

Income and wealth of Italian socio-economic groups: determinants and mobility 1991-2012

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In this study we extend the asset based approach, proposed by [Brandolini et al. \(2010\)](#) and relying on the sociological notion of vulnerability ([Bagnasco, 2008](#)), to define socio-economic groups (or classes). We then show how income and wealth components distribute over time and which are the main socio-economic determinants of social mobility over time. Overall, the present article contributes to the recent literature on income and wealth distribution as well as to the definition of socio-economic groups (or classes), starting from the middle class definition problem.

Income and wealth, as well as their components, jointly determine households wellbeing and cannot be used one as proxy of the other since they often show different patterns and, in classical terms, they actually reflect conflicting interest over economic resources. In particular, since nowadays different types of income and assets are simultaneously owned by almost each household, a partition of the society based exclusively on the classical functional distribution of income (wages against profits and/or rents) is not able in describing contemporary society and its structure.

During the last few years, both the academic and institutional level ([Dabla-Norris et al. \(2015\)](#); [OECD \(2015\)](#)) produced a growing literature in wealth and income inequality, most of which focused on how and why the top 10 and/or 1 percent increased his wealth and/or income over time. Until recent years, inequality studies mainly focused on income, while thanks to the work of the French economist Thomas [Piketty \(2014\)](#), *Capital in the XXIst century*, the idea that wealth concentration at the top matters spread both at the academic and public debate. However, this

research neglected how the distribution within the remaining 90% or 99% changed, and why. At the same time, income and wealth have often been treated separately, while they simultaneously determine individual (household) wellbeing. Given the complexity of contemporary societies in which different income and assets components are owned by families, the simultaneous analysis of income and wealth may help in linking the personal distribution of income and wealth at the micro level with aggregate dynamics. As [Atkinson \(2009\)](#) put it, the study of functional distribution should be considered again as central issue in political economy, in order to make a bridge between the micro and the macroeconomic picture.

At the macroeconomic level, studies on the "functional" distribution of income never ceased to pay specific attention to the decrease of labor share in GDP and its causes ([Bogliacino et al., 2015](#); [Franzini and Pianta, 2015](#); [Glyn, 2009](#); [OECD, 2012](#); [Stockhammer, 2015](#)) especially in developed and advanced economies since the end of the Seventies. Furthermore, the negative correlation between labor share and inequality measures has been established, ([ILO, 2014](#); [OECD, 2012](#)). The rise in income inequality cannot even be fully explained by the skill-biased technological change hypothesis, [Atkinson \(2015\)](#); [OECD \(2011\)](#)

As for capital accumulation, intergenerational transfers play a crucial role in shaping inequality as shown by [Piketty \(2014\)](#) and [Stiglitz \(2015\)](#), therefore the lifecycle¹ theory, according to which capital accumulation strictly relate to age and savings, cannot be used as main explanation for increasing capital and wealth accumulation. Furthermore, households savings strictly depends on income earned, but as a matter of fact, during the last three decades wages have increased less than productivity, see [OECD and ILO \(2015\)](#), reducing savings possibility at least for those who mainly rely on labor income. Economic outcomes seem therefore driven by political and social institutions embodying the relative power of different groups with conflicting interests, what [Acemoglu and Robinson \(2006\)](#) define as the *de facto* political and economic power. But political and economic power is a collective issue rather than an individual and behavioral one. This is why, groups (or class) analysis seems to be well suited to study inequality trend and distributions.

Along this path of reasoning, we can therefore start from the functional distribution at the individual/household level and we will group households according to the types and level of income and wealth owned. Within this debate, the vulnerability approach offers a first insight on how to deal with the conceptualization of the middle class, as people at risk of income shocks,

¹See the theoretical dispute between [Kotlikoff et al. \(1981\)](#) and [Modigliani \(1988\)](#)

like unemployment spells, not constrained to individuals with lower educational levels, but also to those who were used to fulfill intermediate occupations ([Bagnasco, 2008](#); [Krugman, 2014](#)). In particular, the focus of the sociological theory of vulnerability is the decrease in the possibility to keep living standards at the same levels as those characterizing the intermediate classes without external help, that is - at least during last decades in Europe - the welfare state.

In this context, the way households react to shocks depends on resources owned. Thus, although there is not a simple correspondence between groups of people and sources of income, "the breakdown by sources is, indeed, necessary since the different sources raise different issues" ([Atkinson, 2009](#)) and - for what matters here - have a different impact on households' resilience. Most of families have mixed incomes, from labor as well as from financial assets (even in the form of State bonds), and some form of wealth, mainly based on housing, as already noted by [Sylos Labini \(1974\)](#)² Yet, from a political economy standpoint, the post-industrial societies are characterized by risks, like unemployment spells, not constrained to individuals with lower educational levels, but also to those who were used to fulfill intermediate occupations. Over time these outcomes imply inevitably changes in the structure of power and conflict among socioeconomic groups, this is why socio-economics groups have to be thought as active entities and not just statistical aggregates ([Acemoglu and Robinson, 2006](#)).

Acknowledging that any social classification is arbitrary, especially if based only on quantitative aggregates, in this study we will use a simple mathematical tools to describe groups structure and then try to understand whether behind these (quantitative) dynamics any theory of classes emerges. In particular, we merge the sociological vulnerability notion into a way to define it formally including in a unique metric both income and wealth. In doing so, we extend the [Brandolini et al. \(2010\)](#) and [Atkinson and Brandolini \(2011\)](#) asset based approach including a forth group between the middle and the lower class, the lower middle class: this "new" group includes households vulnerable in terms of assets but not of income. This choice depends on the persistent differences between this intermediate class and both the lower and middle one. From the

²The importance of these structural changes have already been accounted for by Paolo Sylos Labini, the Italian economist that lead the study of social classes in Italy with his "*Essay on social classes*" according to which the classification was based on the relation to the process of value formation and the origin of personal income. Sylos Labini not only contributed with the first quantitative analysis to the study of Italian social classes, but also shed light on the role played by the changing middle class in shaping policies affecting later structural inequalities. The essay stimulated a hard debate among Italian scholars. Among all, it is worth noticing Maintan's [1975](#) critics according to which even if the middle class could be considered a social force during the Seventies, the social dynamics would tend to a polarization through the two main classes: workers and capitalists.

qualitative point of view, the lower middle class is populated mainly by two types of households. The first type previously belonging to the middle class, whose the market value of wealth dropped. Members of the second type are households who are better off in terms of income, but still they do not have wealth enough to switch to the non vulnerable middle class. Finally, we can consider the lower middle class as a group at the mercy of market forces (both in terms of income and wealth).

After a deep descriptive analysis, we run a logistic regression to explain the probability of mobility upward and downward across groups, depending on income and wealth components, as well as other economic and demographic characteristics. Results show that mechanisms driving social mobility differ among socio-economic groups: in particular, the possibility to escape poverty depends more on structural variables (labor earnings and the prevalence of business capital over total wealth). For the lower middle class mobility depends both on productive and speculative (finance and real estate) components of income and wealth. Finally, in order to become rich, only speculative components matter.

The paper is organized as follow: Section 2.2 reviews the definition of the middle class in the economic literature, Section 2.3 describes the dataset used, Section 2.4 develops the asset-based approach; Section 2.5 provides descriptive evidence of th distribution of income and wealth components across classes over time; Section 2.6 analyzes the determinants of social mobility; Section 2.7 concludes.

1 The middle class in the economic literature

The "middle class" has always been at the center of the economic debate as the engine of long-term development and growth ([Anderson and Miller, 2003](#); [Doepke and Zilibotti, 2008](#); [Easterly, 2001](#); [Murphy et al., 1989](#))³. But, as pointed out by [Bagnasco \(2008\)](#) "class and especially the middle class has to be included in political economy studies on contemporary capitalism: studying how continuous changes of the economic organization as well as the political regulation between the State and the market, as the result of specific groups of interests in given institutional environments, allow to understand what the social structural categories are, their boundaries and changes".

In the public debate, the major concerns have been driven by the argued impoverishment and

³However, [Doepke and Zilibotti \(2008\)](#) acknowledges for the possibility of other explanation for the decline of the classical upper class, in particular, the decrease in the value of land.

decline of the so called middle-class ([Atkinson and Brandolini, 2011](#); [Chauvel, 2006](#); [Pressman, 2007](#); [Reich, 2013](#)), the increased risk of social exclusion affecting poorer individuals and households and the claim according to which "today nobody is genuinely representing the interests and preferences of middle class voters" ([Hacker and Pierson, 2010](#)). Still, among scholars no agreement exists on the definition of the middle class.

In the following we will summarize the main approaches currently used in the economic literature⁴ to define the middle class. We can identify two main approaches. The first is based on the a pure income approach (within which we put studies based on deciles), although more recent studies integrate wealth as the income flow it generates annually: The second approach uses a multidimensional index to take into account income and wealth separately. Those approaches, used in principle for poverty and inequality studies, can be clustered not only on the basis of the type of economic aggregate used to shape distribution, but also in that only few of them allow for changes in the population size of each groups. This is an important aspect once we want to identify socio-economic classes and therefore we need to choose which method is best suited to reach this goal. Each approach could be disentangled in many sub-categories, we will discuss briefly.

Within the first approach, the standard and even most basic subcategory focuses on how the economic variable of interest, usually income⁵, is distributed across population quintiles. In a dynamic perspective, the population size is fixed while the distribution of the economic aggregate under study can vary. This simple method allows for comparisons across countries and over time as well. Following the decile approach, the middle class is usually represented by those belonging to a precise income deciles, usually the 5th and 6th. However, others like [Belletini and Ceroni](#)

⁴The study of social classes has been therefore carried on by other disciplines like sociology and anthropology. Among all, [Goldthorpe \(2010\)](#) blamed economists because of their over emphasis on income which leads to neglect the more fundamental social stratification embodied in labor market relations. This approach, useful not only because of the theoretical background but also of the simple statistical representation, is based on the idea that material rewards and privileges are determined by the occupational status leading to two main categories: working and service classes (which could be divided into subclasses), where the main difference is the type of relationship upon which the contract is based. However, as summarized by [Crompton \(2008\)](#) in industrial societies only part of the population is economically active. An issue which cannot be overcome using head of households' occupation, nor using the last occupation for actual pensioners, since it cannot account for long term unemployed and those who never worked. Still, structured inequalities are affected by other factors such as gender, ethnicity which play a role in the (social) division of labor but are not *per se* class drivers. Crompton also points out that many occupations are not uniquely identified in the division of labor: i.e. managers have considerable control over their immediate laboring activity, but like workers they are wage-laborers controlled by capital (or the state) within production. But more important here, occupational stratification alone cannot explain ownership of wealth and capital. Using a Marxian standpoint this argument leads to the focus on the difference between the technical division of labor, entailed by occupations, and the social division of labor ([Abercrombie and Urry, 1983](#); [Wright, 1980](#)), which is the intimate meaning behind of class structure. Therefore class structure based on labor relations could be viewed as the result of the structured inequalities, therefore such approaches are able to describe not to explain social stratification.

⁵More recently even wealth studies are conducted this way ([Piketty, 2014](#))

(2007), in a study on the relationship between median income earners and median voter theory, defines the middle class as those belonging to the third and fourth decile. Rosenthal (1985) uses a partition based on thirds of earnings from labor. Using the second subcategory, the middle class belongs to an income range, therefore boundaries are fixed while the population belonging to the group can vary, see Pressman (2007) for an international comparison⁶. As for Italian studies, Massari et al. (2009) define the Italian middle class as those annually earning a net equivalent income between 10,000 and 25,000 euros.

The third subcategory, still within the income approach, defined as the *income net-worth approach*, integrates wealth into total income (from labor, pensions, transfers) using the (net) flow it generates in the current year (Weisbrod and Hansen, 1968). As pointed out by Brandolini et al. (2010), using this definition it is assumed that consumption never impact accumulated savings (the stock) to fulfill current needs, which seems a restrictive hypothesis that we would relax especially in period of crises.

Finally, within the second methodological approach, extended by Atkinson and Brandolini (2011) to the definition of the middle class, we find the *asset based approach* according to which asset poverty is defined as the "exposure to the risk that a minimally acceptable living standard cannot be maintained once income falls" (Brandolini et al. (2010)). This method adds a dynamic dimension to the risk of poverty, that is exactly what the World Bank (2001, pag.139) means for vulnerability to poverty. The literature on vulnerability to poverty mostly focused, until now, on developing countries data. For example, François Bourguignon and Kim (2004) assess an original method to deal with pseudo-panels in estimating the probability that income falls under a given poverty threshold, using this probability as the vulnerability index. Also in Chaudhuri (2003) we found careful methodological investigation and application to the study of vulnerability to poverty, both the methodological concerns and the way they can be applied emerges.

The same methods have been adopted by Amendola et al. (2011) for Italy where vulnerability to poverty is measured as the probability that consumption or earnings levels fall below a poverty threshold within a year. All these works do not take into consideration the evolution

⁶The same approach is used for the study of the emerging middle class in developing countries, the middle class identifies "those significantly above the poverty level" (Ravallion, 2010), so that the lower boundary is taken from the relative poverty line set at .5 or .6 the median or the average net disposable income. Other studies use absolute levels of income as boundaries: within the low and middle-income countries debate, Banerjee and Duflo (2008) define middle class those households whose daily per capita expenditures (in PPP) are between, respectively, 2 and 4, and between 6 and 10. Milanovic and Yitzhaki (2002) define the world middle class as people with daily incomes between roughly 10 and 50 (PPP)

and variability in wealth as main driver of vulnerability, while mentioned in [Amendola et al. \(2011\)](#). Moreover, vulnerability has then be applied to the study of the middle class as well, [Lopez-Calva and Ortiz-Juarez \(2011\)](#), following the idea that households cannot considered as middle class members once they are vulnerable to poverty even if not eligible to poverty programs. In the present paper we follow this idea using instead the role of wealth together with income in determining vulnerability. In particular, instead of looking into the probability of getting poor, we try to understand whether an household is able to escape from vulnerability and therefore his probability of fully enjoying the middle class status thanks to economic mobility.

2 Data

The main data source is the Historical Archive of the Survey of Household Income and Wealth (SHIW) by the Bank of Italy, a representative survey of the Italian population conducted every two years, since 1966. First waves consider only income and savings, while starting from 1977 it includes also wealth, real and financial, and households' economic and financial behavior. The choice of households budgets data, instead of fiscal or administrative data, strictly depends on the population under interest together with the richness of information contained in the Bank of Italy Historical Archive⁷. First, the survey accounts for a representative sample of the entire population, regardless of the working status or social assistance eligibility, status upon which both fiscal and administrative data rely. This way we therefore avoid the truncation at the bottom of the distribution, which would have understate results on inequality. Second, the bias concerning the truncation at the top is not as relevant since we are not interested in the top 1% (and even the 10%) and we can still rely on stratification based on Census⁸.

In this study, we exclude data prior to 1991 since they do not include information on financial wealth and income; this restriction allows also to get rid of effects driven by the inflationary period prior to the Lira crisis which affect both the value and distribution of income and wealth. At the end of the time span, we use data up to 2012. Indeed, the last wave, with data referred to 2014, is used only to construct classes for the previous wave (2012)⁹.

⁷version 9.0 released in December 2015.

⁸To take into account the potential underreporting at the top of the distribution, a correction for most recent data (1995-2012) has been developed by [D'Alessio and Neri \(2015\)](#).

⁹As we will see in the next section, actual classification is based around the concept of vulnerability which derives from a dynamic perspective, in particular the definition of the middle class is based on a forward looking component of wealth.

The full database is then made by 12 waves, corresponding to an equal number of cross-sections of Italian households for a total of 27,519 observations (representing households) and 8,300 panels. Households are defined as a group of individuals related by blood, marriage or adoption and sharing the same dwelling¹⁰. From a technical point of view, choosing households as unit of analysis is due to the impossibility to split wealth data among individuals within the same household without introducing additional arbitrary sharing rules.

The number of observations has been considerably reduced from the original one since we exclude pensioners in order to avoid redistributive effects into the analysis: pensioners' income even if defined by past levels of compensation from work have to be thought as a transfer. As discussed in [Franzini and Raitano \(2014\)](#) we might think at income from pensions as an intra-individual transfer (between different life periods), but it entails also a transfer process among individuals especially in mixed pension system, as it was in Italy. We also excluded individual that are income poor but not asset poor¹¹, who are a tiny minority conceptually incoherent here. Finally, all nominal variables are expressed at 2010 constant prices, using the Households consumption expenditure deflator by Istat.

The main variables considered in the analysis are:

- *Net disposable income* excluding pensions and other transfers. Within it we distinguish i) compensation of employees (for dependent workers), ii) net income from self-employment and entrepreneurial income (the proxy for profits), iii) property income divided into income from buildings (urban rent) and from financial assets.
- *Net wealth* within which we distinguish between real wealth (real estate, businesses and valuables) and financial assets. Financial liabilities are subtracted from total wealth¹².
- *Households' observable characteristics* that is number of components and income earners, region of residence, head of households observable characteristics (as well as partner's characteristics) including working status, profession, age, educational attainment, sex¹³.

¹⁰This definition excludes from the sample people not living in a dwelling: homeless, people living in nursing home, etc...

¹¹See section 3 for the definition

¹²Inherited wealth, especially real estate, contributes to the stock of total net wealth. However, we do not use it as a separate variable since the annual flow of inheritance is not properly reported, therefore the dynamics over short time intervals may be affected.

¹³A detailed Data Appendix with variables definition is reported at the end of this chapter.

3 Asset based approach to social classes and vulnerability

Within a relatively new strand of economic literature looking for a definition of the middle class, the asset-based approach emerged. According to [Atkinson and Brandolini \(2011\)](#), households cannot be considered middle class if their net wealth is not sufficient to keep the living standard, for a given time span, above poverty after an income shock. Thus, those who do not meet this condition are considered lower class.

The contribution of the present article is to revise this approach introducing a new socio-economic group between the middle and the lower one, therefore the society will be partitioned into four classes, instead of three: the lower, the lower middle, the middle and the upper class. The idea is that within asset poor households there could exist a high degree of heterogeneity that we should take into consideration if we want to analyze the dynamics of economic resources in the society.

The middle class is defined as households not asset poor to income shocks and not income poor, where being *asset poor* and therefore vulnerable, means that net wealth owned does not allow the household to maintain a living standard higher than the poverty line, for some time length, in the case a shock on income occurs in period $t + 1$. Formally, it means that household belonging to the middle class must satisfy

$$NW_t \geq \xi PL_{t+1}$$

in terms of assets, where NW_t is the household net equalized wealth in period t , PL_{t+1} is the relative poverty line in period $t + 1$ and ξ is a scale factor defining how long wealth has to be sufficient not to fall into poverty. It can be thought as precautionary savings coefficient or unemployment duration. We rely on this second interpretation and set ξ equals to 1 meaning that households resilience should last at least one year¹⁴.

However, in the original setting by [Brandolini et al. \(2010\)](#) and [Atkinson and Brandolini \(2011\)](#), all those asset poor have been classified as part of the lower class, composed by a hugely heterogeneous group. In order to account for such heterogeneity, we introduce an intermediate class between the non vulnerable middle and the lower class, the lower middle class. In this

¹⁴This choice draws from the average unemployment spell in Italy that, during the two crisis at the tails of the time span considered, was about one year for half the unemployment population.

way, we are able to make use of the asset based approach to fully explain the dynamics and heterogeneity of the entire society as well as the persistence of vulnerability. For instance, an household belongs to the lower middle class if it is *vulnerable but not poor in period t*, which is the case if equivalent income (in net disposable terms) is higher than the relative poverty line while wealth is not sufficient to escape from vulnerability. In this case, it must hold that:

$$\begin{cases} NW_t \leq \xi PL_{t+1} \\ y_t > PL_t \end{cases}$$

At the two extremes we have the poor and the rich. The former are those simultaneously income and asset poor¹⁵. Following [Atkinson \(2006\)](#) and [Eisenhauer \(2008, 2011\)](#), the rich, the upper class is identified with those who can avoid paid employment and be still above the poverty line, that is:

$$\begin{aligned} NW &\geq \frac{PLr}{r} \\ rNW &\geq PLr \end{aligned}$$

where rNW is the flow of income generated each year from property¹⁶. Another option used in the literature, but not considered here, is to allow for an upper class within which households are not *rentier* but get an income from work twice the median or the average income ([Peichl et al., 2010](#))¹⁷.

Table 1: Classes definition

<i>Lower</i>	Income poor and vulnerable
<i>Lower Middle</i>	Not income poor and vulnerable
<i>Middle</i>	Not income poor, nor rich and not vulnerable
<i>Upper</i>	Not vulnerable and capital income above median income

¹⁵It must then simultaneously hold $NW_t \leq \xi PL_{t+1}$ and $y_t < PL_t$.

¹⁶Here we do not distinguish between different types of property, between wealth and capital, nor in terms of their liquidity since even less liquid assets could be used as collateral for borrowing activities. Finally, future work may distinguish upon asset volatility, weighting different components.

¹⁷The space of income and wealth is still not fully partitioned, since we could have people not vulnerable but poor, a category not considered here. Checking with data, over the entire time span, households belonging to this category are the 0.5% of the population considered, a tiny minority that we decide to exclude from the analysis.

3.1 Coherence of the asset based approach

If the dynamics of income and wealth are similar across deciles, one can claim that wealth and income are two sides of the same coin, although expressed differently (flow and stock). This is the case, in part, if we consider the dynamics of average equivalent disposable income from (dependent) work and net wealth (Fig. 1) in absolute terms. However, once we focus on the period starting with the recent crisis (2008), at the aggregate level, it is clear that while income drastically decreases, wealth does not, or at least not with the same intensity. Moreover, the share of income and wealth distributed across respectively income and wealth quintiles have different dynamics. Figure 2 shows that labor income and wealth shares do not co-move. More specifically, we investigate the dynamics of income shares within the third quintile in terms of wealth (top panel) and *viceversa* (bottom panel). This motivates once again the choice of a compound metric that includes separately both income and wealth.

[Figure 1 and 2 about here]

The asset based approach seems also to be compatible with both the distribution of income and wealth across quintiles as well as occupational status and educational attainment. As shown in Fig. 3, the existence of a high degree of heterogeneity between the Poor and the Lower middle class emerges both in terms of income and wealth distribution. As for income, all households classified as Poor entirely belong to the bottom 20%, only the 5% of Lower Middle households do. Looking at wealth, the bottom group concentrates in the bottom two deciles (almost 80% of the population), while less than 50% of the Lower Middle ones. Differences exist also between the Lower Middle and Middle class, especially for wealth: none in the middle class belongs to the first wealth quintile against the 20% of the Lower Middle class members. Even the Rich occupy a coherent position most of them belong to the top quintile.

[Figure 3 about here]

A second check into the coherence of the classification used in this study is to look how groups distribute over professional status - Fig. 4. First, income poor households divide between unemployed and blue-collars and a residual 10% made by white collars. No big differences exist between Lower Middle and Middle class members, while members of the Rich group, whenever

white collars in the 25% of cases, have a high portion of managers and self-employed as well as sole proprietors and members of the arts and professions compared to the rest of the population.

[Figure 4 about here]

Finally, heads of households with only the primary school attainment characterize the Poor more than any other groups - Fig. 5 - while the difference between the Lower Middle and Middle class mainly depends on the share of households characterized by middle and high school, where the Middle class has an higher rate of head of household with high school degree. However, for both of them, less than 10% characterize by bachelor's degree in contrast with the Rich.

[Figure 5 about here]

Overall, while differences in income and wealth across quintiles quietly determine socio-economic groups - defined over the asset based approach-, education and occupations are not strong in establishing those differences. This first evidence supports the idea that personal income distribution and inequality at the micro level cannot be explained only by labor and/or skill. Still we can investigate which socio economic factors mainly drive the position of households across classes and then we will start the descriptive analysis looking into the dynamics of population, total income and wealth across socio-economic groups overtime with a focus on the functional distribution of personal income and wealth.

3.2 Socio-economic determinants of households position across groups

In order to investigate how and to what extent socio-demographic characteristics determine households' position across classes, we run a multinomial logit regression:

$$y_i = \alpha_1 wages_i + \alpha_2 UrbanRent_i + \beta RealEstate_i + \gamma BlueCollar_i + \delta WorkIntensiy_i + \vartheta IncomeEarners_i + \gamma_k X_i + \varepsilon_i \quad (1)$$

where the main economic variables, *wages*, *urban rent* and *real estate*, are expressed in logarithm and account for the level of economic resources both from labor and main wealth components. *Blue Collar* is a dummy variable accounting for the lower occupational status. We then control

for the *intensity of work*, as dummy variable taking value 1 if the head of the household works only part of the year and zero otherwise. *Income earners* measures the number of people at work in the household. Finally, X_i is the set of individual characteristics used as control: among them, we include head of household's age and its square to control for life cycle earning path, but also regional fixed effects.

[Table 2 about here]

According to estimation results, the probability of being in a class higher than the lower one (the Poor) increases as each of the economic variable used increases. In particular, an increase in income from work has a bigger effect on the probability of escaping the lower class and belong to the lower middle class member than it has on the probability to belong to the middle or rich class- respectively, 7.6, 6.8 and 4.8 times. As the (log of) urban rent increases¹⁸, the probability not to belong to the lower class but to a higher one does too accordingly. In this case, the probability of being both lower middle or middle class is once more likely with no big difference between these two groups. Obviously the value of the main residence increases the probability of not being in the lower class, something that follows the groups definition itself.

The composition of the household still matters. As Table 2 shows, adding an income earner to the household, the probability of belonging to a different class than the Poor one increases significantly. Finally, head of household's age does not have a significant effect on class position once we consider the linear association. However, a positive and significant effect emerges as we consider the quadratic term.

This simple model shows therefore that many effects play a crucial role in determining to which class each household belongs. Each source of income plays a different but significant role as well as demographic characteristics.

4 Descriptive analysis

The definition used for the four socio-economic groups allows simultaneously changes in the size of each groups and their boundaries. Table 3 reports summary descriptives on the distribution of population, net disposable income and net wealth shares. Starting with population (top panel),

¹⁸Urban rent is computed net of imputed rent: see the Data Appendix section at the end of the chapter for more detail on variable definition, measures and sources.

we note that the lower class padded out increasing its share by approximately 50% between 1991 and 2012, the lower middle class and the middle class experienced a weaker decrease in their population share, about respectively 13% and 7%. The upper class weakly increases in population share, 2 percentage points, meaning 26%. Population is in 2012 more polarized than it was at the beginning of the Lira Crisis (1991), after which the major shift is a downward movement from Lower Middle to the Poor group followed in 1995 by a similar shift from the Middle to the Lower Middle group.

[Table 3 about here]

Changes in population shares across groups are followed by changes in the share of net disposable income and net wealth. These joint movements imply changes in inequality both within and between groups. Despite the increase in the share of total population belonging to the Poor, the associated income share remains constant, which implies an impoverishment of this group. Similarly, The impoverishment of the Lower Middle class emerges as the decrease in income share is higher than the decrease in population. The opposite applies to the Middle Class, meaning that even if this group shrank it is overall richer.

Slightly different is the analysis of total net wealth over time, according to which there is an increase in the share owned by the lower class, caused by the drain of ex-lower middle class members. However once weighted by the class size the positive effect is offset. A drastic decrease characterizes the wealth share dynamics of the lower middle class which is even stronger once weighted by population. Again, the opposite holds for the middle class whose wealth share increases by 14%. Finally, the share of the upper class widely increase from 29.5% to 36.1%. Similarly to the standard analysis based on deciles distribution, the evidence according to which wealth inequality is stronger than income inequality is confirmed by the asset based approach.

4.1 Income distribution

Once we want to go in depth with this average trends, we need to understand how each income and wealth component varies across classes over time as well as the distribution within each class. This is important to shed light on how structured inequalities evolve and which are the main drivers. We can test, at least descriptively, whether inequalities mainly depend on functional distribution of income, that is on widening polarization in income from work or capital/wealth.

First, looking at the share and median income from dependent work (Tab 4), we are able to get a first look at inequality path between groups. Here, while the lower and lower middle class lose ground, the middle and upper classes increase their share of income from dependent work over time. Moreover, growth in median values is negative for the Poor and increase for the Lower Middle and the Rich, while it is stable for the Middle class. In particular, for the Poor it is evident that the Lira Crisis drove the decreasing trend; the downward jump in 1993 has not been recovered after 2002 (the expansionary period before the Euro Crisis). If on one hand this result could be explained by the increase in unemployment during the crisis, on the other hand, the dynamics at the beginning of the XXI century, characterized by less unemployment, highlights a drop in income from dependent work for those households at the bottom of the distribution.

[Table 4 about here]

Moving forward, we will look at capital income (Figure 6), which permits to get a broader picture over market income distribution. Capital income is used as total income flow from assets (including financial ones), without distinction across types. First of all, as capital income strictly depends on wealth and the way it is invested between real and financial assets, the distribution of this type of income strictly follows wealth. However, one could see that the share of capital income for the upper class has not increased as expected, unless between 1991 and 1995 and after the Euro crisis. This, only apparently, counterintuitive result may depend on the increase in payable interests within the financial income component which increases with classes. Again, the Middle class can be considered the winner in terms of capital income: the share over total capital income accruing to this group almost doubled between 1995 and 2008, from 17 to 32 percent. Moreover, the overall distribution of capital income does not depend on the urban rent component (net of imputed rent), that is income from (rented) real estate (Fig. 7). As one might note, its distribution is almost constant over time, while definitely unequal.

[Figure 6 and 7 about here]

Finally, we show the composition of income within each group, Fig. 8, disentangling all income sources. First, we note that all but the Rich are characterized by labor income from dependent work which as seen is constant if not decreasing over time. Second, the self-employment and profit component increases for all but the Poor between 1995 and 2006,

with the larger increase for the Rich. Third, income from financial assets plays a significant role just for the latter, although it displays high volatility. In particular, after 2006, its values has considerably decreased. No big differences emerge between the middle and lower middle group. Overall, Fig. 8 highlights how the functional distribution of income within and between classes is able to characterize the dynamics of inequality: the Rich, *rentier* by construction, are effectively those for which dependent work is not the main source of income.

[Figure 8 about here]

4.2 Wealth Distribution

A dynamic perspective makes clear that households in Italy are on average well-off in absolute terms: average (and median) net wealth at least doubled across classes, with the increase more pronounced both for the Middle class and the Rich (Tab. 2.3). As said, total wealth can be disentangled between capital and financial component (Fig. 9), two concepts often used as synonymous while they are not. Real capital such as businesses are the classical components of capital while financial wealth and real assets are not. This is a fundamental distinction since wealth includes "the capitalized value of rents which give command over purchasing power" [Kanbur and Stiglitz \(2015\)](#) therefore it is not a physical input of production.

Analyzing wealth composition and its distribution, within and between groups, one has to take into consideration the Italian peculiarity: the share of homeowners is well above all other European countries. This feature shapes the composition of wealth within classes, dominated by the real estate component. In particular, for all groups, the share of real estate over total wealth and capital assets is about seventy five percent, although the share is decreasing with classes (ranging from 79% of the Poor to the 68% of the Rich).

Still, being owner does not unambiguously characterized household's stability in terms of assets. As shown in Fig. 9, the Poor own houses worth less than 30,000 euro and both business and financial asset are about four thousands euro on average. As for the Lower Middle class, real estate assets increase over time in value from fifty to eighty thousands euro, while they still lag behind what the Middle class owns, that is on average forty percent higher. The same ratio applies to the other types of assets even if the distance between the two groups is over time more volatile than for real estate. Finally, the composition of assets own by the Rich over time highlights

a higher weight of the financial component over total wealth - 16% against the 10% of the two middle classes and the 6% of the Poor.

[Figure 9 about here]

Splitting capital and wealth concentration across classes over time, we can see that in 2012 - in the middle of the Euro crisis- the Rich own the 39% and 49% of respectively business capital and financial assets. The shares accrued to the Middle class seem quite stable, so once again, we cannot conclude that households belonging to the non vulnerable middle class are worse off in Italy. Conversely, a remarkable reduction characterizes the Lower Middle Class, for whom in particular, in 2012, the share of business capital is the sixty percent of its value at the beginning of the Lira crisis. Finally, the financial component owned by the Lower middle class experienced a reduction from 39% to 21% over total wealth during the same period. These trends are confirmed and even more pronounced once we weigh them for population dynamics across classes over time.

[Table 5 about here]

5 The determinants of social mobility over time: an empirical assessment.

Once we have seen many descriptives related to socio-economic groups, defined over the asset based approach, we want to understand how mobility across groups occurs for each household. In particular, we want to test the extent to which the composition of wealth and income within household matters for upward (downward) mobility, that is the transition from one class into an higher (lower) one. This exercise helps, without pretension of causal determination, in shedding light on theoretical issues, like the Piketty's claim according to which it is the share of wealth owned that drives accumulation and therefore inequality over time, or it is the flow of income from wealth/capital (Bonnet O. and Wasmer, 2014) that matters. At the same time, using the detailed set of data we are also able to distinguish between the power of productive capital (businesses) and wealth (defined mainly as financial assets and real estate). Furthermore, the main goal is to assess whether different mechanisms are at work among groups.

Following Fields (2008) and Jantti and Jenkins (2013) we define income mobility as a *positional (or rank) movement*, which considers movements among positions within the

distribution (the four groups here). In particular, we define upward mobility as a dummy variable equal to 1 if the household belongs in the last period of observation to a group higher than in t_0 , the first period observed. Conversely, downward mobility occurs if the household belongs to a lower group with respect to the first period observed. Table 5 reports the distribution of upward and downward mobility cases for the full sample: the probability of upward mobility is 12.71% against the 52% of downward positional movement.

[Table 5 about here]

For the estimation model, we use a population-averaged panel-data model with logistic specification for unbalanced panel assuming an AR(1) structure for the within-group correlation (we also run the same specification using an AR(2) structure for which coefficients' sign and significance do not change)¹⁹. In particular, we use the following specification:

$$\begin{aligned}
 mobility_{it} = & \alpha_1 Y_{it} + \alpha_2 W_{it} + \alpha_3 Occupation_{it} + \alpha_4 Triggers_{it} + \\
 & + \gamma_k X_{it} + \beta_t D_t + \varepsilon_{it}
 \end{aligned} \tag{2}$$

In order to take into account collinearity among income and wealth components, we use them as ordinal variables, where $Y_{it} = 1, 2, 3, 4$ if the prevalent income is generated respectively from labor, urban rent, financial assets or self-employment (which accounts also for profits); and $W_i = 1, 2, 3$ if the prevalent share of wealth is made by real estate properties, businesses or financial assets. What remains as source for inconsistent estimates is the collinearity between savings from labor and financial income. *Occupation* is a multinomial variable capturing the head of household's professional status (blue-collar, white collar, manger, unemployed, sole proprietor, etc...). Then X_{it} captures other head of the household's (sex, age, marital status) and household observable characteristics (number of income earners, geographical area). Finally, the variables *Triggers_{it}* are used to capture changes in head of household professional status and the number of income earners within the household in year $t + i$ compared to t . While observable characteristics display the absolute contribution of different status, triggers captures the marginal effect of the change in these, economic and demographic, characteristics.

[Table 6 about here]

¹⁹FE estimation is not allowed as option for this type of models, therefore in order to control for individual characteristics, we use a full set of socio-economic characteristics.

Table 6 reports estimation results for groups' determinants of upward mobility. As for the Poor (Tab. 6 column 1), first column, having a prevalent income not from dependent work does not increase the probability of escaping income poverty over time. The probability of an upward movement is twice more likely if the prevalent wealth component is made by business capital rather than real estate; while decreases by 30% in the case of prevalent financial assets. This evidence highlights the role of productive components in the probability of getting out from poverty. Looking at the role of professional status, it emerges that the absolute position within the occupational hierarchy does not matter, while escaping poverty is 2.4 times more likely as positive changes in occupation occurs. Demographic triggers matter: increasing the household work intensity by one income earner increases the probability of mobility by 3.6 times. Finally, other demographic variables: education, age, are not significant.

Looking at the probability of mobility for the Lower middle class members, we note that here the productive (structural components) have different a impact. First, a prevalent income from urban rent makes upward mobility more than three times more likely. Second, being financial assets the prevalent wealth component relative to real estate decreases the probability of entering the middle class by 26%, while business capital makes upward mobility twice more likely. Third, the position withing the professional hierarchy is significant only if the head of household is a white instead of blue collar. Forth, a positive change in the occupational status increase this probability by almost 6 times. Finally, being single makes the probability of entering the middle class less likely (-33%).

The Middle class seems to be characterized by mechanisms relying more on the speculative components of income and wealth (Table 6 column 3). In fact, not being an household with labor income as the prevalent one increases more than 10 times the probability of becoming Rich, an evidence straightforward given the construction of the Rich group as rentier. However since financial income includes savings, this could be interpreted as determined by the difference in compensations from dependent work, which in turn positively affect the difference in savings. Still, as long as the urban rent is a determinant of upward mobility for the Middle class, there would be an incentive to invest in real estate to increase the urban rent. All professions other than blue-collars seem to have a positive effect on upward mobility. At the margin, a constant occupational status or a positive change over the professional hierarchy have a positive impact, with an odd ratio equal to 2.9 and 2.6 respectively. Work intensity and its changes do not affect the

probability of becoming rich. Furthermore, being single or divorced increases upward mobility possibilities. This evidence taken as absolute value does not tell anything on the marginal change in the marital status. Finally, the geographical region of residence matter: households in the South or living in the two major Islands have a lower probability of upward mobility, *ceteris paribus*.

The analysis of downward mobility display coherent results, Tab. 7. In particular, both for those belonging to the Poor and the Middle group at the starting period the probability of downward mobility seems to be mainly affected by socio-demographic characteristics and their changes. The probability of remaining poor is positively affected by the prevalence of urban rent in total income, while changes in the number of income earners and an increase in the professional hierarchy have a negative and significant impact. However, the absolute effect of the work intensity is now positive. Looking at the Lower Middle households, we note that the prevalence of financial asset in total wealth increases the probability of downward mobility by 20%, while positive changes in occupation and the work intensity has a negative impact (0.4). Finally, for the Middle class members income and wealth composition have a bigger role. Here, in fact, being the urban rent or the financial income the prevalent on has a significant and negative impact on downward mobility, while the prevalence of financial assets in total wealth increases this probability. This apparent contradictory results could be due to the volatility of this type of assets.

[Table 7 about here]

6 Conclusion

Inequality is receiving increasing attention among scholars and international institutions with particular focus on income and wealth accumulation at the top of the distribution. Less is known on the dynamics of inequality within the remaining 90% or 99% and its determinants, although scholars seemed to be increasingly concerned with the argued impoverishment and decline of the so called middle-class.

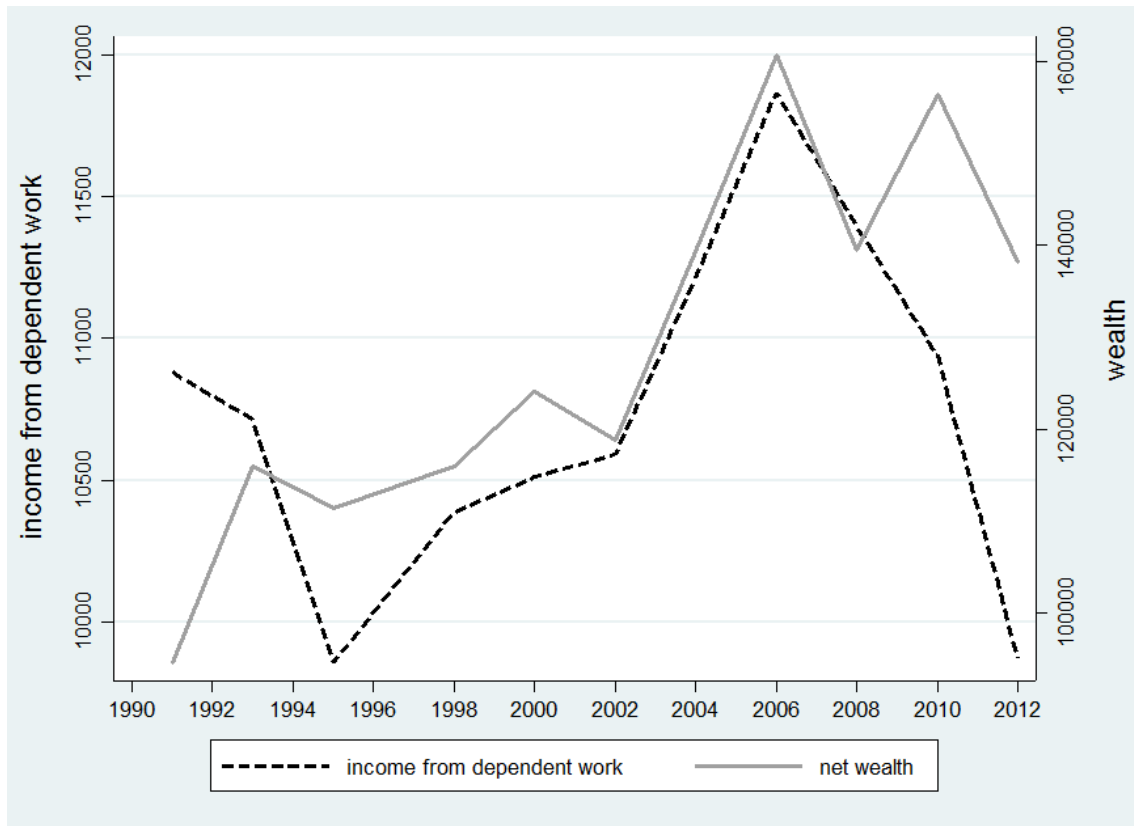
Analysis based on groups dynamics and contrasting interests has never cease to belong to the political economy field. However, the economic literature seem to be in search of a theory to explain such trends: rejecting the classical theory, no theory has emerged from the marginalist revolution and its subsequent applications. This lead to an empiricist approach mainly based

on the partition of the society according to the distribution of economic aggregate. Although income has been always preferred as proxy for status, wealth came up again as the main driver of socio-economic inequalities. In the present paper, using the asset-based approach to account for wealth on its own, we divide the society into four groups within which households are considered middle class if they are not vulnerable to income shock, thanks to their assets endowment.

Using this definition, we are partitioning the social space according to the vulnerability concept, which allows to get close to a functional distribution approach at the micro level. In this way, we are able to understand the dynamics of different types of income and wealth among groups over time. The descriptive analysis on income and wealth composition across groups over time provides the first evidence: while the middle class is shrinking in terms of population, it becomes richer over time, especially in terms of real and financial assets from which it derives increasing income levels. Conversely, the lower middle class seems to face a double trend: on one hand its members face a *proletarization* therefore a downward mobility to the lower class, while another fraction is able to move into the middle class thanks to the wealth accumulation process. What matters for social mobility is the prevalent source of income and wealth: households relying more on urban and financial income as well as on capital income have higher probability to move upward with respect to families whose prevalent income come from employment wages. Furthermore, business capital and financial assets are positively correlated with upward mobility. However, this is not the case for the Poor, lo lower class, for which upward mobility is not affected by the prevalence of urban rent in total income. At the same time, an increase in business capital helps escaping poverty. Overall, these results show that in order to move upward, starting at the bottom of the social stratification, people need productive not speculative means. At the opposite of the distribution, the speculative components play a major role. We can therefore conclude that depending on the amount but also the type of resourced owned, households are able to move to a higher position, meaning that the individual functional distribution has a role in explaining income and wealth inequality for the Italian society.

7 Figures and Tables

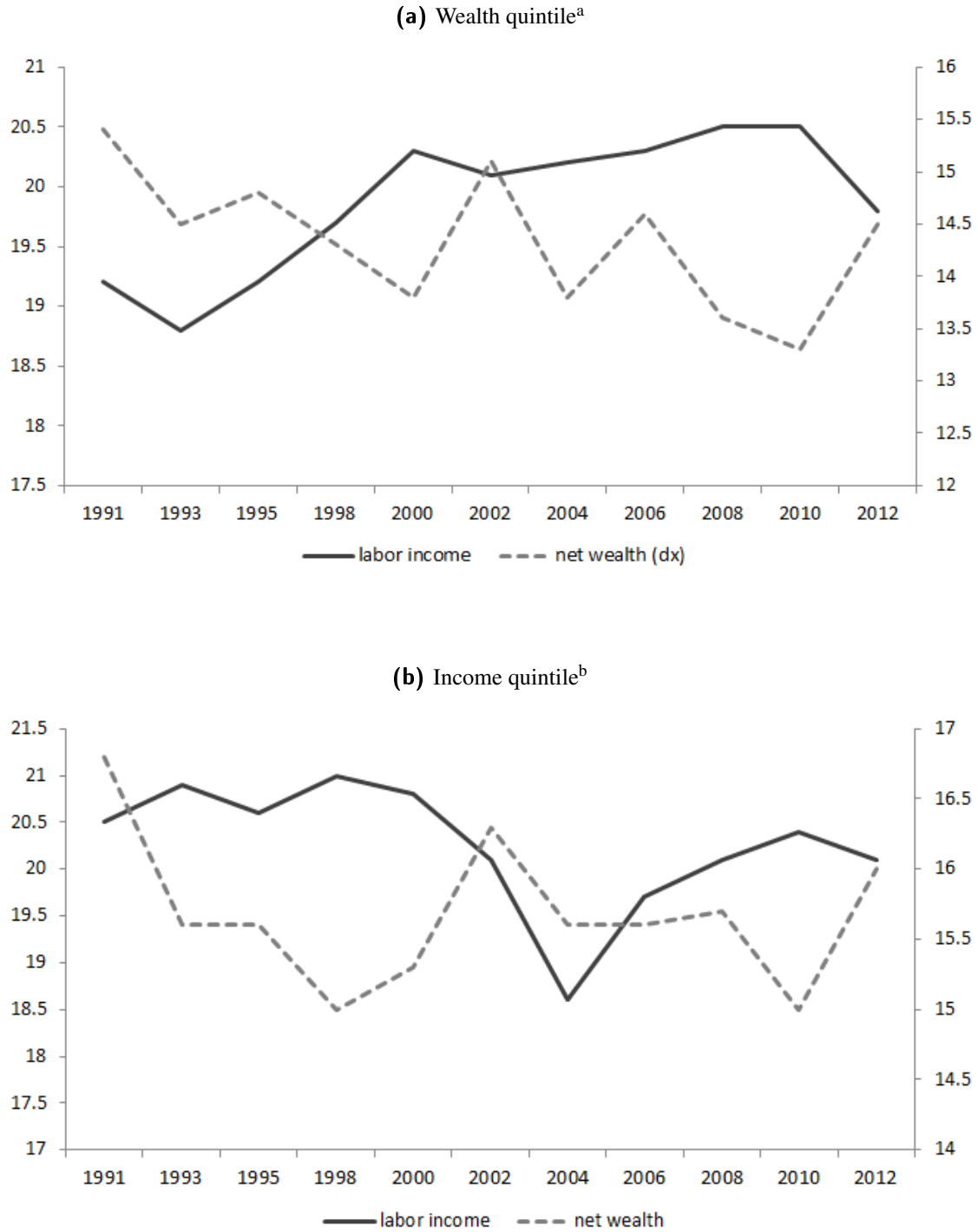
Figure 1: The dynamics of average labor income and wealth.



Labor income includes gross compensation from of employees (dependent work), while net wealth accounts for all assets owned net of liabilities. Both variables are averaged across the population and expressed in 2010 prices.

Source: SHIW Bank of Italy

Figure 2: Labor income and wealth shares within the third income and wealth quintile (%)



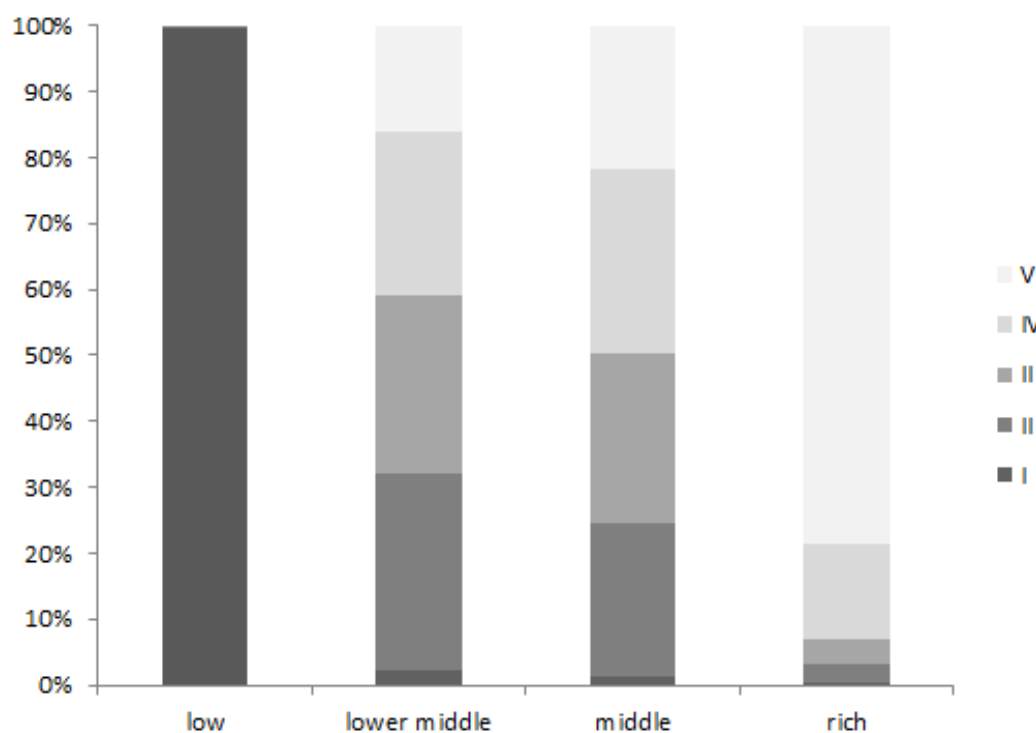
^aThe upper panel shows the dynamics of the shares of labor income and net wealth accruing to wealth third decile.

^bThe bottom panel shows the dynamics of the shares of labor income and net wealth accruing to income third decile.

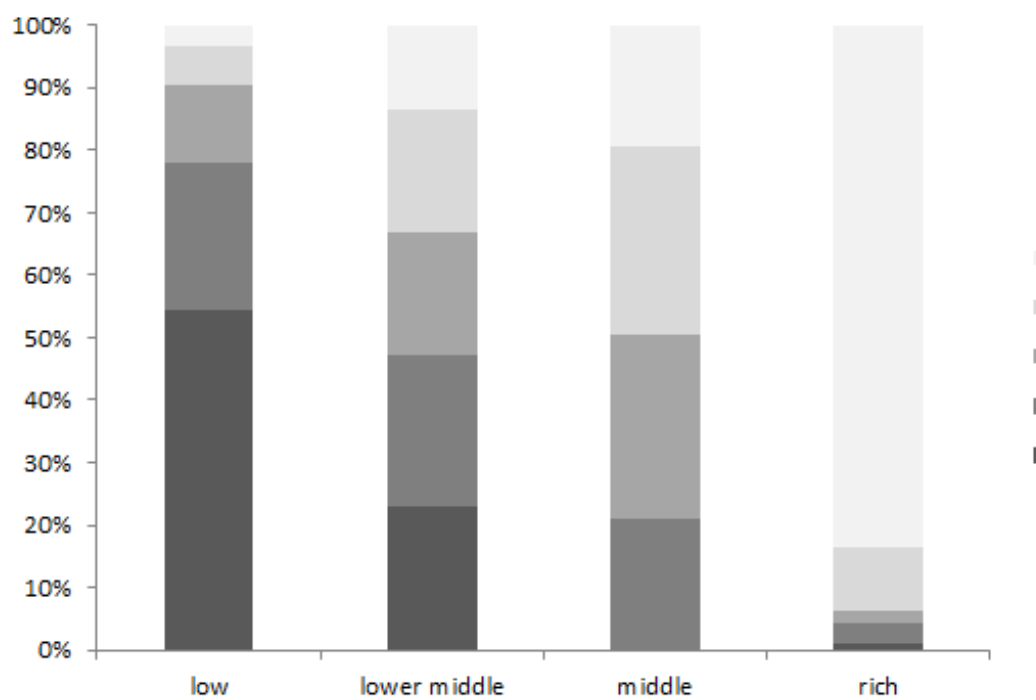
Source: SHIW Bank of Italy.

Figure 3: Groups' distribution across quintiles

(a) Income.



(b) Wealth.

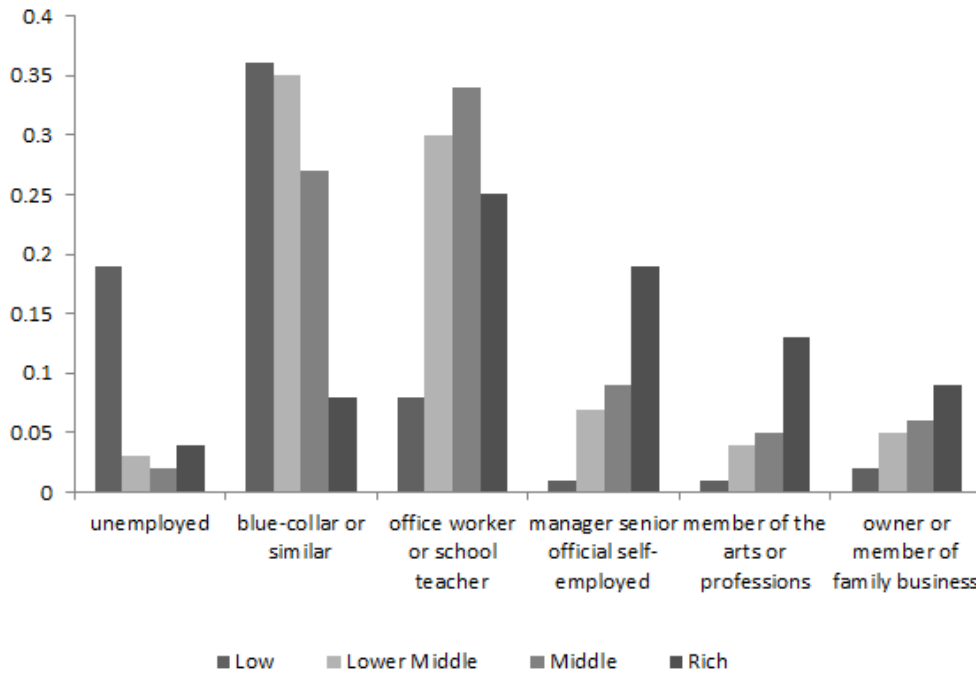


Source: SHIW Bank of Italy

Note: figure (a) shows how the population of each socio-economic group distributes across total income quintiles. Similarly, panel (b) shows how the population of each socio-economic group distributes across net wealth quintile.

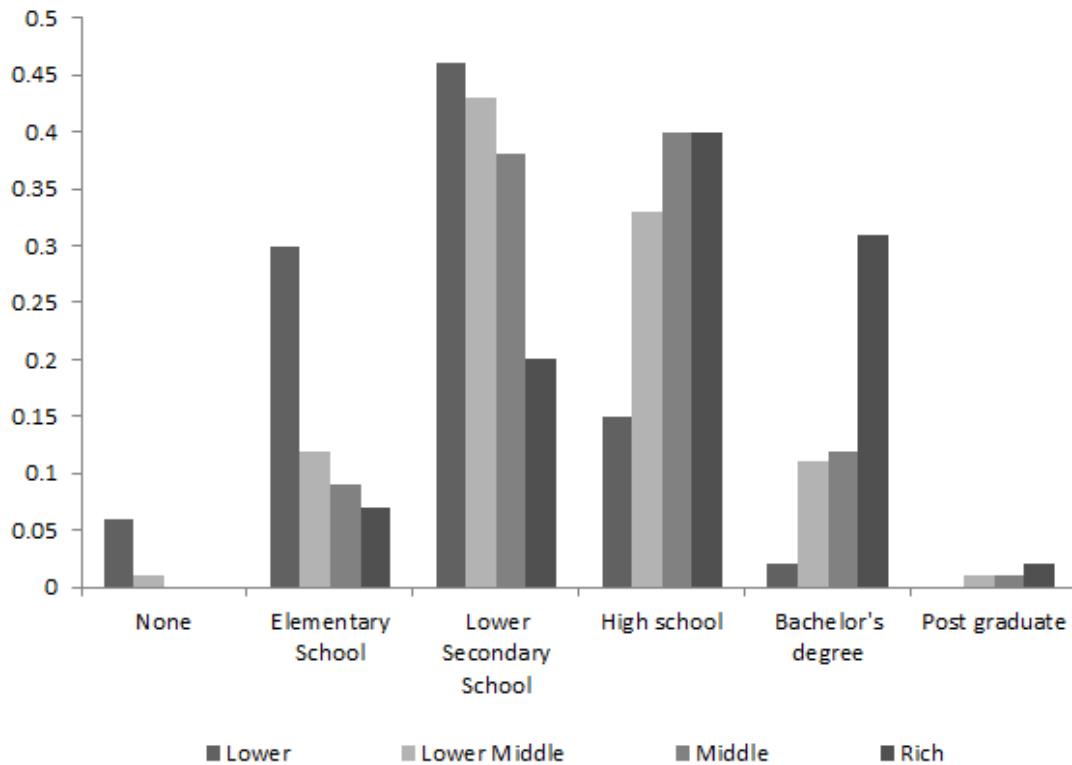
Source: SHIW Bank of Italy

Figure 4: Groups' distribution across professional status^a (%).



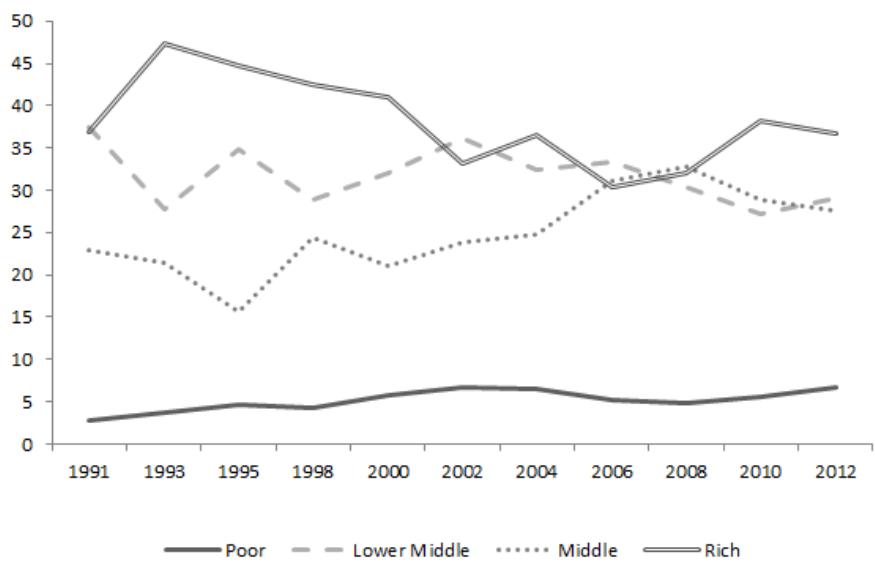
^aThe figure does not include the full distribution across occupations. In particular, we excluded unpaid family members, home maker, freelance. At the same time, junior managers are included into managers and self employed. Source: SHIW Bank of Italy

Figure 5: Groups distribution across educational levels.



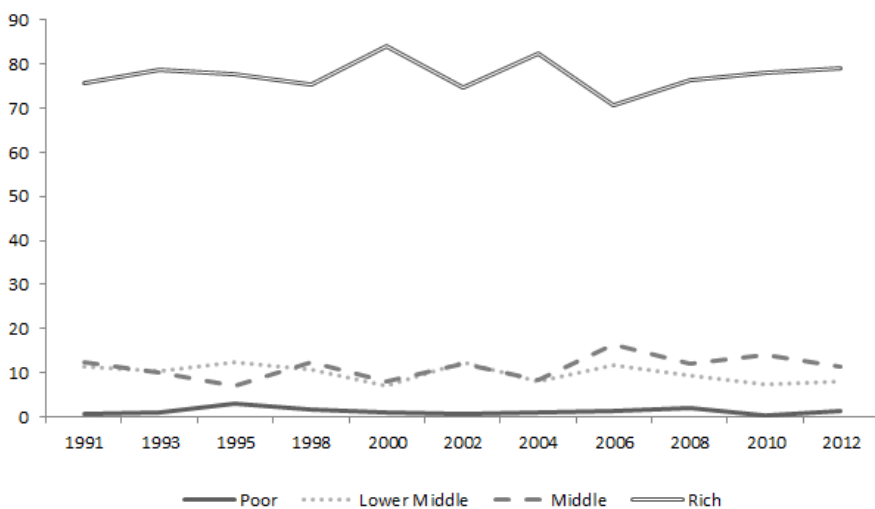
Source: SHIW Bank of Italy

Figure 6: Distribution of income from capital and wealth across groups over time (%).



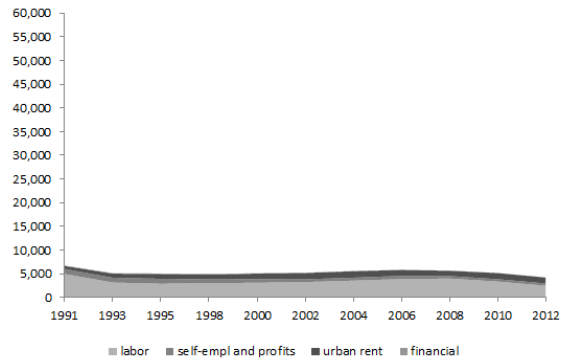
Income from capital and wealth includes property income (actual and imputed rents) and those from financial assets (net of payable interests).
Source: SHIW Bank of Italy

Figure 7: Distribution of urban rent (net of imputed rents) across groups over time (%).

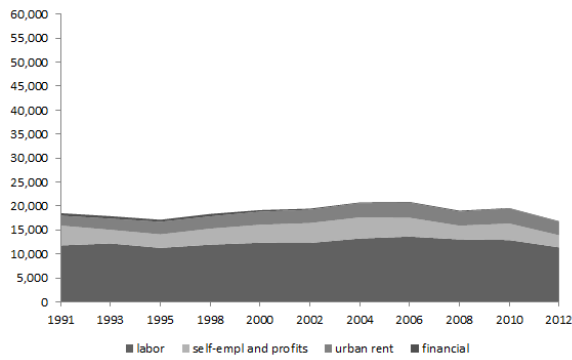


Note: see the Data Appendix section for variable definition. Source: SHIW Bank of Italy

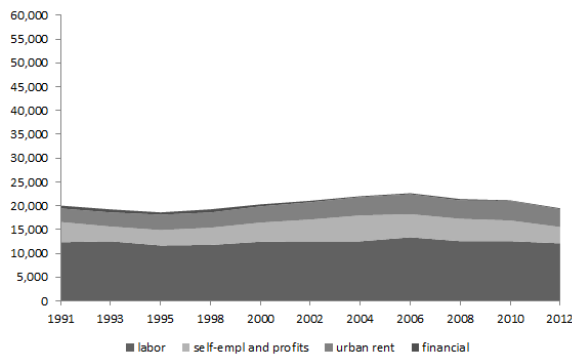
Figure 8: Income components within each group (average values)



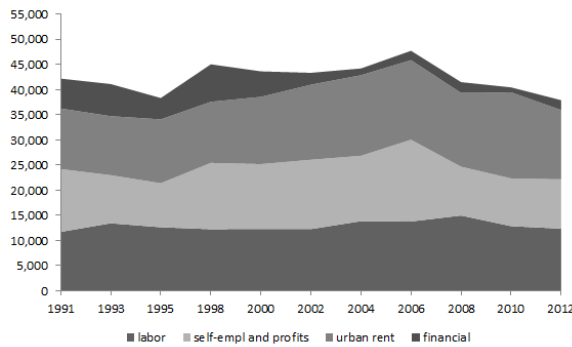
(a) Poor



(b) Lower Middle



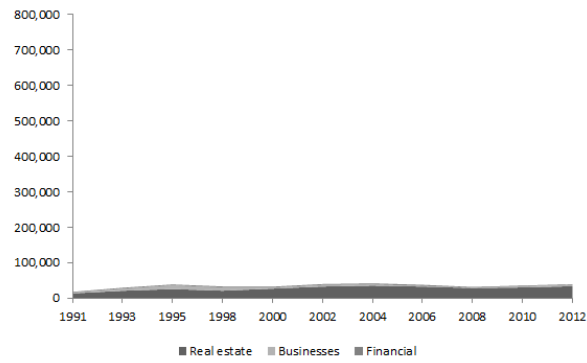
(c) Middle



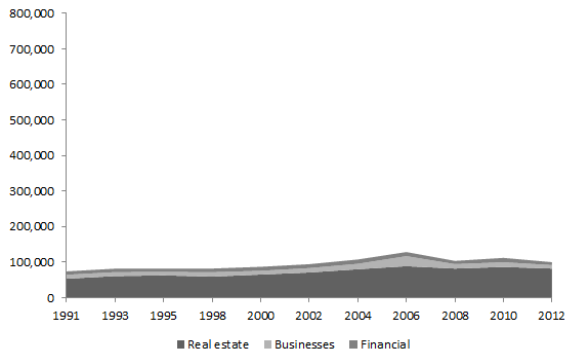
(d) Rich

Source: SHIW Bank of Italy

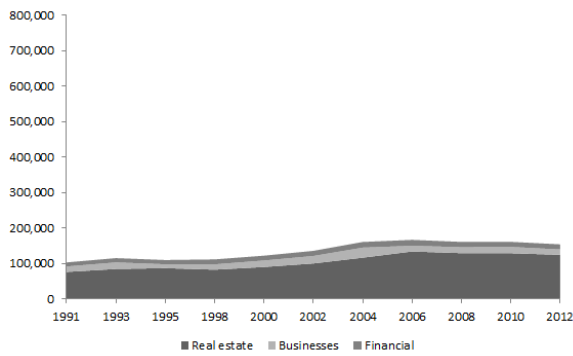
Figure 9: Wealth components within each group (average values)



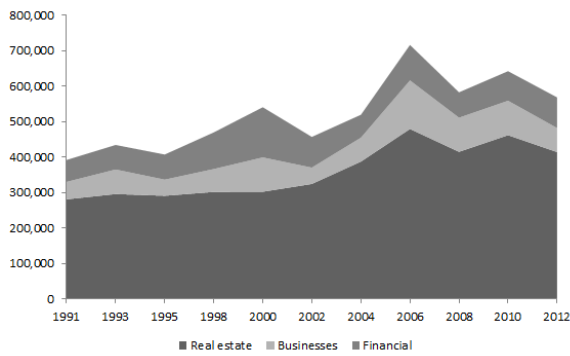
(a) Poor



(b) Lower Middle



(c) Middle



(d) Rich

Source: SHIW Bank of Italy.

Table 2: Determinants of households' class position compared to the lower class

	Lower Middle	Middle	Rich
(log) income from dep. work	19.95*** (2.753)	15.89*** (2.142)	12.31*** (1.908)
(log) urban rent	1.064*** (0.00555)	1.078*** (0.00563)	11.97*** (5.271)
(log) main residence	1.050*** (0.00682)	1.080*** (0.00703)	1.061*** (0.00833)
(log) financial assets	1.046*** (0.00427)	1.082*** (0.00430)	1.306*** (0.109)
blue collar	0.452*** (0.0486)	0.396*** (0.0421)	0.196*** (0.0326)
work only part of the year	0.895 (0.133)	0.770* (0.114)	0.801 (0.154)
income earners	2.507*** (0.243)	2.520*** (0.243)	2.414*** (0.264)
age	1.051 (0.0374)	1.169*** (0.0438)	1.107** (0.0521)
age2	1.000 (0.000399)	0.998*** (0.000422)	0.999* (0.000521)
Islands	0.298*** (0.0513)	0.338*** (0.0576)	0.210*** (0.0495)
Observations	17,867	17,867	17,867
r2_p	0.295	0.295	0.295
vcetype	Robust	Robust	Robust

Note: the reference category is represented by the Poor. The table reports the relative risk ratio of each coefficient and associated SE are in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Source: elaboration on SHIW data.

Table 3: Population, income and net wealth distribution across classes over time (%)

	1991	1993	1995	1998	2000	2002	2004	2006	2008	2010	2012
Population share											
Poor	13.6	18.4	18.9	18.2	19.2	19.5	18.5	16.9	17.5	19.3	19.6
Lower Middle	51.3	43.5	49.9	43.4	48.9	48.5	45.3	46.7	46.6	44.5	45.7
Middle	28.3	28.2	20.2	28.4	23.1	24.6	27.7	29.3	27.7	26.9	27.3
Rich	6.7	9.9	11.0	9.9	8.6	7.3	8.3	7.0	8.1	9.2	7.4
Income shares											
Poor	5.7	5.4	5.7	4.7	5.7	5.6	5.6	5.1	5.3	5.3	5.6
Lower Middle	51.6	43.1	50.5	42.4	46.8	50.0	46.6	44.6	41.2	39.8	41.1
Middle	26.8	27.3	19.9	29.9	25.9	27.4	29.1	33.7	37.3	35.4	33.5
Rich	15.9	24.2	23.9	23.0	21.6	17.0	18.8	16.6	16.2	19.5	19.8
Wealth shares											
Poor	2.9	4.4	6.4	4.7	5.2	6.5	5.7	4.0	3.8	4.3	5.4
Lower Middle	40.8	30.0	36.5	29.7	31.2	37.4	33.5	34.4	29.1	26.5	27.8
Middle	26.9	25.3	17.7	26.9	22.9	27.2	29.1	30.7	36.5	31.4	30.7
Rich	29.5	40.3	39.4	38.7	40.7	28.9	31.7	30.9	30.7	37.9	36.1

Source: SHIW Bank of Italy.

Table 4: Share and median income from dependent work dynamics across group over time

	1991	1993	1995	1998	2000	2002	2004	2006	2008	2010	2012
Share (%)											
Poor	7.0	5.6	5.8	5.0	6.0	6.0	6.2	5.7	6.3	6.0	5.2
Lower Middle	56.6	50.5	58.6	50.3	54.3	56.3	53.4	51.2	47.3	46.0	47.7
Middle	28.8	30.6	21.9	33.3	28.7	29.1	29.9	34.9	36.7	37.2	36.0
Rich	7.6	13.4	13.7	11.4	11.1	8.6	10.6	8.2	9.7	10.9	11.2
Median values											
Poor	6,018	2,725	2,347	2,254	2,246	2,802	3,350	3,963	4,483	2,470	773
Lower Middle	11,608	11,676	11,000	11,384	11,681	11,768	12,929	13,323	12,912	12,818	11,036
Middle	12,079	11,443	11,000	11,270	11,980	11,768	11,447	12,976	12,261	12,000	11,352
Rich	10,282	11,676	10,621	9,737	10,269	8,630	12,781	13,501	13,137	10,667	9,933

Source: SHIW Bank of Italy.

Table 5: The dynamics of capital and financial assets across groups over time (%)

	1991	1993	1995	1998	2000	2002	2004	2006	2008	2010	2012
Business Capital											
Poor	2.4	6.3	14.6	8.9	2.9	5.2	2.9	1.1	1.0	2.8	4.7
Lower Middle	43.0	26.7	35.8	30.4	25.3	38.8	33.0	45.7	28.6	25.1	26.6
Middle	28.9	26.6	14.4	25.2	23.4	33.9	36.5	18.2	31.2	28.0	29.3
Rich	25.6	40.4	35.2	35.5	48.3	22.2	27.7	35.0	39.2	44.0	39.4
Financial Wealth											
Poor	2.7	3.2	3.5	2.6	2.5	3.4	4.1	3.3	2.7	2.6	2.6
Lower Middle	39.5	28.2	32.4	23.5	23.0	33.4	34.4	28.6	26.1	27.2	21.2
Middle	23.2	20.4	14.5	21.3	14.7	22.6	26.7	28.9	34.3	26.3	26.8
Rich	34.7	48.2	49.5	52.5	59.8	40.5	34.8	39.2	36.8	44.0	49.4

Source: SHIW Bank of Italy

Table 6: Upward mobility

	Poor	Lower Middle	Middle
Prevalent income			
urban rent	1.562 (0.750)	3.753*** (1.358)	11.01*** (1.633)
self-empl and profits		5.256 (6.912)	14.72*** (7.226)
financial income	0.545 (0.282)	1.141 (0.273)	1.284 (0.197)
Prevalent wealth			
business	2.069* (0.794)	2.286*** (0.554)	0.999 (0.174)
financial	1.113 (0.164)	0.739** (0.0903)	1.527*** (0.168)
income earners	1.237** (0.112)	0.844** (0.0702)	0.923 (0.0492)
△ income earners	3.605*** (0.665)	1.953*** (0.315)	1.113 (0.107)
no △ occupation	2.471*** (0.400)	4.165*** (0.718)	2.904*** (0.308)
positive △ occupation	4.092*** (1.509)	5.588*** (1.362)	2.698*** (0.386)
office worker or school teacher	1.029 (0.179)	1.532*** (0.181)	1.359*** (0.144)
manager senior official self-employed		2.086* (0.823)	2.987*** (0.519)
member of the arts or professions	1.393 (0.917)	1.124 (0.388)	1.661*** (0.316)
sole proprietor	3.874 (3.998)	2.121 (1.508)	2.148*** (0.511)
single	1.417 (0.324)	0.672** (0.122)	1.301** (0.162)
separated/divorced	1.276 (0.343)	1.055 (0.185)	1.648*** (0.215)
North-East	1.420* (0.289)	1.165 (0.157)	1.112 (0.109)
South	0.563*** (0.104)	1.013 (0.180)	0.510*** (0.0648)
Islands	0.821 (0.168)	0.975 (0.197)	0.610*** (0.0917)
Year dummies	Yes	Yes	Yes
Observations	1,712	2,895	15,222
Number of nquest	574	882	4,424
corr	AR(1)	AR(1)	AR(1)
chi2type	Wald	Wald	Wald

Note: we use a logit model to estimate mobility. The dependent variable is a dummy indicating whether a household move up in the subsequent periods with respect to its position at $t = 0$, that is the first year we observe it. Independent variables on income and wealth have been transformed into two categorical variables capturing the prevalent source. In particular, as for income, the base value is a prevalent income from dependent work; while, as for wealth the reference value is real estate. Robust standard errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 7: Downward mobility

	Poor	Lower Middle	Middle
Prevalent income			
urban rent	2.408** (0.929)	1.128 (0.463)	0.624*** (0.0741)
self-empl and profits	0.404 (0.315)	1.717 (2.703)	0.146*** (0.0799)
financial income	1.371 (0.649)	1.079 (0.250)	0.978 (0.0792)
Prevalent wealth			
business	0.979 (0.339)	0.663 (0.174)	0.936 (0.0842)
financial	0.960 (0.121)	0.813* (0.0867)	1.327*** (0.0851)
income earners	1.214** (0.103)	0.924 (0.0661)	0.974 (0.0276)
△ income earners	0.315*** (0.0522)	0.613*** (0.0834)	0.874*** (0.0429)
no △ occupation	0.0557*** (0.00825)	0.0524*** (0.00574)	0.140*** (0.00618)
positive △ occupation	0.0652*** (0.0200)	0.0368*** (0.00904)	0.165*** (0.0108)
office worker or school teacher	1.551** (0.276)	0.785** (0.0825)	0.803*** (0.0407)
manager senior official self-employed		0.955 (0.387)	0.820* (0.0903)
member of the arts or professions	0.412 (0.289)	1.112 (0.331)	0.729*** (0.0853)
sole proprietor	0.944 (1.329)	0.330* (0.209)	0.466*** (0.0691)
single	1.172 (0.248)	1.134 (0.153)	1.304*** (0.0900)
age	0.962 (0.0426)	0.912*** (0.0293)	0.863*** (0.0170)
age2	1.000 (0.000506)	1.001*** (0.000369)	1.002*** (0.000217)
North-East	0.724 (0.149)	1.165 (0.133)	0.804*** (0.0459)
South	0.633** (0.119)	1.537*** (0.209)	1.104 (0.0706)
Islands	0.524*** (0.115)	1.226 (0.210)	0.869* (0.0657)
Year dummies	yes	yes	yes
Constant	9.669** (9.188)	34.04*** (24.45)	75.22*** (34.28)
Observations	1,725	2,895	15,222
Number of groups	579	882	4,424
corr	AR(1)	AR(1)	AR(1)
chi2type	Wald	Wald	Wald

Note: we use a logit model to estimate mobility. The dependent variable is a dummy indicating whether a household move down in the subsequent periods with respect to its position at $t = 0$, that is the first year we observe it. Independent variables on income and wealth have been transformed into two categorical variables capturing the prevalent source. In particular, as for income, the base value is a prevalent income from dependent work; while, as for wealth the reference value is real estate. Robust seeform are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Figure 10: Inequality measures on net disposal income over time

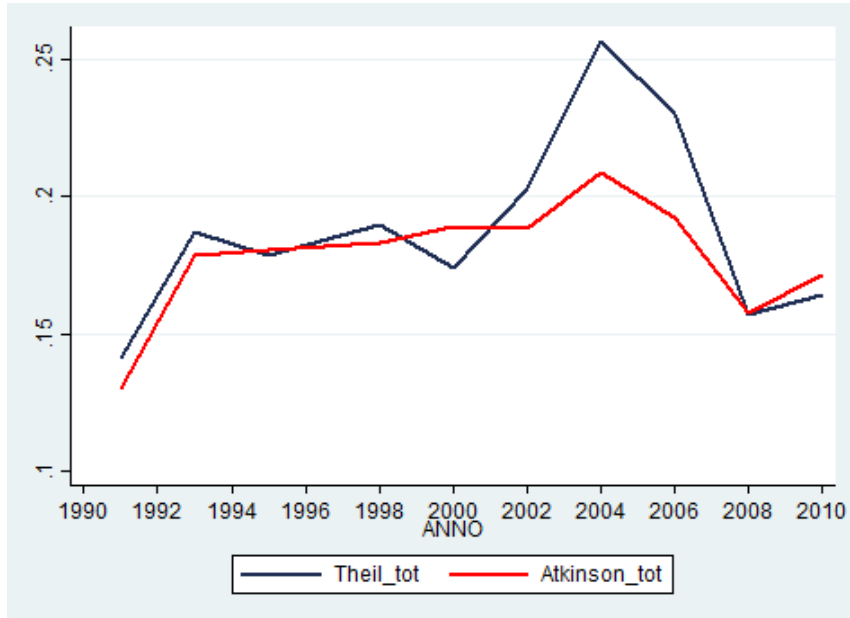


Figure 11: Inequality measures on net wealth over time

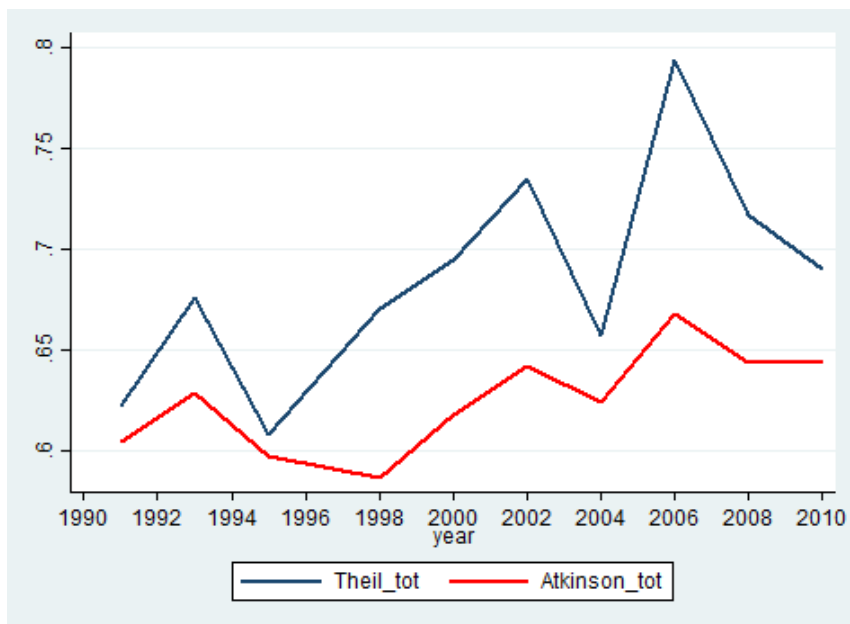


Table 8: Theil Index

year	Income			Wealth		
	Labour	Financial	Urban Rent	Business	Real Estate	Financial
1991	0.112	1.238	3.532	0.639	0.356	0.954
1993	0.137	1.313	3.256	1.078	0.384	1.07
1995	0.146	1.313	2.957	0.721	0.367	1.105
1998	0.139	1.23	3.35	1.41	0.388	1.052
2000	0.137	1.42	3.128	1.468	0.343	1.337
2002	0.14	1.506	3.425	1.072	0.439	1.261
2004	0.137	1.394	3.559	1.299	0.353	1.038
2006	0.135	1.675	3.548	1.92	0.352	1.275
2008	0.126	1.294	3.542	1.932	0.309	0.986
2010	0.129	1.536	3.562	1.144	0.381	1.135

8 Appendices

8.1 Data Description and Sources

The unique data source for this paper is the Historical Archive of the Survey on Income and Wealth provided by the Bank of Italy

- Economic variables:
 - **Income.**

Total income: captures the net disposable income, that is the summation of all income components (from work, self employment, income from capital and wealth, (*see below*)); **Income from work:** refers to the compensation of employees, that is all form of salaries for dependent work; **Income from capital:** includes net income from self-employment and entrepreneurial income; **Income from wealth:** which sums among urban rent and imputed rent from real estate and the income flow from financial assets owned (interests on bank and postal deposits, on government and other securities) net of payable interests;
 - **Wealth.**

Total net wealth: within which we distinguish between real wealth (real estate, businesses and valuables) and financial assets. Financial liabilities are subtracted from total wealth. When in the text we refers generally to "wealth" it measure only the value of real estates and financial assets, which are the non productive components; **Capital wealth:** includes only productive capital, that is businesses;
- **Households socio-demographic characteristics:** They include educational attainment and professional status. Other labor market variables taken into account in the analysis are: *work intensity* a dummy variable equal to 1 if the head of household worked twelve months during the year of reference and zero otherwise; *number of income earners* where income can be both from dependent work, self-employment or entrepreneurial one. A different version of this latter variable includes only the number of employment income earners.

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