



# Historical evolution of intergenerational class mobility and educational effects in urban Argentina: 1960–2017

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## ABSTRACT

The Argentinean case –given an early modernization and the singularity of its reversal of development– is instructive about the role of education on intergenerational class mobility. We propose a wide historical analysis of time variations in intergenerational class mobility and the role of education over different periods in urban Argentina –specifically in the Buenos Aires Metropolitan Area, from 1960 to 2017. This is the first time a long-term social mobility study has been conducted in Argentina. We analyse intergenerational social mobility according to EGP class scheme, using absolute rates, log-linear models, and long-term counterfactual analysis. Results show a social fluidity process for men but not for women. The counterfactual analysis exhibits that most social fluidity among men was due to a reduction in the direct class origin-class destination effect. No evidence of effects of educational expansion or educational equalization is observed. This presence of moderate social fluidity has not been linked to a modernization process which expands vertical upward mobility. Instead, it took place in a context of deindustrialization and the decline of the skilled working class.

## 1. Introduction

Most research concerning variations of intergenerational class mobility over time has been conducted in developed nations. Studies in Latin American countries are increasing, but at a slow pace. Moreover, works on the effects of education are particularly scarce. Regarding this last topic, two main tendencies can be noted in the international literature. The first one is a focus on temporal social fluidity (Ganzeboom et al., 1989, Goldthorpe, 2000, Breen, 2004), i.e., exploring the degree of openness of the class structure according to birth cohorts or over certain time periods. The second one is the exploration of the impact of educational expansion on social mobility, a most recent development observed following the contributions of Breen and Muller (2020). We discuss the hypotheses linked to both approaches in the theoretical review, but first we establish the importance of the study of long term social mobility in this country.

An exploration over a sixty-year survey period (1960–2017) offers an unusual and interesting empirical basis for an intergenerational class mobility study that takes into account educational effects.<sup>1</sup> Not only

Argentina has been little explored in this sense, but the case is particularly interesting in international debates.

At the end of the nineteenth century and early twentieth century, Argentina was among the most developed countries in the world (Madison, 2018). Posterior economic, political, and institutional upheavals led the country to a surprising decline, falling to the 60th position according to per capita GDP (World Bank, 2018). A number of works have singled out the country as an almost anomalous case, e.g., the “Argentine Riddle” (Weil, 1944), the “Argentina Paradox” (Taylor, 2018), or a “Reversal of development” (Waisman, 1987). With respect to Argentina’s early development, according to Llach (2020), the country was rich though not necessarily “modern”. Its GDP per capita was clearly high, but its degree of “modernity” was not very high considering other indicators of development, such as education. According to Gerchunoff and Hora (2021), Argentina took a big step forward after the 1880 s, especially regarding the country’s integration, although problematic regional differences existed, which, have been described in depth by Míguez (2021). In this line, Ladeux and Schiaffino (2020):3, when comparing “settlement countries” such as Argentina, Australia and

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<sup>1</sup> Breen : 367) (2010) notes that “few studies have analyzed trends in fluidity using a series of mobility tables collected over time (when a series is defined as consisting of more than two over-time observations)”.

Canada in the late nineteenth and early twentieth century, drew three main conclusions: 1) Argentina's educational indicators were much lower than those of Canada and Australia during the First Globalisation (1880-1914); 2) Argentina's regional distribution of human capital presented inequalities that were not present in the other two countries; and 3), such inequality seems to be persistent. In spite of regional inequalities, [Gerchunoff and Hora \(2021\)](#) emphasize that few countries in the world presented such a high degree of school expansion as Argentina. This educational growth later stagnated, showing a relatively low progress as compared with other countries in the region.

It is important to note that, any long-term historical analysis of social mobility in Argentina is bound to be centred on the Buenos Aires Metropolitan Area (*Area Metropolitana de Buenos Aires*, hereinafter AMBA), since national surveys on social mobility started in 2003. The Buenos Aires Metropolitan Area (AMBA) is Argentina's economic and political core and one of the largest metropolises in Latin America. It accounts for one third of the national population, ranging from almost 7 million in 1960 to almost 13.5 million inhabitants in 2010 ([Riveiro, 2019](#)). The metropolitan area includes the federal capital city, Buenos Aires as well as over 20 surrounding counties in the Buenos Aires Province.

In this article, we study the interrelationships between class origins, education and class destinations, taking into account intergenerational temporal variations in the AMBA from 1960 to 2017. We explore class mobility in a region characterised by a highly singular process of development and decay, which we believe could represent a significant contribution to international social mobility research.

## 2. Theoretical and empirical review

Our main concern was to study trends in temporal intergenerational class mobility, or what is usually termed "social fluidity", while taking into account the mediating effect of education, independently of possible changes in the social structure. A usual didactic device is the O-E-D triangle.

Based on this O-E-D triangle, previous research accounted for four mechanisms of increasing social fluidity. Firstly, many studies showed an equalization of educational opportunity for the birth cohorts which grew up in the post World War II period, related to the expansion of the educational system's reforms oriented to promote working class offsprings educational achievement. As educational attainment is an important factor that affect class destination, the fall in the association between class origins and educational destinations (O-E) implies an increase in social fluidity ([Breen, 2010](#); [Pfeffer & Hertel, 2015](#); among others). Secondly, increasing fluidity could be related to educational returns. For the liberal theory, together with the weakening of the origin-education (OE) association, the pressures of economic efficiency would promote occupational selection based on educational qualifications—thus strengthening the education-destination (ED) association. In turn, the 'direct' OD association, which is not mediated via education, weakens, and so does too the overall OD association. In other words, relative rates of mobility become more equal (social fluidity increases). Different from what the liberal theory has proposed, it has been regularly found that the ED association does not strengthen but, the other way around, it has rather tended to weaken, due to 'credentials inflation' associated with a growing range of other employment selection criteria. "What is suggested is that any equalisation in educational attainment that may have been obtained in relation to class origins is being offset by a decline in the 'class returns' that education brings" ([Goldthorpe, 2016](#): 102). Some authors suggest that social fluidity can increase if class returns to education decline with educational inflation given educational expansion ([Torche & Ribeiro, 2010](#); [Gil Hernández et al., 2017](#)). Thirdly, educational expansion can foster social mobility as a result of a "compositional effect", that is, in the context of educational expansion the labour force is increasingly composed by college graduates for whom the effect of class origins on their class destinations tend

to be offset -the OD association declines as educational levels rise- ([Hout, 1988](#); [Torche, 2011](#); [Vallet, 2004](#); [Breen & Luijckx, 2004](#)). Finally, the direct O-D effect net of education must be considered, given that, beyond formal education, several other resources may be transmitted from parents to their children: patrimony, cultural habits (accent, vocabulary, lifestyle) and socio-psychological skills (motivation, leadership, discipline), social capital ([Jackson et al., 2007](#); [Marqués Perales & Gil-Hernández, 2015](#)).

Regarding the debates on intergenerational time variation on class and educational mobility, two main hypotheses are proposed in the literature. The liberal theory postulates that within modern societies, educational expansion tends to promote meritocracy in occupational allocation and thus increase social fluidity ([Treiman, 1970](#); [Ganzeboom et al., 1989](#)). In contrast, according to the trendless fluctuation theory, decades of educational expansion and educational reforms have had little or no effect on social fluidity ([Goldthorpe, 2016](#); [Bukodi & Goldthorpe, 2019](#)). The political pathway that could promote openness of the class structure should be based on diminishing inequalities of class conditions; expanding the demand for high-level professional occupations ("room at the top"); improving the quality of public health, education, and welfare, especially for the working classes; and creating a modernised and environmentally friendly infrastructure, etc. As highlighted by [Goldthorpe and Jackson \(2007\)](#), there is no clear political pathway to return to structural conditions resembling those of the mid-twentieth century. [Barone \(2020\)](#) advances that neither of these two hypotheses have been sufficiently corroborated.

According to a third interpretation, educational expansion plays an important role in promoting class structure openness, though it has a contingent nature ([Breen & Jonsson, 2007](#); [Breen, 2010](#)). These authors point to two possible links to the effects of education on social fluidity: equalisation and compositional effect. The educational expansion and progressive reforms in education favoured the increase of social mobility along with structural changes in the "30-year golden age" after World War II. But, as it was shown, in recent decades the trend towards fluidity has been declining in Europe because equalisation has to some extent decreased among younger cohorts ([Breen & Müller, 2020](#)) though educational expansion has persisted over successive cohorts. Since the pattern of a weaker OD association among those with the highest educational levels is still present, educational expansion could be the only channel to increase social fluidity.

Most of the previous research on the impacts of educational expansion on trends in intergenerational class mobility is primarily based on European societies and the United States. Little research has yet examined the issue in other parts of the world, with exceptions like the study Brazil by [Torche and Ribeiro \(2010\)](#), [Chung and Park in South Korea \(2019\)](#), [Torche \(2010a\) \(2010b\)](#) in Mexico and Chile; [Boado and Fachelli \(2020\)](#) for a comparison of Buenos Aires and Montevideo, [Jorrat \(2016\)](#), [Jorrat and Marqués-Perales \(2022\)](#) in Argentina. In contrast to developed countries and some late developing countries (such as South Korea), where a high degree of educational expansion took place and fostered social fluidity through educational equalization or compositional effect, in Argentina educational expansion has lowered its pace since mid-20th century.

Several studies compare intergenerational class mobility in Latin America with develop countries. [Solís and Boado \(2016\)](#), as well as [Fachelli et al. \(2021\)](#) conclude that the class structures of Latin American countries differ, but when comparing them with European countries, certain common features can be found, such as a similarity in high absolute rates of intergenerational social mobility. These author found differences in the behaviour of social fluidity, presenting more inequality in Latin American countries than in European ones, while [Solís : 486, 492 \(2016\)](#) emphasizes that the patterns of intergenerational class mobility in Latin American countries are more hierarchical (greater barriers to the highest classes). The role education has not been a main concern of this studies.

Despite progress in intergenerational class mobility research in Latin

America, recent ODE-C or P interaction developments have centred mainly on developed countries. [Boado and Fachelli \(2020\)](#) found that schooling is a powerful mediator between class origin and class destination in Mexico, Argentina and Chile. However, countries do vary regarding the role of schooling as an equalizer, and there is no evidence showing its significant attenuating effect on the association between class origins and destinations. The overall results show that educational expansion has made a limited contribution to diminishing the effects of class origins on class destinations, at least in Argentina. [Jorrat and Marqués-Perales \(2022\)](#) and [López Roldán and Fachelli \(2021\)](#) found constraints in the effect of educational expansion in the whole country. They noted that to an even greater degree, the link between origins and destinations became stronger as educational levels rose, an opposite pattern to that found in developed countries.

Few works performed in developing countries, have gone beyond 3-way models to study social mobility, like [Jorrat \(2016\)](#) and [Jorrat and Marqués-Perales \(2022\)](#) have done. In this study, we analysed these interactions more in depth by applying counterfactual models. It is interesting to explore ODE-P in a country that underwent early modernisation and certain educational expansion, in which both processes slowed down thereafter.

Social mobility studies have been repeatedly questioned for their gender blindness ([Salido Cortés, 2001](#)), especially when taking into account the general decline of the traditional gendered division of labor (with a male provider and female responsibility over domestic and care labors) and the surpassing in educational terms of women over men. While there is a tendency to reconsider the classic mobility analysis centered only on men, this is not without theoretical and methodological challenges, as authors tend to agree ([Salido Cortés, 2001](#); [Breen & Luijckx, 2004](#); [Solís & Boado, 2016](#); [Salido Cortés & Fachelli, 2020](#)).

Previous findings state gender differences -though diminishing- in terms of absolute mobility, between origin (fathers) and destination (daughters rather than sons) related to occupational gender segregation. Regarding relative social mobility, different scenarios emerge ([Breen & Luijckx, 2004](#); [Solís & Boado, 2016](#); [Bukodi & Paskov, 2020](#)). On the one hand, some works emphasize the similarity of the level of fluency between both genders ([Breen & Luijckx, 2004](#); [Solís and Boado \(2016\)](#)), while other works do emphasize the particular contribution of gender as a second-order factor to describe relative mobility ([Bukodi & Paskov, 2020](#)). National cases are more complex regarding gender. For instance, in Spain, ([Gil Hernández et al., 2017](#)) find that women in recent cohorts experienced a more marked decline in the strength of the origin-destination association than men, which might have led to more equal relative rates among themselves than among men.

In Argentina, both the decline of the traditional gendered division of labor and the educational advancement of women gained strength between the 1970 s and 1990 s, by, on one hand, the increase in the participation of women in higher education and their subsequently more qualified participation in labor force, and on the other hand, the increase in the labor participation of working-class women after successive economic crises ([Arriagada & Sojo, 2012](#); [Águila & Kennedy, 2016](#)). In Argentina, the diversity of findings on gender differences in social mobility matches the diverse international literature. In the case of absolute mobility, some studies point out women's greater total and upward mobility ([Jorrat, 2016](#)) and others a very similar profile to men ([Dalle et al., 2018](#)). Regarding relative mobility, some previous studies showed constant fluidity of men and women by cohorts (with men having a certain tendency towards closure) ([Jorrat and Benza, 2016](#); [Jorrat, 2016](#); [Dalle, 2018](#)), while others show greater rigidity in women ([Dalle et al., 2018](#)).

An important research question thus emerges, *Did Argentina's educational expansion between 1960 and 2017 reduce inequality of opportunities in intergenerational social mobility?* Summarizing, past research has not produced clear findings on those effects and processes in Argentina. Previous analyses of birth cohorts in groups of surveys found somewhat complementary results: a) constant fluidity ([Jorrat and](#)

[Benza, 2016](#); [Gil Hernández et al., 2017](#); [Jorrat, 2000](#)); and b), an increase in the mobility barriers between the working class and the service class in a context of a general trend of constant fluidity ([Fachelli et al., 2021](#)). However, over a longer period of time, some degree of social fluidity seems to have been detected, at least in urban Argentina ([Dalle, 2016](#)). Given these trends, a major focus of the present paper was to perform a fresh analysis of the role of education. According to research conducted on the whole country and for the Buenos Aires Metropolitan Area in particular, ([Jorrat, 2016](#), [Jorrat, 2011](#)) education does not appear to have favoured intergenerational class mobility, at least when considering cohorts over a short time period.

In the light of previous discussions on convergence or divergence, an additional research question was whether the trend of historical intergenerational class mobility in urban Argentina was of a constant or fluid nature, taking into account a broader period. Specifically, could education influence these possible trends of social fluidity in any way? The present work thus explore intergenerational class fluidity and the effects of education across periods by means of a group of surveys, covering a time span of approximately 60 years.

### 3. Contextualisation

We now describe some characteristics of the evolution of class structure and educational expansion in Argentina from the late nineteenth century to the beginning of the twenty-first.

#### 3.1. Evolution of class structure

As noted above, Argentina had experienced an earlier modernisation, based on an agrarian export-oriented economy. This economic development produced high rates of economic growth, which was reinforced by an enormous inflow of foreign immigrants, second in size only to that of the United States. Within fifty years (1880–1930), the class structure was deeply transformed, especially in Buenos Aires and in the Argentin's central area, the Pampas. It went from a polarised and fairly closed society to one in which middle classes came into full existence, with upward mobility becoming an attainable possibility for the working classes ([Germani, 1962](#)).

Analysing census data from 1869 to 1947, [Germani \(1963\)](#) showed how the cumulative impact of European immigration, economic growth and occupational change contributed to high upward mobility rates from the lower classes (agricultural workers, modest farmers and unskilled manual workers) to the skilled working class, to the lower-middle and also to the privileged middle classes. Most, of them, enlarging the working class in the port city of Buenos Aires, which, as it flourished, provided an abundance of job opportunities in industry and services. A high proportion of the working-class offspring would then move up to the salaried middle classes through educational credentials.

By the 1930 s, Argentina had adopted an economic model of import substitution industrialisation (ISI), thus furthering the expansion of local manufacturing industries, which was reinforced by the World War II. Strong protection of local production and progressive income policies favoured consumer goods manufacturing industries until the late fifties. Nonetheless, manufacturing industries were highly dependent on the export revenues generated by the agricultural sector, in order to import supplies and finance the aforementioned protection and income policies. The urbanisation and growth of the tertiary sector induced by this economic model would further expand the opportunities of upward social mobility ([Germani, 1963](#)). Further on, in the ISI model, while European immigrants were ceasing to arrive en masse, internal migration from rural areas contributed to the growth of the manufacturing industry's labour force, filling the lower positions in the occupational hierarchy, while, natives (especially those descendants of European migrants) reached higher positions ([Germani, 1963](#)).

Under Peronism (1946–1955), the improvement of living conditions and the expansion of social rights were key channels of integration of the

old working class of European background and the new working class of internal migration background, leading to a new consolidated working class (Germani, 2010 [1970]; Torre, 2010). These welfare democratisation took place, supported by the organisation and mobilisation of trade unions. Míguez (2016) offers another perspective on this subject, noting that the “aggressive nationalisation policies” of the economy attempted to favour the internal market while making industrial sector uncompetitive. Such sector was formed by urban salaried segments, the industrial working class, and new, publicly employed middle sectors.

During both stages, i.e., during the agrarian export-oriented economy and the import substitution industrialisation, the class structure of Argentina’s central area (the *Pampas*), and of its core, the AMBA, was generally considered open and integrated. Open because of the upward social mobility from unskilled to the skilled working class and from the skilled working class to the middle classes (Germani, 1963), and integrated configuration, despite notable nuclei of marginality, because of its widening middle classes, and the rising welfare and social and political integration of the lower classes. In the late 1950 s, Argentina distinguished itself from other developing countries for its more equal income distribution and an “egalitarian feeling” (Germani, 2010 [1970]; Torre, 2010).

However, by 1950 s, the initial impetus of the ISI was exhausted. Further industrialisation was pursued via the development of heavy industries throughout the country, which contributed, together with the educational expansion of the 1960 s and 1970 s, to the emergence of highly skilled manual and non-manual sectors (Torrado, 2010). Nevertheless, this development would reveal the structurally segmented and heterogeneous nature of Argentina’s social structure as well as the constraints of the financial dependence of industrial development on agrarian commodity exports (“external restriction”).

The 1973 oil crisis, added to Argentina’s political crisis that ended in a harsh coup d’état in 1976, worsened the difficulties of economic policies centred on the internal market, as well as those of income distribution which had been stabilising since the 1930 crisis and the emergence of Peronism. As in other Latin American countries, the military government misused foreign credits and economic deregulation – harming the protected local industry – in order to (unsuccessfully) slow inflation down. At the same time, it pushed forward state terrorism, in order to weaken the unions and social protest. Along trade opening, the technological renewal began to generate changes within the labour market, which progressively favoured income concentration. This led to an increase in marginal positions (salaried and self-employed), a decline in industrial employment, and the consolidation of the upper-middle and upper classes (Torrado, 1992).

Beginning in the 1970, in the western hemisphere, and particularly in Argentina (Graña & Terranova, 2022), there was a tendency of diminishing industrial share of GDP, and of industrial employment in the labour force. Also in Argentina the growth in industrial productivity was moderate (Graña, 2015; Rougier, 2021). All these phenomena had a significant impact on the structure of employment and social classes, especially in the skilled working class, being affected in its size and composition.

A democratic government came into office in 1983. Given the overwhelming amount of foreign debt, it struggled with an impossible return to traditional internal market economic policies, and fiscal austerity demands of the IMF, to finance the country’s debt (Torre, 2021). Like many countries in the period, these tensions would ultimately converge in hyperinflation, which opened the way in Argentina to a fixed parity exchange. A later reopening of the economy tended to weaken the demand for low-skill jobs. The economy in the 1990 s favoured, again, the primary sector – in the midst of a notable sectorial expansion that had begun in the 1980 s – and was undergoing a technological modernisation which benefited from a new affluence of foreign capital, as well as privatisation policies in pursuit of state efficiency and debt payments. This led to a diminishing participation of the national public sector in the labour market in a strongly regressive

context.

Between 2003 and 2011, the trends in the relative size of class positions moved in opposite directions. Economic growth was based on the export of commodities and policies oriented towards internal market expansion and regional integration. It led to the growth of the skilled working class and salaried middle classes, and a decline in unskilled and marginal working class positions (short distance upward mobility). The first two, however, has been at a relatively high level, a long time before (Dalle, 2016). Recent years have exhibited different economic ups and downs, needing more time before clearly showing its impact on the class structure.

Overviewing the class positions based on national population censuses and urban household surveys, all positions seem generally stable, with an absence of strong tendencies, especially in IIIa and V. At the same time, three movements can be distinguished. Firstly, the upper service class grew slowly (from 5.5% in 1980 to 8.2% in 2010), but dropped in 2017, and the lower service class declined from 2001 to 2017. This results in a rise and fall of the service class, going back to its pre-2001 values. Secondly, the rural middle and small employers’ classes (IVc and IVa) drop, and this decrease is compensated by an increase in the self-employed (IVb). Thirdly, a fall and rise of the skilled manual workers position, back to over 10%, together with the general rise of the service and commerce workers (from 4.8% in 1991 to 9.2% in 2017), resulted in a change in the composition of the upper working class, more equally composed since 2001. Lastly, the lower working class rose slowly from 19.2% in 1980, to 24.9% in 2010. As a general conclusion, a stagnating service class can be observed, together with a decline of the middle class (with the expansion of a precarious IVb), as well as a relative downgrading of the working class (with the moderate decline of VI and the rise of VIIa).

To close this point, these economic upturns and downturns together with the cyclic reorientations of the state role led to class structure changes, opening and closing channels of upward mobility. Nevertheless, it is worth noting that previous studies have failed to focus on the impact of such structural changes on the degree of openness of the class structure based on time periods. Such a study thus remains to be performed. Before engaging in that task, we briefly describe below Argentina’s educational evolution.

### 3.2. Evolution of educational levels

In the late nineteenth century, Argentina was an advanced country in Latin America as far as education is concerned. The 1884 common education law established the free and compulsory nature of the primary level. As a result, illiteracy rates fell from 77.4% in 1869 to 13.6% in 1947, and the net primary enrolment rate rose from 20% in 1869 to 85.6% in 1960 (Rivas, 2010). According to data from Barros and Lee (2013), by 1950, Argentina was leading Latin American nations in terms of school attendance, with 84.1% of the population aged over 24 years having attended school, followed by Uruguay (79%) and Chile (76.5%). These figures contrasted with school attendance rates of 56.5% in Colombia, 53.9% in Mexico, and 34.7% in Brazil.

The expansion of the secondary level took place later and was less far-reaching. Secondary education was organised more restrictively as all secondary education guarantees access to university in the country. There were two milestones in the expansion of secondary education. The first took place under Peronism, with the multiplying of the number of schools and an increasing access to this level. The second milestone corresponded to the return to democracy in 1983, when the secondary level was consolidated as mandatory, especially with the 1993 and 2006 education laws. The net rate of secondary schooling went from 42.2% in 1980 to 84% in 2010 (according to Rivas, 2010 and ECLAC, 2021). However, from the 1970 s to the 1990 s, structural reforms transferred primary, secondary and non-university higher education to provincial responsibility, resulting in a clear underfunding.

Higher education in Argentina is divided between a provincial non-

university educational level and a national university level. The non-university sector, centrally dedicated to teacher training, was organised in 1970 around Higher Training Institutes. The sector was, however, already somewhat traditional and established throughout the country. At the higher university level, there were two stages of expansion similar to those of the secondary level (Rojas, 2011). Over the 1947–1975 period, 19 public universities were created (previously there were only 6) and new degrees were added to the existing ones. Since 1949 this level has been free of tuition fees. The second stage took place after the return to democracy, with a growth in gross enrolments in higher education (from 24.8% in 1983 to 73.2% in 2010, (ECLAC, 2021)) and the creation of 30 new universities (half of those between 2009 and 2015), decentralising access to the university.

According to censuses and household surveys (Table 2), three phenomena can be detected for people aged 25–65 years throughout the country. Firstly, the completion of the primary level grew significantly between 1960 and 1991 (from 41% to 76.9%, reaching 93% in 2017, when deducting the sum of No Formal schooling and Incomplete Primary from 100%). Secondly, a sustained and slower growth in access to and completion of secondary level (more than half of the study population access secondary education between 1991 and 2001, and complete it between 2010 and 2017). Lastly, the higher level grew strongly from a very low starting point. Access to this level rose from 3% to 13.7% between 1960 and 1991, showing a lower growth rate as of 1991 (see the sum of Higher incomplete plus Higher complete). In 2017, almost a third of this population reached this level (29.9%) and almost a fifth completed it (16.8%). The distinction between university and non-university levels shows that the prevalence of the university level began to drop as of 1991, despite the expanding number of universities mentioned above.

Argentina’s educational expansion was relentless for almost half a century, but its growth was uneven and later declined. The country was advanced compared to the rest of the region, but it did not remain so for long. According to data from Barros and Lee (2013), 42.8% of people aged 25 years and over in Argentina had completed secondary school or more, below the 52.9% figure for Chile, similar to Colombia (41.9%), and above of Brazil (35.9%), Mexico (35.9%) and Uruguay (27.2%).

In a comparative perspective, according to data from OCDE countries (persons 25–64 years old, around 2014), Argentina is far below rates of higher education in early developed or industrialized countries (United Kingdom 42%, USA 44%, France 32%, etc.). More interesting, late

**Table 1**  
Class position distribution. Population aged 25–65 years. (Urban Argentina, 1980–2017).

| EGP   | 1980      | 1991      | 2001      | 2010   | 2017   |
|-------|-----------|-----------|-----------|--------|--------|
| I     | 5.5       | 7.4       | 8.0       | 8.2    | 6.4    |
| II    | 8.3       | 8.8       | 16.4      | 12.5   | 10.2   |
| IIIa  | 15.2      | 12.4      | 10.0      | 10.1   | 11.5   |
| IIIb  | 8.5       | 4.8       | 7.4       | 8.4    | 9.2    |
| IVa   | 6.1       | 6.4       | 5.8       | 3.7    | 3.3    |
| IVb   | 17.4      | 19.4      | 16.0      | 16.9   | 18.6   |
| IVc   | 1.3       | 0.5       | 0.6       | 0.8    | 0.6    |
| V     | 6.6       | 4.5       | 3.0       | 3.5    | 4.2    |
| VI    | 10.3      | 12.4      | 8.5       | 9.4    | 10.6   |
| VIIa  | 19.2      | 22.6      | 22.6      | 24.9   | 23.9   |
| VIIb  | 1.5       | 0.9       | 1.6       | 1.6    | 1.4    |
| Total | 100.0     | 100.0     | 100.0     | 100.0  | 100.0  |
|       | 6.149.972 | 4.892.434 | 7.627.275 | 38.830 | 37.332 |

Source: Own elaboration based on samples, harmonised by IPUMS (Minnesota Population Center, 2020), of 1980, 1991 and 2001 national population censuses surveyed by the National Institute of Statistics and Censuses (INDEC, in Spanish). The 2010 and 2017 positions were calculated using national household surveys (Encuesta Anual de Hogares Urbanos 2010 and Encuesta Permanente de Hogares Total Urbano 2017, INDEC, 2021). The table represents only the urban population (around 92% of the total population). The EGP class construction was carried out by comparing each source of occupational classification, status employment and firm size, with Goldthorpe and Heath (1992).

development countries like Korea (45%) or Spain (35%) are quite above, and the same is observed for comparisons with immigration or settlement countries (Australia 44%, Canada 54%, Israel 49%). Argentina exhibits results (17% in 2017) similar to China, Costa Rica, Mexico, Italy, Turkey, etc., and above Brazil.

Based on this contextualisation we can make two observations:

- 1) Argentina seems to have experienced a modest process of educational expansion since the 1960 s, due to notable early developments that later came to a halt.
- 2) After 1976, the service class did not grow sufficiently to contribute to upward vertical mobility, while downward vertical mobility seems to have intensified.

Hence, we propose the following guiding hypothesis:

The presence of a modest educational expansion in AMBA failed to boost social fluidity from 1960 to 2017, in spite of the relevance of education as a main channel through which class of origin affects the class of destination.

#### 4. Data sources, variables and descriptive aspects

The study was based on 18 surveys carried out between 1960 and 2017. The surveys were performed within the Buenos Aires Metropolitan Region (AMBA) until 2002. Selection of this region was used in national samples from 2003 onwards, with the exception of a 2016 AMBA survey. Almost all were stratified random samplings in several stages and all were carried out within academic settings. A total of 11,418 cases were taken into account: 6575 men and 4843 women. Most details about the surveys are specified in Appendix 1.

Following various considerations – regarding our temporal approach to intergenerational class mobility and the role of education –, we decided to use groups of survey periods rather than birth year cohorts (on the use of periods and/or birth cohorts, see, among others, Breen & Luijckx, 2007; Breen, 2020). The first appeared to be the best procedure given our need to integrate different surveys. As Breen :15) (2020) notes, the disadvantage of working with birth cohorts instead of periods is that “as a cohort ages, its members may change their class positions. This is an age effect. If one ignores it, there is a danger of confounding cohort and age effects.”<sup>2</sup> Furthermore, Torche and Costa-Ribeiro (2010: 293) found for Brazil that social fluidity increased because of period transformation, instead of cohort replacement. They noted that the dynamics of the O-D-E processes they studied “resulted in a *period, rather than a cohort*, change in fluidity.” At any extent, they add: “In sum, the period versus cohort interpretation of mobility dynamics is an open question” (2010: 293).

We took into account four periods: 1) 1960 and 1971; 2) 1995–2003; 3) 2004–2008; 4) 2010–2017.<sup>3</sup> When collapsing surveys, we look at relevant political-historical events in the country as possible limits for each period. This was done after controlling for the distribution of class origins of each sample, looking for the size of differences between them. We made all possible comparisons of pairs of surveys, based on groups of 5 birth years within the pair of surveys compared. We also added

<sup>2</sup> As an example of mean ages for birth cohorts and periods, we observed that the mean age within periods is certainly more stable than within fairly uniform birth cohorts –around 22 years each.

<sup>3</sup> Beyond political and economic considerations, the integration of survey periods took into account changes in the distribution of five EGP origin class categories. The construction of survey periods allowed us to have no more than one EGP class origin whose percentage exceeded 5 points any other survey. And the same observation applied when comparing the percentage of each EGP class category with the total of those categories in each period. A similar outcome was obtained for women, although very few women were encountered in the first period, when heads of households were interviewed.

**Table 2**  
Highest educational level. Population aged 25–65 years, Argentina (1960–2017).

| Highest achieved educational level | Year       |            |            |            |            |            |            |
|------------------------------------|------------|------------|------------|------------|------------|------------|------------|
|                                    | 1960       | 1970       | 1980       | 1991       | 2001       | 2010       | 2017       |
| No formal schooling                | 12.1       | 6.8        | 4.9        | 3.2        | 3.5        | 1.6        | 0.9        |
| Primary incomplete                 | 46.9       | 37.8       | 31.5       | 19.9       | 13.4       | 10.9       | 6.0        |
| Primary complete                   | 26.4       | 36.5       | 34.6       | 35.1       | 29.8       | 25.6       | 21.0       |
| Secondary incomplete               | 8.3        | 8.2        | 10.5       | 13.8       | 15.2       | 15.0       | 14.4       |
| Secondary complete                 | 3.3        | 6.6        | 12.0       | 14.3       | 17.4       | 21.0       | 27.7       |
| Higher incomplete                  | 1.4        | 1.6        | 2.2        | 5.5        | 8.3        | 10.1       | 13.1       |
| Non-university incomplete          | 0.2        | -          | 0.2        | 1.6        | 2.5        | 3.3        | 3.6        |
| University incomplete              | 1.2        | -          | 2.0        | 3.8        | 5.8        | 6.8        | 9.4        |
| Higher complete                    | 1.6        | 2.5        | 4.4        | 8.2        | 12.3       | 15.8       | 16.8       |
| Non-university complete            | 0.3        | -          | 1.1        | 3.6        | 6.0        | 7.0        | 6.7        |
| University complete                | 1.2        | -          | 3.2        | 4.6        | 6.3        | 8.8        | 10.1       |
| Total                              | 100.0      | 100.0      | 100.0      | 100.0      | 100.0      | 100.0      | 100.0      |
|                                    | 10.580.353 | 10.914.100 | 12.804.354 | 14.564.288 | 16.280.510 | 19.033.370 | 19.267.823 |

Source: Own elaboration using samples harmonised by the Minnesota Population Center (2021), based on national population censuses surveyed by the National Institute of Statistics and Censuses (INDEC, in Spanish). Except for 1960, the data was reconstructed from the National Statistics and Census Directorate (1960) where the information presented is for 25 years of age and over, and 2017 (INDEC, 2021), which corresponds only to the urban population, excluding the rural population (8.3% of the population). No information was available allowing to distinguish between non-university and university higher levels in 1970.

comparisons of class origins of each survey within each period. It was assumed that the distribution of class origins should show small differences, and this was observed in all of our attempts.

For the class categorisations, we applied EGP class scheme, with the following five categories: 1) I+II, 2) IIIab, 3) IVab, 4) V+VI, and 5) IVc+VIIab. This procedure was preferred given that our analytical procedures – 3- and 4-way models – would require a limited number of categories for our main variables: class origin, class destination, educational levels and periods of groups of surveys. The rural sector presented little significance among the destination classes because the region under study was highly urban – but this was not the case of origin classes. We thus applied the rather more usual procedure of adding autonomous rural workers to the unskilled working class. It was impossible to divide the upper categories I+II in I and II as currently recommended because of the limited number of cases for class I. We relied on detailed occupational information which allow us to applied the Treiman and Ganzeboom and Treiman (2001) algorithm for EGP on ISCO 1988 coded occupations.

As far as education was concerned, three levels were considered: 1) Up to incomplete secondary studies; 2) Complete Secondary and Incomplete Higher Education; and 3), Complete Higher Education (tertiary and university degree). Complete tertiary and Complete University were joined under Higher Education. Complete University by itself would have provided few cases for model explorations.

## 5. Aspects of class mobility and methodological approaches

### 5.1. Absolute mobility

There are two usual ways of studying class mobility: the absolute and the relative approach. The former is based on the analysis of positions within class categories (five in our case) at origins (generally the fathers' occupations when interviewees were growing up) and destinations (the interviewees' present occupations, within the 25–65 age range). The cross-tabulation of class origins and class destinations allows us to analyse movements between them, known as absolute mobility. We did so here over four periods, for men and women. Our focus of the absolute mobility analysis was vertical mobility, and its upward and downward direction. Following Erikson and Goldthorpe (1992), we aggregate our data in the following three big classes: 1) I+II; 2) III, IVab, V+VI; and 3) IVc +VII). When describing absolute mobility, the dissimilarity index is an empirical index, the sum of those differences with the same signs between the sum of each destination and the sum of each origin for each period not to be confused with the one that could be obtained under the independence model.

### 5.2. Relative mobility

The other type of approach, relative mobility (or social fluidity), "is based on the comparison, between people of different class origins, of their chances of being found in one destination class rather than another" (Breen, 2004: 4). There have been different attempts to model relative social mobility (or social fluidity), which we discuss below.

As is usual, we used log-linear and log-multiplicative models. Basically, we compared the constant association model and the uniform difference model (Unidiff). According to Vallet : 7) (2006), the first model assumes that all the odds ratios that measure the association between class or educational origin and class or educational destination are constant over survey periods. Again, according to Vallet :13) (2006), in the case of the log-multiplicative Unidiff model, given the assumption of a stable structure in the association between class or educational origin and class or educational destination, Unidiff is able to detect differences in strength of association over survey periods. As Li and Devine :14) (2011) added, "The UNIDIFF model ... further allows for a uniform movement for the coefficient of one year to move above or below that of the other".

A usual research procedure is to graphically represent the ODE education triangle showing the different OD, OE and ED paths over time. In our case, P for periods of several groups of surveys. We named the regular 3-way interactions emerging from this triangle in the same way as Pfeffer and Hertel (2015), Gil Hernández et al. (2017) among others did, i.e.:

OD-P: Trends in intergenerational class mobility over periods;

OE-P: Trends in educational inequality linked to class origins over periods;

ED-P: Trends in class returns to education over periods.

We also analysed a fourth 3-way interaction in order to take into account the OD relation along educational levels OD-E. The general idea is that modernisation –with its ups and downs – might have furthered educational expansion, and such expansion would have softened the strength of the direct association class origin-class destination (OD).

Finally, we applied counterfactual models (Breen, 2010) in order to understand the effects of each mechanism on social fluidity when encountered. As our study was based on periods rather than cohorts, we explain the five nested models analysed using periods.

1) In the Baseline Model, a path analysis with categorical variables (PEOD) was performed using two equations, assuming a counterfactual situation of constancy in which there was no variation over periods and the explanatory mechanisms considered. That is, on the one hand, the education level depends only on the class of origin

(OE); on the other, the class of destination depends on the observed period, as well as on the class of origin, the education level attained, and their interaction (POE). In the estimated POD table, the Unidiff model was fitted to simulate the consequences of the baseline hypothesis for change in social fluidity on the periods.

- 2) A Educational Expansion model was considered, adding the PE association in the first equation above, i.e., the variation of educational levels over time.
- 3) Inequality of Educational Opportunities (IOE, Equalize) model, the POE interaction in the first equation is added in order to take into account the variation in educational inequality. It thus measures the additional variation in social fluidity that results from the reduction of inequalities in face of the schooling process.
- 4) The Educational Class Return (EducReturn) model adds the PED interaction in the second equation to measure the additional variation in social fluidity due to the change in the relative occupational advantage offered by education, i.e., the higher the level of education, the higher the expected occupational level.
- 5) If we add the POD interaction in the second equation, we obtain the Origin Return model, the direct effect of the association between origin class and destination class on social fluidity. This last model coincides with the observed model, an exact reproduction of the observed trends in social fluidity over periods.

## 6. Results

We first describe aspects linked to the main variable distributions and then discuss aspects of absolute mobility. Results of the relative mobility trends of 3-way interactions models are then considered, before closing this section with the 4-way counterfactual simulation effects.

### 6.1. Educational levels and class categories distributions by periods

We will begin with the educational levels by periods for men (Table 3) and for women (Table 4).

For men, we can observe that the lower educational level is reduced by half when we move from the first period toward the present one. At the same time, in the most recent period, the higher educational level is four times that of the oldest one. The present intermediate educational level for men is twice its oldest value. Women's higher educational achievement is clear when comparing Tables 3 and 4. Their participation in the lowest level more than halves and their higher education level is fifteen times higher when comparing the most recent period to the oldest.

We now introduce descriptions of class destinations by periods (Table 5 for men, Table 6 for women). We consider those with class origins in both cases.

In the case of men, the number of skilled workers decreased while the unskilled increased, as we move from the earliest to the present years. The middle salaried or autonomous classes remain relatively stable. The service class grew after the first period (1960–1971) and then did not show any notable variations showing.

For women, service class participation grew more than for men, and the skilled working class is abruptly reduced after the first period, compensated with both routine non-manual and unskilled working class.

If we observe the OE relationship per period (Fig. 1), we can observe that the first period shows the largest difference with regard to the others. Origins with primary education (light blue) correspond to the large number of respondents with low occupational levels in all periods. Clearly, their participation decreases between 1995 and 2017 when compared to the first periods. Respondents with complete higher education gain ground over time, mostly in the case of higher class workers, but again, a clear difference can be found between the first period and the rest.

Focusing on the ED relationship (Fig. 2), workers with primary

education were distributed across all classes during the first period, although they were more numerous in the lower classes, and the proportion of workers with middle and higher levels was higher in classes I+II. We can observe a certain homogeneity over time in the following three periods, given that the levels of primary and intermediate education increased. If we look more closely at the higher educational level, we can see a rather steady distribution over time from 1995 onwards, at least as far as workers as a whole are concerned.

### 6.2. Trends of absolute class mobility rates

Basic aspects of intergenerational social class mobility over periods are shown in Table 7 (men), and Table 8 (women).

In the case of men, more than two thirds of interviewees showed absolute mobility, with no notable variations over periods. Vertical mobility grew after the first period, from around 45%, to approximately 53%. The upward vertical mobility did not show any significant growth: the different vertical mobility rates remained slightly above 30% across all periods. The downward vertical mobility, instead, increased from 14% in the first period to nearly 20% afterwards, explained mainly by the growth of downward flow from skilled origins to unskilled working class destinations (the weight of this flow rose from 11% to 27% of the total downward vertical mobility). Hence, the ratio of upward vertical to downward vertical fell from 2.2 points in 1960–1971–1.6 points, its lowest value, in the most recent period (2010–2017).

In the case of women, we see that absolute mobility rose 7 points after the first period and then it remained stable at around 70%. Vertical mobility rose 7 points in the second period and reached around 50–53% after that. Upward vertical showed a growth of 10 points for the second period, reaching 32–34%. Downward vertical drops a little in the second period while remaining at around 18–19% later. The ratio upward vertical to downward vertical remained stable, close to 1.8. The main difference with the absolute mobility patterns for men is the higher stability of these ratios for women.

Fig. 3 below summarises the vertical mobility characteristics of each sex:

We can observe how, beyond the first period, vertical mobility trends were similar for both sexes over the three subsequent periods after 1995.<sup>4</sup>

We will now focus on the analysis of relative mobility, beginning with the 3-way interaction trends.

### 6.3. Observed trends in relative mobility (social fluidity)

#### 6.3.1. Three-way interactions for Education, Class Origins and Class Destinations, over periods

We briefly present some results for three-way interactions taking into account log-linear (and log-multiplicative) models, for only: Constant Association and Uniform Differences (Unidiff). The basic interactions are OD-P, OE-P, and ED-P. We add the interaction OD-E, to show OD variations over educational levels. Results are presented in Table 9 for men and Table 10 for women.

Regarding the men's data and their three basic interactions (ODP, OEP, and EDP), according to the test of  $L^2$  differences, the Unidiff model seems to be the preferred model (but not if we consider the BIC values). Furthermore, all association relationships tend to decline between the first and the second periods, though they tend to become slightly stronger thereafter, with the exception of OEP. A model fit improvement with respect to the constant association model seems to be present for the three main trends (not according to BIC), although the period differences do not always show a clear pattern. In fact, the OD, OE, and ED

<sup>4</sup> For a comparative illustration, in Appendix 2 we show the similarities of different aspects of absolute mobility for the general population (18+), and for our selected age-range 25–65.

**Table 3**  
Educational Levels by Periods. Men aged 25–65 years. AMBA.

| Periods                             | 1960–1971 | 1995–2003 | 2004–2008 | 2010–2017 | Total     |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|
| <b>Labour market insertion</b>      | 1921–1971 | 1956–2003 | 1965–2008 | 1970–2017 | 1921–2017 |
| <b>Educational Level</b>            |           |           |           |           |           |
| Up to Incomplete Secondary          | 77.0%     | 49.5%     | 46.6%     | 38.8%     | 52.7%     |
| Complete Secondary + Incomp. Higher | 18.1%     | 33.7%     | 36.5%     | 40.7%     | 32.4%     |
| Complete Higher                     | 4.9%      | 16.9%     | 16.9%     | 20.5%     | 14.9%     |
| Total                               | 100,0%    | 100,0%    | 100,0%    | 100,0%    | 100,0%    |
| N                                   | 2030      | 1411      | 1488      | 2565      | 7494      |

Note 1: Range of years of labour market insertion were obtained adding 25 years to the interviewees' years of birth within each cohort.

Note 2: "Higher" includes Tertiary and University educational levels.

Source: Own elaboration

**Table 4**  
Educational Levels by Periods. Women aged 25–65 years. AMBA.

| Periods                             | 1960–1971 | 1995–2003 | 2004–2008 | 2010–2017 | Total     |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|
| <b>Labour market insertion</b>      | 1921–1971 | 1956–2003 | 1965–2008 | 1970–2017 | 1921–2017 |
| <b>Educational Level</b>            |           |           |           |           |           |
| Up to Incomplete Secondary          | 86.2%     | 49.8%     | 40.9%     | 36,0%     | 43.1%     |
| Complete Secondary + Incomp. Higher | 12.1%     | 30.3%     | 35.5%     | 38.3%     | 34.3%     |
| Complete Higher                     | 1.7%      | 19.9%     | 23.5%     | 25.6%     | 22.5%     |
| Total                               | 100,0%    | 100,0%    | 100,0%    | 100,0%    | 100,0%    |
| N                                   | 297       | 1695      | 1666      | 2874      | 6532      |

Note: "Higher" includes Tertiary and University educational levels.

Source: Own elaboration

**Table 5**  
Class Destinations by Periods. Men aged 25–65 years (with class origins). AMBA.

| Periods                           | 1960–1971 | 1995–2003 | 2004–2008 | 2010–2017 | Total     |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|
| <b>Labour market insertion</b>    | 1921–1971 | 1956–2003 | 1965–2008 | 1970–2017 | 1921–2017 |
| <b>Destination Class</b>          |           |           |           |           |           |
| I+II: Service class               | 19.9%     | 26.3%     | 25.9%     | 24.8%     | 23.8%     |
| III: Routine non-manual           | 12.6%     | 13.7%     | 10.4%     | 10.8%     | 11.8%     |
| IVab: Self employed               | 26.6%     | 23.5%     | 25.8%     | 25.2%     | 25.4%     |
| V+VI: Skilled manual              | 29.4%     | 14.7%     | 13.2%     | 13.4%     | 18.5%     |
| IVc+VII: Unskilled manual & rural | 11.5%     | 21.8%     | 24.8%     | 25.8%     | 20.4%     |
| Total                             | 100.0%    | 100.0%    | 100.0%    | 100.0%    | 100.0%    |
| N                                 | 2012      | 1264      | 1381      | 1918      | 6575      |

Source: Own elaboration

**Table 6**  
Class Destinations by Periods. Women aged 25–65 years (with class origins). AMBA.

| Periods                           | 1960–1971 | 1995–2003 | 2004–2008 | 2010–2017 | Total     |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|
| <b>Labour market insertion</b>    | 1921–1971 | 1956–2003 | 1965–2008 | 1970–2017 | 1921–2017 |
| <b>Destination Class</b>          |           |           |           |           |           |
| I+II: Service class               | 16.6%     | 25.2%     | 24.7%     | 27.5%     | 25.6%     |
| III: Routine non-manual           | 16.6%     | 31.3%     | 35.2%     | 30.1%     | 31.3%     |
| IVab: Self employed               | 23.4%     | 13.3%     | 13.3%     | 14.7%     | 14.3%     |
| V+VI: Skilled manual              | 26.3%     | 5.7%      | 4.1%      | 4.2%      | 5.6%      |
| IVc+VII: Unskilled manual & rural | 17.1%     | 24.4%     | 22.7%     | 23.5%     | 23.3%     |
| Total                             | 100.0%    | 100.0%    | 100.0%    | 100.0%    | 100.0%    |
| N                                 | 205       | 1359      | 1334      | 1945      | 4843      |

Source: Own elaboration

associations undergo a significant weakening between the earliest period and the next. The tendencies are then relatively stable or rise slightly. Some considerations are thus needed. OD declines by 32% in the second period, and then increases a little. OE is the only association to decrease systematically, less during the second period (10%), but then it weakens by 24% and 28% percent with respect to the first period. ED presents a more erratic behaviour: the association becomes 10% weaker in the second period, returns to the reference value of 1 in the third period, and then becomes 15% weaker in the last period compared to the first reference period. Very generally speaking, the effects of class

origins on class destinations decline after 1960–1971. These effects later show a steady trend and a subtle tendency towards a stronger association. The temporal variation of OD across periods may be somewhat linked to the effects of class origins on educational attainment as well as to variations in the effects of educational achievements on class destinations. Only the first, however, exhibits a monotonic weakening trend in the OE association over survey periods. We should add that links between class origins and class destinations tend to remain constant across educational levels. Moreover, focusing on OD parameters along E, they become stronger for the secondary educational level and weaker for



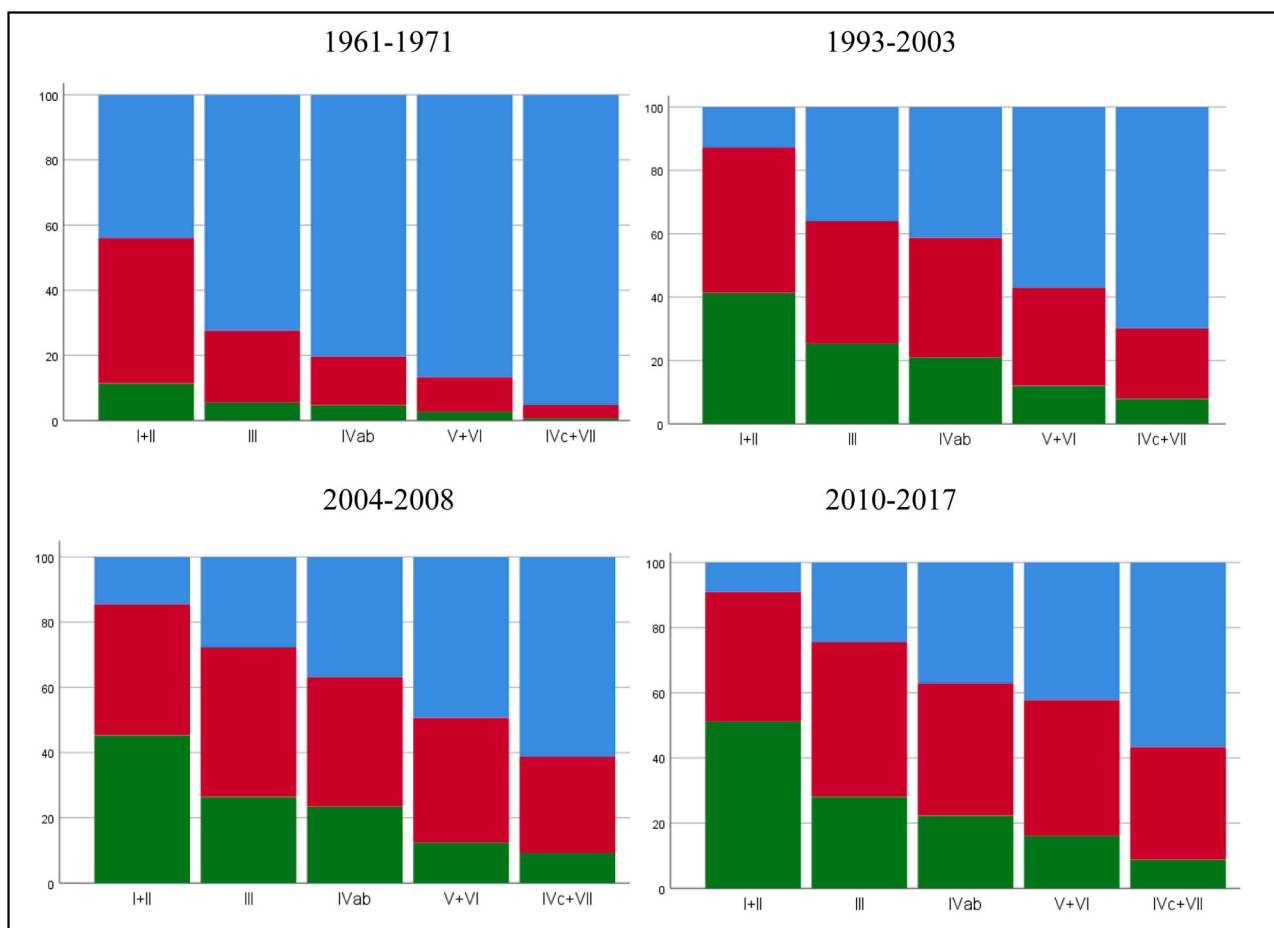


Fig. 1. OE relationship over periods. Persons with occupation, aged 25–65 years. Source: Own elaboration from databases described in the Appendix.

the higher educational level.<sup>5</sup>

In any event, all trends –global intergenerational class mobility trends, trends in educational inequality linked to class origins, and trends in class returns to education– present relatively favourable period differences for men, suggesting that it could be relevant to explore 4-way counterfactual effects.

In the case of women, and in contrast with the findings for men, constant association is clearly the preferred model for all three-way interactions. We will thus not read the women’s parameters and no further comments will be made on this point.

### 6.3.2. Simulations and counterfactual models for men

In a didactic statement, Chung and Park : 9) (2019) pointed out: “The aim of the counterfactual decomposition analysis is to reveal the relative contribution of three mechanisms that shape the trend in intergenerational social class fluidity.” They specified these mechanisms: the compositional effect (with educational expansion), educational equalisation or inequality of educational opportunities (trends in educational inequality and class origins), and trends in class returns to education.

Before moving on to the counterfactual models, we recall here the patterns observed for our 3-way models, as described in the following figure (Unidiff parameters for men):

Regarding the question as to whether education expanded in Argentina over periods and reduced inequality of opportunities in social

mobility, there is not a marked trend. While OE shows a monotonic decrease, the ED link does not, since it drops between the first and second periods, increases in the third period, and decreases again in the fourth period. On the other hand, the OD association only declines between the first and second periods, showing a constant tendency from the 1995–2003 period onwards.

We applied counterfactual models for men only because women presented constancy. Results for men showed that neither the expansion nor the equalisation operated in favour of social fluidity. They maintained values close to 1 and over. Education return was also neutral because the decrease in the last period was insufficient to show a change.

The graph below illustrates more clearly the significant influence of direct effect reduction.

In the above figure, neither a lack of significant educational expansion (compositional effects) nor equalisation seem to promote social fluidity. Let us recall that Breen (2010) had pointed out that changes in social fluidity are linked to educational equalisation and the influence of compositional effects. In a more recent work, the author added: “Social fluidity can therefore be changed by what Breen and Jonsson (2007) termed a “compositional effect”, that occurs when two conditions are met: social fluidity is higher among those with higher levels of education, and education expands to increase the share of the population with these levels of education.” (Breen 2018: 11).

In our ED-P interaction (class returns to education) the uniform variation model was preferred, while the ED parameters tended to weaken during the second period (1995–2003) and during the most recent one (2010–2017). With respect to compositional effects, however, neither the expansion nor the equalisation simulation interactions led to account for effects of education on social fluidity. It can be seen

<sup>5</sup> Jorrat (2016) noted in the case of Argentina (national samples) that although the constant association model should be preferred, OD parameters systematically increased across educational levels much more markedly for women than for men.

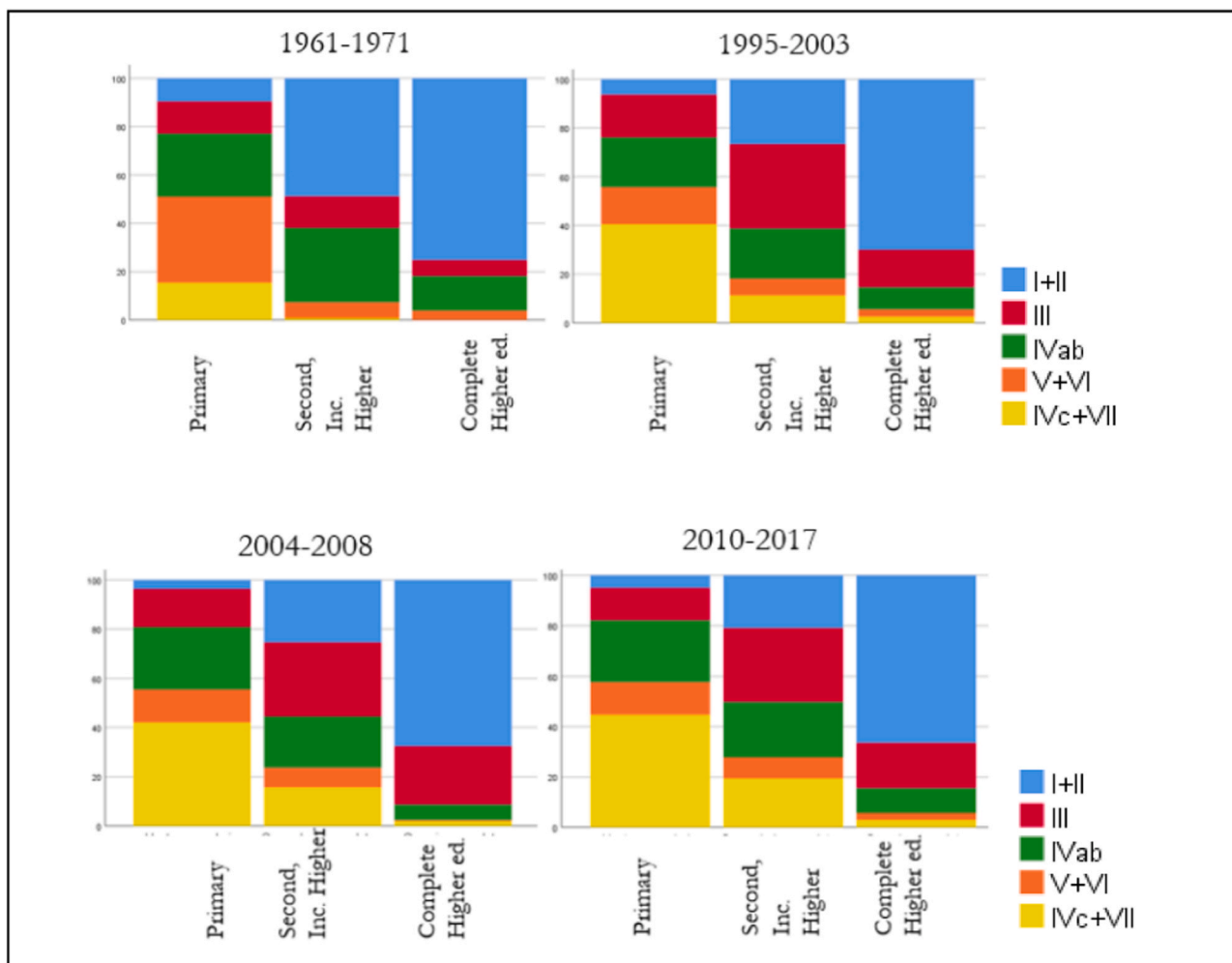


Fig. 2. ED relationship over periods. Persons with occupation, aged 25–65 years. Source: Own elaboration from databases described in the Appendix.

Table 7  
Absolute Mobility aspects based on periods. AMBA. Men, aged 25–65 years.

| Aspects of Mobility:       | Periods   |           |           |           | Total |
|----------------------------|-----------|-----------|-----------|-----------|-------|
|                            | 1960–1971 | 1995–2003 | 2004–2008 | 2010–2017 |       |
| Dissimilarity Index (DI)   | 15.1      | 15.5      | 12.7      | 12.7      | 10.4  |
| Absolute Mobility          | 65.5      | 68.8      | 65.6      | 66.3      | 66.4  |
| Non-vertical Mobility      | 20.9      | 15.7      | 12.3      | 14.7      | 16.3  |
| Vertical Mobility          | 44.6      | 53.1      | 53.3      | 51.6      | 50.1  |
| Upward Vertical Mobility   | 30.6      | 33.2      | 34.4      | 32.0      | 32.3  |
| Downward Vertical Mobility | 14.0      | 19.9      | 18.9      | 19.6      | 17.8  |
| UVM / DVM                  | 2.2       | 1.7       | 1.8       | 1.6       | 1.8   |
| N                          | 2012      | 1264      | 1381      | 1918      | 6575  |

Source: Own elaboration

that the certain level of fluidity observed for OD-P seems to be due to the diminishing effect of origin-destination associations over periods, net of education.

It is interesting to remember at this point the case of France, where Vallet :13) (2020) found that “change in the relative occupational advantage afforded by education has played no role at all, that is to say, the declining occupational returns to education had no influence on social fluidity, presumably because they affected men of all social origins rather uniformly”.

Finally, we wish to digress and note that the moderate social fluidity of men could be observed against the backdrop of the absolute mobility rates. Vallet : 128) (2004) points out that the absolute rates of

intergenerational class mobility rests on two aspects: a) changes in the origin-destination class structures, and b) the general level and/or structure of the association between origins and destinations. In our case, we must remember that men’s downward vertical mobility increased almost 6% points after the first period (while upward vertical grew by half that value). This took place in the context of Argentina’s deindustrialisation process, slow of service class growth, women’s education surpassing men’s and general economic underperformance. It seems that the pattern of observed fluidity in all three-way interactions did not relate with upward vertical class mobility for men.

**Table 8**  
Absolute Mobility aspects based on periods. AMBA. Women aged 25–64 years.

| Aspects of Mobility:       | Periods   |           |           |           | Total |
|----------------------------|-----------|-----------|-----------|-----------|-------|
|                            | 1960–1971 | 1995–2003 | 2004–2008 | 2010–2017 |       |
| Dissimilarity Index (DI)   | 12.7      | 30.8      | 33.7      | 31,0      | 30.4  |
| Absolute Mobility          | 64.4      | 71.3      | 70.8      | 70.3      | 70.4  |
| Non-Vertical Mobility      | 19.0      | 18.5      | 17.5      | 18.5      | 18.2  |
| Vertical Mobility          | 45.4      | 52.8      | 53.3      | 51.8      | 52.2  |
| Upward Vertical Mobility   | 24.4      | 34,0      | 34.7      | 33,0      | 33.4  |
| Downward Vertical Mobility | 21.0      | 18.8      | 18.6      | 18.8      | 18.8  |
| UVM / DVM                  | 1.2       | 1.8       | 1.9       | 1.8       | 1.8   |
| N                          | 205       | 1359      | 1334      | 1945      | 4843  |

Source: Own elaboration

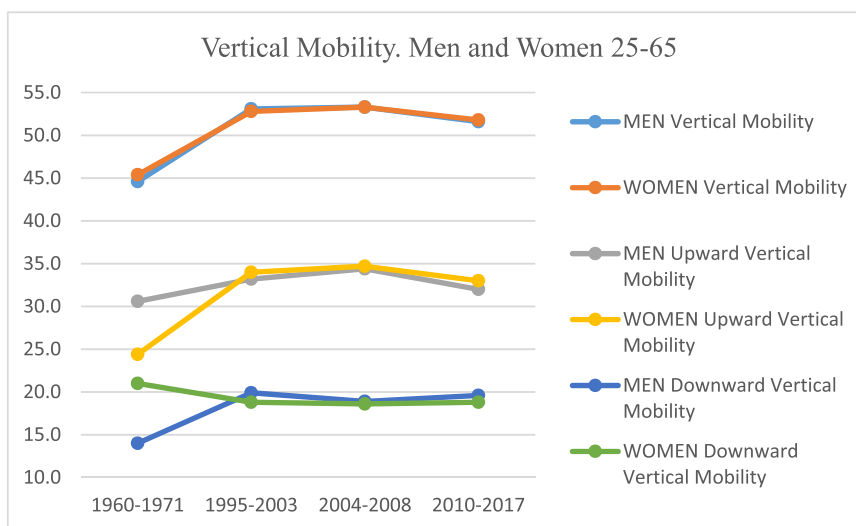


Fig. 3. Vertical mobility for men and women aged 25–65 years over periods. Source: Own elaboration from databases described in the Appendix.

**Table 9**  
Models fitting three-way interactions over periods. Men aged 25–65 years.

| Models   | L <sup>2</sup>  | GI                           | ID              | BIC       | p: Dif. L <sup>2</sup> |
|--|-----------------|------------------------------|-----------------|-----------|------------------------|
| <b>ODP: Trends in Intergenerational Class Mobility</b>                     |                 |                              |                 |           |                        |
| Constant   | 106.2681        | 48                           | 4.5             | -315.70   | 0.000                  |
| Unidiff  | 83.9863         | 45                           | 3.9             | -311.61   |                        |
| <b>OEP: Trends in Educational Inequality and Class Origins</b>             |                 |                              |                 |           |                        |
| Constant   | 64.2789         | 24                           | 3.2             | -146.71   | 0.003                  |
| Unidiff  | 50.5121         | 21                           | 2.6             | -134.10   |                        |
| <b>EDP Trends in Class Returns to Education</b>                            |                 |                              |                 |           |                        |
| Constant   | 124.2268        | 24                           | 4.6             | -86.76    | 0.007                  |
| Unidiff  | 112.2327        | 21                           | 4.4             | -72.38    |                        |
| Parameters:  | 1960–1971       | 1995–2003                    | 2004–2008       | 2010–2017 |                        |
| OD   | 1.0000          | 0.6760                       | 0.7020          | 0.7417    |                        |
| OE   | 1.0000          | 0.8998                       | 0.7610          | 0.7193    |                        |
| ED   | 1.0000          | 0.8042                       | 0.9944          | 0.8483    |                        |
| <b>ODE: Variations in Intergenerational Class Mobility along Education</b> |                 |                              |                 |           |                        |
| Constant   | 45.0993         | 32                           | 2.7             | -236.21   | 0.242                  |
| Unidiff  | 42.2602         | 30                           | 2.5             | -221.47   |                        |
| Parameters:  | Up to Secondary | Comp. Secon.+ Incomp. Higher | Complete Higher |           |                        |
| OD   | 1.0000          | 1.0644                       | 0.7653          |           |                        |

Note: "Higher" refers to Tertiary and University levels.

Source: Own elaboration

**7. Final remarks**

In this work, we explored the question: has education expanded in Argentina over different periods, reducing the inequality of

**Table 10**  
Models fitting three-way interactions over periods. Women aged 25–65 years.

| Models   | L <sup>2</sup>  | GI                      | ID              | BIC       | p: Dif. L <sup>2</sup> |
|--|-----------------|-------------------------|-----------------|-----------|------------------------|
| <b>ODP: Trends in Intergenerational Class Mobility</b>                     |                 |                         |                 |           |                        |
| Constant   | 85.7174         | 48                      | 4.1             | -321.58   | 0.376                  |
| Unidiff  | 82.6149         | 45                      | 4.0             | -299.22   |                        |
| <b>OEP: Trends in Educational Inequality and Class Origins</b>             |                 |                         |                 |           |                        |
| Constant   | 21.2395         | 24                      | 2.1             | -182.44   | 0.402                  |
| Unidiff  | 18.3092         | 21                      | 2.1             | -159.91   |                        |
| <b>EDP Trends in Class Returns to Education</b>                            |                 |                         |                 |           |                        |
| Constant   | 36.5203         | 24                      | 2.2             | -167.16   | 0.332                  |
| Unidiff  | 33.1065         | 21                      | 2.0             | -145.11   |                        |
| Parameters:  | 196–1971        | 1995–2003               | 2004–2008       | 2010–2017 |                        |
| OD   | 1.0000          | 0.7884                  | 0.9345          | 0.8213    |                        |
| OE   | 1.0000          | 0.7296                  | 0.7016          | 0.7791    |                        |
| ED   | 1.0000          | 0.9325                  | 0.8580          | 0.8344    |                        |
| <b>ODE: Variations in Intergenerational Class Mobility along Education</b> |                 |                         |                 |           |                        |
| Constant   | 21.3400         | 32                      | 2.0             | -250.19   | 0.165                  |
| Unidiff  | 17.7831         | 30                      | 1.7             | -236.78   |                        |
| Parameters:  | Up to Secondary | Comp. Sec.+ Inc. Higher | Complete Higher |           |                        |
| OD   | 1.0000          | 0.6845                  | 0.8832          |           |                        |

Source: Own elaboration

opportunities for social mobility?

We began by noting the strategic interest of our exploration of the temporal intergenerational class mobility and the role of education in AMBA and the significant, long-term historical database, over a period of approximately 60 years. To the best of our knowledge, such a long

**Table 11**  
Counterfactual model values. Men aged 25–65 years.

| Periods        | Baseline | Expansion/<br>Composition | Equalisation | Educ.<br>Return | Direct<br>OD |
|----------------|----------|---------------------------|--------------|-----------------|--------------|
| 1960–1971      | 1.0000   | 1.0000                    | 1.0000       | 1.0000          | 1,0000       |
| 1995–2003      | 0.9962   | 1.0859                    | 1.1054       | 1.0302          | 0,6743       |
| 2004–2008      | 0.9941   | 1.0767                    | 1.0319       | 1.0201          | 0,7013       |
| 2010–2017      | 0.9932   | 1.0686                    | 1.0234       | 0.9805          | 0,7417       |
| Total Change % |          | -6.9                      | -2.3         | 2.0             | 34.8         |

Source: Own elaboration

period is unprecedented in Latin American countries.

The second aspect worth emphasizing is that Argentina represents a somewhat “deviant case”, given its earlier stages of development and posterior stagnation. Indeed, the country had one of the highest GDP per capita in the world to the sixtieth position. Such processes have been termed as the “Argentine Paradox” by Taylor (2018). This led us to believe that our study would make a relevant contribution to international class mobility research.

We also noted that few studies devoted to explore the role of education in social class mobility had exceeded the limits of usual 3-way interactions in developing countries such as Argentina. In this sense, we applied counterfactual 4-way models for men, in a country where modernisation and the rhythm of educational expansion slowed down.

To analyse the evolution of education, we used national population censuses that showed a high degree of access to and completion of primary education, a sustained but declining growth in the degree of access to and completion of secondary school, and finally an upwards and weaker trend, for higher education. We concluded that throughout almost half a century, education in Argentina continued to expand but its growth was uneven and somewhat slowed down.

With respect to the analysis of the interactions between class origins, education, and class destinations, focusing on the three main interactions of the men’s data (ODP, OEP, and EDP), the uniform differences model would be the preferred one. Indeed, the degree of association declined after the first period for the three interactions, although this decline was a systematic one just for OE. The ODE interaction presented a drop in the OD parameter for Higher Education, but the Unidiff model was not preferred.

The case of women was different: all relationships showed constancy throughout all periods. This also applied to the ODE interaction, where Complete Secondary and Incomplete Higher Education obtained a lower value (0.68), but the Unidiff model was not preferred. The latter exhibits a clear contrast with international patterns, where women presenting intermediate and highest educational levels show a declining influence of origin.

All these trends in intergenerational class mobility for men (educational inequality linked to class origins, class returns to education)

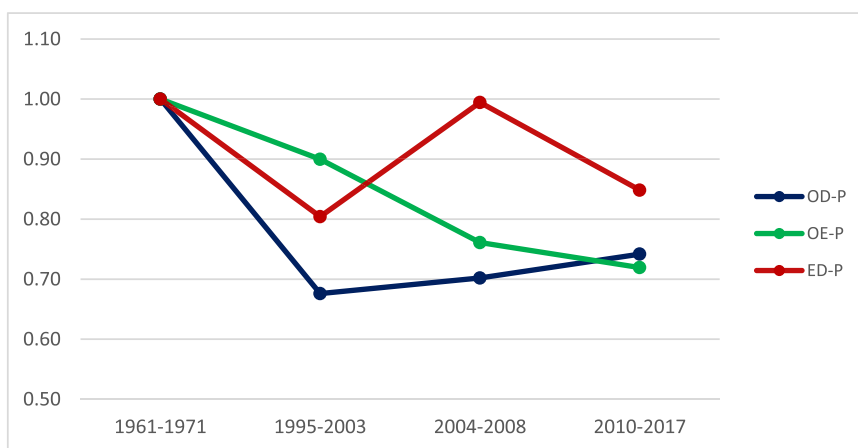


Fig. 4. Interactions OD, OE, ED, across periods. Men aged 25–65 years. Source: Own elaboration from databases described in the Appendix.

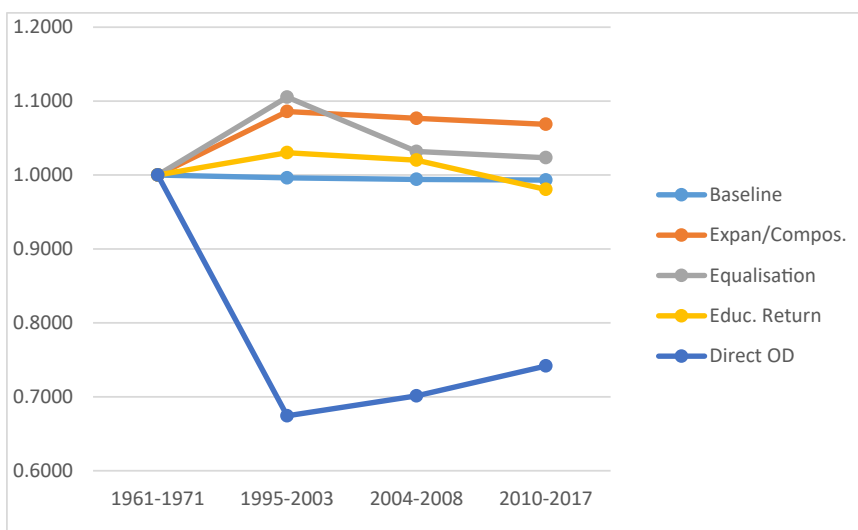


Fig. 5. Counterfactual models. Men aged 25–65 years. Source: Own elaboration from databases described in the Appendix.

exhibited period differences after the earliest stage (1960–1971). This suggests that 4-way counterfactual effects should be explored for men but not for women, since constant association was clearly the preferred model for all three-way interactions for women.

When we applied counterfactual models for men, we found that educational expansion has not contributed to generate social fluidity according its three mechanisms: equalization, compositional effect and educational return. The observed OD-P reduction can be explained by the 35% reduction of direct effect overall.

This decline in the general strength of the origin-destination association among men, from the first to the other three periods, did not come along with upward vertical mobility. Downward vertical rose after the first period, particularly produced by the growth of the flow from skilled working class origins to unskilled working class destinations. Thus, this presence of moderate social fluidity may not be linked to a modernization process. As changes in the class structure resulting from a poor economic performance and deindustrialization implied a stagnation of the service class, and a substantive decline in the size of the skilled working class, we could suggest that this increase in social fluidity does not imply a more open opportunity structure, for men. Further exploration is needed to complement this finding with the effect of expansion in educational and occupational terms of women, who show a constant association in the analyzed period.

Hence, due to marked ups and downs in economic trends at least since the 1970´-which implies a relative stagnation within a Latin American context-, plus the slowdown of educational expansion in recent decades, educational attainment has not been a key factor to promote social fluidity. In spite of the advantages of the absence of academic tuitions in the relevant public education sector of Argentina, the lack of educational reforms oriented to equality of opportunities for working-class offsprings might be a relevant factor. The reduction of direct OD effects –net of education- in the Buenos Aires Metropolitan Area must be linked to these processes.

As we previously noted, [Chung and Park:11 \(2019\)](#) pointed out that the outstanding educational expansion of Korea led to “a significant reduction in the origin-destination association (i.e. an increase in social fluidity)”, a result of the three main effects of counterfactual trends, “which contributed to increased openness in the Korean society.” And they singled out important differences with another non-Western country like Brazil, following Torche and Costa-Ribeiro (2010) study, “that found no significant roles of the compositional effect and educational equalization but mainly of the declining effect of education on social destinations and the declining direct effect of social origins on destinations.” Chung and Park think that this might be due to the relevant differences in degrees of educational expansion. In this sense, we could say that Argentina is closer to Brazil than to Korea.

The Argentine case, being atypical, can offer new elements to the current understanding of intergenerational mobility processes. In general, the mobility process is observed from low levels of development, industrialization or wealth that progressively increase. These processes have an impact on educational expansion, together with an improvement in living conditions, mechanisms that in turn promote or accompany an increase in democratization, as well as favour access to opportunities for mobility. Instead, the Argentine paradox is an initial

process of early development (1880–1970), where posterior transformations in the model of economic development (1976–2001) and recurrent economic crises, implied regressive effects on the class structure. If there is any element that shows a weakening of the influence of origins over destinations, as it is the case of the direct effect O-D, that seems to have been a worsening, rather than an improvement of sons’ class conditions in relation to that of their fathers, induced by the “deindustrialization process” and the “reversal of development”.

In a final consideration two statements stand out: 1) Our research for the Buenos Aires Metropolitan Area has detected, to a certain extent, social fluidity over periods among men within a large time span. 2) Most social mobility research in Argentina –for shorter time periods- has shown constant association between class origins and class destinations, either over birth cohorts or along periods. This is surely so since 1995, and it is equally observed when national surveys are considered (2003 onwards), as well as in the present case for women. Hence, the social fluidity over periods for the Buenos Aires Metropolitan Area since the 1960 s, along with the irrelevance of educational expansion reflected in the counterfactual effects for men, suggest that the more general findings and trends about intergenerational class mobility in Argentina seem to reflect persistent inequality under educational doldrums and economic stagnation.

Our research represents a new step in a series of analyses. We are well aware that much work remains to be accomplished in order to account for these complex and atypical processes.

#### Declaration of Competing Interest

None.

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Appendix 1

Descriptions of each survey sampling within each of the four time periods considered in this work. .

| Year                                  | Region   | Interviewees                     | Type of Sample                              | National Sample Size | Sample Size AMBA <sup>o</sup> | PROJECT  |
|---------------------------------------|--|----------------------------------|---|----------------------|-------------------------------|--|
| 1960                                  | AMBA   | Breadwinners, 18 +               | SRS* –4 stages                              | -                    | 1549                          | UBA-Institute of Sociology, 1960/61 Study: "Stratification and Social Mobility".   |
| 1971                                  | AMBA and other urban districts in the country, | All respondents, 18 +            | Purposive sample. Random samples for groups | 899                  | 669                           | "Political Leadership in Argentina", F. Turner 1973. Fieldwork 1971  |
| <b>First time period (1960–1971)</b>  |  |                                  |   |                      |                               | <b>2218</b>  |
| 1995                                  | AMBA   | All respondents, 18 +            | SRS-4 stages                                | -                    | 1295                          | CEDOP-UBA* *. Study: "Utilization and expenditure in health services"- Ministry of Health; "Social Stratification Survey". |
| 1998                                  | AMBA   | All respondents, 18 +            | SRS-4 stages                                | -                    | 251                           | CEDOP-UBA Public opinion study   |
| 2000                                  | AMBA   | All respondents, 18 +            | SRS-4 stages                                | -                    | 271                           | CEDOP-UBA Public opinion study   |
| 2002                                  | AMBA   | All respondents, 18 +            | SRS-4stages                                 | -                    | 315                           | CEDOP-UBA Public opinion study   |
| 2003                                  | National                                       | All respondents, 18 +            | SRS-4 stages                                | 1538                 | 491                           | CEDOP-UBA. "Utilization and expenditure in health services"- Ministry of Health  |
| <b>Second time period (1995–2003)</b> |  |                                  |   |                      |                               | <b>2623</b>  |
| 2004                                  | National                                       | All respondents, 18 +            | SRS-4 stages                                | 1000                 | 363                           | CEDOP-UBA, ISSP Module 2003: "National Identity"   |
| 2005 (May)                            | National                                       | All respondents, 18 +            | SRS-4 stages                                | 1420                 | 390                           | CEDOP-UBA and University of Indiana: International Study: "Stigma in Global Context"                                       |
| 2005 (July)                           | National                                       | All respondents, 18 +            | SRS-3 stages* **                            | 1000                 | 203                           | CEDOP-UBA and Ministry of Health. Study: "Utilization and expenditure in health services"                                  |
| 2007                                  | National                                       | All respondents, 18 +            | SRS-4 stages                                | 3313                 | 858                           | CEDOP-UBA. Two ISSP Modules 2006–2007. 1) "Role of Government IV"; 2) "Leisure Times and Sports"                           |
| 2008                                  | National                                       | All respondents, 20–69           | SRS-3 stages* **                            | 4000                 | 901                           | CEDOP-UBA. Study: "Attitudes towards Aids",  |
| <b>Third time period (2004–2008)</b>  |  |                                  |   |                      |                               | <b>2715</b>  |
| 2010                                  | National                                       | All respondents, 18 +            | SRS-4 stages                                | 2263                 | 471                           | CEDOP-UBA. ISSP Module 2009: "Social Inequality IV", and ISSP 2010 "Environment III"                                       |
| 2012                                  | National                                       | All respondents, 18 +            | SRS-4 stages                                | 977                  | 229                           | CEDOP-UBA. ISSP Module 2012: "Family and Changing Gender Roles IV"   |
| 2014                                  | National                                       | All breadwinners & their spouses | SRS-4 stages                                | 27610                | 1149                          | Programa de Investigación sobre la Sociedad Argentina Contemporánea. Ministry of Science, Technology, and Innovation.      |
| 2016                                  | AMBA   | All respondents, 25–65           | SRS-4 stages                                | -                    | 946                           | Programa de Investigación sobre Análisis de Clases sociales IIGG-UBA; AGENCIA I+D+i grant.                                 |
| 2017                                  | National                                       | All respondents, 18 +            | SRS-4 stages                                | 5729                 | 1068                          | Universidad. Católica Argentina. Encuesta de la Deuda Social de Argentina 2017   |
| <b>Fourth time period (2010–2017)</b> |  |                                  |   |                      |                               | <b>3863</b>  |

<sup>o</sup> Size in AMBA is the effective sample size from AMBA of persons aged 25–65 years, with information on class origin and class destination.

\* SRS: Stratified Random Sampling

\*\* CEDOP-UBA: Centro de Estudios de Opinión Pública, at Instituto Gino Germani, Facultad de Ciencias Sociales, Universidad de Buenos Aires.

\*\*\* Sex-age quotas in 4th stage

Note 1: In the case of national samples, the AMBA region was selected.

Note 2: All surveys, with exception of 1971, had a specific Social Mobility Section.

Appendix 2. Comparisons of aspects of mobility within general population (18 +) with those within selected age range (25–65)

| Aspects of Mobility | MEN 18 + | MEN 25–65 | WOMEN 18 + | WOMEN 25–65 |
|---------------------|----------|-----------|------------|-------------|
| Dissimilarity Index | 10.5     | 10.4      | 30.4       | 30.4        |
| Absolute Mobility   | 66.3     | 66.4      | 70.6       | 70.4        |
| Non Vertical        | 16.3     | 16.3      | 18.4       | 18.2        |
| Vertical            | 50.0     | 50.1      | 52.2       | 52.2        |
| Vertical Upward     | 32.1     | 32.3      | 33.4       | 33.4        |
| Vertical Downward   | 17.9     | 17.8      | 18.8       | 18.8        |
| MVU / MVD           | 1.8      | 1.8       | 1.8        | 1.8         |

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