it sought to be informed quite early about popular public opinion (from

the mid 60s onwards). In this sense, Yugoslavia (and especially Slovenia) was probably the only region among the former socialist countries in which regular opinion polls had been held for decades.

*Economy.* After WW2 Slovenia succeeded in transferring its comparative social advantages (education, an early industrialization relative to other regions) to the newly established large-scale production facilities, that catered to a broader (Yugoslav) market than ever before. Although until 1990 Slovenian enterprises primarily held a prominent position within the former Yugoslav market, a lot of them did have a long-standing orientation towards trade with the outside world. The country is and was highly dependent on foreign trade, with export revenues corresponding to over half of the GDP. Most of the trade was and still is with the European Union (Germany, Italy, France, and Austria make up about 60% of foreign exchange), and foreign exchange in both directions is rather balanced and dominated by machinery and other manufactured products. So the economic situation is highly sensitive to fluctuations in the conditions for trade (e.g. business cycles in Western markets).

*Market institutional arrangements during socialism.* The institutional market arrangements under socialism encouraged non-rational and/or half-rational decisions in firms, as managers tried to accommodate political demands rather than market pressure. Such practices were too costly for market performance, in comparison with more competitive markets. It needed large non-market (social) transfers to many subjects in the form of direct subsidies, tax breaks and cheap credits, which eroded and weakened the market power of the banking sector. In the absence of efficient price mechanisms, the resource re-allocation process became very complex, inefficient and very expensive, but made for a relatively egalitarian distribution of income, wealth and political power<sup>14</sup>.

*Labour market arrangements and dynamics during socialism.* The accelerated structural changes under socialism can best be seen by the dramatic decrease of farmers (approaching a 10% share in the early 70s) and an increase of non-manual workers from 18% in 1931 to nearly 60% in 1990. From around 1970 onwards, a special sub-period of rapid development and structural change occurred. This was mainly due to the planned and controlled immigration of the unskilled labour force from less developed regions of the former Yugoslavia into Slovenia and due to huge political and economic reforms, which significantly changed the sector and occupational distribution of the country. Inflows of unskilled workers were preceded by important emigration outflows of the skilled Slovenian labour force to Western countries (e.g. to Germany), by which emigrants were looking for better life chances, after the economic crises of the late sixties.

During the seventies and eighties, due to market oriented institutional reforms and the fragmentation of large business plants, the number of economic entities, i.e. firms and their associations, almost doubled and the number of top managerial positions doubled as well (from about 10 000 to about 20 000 of the leading positions in firms). The economy became much more market oriented than before. Financial conglomerates, including banking, industry and policy actors, emerged on the national level of Slovenia,

combining industrial sectors and foreign trade in autonomous vertically linked manufacture-trade chains (the weak origins of, once missing, larger financial holdings and corporations). The social networking of business and political leaders supported such a development, by creating new market opportunities, especially in Eastern European regions and in the Third World (clearing arrangements in the exchange of goods and services mostly due to the undeveloped financial markets in some of the export destinations). But rapid development was often disturbed by high inflation in the unstable financial environment. Some first attempts towards a more market economy regulation were already initiated within, the then, Yugoslavia (by the so-called Markovich reforms, in 1988), but more definitively after the independence of Slovenia was declared and gained, in 1991.

In short, the basic characteristics of the contractual Slovenian labour markets during socialism can be summarised by: 1. the absence of explicit ownership rights; 2. the adjustment of salaries according to redistribution of income; 3. the indexing (limiting) of salaries regardless of the market outcome (collective arrangements of income distribution); 4. pay scales within enterprises, regulated by internal referendums, i.e. by rigid occupational or branch agreements on pay scales; 5. workers' security against dismissal (Vodopivec & Oražem 1995: 22-23). However rigid these features seem now, in comparison to other parts of (former) Yugoslavia the market and labour markets in Slovenia had a higher level of market-sensitivity, as the whole economy was more integrated into the Western economy and thus connected to its business cycles rather than to the other regions of the country.

*The Slovenian education system:* The Slovenian educational system basically follows the Austrian model (regulation enacted in 1869). A modest educational reform was introduced in the 1920s, when secondary vocational education was slightly expanded. A new system of primary, comprehensive and 8 year compulsory schooling was instituted in 1958. In the urban areas, the whole of the compulsory schooling was performed at one location (building). In some distant rural areas (but also in some towns), children had to change schools to more central places after finishing their first four years of primary education[16]. The socialist regime favoured vocational training and the already wide system of 2-3 year vocational courses was much expanded after the 60s.

However, unlike in some other socialist nations, there was never a close connection between vocational schools and firms. It is fair to say that a more open labour market continued to exist during the socialist era, in contrast to the rather strict vocational plans of educational authorities on how to link educational paths and occupational jobs.

A peculiarity of Slovenian education is the nation-wide introduction of ability testing, from 1965 onwards, for pupils of 13 years<sup>16</sup>. Employment offices performed a standard (ability) test. The results were heavily relied upon to determine the crucial choice at the end of primary school, in an attempt to diminish the influence that parents and schools could have on the outcome. For a small minority of talented students from lower classes and of a rural background, a positive test result was used to allocate special fellowships that would allow them to attend schools with an academic focus in

the major urban areas. The system was phased out temporarily in the early 1970s, but was reinstated around 1980 and has stayed in place until this date.

### 3.3. Socialist de-stratification attempt

The specific features of Slovenia in the period of communist-socialist experiment within the former Yugoslavia can also be described from a more mobility focused basis, using a list of some of the general principles of the former communist regimes (Ganzeboom & Nieuwbeerta 1996), which Slovenia significantly deviates from:

- (a) Abolishment of the private ownership of means of production. In this respect there was a total 'success' in the nationalisation of large-scale enterprises between 1944-1960 (Princic 1994), but a great 'failure' in two fields: agrarian reform and small business (industry and craft). Agrarian reform was abandoned definitively in 1958, and it did not modernise agriculture which, still now, is very extensive and dispersed (i.e. a lot of separate pieces of land, which could not lead to an intensive and low-cost production, machine cultivation is inevitably under-utilised). We also can trace a non-interrupted line of historically strong small-scale production (craftsmen), and a personal local service industry, which was re-regulated in 1965, and by permanent incentive it expanded from then onwards (but with a limited expansion allowed and with a strictly regulated employment maximum).
- (b) The prevention of accumulation of material and financial capital in private hands. Despite restrictions, private material and financial accumulation easily continued to exist, due to 'cheap' credits for the masses (periodically, 'Titoism' highly supported political delivery of resources, for example, by imposing negative interests to major banks and by controlling accumulation within enterprises) and due to selected, but available access to power, privilege and other sources (for socialist elites). However, the accumulation of privately gained resources was mostly manifested within non-market spheres, merely in the form of various private luxuries or family buildings.
- (c) Negative discrimination of traditionally privileged social groups ('bourgeois'). The theoretically based ideological treatment of the 'bourgeoisie' (initial Communism) was substituted already in the early 50s by a more practical and subtle national discrimination of specific target groups<sup>17</sup>: collaborators of occupation troupes during WW2 and their offspring, the officials of the catholic church and outstanding members of this religion (this is a straightforward continuation of the historical local sub-elite tensions), farmers as a whole, and non-party professionals (independent intellectuals), who were prohibited from any promotion into the inner power circles.
- (d) Positive discrimination of traditionally under-privileged social groups. This was an initial feature of the system, which only partially succeeded in the narrow field of politics, with recruitment into power circles from lower (working) classes in the first post-war period (proved empirically by Saksida et al 1974b:236). This feature disappeared over time, as the parents with a revolutionary background had not been capable of effectively passing on their own privileges to their offspring.

- (e) Strict control of migration. This feature was never typical of Yugoslavia and especially for Slovenia. It was valid only for a very short period immediately after WW2 (until the open questions of border with Italy and Austria were settled, around 1955). In Slovenia, a lot of people have relatives beyond the near borders (especially with Italy, Austria), so at least daily migrations were always present. From the very beginning of the 60s the population was officially free to travel or to migrate elsewhere.

### **3.4. Influential voluntary sector: a base for neo-corporatism**

From the aspect of social capital, we might also emphasise here the strong and traditional role of actors within the voluntary or third sector in Slovenia. The sustainable evolution of intermediary bodies was probably made sustainable for a longer time due to the historical lack of independent own-state bodies. Around 8000 societies and associations were already registered at the beginning of the 20th Century (Erjavec 1923). More than 14 000 societies and associations of all kinds were available to relax the civil initiative of people at the end of the century, in the 90s (Kolaric, Cernak-Meglic, Svetlik 1995). So, even nowadays, this long development of civic influence and of social networking on the public spheres and on public decision-making give a strong corporate character to the economy and the political life.

In a way, the collective nature of social dynamics works as a kind of system obstacle to a more rapid change of the country into the suggested individually based economy and society (see more on the difference in DiPrete *et al.* 1997). On the other side, as stated by Bernik (1989:39), a large sphere of informal activities (in Yugoslavia in general, and in Slovenia being on the periphery in particular) had always had an important corrective system role. It reduced the increasing system complexity, by properly differentiating the rigid system regulation, which had usually been very inadequately organized by the means of some 'imported' institutional and political designs.

Besides, a strong collective influence over specific labour market arrangements (wages, jobs' descriptions) transformed a lot of work posts into closed positions, controlled by collective actors (trade unions, occupational and professional groups) rather than by employers. Therefore, we might expect special oligopolistic effects of such a rigid LM situation on mobility issues during the transition period<sup>18</sup>. Namely, the collective actors are inclined permanently to reproduce the limited market supply and to maintain the rent-generating properties of the jobs they control, especially in times of a changing social structure (Sørensen 1994).

### **3.5. Basic political changes since the gaining of state independence in 1991**

The new state regime in Slovenia was legally shaped by the new Constitution, in October 1991, after the short war for independence from Yugoslavia (in June and July 1991, with later negotiations and agreements under international supervision). The new state of Slovenia is a parliamentary democracy. The state division of power is based on

an explicit tripartite separation: the parliament, the executive-administrative system, and the judicial system. The introduced market economy needed large reform projects such as economic restructuring, privatisation of economic assets, and deregulation of (the once) very large state and public institutions designed for delivering public services. In the early 90s, the Slovenian economy rapidly re-oriented nearly the whole foreign exchange to the Western European markets. An unbalanced development from previous times resulted in economic restructuring, privatisation of economic assets, a rapid rise in unemployment and in the closing down of low-competitive industrial firms.

A major reform of the primary and secondary educational systems - characterised now by earlier educational decisions, less transitional opportunities and probably by a higher social selection - was implemented recently, during the 90s. Together with (labour) market reforms, it probably somewhat influenced the character of the mobility regime during the 90s: with a new curricula, nation-wide standard exams (Matura), changes in the VET education (professional high schools introduced), limited transitions from vocational to general schools, and increasing dropouts. Higher education as a system experienced no real regulatory changes so far, except in the R&D field, but important changes occurred anyhow. Let's mention just few of them: the massive enrolment of young cohorts into social sciences; the decentralization of management in higher education with its usual consequences; the marketisation of surplus enrolment; the erratic recruitment and promotion practices of the teaching staff within the two Slovenian Universities (Ljubljana, Maribor) due to restrictive public financing. A more competitive educational context raised the role of families in education-continuation decisions and increases the level of social selection within the status-attainment processes in comparison to the socialist era (Pretnar 1999). In other words, a higher social selection means higher parental effect in the social mobility regime.

## 4. Data

In order to examine the patterns of educational and occupational attainment in Slovenia during this century, we analysed data from eight sample surveys. The data available to us allows us to take into account nearly the whole of the 20th century. Five samples are part of the Slovenian Public Opinion Poll (SPOP).<sup>19</sup> These SPOP surveys have been conducted on a nearly annual basis from 1968 onwards by the Centre of Public Opinion and Mass Communication at the Faculty of Social Sciences of the University of Ljubljana, under the direction of N. Tos (see Tos *et al* 1968-98), and data was mostly collected from a two-stage random sample of the Slovenian population aged 18 years or older (there were some changes in sample design after 1990, which did not harm the representativeness of the samples). The questionnaires mainly include questions on individual attitudes and opinions about current events and so on. Besides, they always include some relevant demographic variables such as the sex, age, employment status, occupational status and educational attainment of respondents. In five of the

surveys, those held in 1968 (n = 2082), 1973 (n = 2098), 1980 (n = 1755), 1989 (n = 1862), and 1998 (n = 1007), information was also collected on the respondents' parental social background.

First we added to the data, from the five mentioned surveys, two sample surveys that were administered after 1990 as part of the internationally comparative projects, namely the International Social Justice Project 1991 (ISJP 1991, n = 1375, on international results see also Kluegal et al. 1995) and the International Social Survey Program 1992 (ISSP 1992, n = 1049). The principal local investigators for the surveys were V. Antoncic and N. Toš, respectively. The sampling in these two surveys followed the same procedures as used for the SPOP surveys, but the data processing was different due to adjustments in the different international contexts. In particular, occupational information was recorded in much more detail in the latter two surveys. And, finally, we added a sample, which was used for the Time Use Survey, from 1967 (n = 600, on results see Boh & Saksida 1969).

To our best knowledge, Slovenian researchers who have studied the stratification regime of Slovenia have not used the selected SPOP surveys. But some of the Slovenian data sets appeared as a source in a range of comparative publications originating from the Social Justice Project and the International Social Survey Program (see, for example Dessens *et al.* 1999, Gijssberts 1999).

In the pooled data set there was a total of 11 828 respondents all together. For our analyses we selected respondents who were between 21 and 64 years of age at the time they were interviewed, which left us with only 10 930 respondents<sup>20</sup>. Furthermore, we only included data on respondents with valid information on all the variables relevant in the analysis. This left us, in the end, with a dataset containing information on 10 569 respondents for our education analyses and 9118 respondents (i.e. employed persons only) for the occupational analysis.

*The educational attainment* of respondents was measured in line with the measurement procedures of the second generation of stratification research: people's highest level of education<sup>21</sup> was re-coded into the approximate number of years of education completed. The educational classifications used in the surveys were rather varied, with no pair being strictly identical. They ranged between five crude categories in the 1973 SPOP survey, and seven internationally imposed categories in the Social Justice file to a full recording of years completed in the 1968 file.

We quantified each of the categories using the approximate years of study associated with it. For validation we checked whether the measure constructed passed a 'visual test' of linearity with respect to the criterion variables in the model, i.e. fathers' occupation and respondents' occupation. A further comparison between the surveys reveals that there is a rather consistent trend towards higher education between 1968 and 1992, and that education has about the same standard deviation in all the surveys.

*Occupational attainment* enters the analyses for two types of persons: respondents and their fathers. Again, the occupational information was rather variable, varying between the crude classifications (7 categories) used in the 1973 and 1980 SPOP surveys

and the detailed classification according to the International Classification of Occupations [ISCO] 1968/88 in the Social Justice file, with an intermediate number of categories (around 20) in the remaining files.

We processed this information using procedures developed by Ganzeboom & Treiman (1990) for constructing the International Stratification and Mobility File. Each category was first matched with a detailed or broader category of both the ISCO-68 and ISCO-88 classifications. Where available, information on supervisory status was used to allot subcategories to an appropriate place in the respective ISCO classifications. This information was then converted into the International Socio-Economic Index of occupational status [ISEI], developed by Ganzeboom, De Graaf, and Treiman (1992), allowing the interval level of measurement and analysis of the key status variables. Finally, a mean of both derived indexes (for the ISCO-68 code and for the ISCO-88 code) was calculated for every active person. We checked whether the relationship between ISEI, FISEI and years of education (EDUCYR) was approximately linear; we also sought to find more appropriate ISCO categories to make adjustments towards linearity, where the original classification gave us some degree of freedom.

For the analysis of educational attainment, the respondents were classified according to their birth years<sup>22</sup>. One can assume that, on average, the crucial decisions about educational career (in Slovenia) were taken at age 12, and this is added as a constant to the year of birth to create *cohorts* (COH) that are optimally sensitive to contextual variations:

$$\text{COH} = (\text{year of birth}) + 12.$$

For the occupational status attainment analyses, we estimate the year of *entry into the labour market* (EYR) as the imputed year of completion of education, that is:

$$\text{EYR} = (\text{year of birth}) + 7 + (\text{years of education}).$$

Finally, based on information on the LM entry year and the survey year, a variable was constructed to take account of the differences in labour markets concerning work experience between individuals. *Experience* (EXP) was estimated by taking the difference:

$$\text{EXP} = (\text{survey year}) - (\text{entry year}).$$

The temporal coverage of the main labour market (constructed) variables through cohorts might be seen from the table: 'YRE x EXP' (in Appendix 2).

The description of original and constructed variables is presented in table 2. It is to be noted that all the constructed variables are only approximations of the true dynamics, as we do not have precise information on the length of education and actual year of entry into the labour market. Moreover, while we label the time elapsed since entry into the labour market as Experience, we do not really know how much of that time was spent in the labour market, let alone whether it was spent in similar jobs to the current one. As we will show, this does not make a difference on the interpretation of historical developments.

**Table 2**  
**Descriptive of Variables in the Analysis (n = 10930)**

A. INITIAL VALUES OF CONSTRUCTED VARIABLES		
YEAR		Years of the survey: 67, 68, 73, 80, 89, 91, 92, 98
AGE	21..64	Age of a respondent at the survey time
FEMALE	0,1	Gender (0 - male, 1 - female)
BYR	5..80	Year of birth: BYR = YEAR - AGE.
COH	15..90	Year of the crucial decision about educational career, aggregated in 5-years wide cohorts: $COH = 5 * RND((BYR + 12) / 5)$ .
EDUCYR	0..22	Education scaled by approximate number of years of completion.
EYR	15..97 15..95	Year of entry into the labor market, assumed to be identical to the year of leaving education, aggregated in 5-years labour market entry cohorts: $EYR' = RND(BYR + 7 + EDUCYR)$ , $EYR = 5 * RND(EYR' / 5)$ .
EXP	0..50 0..50 0..50	Years of experiences on labour markets based on exact entry-year (EYR1) aggregated in 5-years wide classes (used for occupational analysis): $EXP' = SURVEY - EYR'$ , $EXP = 5 * RND(EXP' / 5)$ .
(F)ISEI	1..9	Father's and respondent's occupational status, derived as the mean of the ISCO-68 and ISCO-88 codes, scaled by the International Socio-Economic Index (Ganzeboom & Treiman, 1996), by 10 ISEI points metric: $FISEI = RND(MEAN(fasei, fosei)) / 10$ (miss = 361) $ISEI = RND(MEAN(asei, osei)) / 10$ (miss = 1515)
B. TRANSFORMED VALUES OF BASIC TREND VARIABLES		
COH	-3,5..4,0	Variable centered in the period around 1950, by 10 years of historic time metric (used for educational analysis): $COH = (COH - 50) / 10$
EYR	-4,5..3,5	Variable centered in the period around 1960, by 10 years of historic time metric (used for occupational analysis): $EYR = (EYR - 60) / 10$

## 5. Methods

### 5.1. Educational attainment

Using the ‘Linear model of highest level completed’ we have assessed the changes in access to education. This model was introduced by Blau and Duncan (1967) and assumes that educational attainment, as a dependent variable can be represented adequately by a metric variable (for example, by years of schooling) and that the relation between social background variables and successive levels of educational attainment is linear. In this model, the final attained number of years of a person’s education is the dependent variable, and as independent variables we used the father’s occupational status (FISEI) and the cohort (COH) of respondents. In order to examine whether the effect of fathers’ occupational status changed over the cohorts we also included an interaction term between these two variables (FISEI\*COH):

$$EDUCYR = a + b*FISEI + c*COH + d*(FISEI*COH) + e*FEMALE + f*COH*FEMALE + g*FISEI*FEMALE + \varepsilon, \quad (1)$$

in which the usual  $\varepsilon = 0$  for the error term in the regression model was applied. After running the OLS procedure, the above model (1) brings a set of estimated coefficients to the population parameters. For simplicity of notation, and to expose a linear trend d in parental effect b, the above equation for predicting the values of EDUCYR could be rewritten in the following way:

$$EDUCYR = a + c*COH + (b + d*COH + g*FEMALE)*FISEI + (e + f*COH)*FEMALE,$$

where all coefficients attached to FEMALE terms bring differential effects for women in comparison to men. Due to the need for a better ability to interpret the results and for other methodological difficulties, additional numerical transformation was conducted on the variables FISEI and COH (details are shown in the lower part of table 2). Note that coefficient a gives the expected mean education for a person born in about 1940, making his first school continuation decisions in 1950, whose father’s occupational status is at the average for 1948-1952. Coefficient b gives the effect of fathers for those born in 1940, where the effect is measured as years of education per 10 points of FISEI. Coefficient c gives the (linear) effect of educational expansion over time (in precise terms - the expected difference in average years of schooling for persons born 10 years apart whose fathers have the mean occupational status in their cohort).

Coefficient d, which is of the greatest interest to our analysis, gives the linear change in the effect of the father’s occupational status on educational attainment over time. We also have other three terms (coefficients e, f, and g) to detect gender differences in educational attainment.

## 5.2. Occupational attainment

To examine the effects of parental background on occupational status we used a procedure, applied first on Italian data (Ganzeboom, DeGraaf, Treiman 1993, see also Ganzeboom & Treiman 1996) and later also on data of 11 other nations (Ganzeboom, Kalmijn, Peschar 1995). We applied a linear regression model, where the dependent variable is a score for the respondent's occupational status (ISEI as a mean of two SEI values derived from the appropriate ISCO-68 and ISCO-88 codes), and the main explanatory variables are the father's occupational status (FISEI as a mean of two SEI values derived from the appropriate ISCO-68 and ISCO-88 codes), and the respondent's total years of education (EDUCYR). This would be an example of the classic status attainment approach.

However, we have to control for the fact that older cohorts, on average, have more labour market experience than younger cohorts. Furthermore, we have to control for the fact that the effects of a father's occupational status and the effect of a respondent's education can change over their occupational career. For more experienced people, i.e. who have been away from their parental house for a longer period, the effect of their parental background can be assumed to be smaller.

Therefore, in our model we include a variable for experience (EXP) and its interaction term with fathers' status (FISEI\*EXP) and education (EDUCYR\*EXP). By doing this in our model the effect of a father's occupational status and a respondent's education are measured at a point where respondents have zero years of experience, i.e. at the assumed time when education was completed and the labour market entered. Therefore, conceptually our model comes down to a model with the first occupation as the dependent variable, as in Blau & Duncan's classical status attainment model (Blau & Duncan 1967).

Our main interest then is in historical variation, using a variable indicating the approximate year a person entered the labour market (EYR). To test whether the effects of a father's occupational status and a person's education on attained occupational status have changed over the period under investigation, interaction terms between a variable indicating the year a person entered the labour market (EYR), and two main explanatory variables are included (FISEI\*EXP and EDUCYR\*EXP). The final model takes the form of a linear regression (error term  $\epsilon$  included here):

$$\begin{aligned}
 ISEI = & a + b*EXP + c*EYR + d*FISEI + e*EDUCYR + \\
 & + f*FISEI*EXP + g*EDUCYR*EXP + \\
 & + h*FISEI*EYR + i*EDUCYR*EYR + \\
 & + j*FEMALE + k*EDUCYR*FEMALE + l*FISEI*FEMALE + \epsilon \quad (2)
 \end{aligned}$$

As before, we have in the last row of the regression equation (2) three other terms (coefficients j, k, and l) to model gender differences in occupational attainment. Also, for predicting the values of ISEI and by exposing a linear entry-year trend and a linear

lifetime trend in EDUCYR (second row) and in FISEI (third row), the above equation could be rewritten in the following way:

$$\begin{aligned}
 ISEI = & a + b*EXP + c*EYR + j*FEMALE + \\
 & + (d + h*EYR + f*EXP + l*FEMALE)*FISEI + \\
 & + (e + i*EYR + g*EXP + k*FEMALE)*EDUCYR
 \end{aligned}$$

After running the OLS procedure and applying the usual  $\varepsilon=0$  for the error term, the above model (2) yields a set of estimated coefficients for the population parameters. Coefficient *a* gives the expected ISEI score at the point of entry for a person entering the labour force in 1960 whose father's occupational status (FISEI) and own education (EDUCYR) are at the average for the 1940-52 entry cohort. Coefficient *b* gives the (main) effect of seniority among those with the average education and average father's ISEI score of the labour force entry cohort. Coefficient *c* gives the (linear) effect of the 'upward shift' in the occupational distribution over time. Coefficients *d* and *e* give the effects of a father's occupation and the effects of a respondent's years of education on his/her occupational status at the beginning of the career for those entering the labour force in 1960 (*e* must be multiplied by 10 to put it in the same metric form as the original variables). Coefficients *f* and *g* in the interaction terms give the (linear) change in the effect of the father's occupational status and the effects of the respondent's education on occupational attainment for each additional ten years of seniority, respectively.

Coefficients *h* and *i*, the most interesting for our analysis, give the difference in the effect of fathers' occupational status and of educational attainment for labour force entry cohorts 10 years apart, respectively.

## 6. Discussion on empirical findings with the applied Blau-Duncan models

### 6.1. Educational attainment in Slovenia

We have already discussed the expansion of the educational system in Slovenia earlier in the paper. This discussion is confirmed by our data. In Table 3 we first present the average years of education (EDUCYR) by cohorts (COH). As we can see, the average of educational distribution has gradually increased, but at a faster rate for women than for men.

The first question (1) concerns whether the patterns of educational inequality have changed. We thus examined the changes in the effects of parental background on final educational attainment employing the 'Linear Model of Highest Level Completed'. In this model, the respondent's final educational attainment, measured in years of schooling, was regressed on parental background variables. To examine how the effects of parental background changed over the cohorts, two versions of the 'Linear Model of Highest Level Completed' were applied. The first version allows for non-linear trends

by using dummies for the distinguished cohorts. In the second version of the model, the cohort variable was included as an interval variable, and thus this model tests for linear trends. The parameter estimates of both versions of the 'Linear Model of Highest Level Completed' are presented in Table 4.

**Table 3**  
**Years of Education by Female and Birth Cohort**  
**Summaries of EDUCYR**  
**By levels of FEMALE**  
**COH**

Variable	Value Labe	Mean	Std Dev	Cases
For Entire Population		9.746	3.073	10569
FEMALE	0 Men	10.060	3.020	5284
COH	15	6.781	3.076	32
COH	20	7.517	2.903	114
COH	25	8.635	2.913	195
COH	30	9.212	3.184	217
COH	35	9.201	3.151	313
COH	40	9.410	3.362	564
COH	45	9.837	3.007	584
COH	50	9.710	3.166	660
COH	55	10.393	3.057	614
COH	60	10.898	2.847	514
COH	65	10.510	2.632	529
COH	70	11.076	2.233	365
COH	75	10.957	2.211	283
COH	80	11.035	1.997	228
COH	85	11.857	2.194	56
COH	90	12.000	1.549	16
FEMALE	1 Women	9.431	3.095	5285
COH	15	5.733	3.061	30
COH	20	6.532	2.668	137
COH	25	7.881	2.434	169
COH	30	7.959	2.727	247
COH	35	8.067	2.484	326
COH	40	8.537	2.980	581
COH	45	8.532	2.989	638
COH	50	8.892	3.048	628
COH	55	9.637	3.031	580
COH	60	10.353	2.796	482
COH	65	10.584	2.821	477
COH	70	11.054	2.638	370
COH	75	11.385	2.485	298
COH	80	11.362	2.103	240
COH	85	12.353	2.477	65
COH	90	13.058	1.297	17

**Table 4**  
**Trends in Educational Attainment in Five Year Wide Educ. entry Cohorts, 1915 - 1990, Men and Women Aged 21-64. Metric Regression Coefficients (N=10569)**

	A	B	C	D	E	F
COH	.669 (37.4)	.516 (20.3)	.424 (17.9)	.729 (13.2)	d	d
FEMALE	-.612 (10.9)	-.682 (12.1)	-.823 (5.1)	-.824 (5.1)	-.827 (5.2)	-.829 (5.2)
COH * FEMALE		.300 (8.4)	.289 (8.7)	.293 (8.8)	.292 (8.8)	.295 (8.9)
FISEI			.879 (28.4)	.928 (29.1)	.920 (28.8)	
FISEI * FEMALE			.043 (1.0)	.044 (1.0)	.045 (1.1)	.046 (1.1)
FISEI * COH				-.087 (6.1)	-.081 (5.6)	
15						1.323 (2.8)
20						1.042 (5.3)
25						.967 (6.9)
30						.999 (8.1)
35						1.015 (9.9)
40						1.127 (14.7)
45						.825 11.3)
50						.871 (13.1)
55						1.038 (15.7)
60						.912 (14.0)
65						.752 (11.2)
70						.808 (10.1)
75						.806 (9.1)
80						.459 (5.0)
85						.580 (3.4)
90						.251 (0.6)
Constant	9.896	9.933	6.848	6.700	6.500	6.669
adj R <sup>2</sup>	12.6%	13.2%	25.4%	25.7%	26.0%	26.1%

NOTE -

COH: Year when respondent was 12 years old (15..90), centered around 1950, by 10 years metric;  
 FEMALE: 0..1 gender; FISEI: Father's status (1..9); d: main dummy effects specified but not presented. T-values in parentheses.

The figures in this Table give a precise picture of the effects of fathers' occupational status on final educational attainment in Slovenia for birth cohorts born between circa 1905 and 1980, thus covering historical events in the 1920-1995 period. Note that our age selection and the fact that we have allotted students to their expected level of education ensures that selection effects are minimised<sup>23</sup>.

Models A and B assess the educational expansion of men and women and simply serve to provide a parsimonious model for the numbers already shown in Table 3. Model A tells us that every 10 years the average years of education increases by 0.7 years, and that on average women lag men by 0.6 years of education. Model B includes the interaction between sex and birth cohort, which is strongly significant. It informs us that in the cohort born at the turn of the century (which is not observed in our data), women lagged men by about 0.68 years. As gender was coded as a [0,1] variable, the cohort coefficient now refers to men only, and was found to be 0.5 years per decade. For women, educational expansion is found to be  $(0.516 + 0.300 = )$  0.8 years per decade. The interaction term implies that, by the cohort born in 1980, women had already more than made up their careers  $(-0.682 + 0.300*8 = 1.718)$ , which squares well with the numbers observed in Table 3.

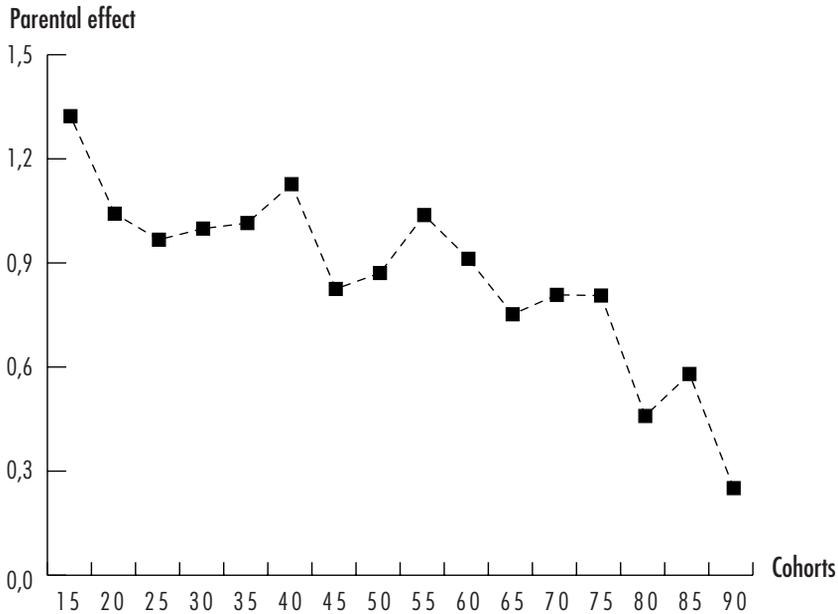
Model C adds a father's occupation to the predictor set. Every 10 points of a father's status is associated with 0.9 years of education (note that in the original metric terms, the father's status ranged between 10 and 90), and this number hardly varies between men and women (i.e. an insignificant interaction term FISEI\*FEMALE in all models).

Model D shows that the differences according to family background have significantly declined over the century. For the pooled model they are estimated at more than 0.9 years of education per 10 points of father's status, but this had declined by about 25% in the cohort born in 1980  $(-0.087*8 = -0.696)$ , and  $0.696/0.928$  gives 75% of decline).

Model E replaces the linear cohort effect with separate dummy variable effects, thus allowing for more non-linear variation in the model. The increase in the adjusted R2 suggests that this is a better fitting model. It is important that it changes the estimate of the change in fathers' effect to some degree: the change coefficient is now estimated at -0.081 per decade, suggesting that the initial fathers' effect has declined only 70% over the cohorts observed  $(-0.081*8 = -0.648)$ , and  $0.648/0.920$  gives 70%) The effect is still widely significant.

Finally, Model F separates the changes in fathers' effect out by cohort and Figure 2 gives a visual impression of the estimated coefficients (and their approximate 50% confidence intervals). The improvement of the adjusted R2 suggests that significant non-linearities exist and Figure 2 shows what they are. For men and women the effect of a father's occupation remained high until the 1940 birth cohort, and started to decline only after this time. In fact, a lasting decline of about 42% - 47% from 1.1 (COH = 40) or from 1.0 (COH = 55) to 0.58 (COH = 85) occurs almost exclusively in this era. Surprisingly these findings expose a rather drastic decrease of parental effect during socialism in comparison to other CEE countries (Ganzeboom & Nieuwebeerta 1999). This contrasting issue should be investigated further.

**Figure 2**  
**Cohort Variations in Parental Effect on Educational Attainment**



If we translate the findings into a historical context (i.e. when the respective cohorts were making their crucial decisions in the educational career), we find that the educational system only began to open up after 1960. At that time, some of the decisive educational rearrangements were made and national educational testing was imposed. While nothing in our data can give further evidence on this coincidence, it remains a rather suggestive observation.

**6.2. Occupational attainment in Slovenia**

In comparison to the expanded educational system the change in occupational ‘system’ represents another, more complex social mechanism. The latter is not so institutionalised as the former. The latter is mainly due to labour division (technical progress), thus providing a place for work and the earning activities of people; but also it provides an arena for politically, institutionally and socially conditioned utilisation of the current labour force. It is hard to talk about its expansion; instead, we should talk in terms of its temporal change.

This is also confirmed by our data. Below, (in table 5) we present the average ISEI points of occupational status by entry years, separately for men and women. We can see that the occupational distribution (mean, STD) has changed for both, but, again, more for women than for men.

**Table 5**  
**Occupational Attainment by Sex and LM Entry Cohort**  
**Summaries of ISEI**  
**By levels of FEMALE**  
**EYR**

Variable	Value Label	Mean	Std Dev	Cases
For Entire Population		4.101	1.387	9118
FEMALE	0 Men	4.176	1.302	4743
EYR	15	2.976	.573	17
EYR	20	3.235	.779	40
EYR	25	3.444	1.045	92
EYR	30	3.631	1.143	130
EYR	35	3.969	1.318	160
EYR	40	3.937	1.252	330
EYR	45	4.086	1.309	411
EYR	50	4.072	1.280	526
EYR	55	4.239	1.364	574
EYR	60	4.375	1.298	518
EYR	65	4.321	1.409	493
EYR	70	4.385	1.226	486
EYR	75	4.387	1.147	386
EYR	80	4.235	1.352	255
EYR	85	4.019	1.226	242
EYR	90	4.470	1.325	60
EYR	95	4.587	1.418	23
FEMALE	1 Women	4.020	1.468	4375
EYR	15	3.403	.841	26
EYR	20	3.440	.862	67
EYR	25	3.558	1.014	96
EYR	30	3.419	1.079	132
EYR	35	3.530	1.307	185
EYR	40	3.413	1.301	326
EYR	45	3.645	1.417	392
EYR	50	3.794	1.434	448
EYR	55	3.739	1.405	465
EYR	60	4.297	1.526	437
EYR	65	4.183	1.551	434
EYR	70	4.551	1.471	406
EYR	75	4.441	1.392	322
EYR	80	4.512	1.332	294
EYR	85	4.249	1.436	250
EYR	90	4.939	1.738	64
EYR	95	5.441	1.290	31

Table 6 reports our analysis of occupational status attainment. Four models are estimated for the pooled data, building up to the full model of equation (2) which is shown here as model C. Since this analysis includes only those respondents with valid occupation codes, the number of cases (n = 9118) is reduced relative to the analysis on educational attainment (n = 10 569).

**Table 6**  
**Trends in Occupational Attainment in Five Year Wide Labor Market Entry Cohorts, 1915 - 1995, Men and Women Aged 21-64. Metric Regression Coefficients (N=9118)**

	A	B	C	D	E
EYR	.205 (5.2)	-.168 (5.4)	-.373 (10.0)	d	d
EXP	-.006 (1.4)	-.014 (3.5)	-.017 (3.4)	-.003 (0.8)	-.015 (3.1)
FEMALE	-.550 (6.8)	-.444 (5.7)	-.443 (5.8)	-.462 (6.1)	-.465 (6.1)
FISEI	.442 (13.4)	.154 (5.9)	.165 (6.0)	.199 (7.3)	
FISEI * FEMALE	.114 (5.2)	.054 (3.0)	.051 (2.8)	.053 (2.9)	.044 (2.4)
EDUCYR		.307 (58.5)	.311 (28.9)	.334 (31.3)	
EDUCYR * FEMALE		.026 (3.7)	.025 (3.5)	.027 (3.8)	.031 (4.3)
FISEI * EXP	-.003 (2.2)	-.000 (0.3)	-.001 (1.0)	-.003 (2.3)	-.002 (1.5)
EDUCYR * EXP			.034 (10.8)	-.001 (1.9)	-.001 (1.2)
FISEI * EYR	-.056 (5.2)	-.020 (2.4)	-.057 (6.5)	-.077 (9.2)	
15					.466 (1.9)
20					.540 (3.1)
25					.450 (4.6)
30					.531 (6.1)
35					.438 (5.9)
40					.383 (6.8)
45					.261 (5.2)
50					.222 (5.4)

The parental effect on educational and occupational attainment in Slovenia during the 2<sup>th</sup> century

55					.181 (4.6)
60					.089 (2.5)
65					.074 (2.2)
70					.125 (3.9)
75					.145 (4.2)
80					.058 (1.5)
85					.068 (1.8)
90					.111 (1.7)
95					.206 (2.2)
EDUCYR * EYR			.034 (10.1)	.032 (9.6)	
15					.078 (0.7)
20					.060 (1.2)
25					.091 (2.4)
30					.098 (3.2)
35					.195 (7.3)
40					.196 (9.6)
45					.247 (13.3)
50					.278 (18.3)
55					.327 (21.9)
60					.305 (20.9)
65					.359 (25.3)
70					.371 (21.9)
75					.350 (19.7)
80					.398 (19.6)
85					.327 (14.3)
90					.393 (9.6)
95					.342 (5.5)
Constant	3.017	0.834	0.723	0.530	1.120
adj R <sup>2</sup>	19.6%	52.2%	53.3%	53.6%	54.3%

NOTE - d: Dummy effects not listed. T-values in parentheses.

Model A refers to the kernel of the stratification process and reports the effects of fathers' occupational status (FISEI), labour market entry cohort (EYR), and seniority (EXP), averaged over the total dataset. The main effect of fathers' occupation is about 0.44 for men and is slightly larger, about 0.56 for women ( $0.442 + 0.114 = 0.556$ ). They both imply an average level of intergenerational occupational mobility during the middle of the century, that is neither exceptionally high nor exceptionally low as compared to other European countries at that time (for Hungary see Ganzeboom, De Graaf, and Robert 1990; for other countries see Ganzeboom & Treiman 1996, Ganzeboom, Kalmijn, and Peschar 1995).

The positive value of the coefficient associated with labour force entry year (EYR = 0.205), indicates an 'upward shift' of the occupational structure (more 'good' jobs, less 'bad' jobs in the terms of ISEI codes). Each decade later, a man would obtain an occupation of two ( $0.205 * 10$ ) ISEI points higher. The third variable in model A, seniority, has a very modest effect (EXP = -0.006, not really significant) on occupational status attainment.

Model B adds educational attainment as a determinant of occupational status. As expected, educational attainment has a substantial effect on occupational status: for men each additional year of schooling results in an expected increase of about 3.0 ISEI points ( $0.307 \times 10 = 3.07$ ), while for women slightly more, about 3.3 ISEI points ( $0.307 + 0.026 = 0.333$ ). In addition, its inclusion has a major impact on the other coefficients. The variance explained by the model is therefore increased substantially (from 19.6% in model A to 52.2% in model B).

Furthermore, the coefficient for fathers' occupational status reduces by more than half (from 0.442 to only 0.154); and the effect of both entry year and experience substantially decreases (EYR from 0.205 to -0.168 and EXP from -0.006 to -0.014, respectively). The decrease in the effect of seniority is not so straightforward and will need further investigation (usually, within cohorts, seniority and education are negatively correlated, so that when education is omitted, the effect of seniority is suppressed). Also, a decrease in the effect of the entry year is not very common (usually an increase is present, which follows from the negative correlation between entry year and seniority: recent entry cohorts cannot have been in the labour force for a long time).

In Model C, which includes all main and interaction terms from equation (2), there is only a small change compared to Model B - a term for the control of (linear) temporal change in educational expansion is added. The new specification causes further significant decreases in both main effects: entry year (EYR from -0.168 to -0.373) and experience (EXP from -0.014 to -0.017). The inclusion of the term for educational expansion does not change the direct effect of the respondent's education on his occupational attainment (EDUCYR even slightly increases from 0.307 to 0.311); for men, each additional year of schooling thus yields an increase of about 3.1 ISEI points. The main effect of fathers' occupation is about 0.165 for men and a bit more - 0.216 ( $= .165 + .051$ ), for women.

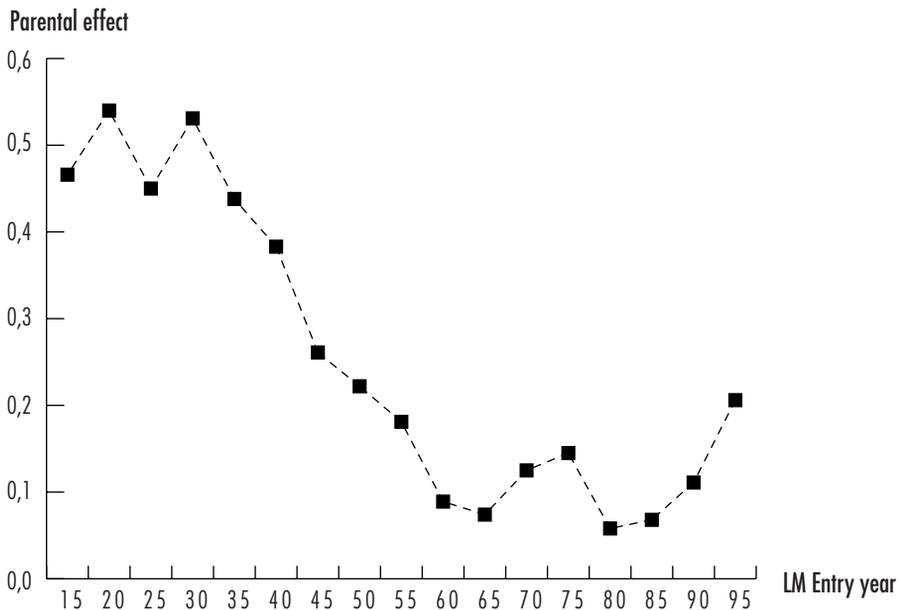
More interesting are the trend effects. In order to be able to test to what extent occupational opportunities in Slovenia have changed over time, we need to look at the interaction term between a father's occupation and year of entry into the labour market (FISEI\*EYR). We can see, that the (linear) trend effect is significantly negative, -0.057 (from -0.020 in model B to -0.057 in model C). To control for educational expansion, we have an interaction between education and entry year (EDUCYR\*EYR). Here, we can see that expansion increased the chances of obtaining higher occupational attainment (0.032).

Furthermore, in order to control for changes in the effects of parental background and education between persons with higher and lower experience in the labour force, interaction terms between fathers' occupation and experience (FISEI\*EXP) and between education and experience (EDUCYR\*EXP) have been included. The former effect is negative (-0.003) and not significant (this is not so common, as the parental background should be ever less important for a career during the respondent's life). The latter effect is, however, significantly positive (0.034), which might mean that during the career the role of education increases, which might also be in accordance with the above mentioned hypothesis that the role of education is overestimated in Slovenia, as a delayed industrial country.

Model D with an improved explained variance makes a single change compared to model C, in replacing the main effect of the entry year variable (EYR) by a cohort-wise dummy specification, allowing to control for temporal non-linearities in this effect. All the estimated parameters remain rather stable in comparison to the previous model C, except for all those defining the life-cycle effects (EXP). The main effect (EXP) is not much more significantly different to zero, and both trend effects changed, as well. While the educational effect on occupational attainment over life cycle is now reduced nearly to zero, the corresponding parental effect becomes significantly negative (-0.003). The rationale behind this would be that no clear regularity could be found in the utilisation of work experiences in labour markets in Slovenia. In other words, work and life experiences were much less rewarded than, for example, education, probably due to the rapidly changing structural environment (ever new jobs could barely be handled effectively by the old experiences).

Model E replaces both, i.e. the main term for entry year (EYR) and the linear interaction terms for entry year (FISEI\*EYR and EDUCYR\*EYR), by a cohort-wise specification that allows us to look for non-linearities in parental and educational effect. That is why both main effects (FISEI and EDUCYR) are omitted from this model, too. The adjusted R2 suggests that a non-linear design of these two effects in model E is a significant improvement on the model D (an increase from 53.6% to 54.3%). Figure 3 shows the estimated coefficients for parental effect (FISEI) by entry cohort, together with their approximate 50% confidence intervals.

**Figure 3**  
**Cohort variations in parental effect on occupational attainment**



The main non-linearity in the coefficients occurs in the earlier cohorts, and, again, in the recent cohort, after the 90s, when democracy and market forces again replaced the former overwhelming political conduct and pressure. The finding also exposes the emerging characteristics of a 'more relaxed' context of the transitional Slovenia, which theoretically could have been anticipated: a slight increase in parental effect and a modest decrease in educational effect on occupational attainment.

## 7. Concluding remarks

With the use of the regression mobility models, we empirically addressed social change and stability in Slovenia in the 20th century. The data, collected in a pooled data set, is representative of adults, aged from 21 to 64 years. They come from two different sources: firstly, from five (two-stage stratified) random samples of regular cross-section surveys, namely, Slovenian Public Opinion Polls, completed in 1968, 1973, 1980, 1989 and 1998, and, secondly, from three other random sample surveys, namely, the Time Use Survey (1967), the Social Justice Project (1991), and the ISSP survey (1992). The applied research design allowed for cohort analysis, embracing labour market entry years of respondents from around 1920 onwards. After describing historical determinants and examining stratification research in Slovenia, we brought together information on long-term trends in intergenerational mobility, using the core of the Blau-Duncan model. By using standard scales and methods the issues tend to be internationally comparable.

We estimated the basic parental effect within the occupational and educational attainment of (active) people. The findings support the existence of a significantly negative linear trend in the parental effect over time (a validation of the IMS hypothesis), which explains the functioning of the mobility regime during the modernisation in Slovenia: through industrial development, the society was slowly changing towards a more merit-selective, market-based society.

Expanding the last finding further, we found - by a dummy-cohort design of parental effect in the models - a significant non-linearity in parental effect in educational as well as in occupational analysis. Surprisingly, the findings expose a rather drastic decrease of parental effect during socialism in comparison to other CEE countries, followed by a slight increase (in occupational analysis) towards the end of socialism (1990). Most of the long-lasting decrease was due to the strong communist policy interventions on the Slovenian labour markets. Such a significant trend of de-stratification gives a validity also to the political intervention thesis in mobility research, at least for the period until the 90s in the ex-socialist countries. This decrease seems to be diminished now, since the introduction of a market economy and the democratic system of political competition. Probably, the new and more open societal situation is going to slowly re-establish a more 'normal level' of parental effect as is commonly found in other Western countries.

Nevertheless, the non-linear variations of parental effect over time, and its rather strong decrease during socialism in Slovenia - in comparison to some other post-socialist countries - mean that for future research we feel a need to deepen our understanding on how a mobility regime works in general and in the longer perspective<sup>24</sup>, especially under salient political pressure within a small country. There are good reasons to believe that the above results are not only a purely experimental or numerical issue, valid only for Slovenia due to its socialist era. A substantive explanation, though highly speculative, could be the following.

Within a small nation (limited in its sovereignty within the international context) a network of unbalanced structural opportunities is behaving like an unstable structural device for mobility. Some factors are much more important than others, which are either not settled enough or are simply missing. Also, due to frequent changes the resources and organisational systems should adjust repeatedly to the variety of external pressures. It is then likely that the parental (family) effect is only used by individuals as a compensating device: it acts stronger, when some other resources are rarer (weaker) or some other mobility channels are closing further. As a consequence, the mobility regime functions only at a sub-optimal level: sometimes it is close and sometimes it is far from the (invisible) optimum. In such situations, the extremes might tell us more than the overall long-term pattern. The significant variations in a single factor effect over time - like is the case with parental effect in Slovenia during socialism - could have an important signalling value: it uncovers the fragility of the whole underlying mobility regime. If nothing else, given the extreme values in the single factor effect, it suggests an inevitable under-utilisation or even forced scarcity in some of the other mobility factors.

However nice the above explanation sounds, it still expresses an overly mechanical view of the basically stochastic nature of social dynamics. Therefore, it needs further sociological illumination and methodological elaboration.

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## Appendix 1

### An Overview of Slovenian History during 20th Century

- ... 1918 Slovenia is part of the Austro-Hungarian empire. Its elite is mainly German speaking, with official bilingual practice in public affairs from 1860 onwards. The population overwhelmingly Slovene and Roman Catholic.
- 1918 Slovenia becomes an autonomous region of the Federal Kingdom of Yugoslavia (Slovenians, Serbians, Croates, other minorities and nationalities not allowed). Cultural ties with the German speaking part of Europe are lessened. Free elections, and autonomous local parliament until 1931. Late, but speedy industrialization. The educational system has four years of compulsory schooling.
- 1923..43 West and Adriatic part of current day Slovenia (Koper, Gorica) under repressive Italian rule (London Memorandum 1915).
- 1941-1945 Second World War. Italian, German & Hungarian occupation. Slovenian partizan forces, being a part of Tito's army, press for independence. At the end of the war, the Slovenian territory is redefined; it now embraces almost all Slovene speaking population in the region. Pockets of (bi-lingual) Slovenians live across the Austrian (Carinthia) and Italian (Trieste, Veneto-Friuli) borders. Inside Slovenia there remain small pockets of Italian (Histria) and Hungarian (Prekmurje) speaking minorities.
- 1946 Free elections promised by Tito, but they were rigged. Tito unites Slovenia with the Federal Socialist Republic of Yugoslavia. Slovenia remains independent from Belgrade in cultural matters, such as education. Second wave of industrialization starts (mid 60s and 70s) and leads to immigration of unskilled labour force to Slovenia from other parts of Yugoslavia, especially of Serbo-Croations that number nowadays about 10% of the population (citizens).
- 1958- ... Educational reform. In the new system, 8 years of comprehensive primary education becomes compulsory (age 7-14), secondary education is characterized by a wide arrangement of vocational tracks.
- 1948..56 Yugoslavia (Tito) broke with Stalin. Contacts with the Soviet Union again within the Hruschtchev period. Around 1955, borders with Austria and Italy are finally settled.
- 1947..60 Orthodox communist period. Nationalization of all large enterprises and real estates. Agricultural collectivisation attempted, but failed at the end (1958). Many Slovenians (20% to 30%) continue to have family-land ownership, which is often worked at the side. After the orthodox period and the settling of the border dispute with Italy (1955), the borders remain open for citizens and many Slovenians work temporarily in Western Europe (short- and long-distance migrations).
- 1952..70 Political elites in Yugoslavia gradually try to establish a third way of socialism - a more soft version of communism, with elements of controlled self-regulation within firms and local authorities. On international level, high involvement in non-aligned movement.

- 1965 A national ability test system for 13 years old is established in Slovenia. Talented children from low status families receive material support to extend their studies.
- 1970..1980 First signs of hostile nationalisms within and between republics of Yugoslavia. Large political and economic reforms towards decentralization of planning and political decision making. Even half-autonomous national self-defense forces were allowed within republics (beside federal army forces), they were developed only in Slovenia.
- 1980 Tito dies. Attempts by Belgrade to impose a unique federal educational system, with Serbian language and history exposed and with other measures to re-integrate Yugoslavia fail.
- 1990 First free multi-party election after WW2 in Slovenia. Anti-communist coalition DEMOS (consisting of christian-democrats, social-democrats and nationalists) wins the majority and appoints a new government. The transformed Communist Party wins about 15% of the popular vote. In December 1990 a Plebiscit referendum for independent Slovenia was performed (82% in favour).
- 1991 The Slovenian parliament announces independence (Jun). Attempts by federal troops to overthrow the newly formed government are effectively countered by secretly formed local militia and national defense forces. The fights last 10 days and lead to about 40 casualties. Federal troops withdraw from Slovenia in September-October 1991 under the threat of the awakening Serbian-Croatian conflict. The Vatican state, Germany and Italy are quick to recognize the newly born state.
- 1992 Slovenia's independence is recognized by other Nato states, Russia and finally by Yugoslavia. The first Slovenian government under independence is ousted. Elections held in December 1992 lead to liberal-democratic dominance in government coalition with Christian Democrats, the former Communist Party that shrinks to a smaller proportions (<10%) and few others.
- 1996 Slovenia becomes a candidate member of NATO and the EU. Second elections held in December 1996, lead again to (now a weaker) liberal-democratic dominance in coalition with Slovenian People's Party and few smaller parties. The former Communist Party is in opposition. Fostering of economic (privatization of enterprises) and social reforms (education, pension, health services), augmented by efforts oriented toward EU accession.
- 2000 Political disputes over hesitating reforms and delayed economic and financial restructuring during the period 1997-1999 introduce elements of political crises into the country. The Parliament votes for no confidence in the governmental coalition just five months before the next third regular elections (are to be held in mid of October 2000). A right-wing coalition establishes a new temporary government.

**Appendix 2**  
**Years of Potential Experience in the Labor Force (EXP) by Year of Entry**  
**in the Labor Force**

Count	EXP											Row
EYR	0	5	10	15	20	25	30	35	40	45	50	Total
15											55	55 .5
20										60	70	130 1.2
25									77	136	66	279 2.6
30								72	186	89	30	377 3.4
35							74	202	88	109	10	483 4.4
40						138	277	125	209	20	76	845 7.7
45				156	286	137	191	35	219	37		1061 9.7
50			182	299	147	202	25	268	75	20		1218 11.1
55		145	304	153	195	33	250	92	26			1198 11.0
60	101	219	111	180	38	271	93	45				1058 9.7
65	46	169	100	225	44	349	58	46				1037 9.5
70	42	108	230	42	395	103	58					978 8.9
75	6	157	41	393	112	56						765 7.0
80	24	45	374	100	59							602 5.5
85	19	374	117	56								566 5.2
90	44	84	55									183 1.7
95	48	47										95 .9
Column Total	229 2.1	1085 9.9	1281 11.7	1413 12.9	1398 12.8	1312 12.0	1110 10.2	1004 9.2	1000 9.1	734 6.7	364 3.3	10930 100.0

## NOTES

1. A challenging new hypothesis, which is to be explored more in the future, postulates that Slovenian elites in both the Kingdom of Yugoslavia and in Tito's Yugoslavia, were the key factor for the existence of both the regimes. It was not the relationship between the Serbs and Croats, but probably the relationship between the Serbs and Slovenians, which was the decisive factor in peaceful and non-peaceful solutions of several regime crises. When the long-standing links between these two local elites were broken, Yugoslavia fell apart (from personal discussion with the historian A. Gabrič).
2. Some interesting ideas on the size and capacity effects on developmental trends of a small country are presented in Adam & Tomc (1994), with additional remarks in Kramberger (1995), and in Adam (1998).
3. On the recently established Slovenian Social Science Data Archives, embracing survey data sets from the 60s onwards, see more in the report written by J. Štebe, within the Professional news of this issue.
4. A standard objection against a single measure of association is that it is a useful summary, however, as the 'association' is usually produced by rather different social processes for different status or class groups, an average summary result is, in a way, misleading (see, for example Ishida, Mueller and Ridge 1995: 154-93). This argument would hold water if the differentiated parameters would be undifferentiated in themselves; however, a set of differentiated parameters is no more than a set of new starting parameters, which could easily be further broken down - until we reach a meta-model with a more continuous (status) and a less discrete (class) nature of social space. So, we easily come back to a single measure of association, at least for parsimonious reasons.
5. They were using all kinds of multivariate techniques (factor analysis, multiple regression, and taxonomic methods based on factor scores). They also developed their own algorithms (pattern recognition) for dealing with variables of different measurement levels. As well they also developed a lot of their own computer procedures for analyzing stratification processes (using the GLIM package as a framework).
6. The Socialist Republic of Macedonia was one of the six federal units within the former state Yugoslavia.
7. The data referred to the situation in 1970 and were gathered by a 'snow-ball sample' (2240 respondents from Slovenia) and was not wholly representative (given the overestimation of the upper classes). The first 320 respondents (cluster leaders) were chosen randomly, the remaining six within each cluster point were their close friends, determined by first and second order respondents. This interesting data file is, to our best knowledge, probably lost.
8. The derived recommendation to the current regime, which supported the research, and concerning the de-stratification policy was (hopefully?) an ironical one: "If the society ... decides to go in this direction, the act of abolishing private ownership of the means of production does not suffice for the realization of this objective. The changes would have to be much more radical and far reaching." Compare also the issues in Caserman, A. (1977): Pattern of career mobility in post-revolutionary society, and in W. Mueller & K.U.Mayer (ed., 1977): pp.321-328.
9. It is fair to admit here, there are some objections against the current mainstream in historical representation of the ever-delayed country of Slovenia, saying that, for example, by the circle of an enlightened Baron Sigismund Zois, being it very active in the second part of 18th Century, the country's intellectuals were at that times still up-to date (i.e. integrated in that-times atmosphere), concerning international discussions on main social problems and taking into account their personal policy engagements.

10. People from the Slovenian regions thus studied at universities in Padova, Vienna, Graz and Krakow. More on this in A. Cindrič (1997).
11. It should be kept in mind that the trends in farming backgrounds, while relevant for the data we study, need not be representative for industrial development per se. Farmers tend to have more children than other people and this may have changed during the century. Also, the time frame that our respondents refer to (age 15, after they were born; etc.) varies between surveys and is not precise to begin with. Nevertheless, we believe that the numbers are indicative of underlying developments and can be used in the absence of national long-term statistics.
12. The economic part of this overview is mostly based on Vodopivec & Orazem (1995).
13. Some basic aggregate measures of the 'linkage-problem' of the Slovenian labour market, namely, on the increasing gap between education origins and occupational destinations of people, are calculated for the period between 1970-1990 and are presented in A. Kramberger (1999).
14. The immature nature of socialist market-firms and market inefficiency under socialism were elaborated on by A. Bajt in many of his known works on the peculiarities of the socialist economy. Some examples are: A. Bajt (1988a) on economic growth and factor substitution; and interesting theoretical findings on the strange behaviour of the "Ilirian firm" are presented in A. Bajt (1988b).
15. For details, see the paper by A. Gabrič in this journal.
16. For details, see the paper by J. Makarovič in this journal.
17. However, these subtle forms of discrimination seem nowadays to be among the strongest sources of inspiration for the current political combat. With few exceptions, a majority of the members of the 'new' political elite tends to gain their popular political support by a negative feelings towards the survivors of the 'old communist' (continuity) regime. See the papers within the 'elite' section, in this issue, for more details.
18. In general, such collective labour market arrangements need not be an obstacle to development, especially if based on an explicit social awareness or even a social contract. This is the case, for example, with the small country Denmark, which has one of the most successful economies in Western Europe, due to its solid industrial relations.
19. The output of the SPOP is unique in the collection of data, even in comparison to other Central/Eastern European Countries. It records a series of historical images (public opinions) and stratification facts for a period of three decades of Slovenia's recent history. It is now archived and open to the international research community (see the paper by Štebe for details, in this issue).
20. After the age selection TBS-67 included 456 cases (4.2 %), SPOP-68 2082 cases (19.0 %), SPOP-73 1885 cases (17.2 %), SPOP-80 1755 cases (16.1 %), SPOP-89 1862 cases (17.0 %), SJP-91 1189 cases (10.9 %), ISSP-92 886 cases (8.1 %), and SPOP-98 815 cases (7.5 %).
21. Students were allotted to the next higher level of education, on the assumption that they would complete the level of schooling that they were currently enrolled in.
22. For four surveys, years of birth were recorded in broad categories and not in exact years. With no harm on the generalisation of results, we added a random uniform deviation to the category limits to avoid clustering of the data.
23. Of course, our design does not cover additional education obtained after the age of 21 other than for students who are currently enrolled. We do not expect that this is a significant bias.
24. The findings on up-and-down variations in parental effect are in a way also close to some ideas of the classical writers on social mobility. For example, Sorokin (1927) claimed that variations in mobility (effects) are long-term oscillations rather than just uni-directed trends. He even suggested to anticipate "vertical mobility with no definite trend"; not surprisingly, for him almost 130 years of a history was "too short a period" to find something meaningful in a trend investigation.

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