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# Questioni di Economia e Finanza

(Occasional Papers)

Gender wealth gap in Italy

by Giovanni D'Alessio

March 2018

Number

433





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ISSN 1972-6627 (print)

ISSN 1972-6643 (online)

*Printed by the Printing and Publishing Division of the Bank of Italy*

# GENDER WEALTH GAP IN ITALY

by Giovanni D'Alessio\*

## Summary

The paper, using data from the Bank of Italy's Survey of Household Income and Wealth, estimates the intrahousehold distribution of wealth. On the basis of reconstructed data, a large gap between men and women emerges, greater for financial assets than for real assets and in particular for real estate. This gap, smaller among young people, increases with age; it is decreasing over time, but has remained significant in recent years. Gini concentration indices computed on individual net wealth are far greater than those calculated on household wealth or per capita wealth, which shares wealth equally among household members. The trend in concentration indices, however, does not significantly change. Some regressions suggest that the observed gaps are largely attributable to gender differences in terms of age, educational qualifications, employment and income.

JEL classification; D31, D13, J16.

Key words: Household wealth, intrahousehold distribution, gender gap.

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\* Bank of Italy, Directorate General for Economics, Statistics and Research.



## 1 Introduction<sup>1</sup>

The distribution of wealth is an extremely important topic. Like income and consumption, the amount of wealth owned is a key indicator of well-being. It affects both consumption and saving behaviour, being a reserve of value on which one can draw for future consumption or as collateral to access credit services; it usually produces income (rents and other capital income), thereby increasing the resources available to the household. It can be a source of social prestige and political influence, and its amount may also be considered when defining the conditions of poverty (Brandolini et al., 2010).

The analysis of wealth distribution in Italy is usually conducted at household level, assuming an equal distribution of the resources held among its members.<sup>2</sup> This is not a choice but is due to a lack of data, as the Bank of Italy's Survey of Household Income and Wealth (SHIW), which collects information on wealth, does not always acquire the data needed to distinguish the wealth owned by each member of the household and only makes the household aggregate available. However, the assumption of an equal intrahousehold distribution is not tested and it is presumably - at least in some cases - violated.

The intrahousehold distribution of wealth is a primary topic in developing countries, where women face culturally and socially disadvantageous factors as well as less egalitarian laws than those of developed countries, particularly as regards inheritances, separations and divorces, and access to education and professions. According to Deere and Doss (2006a), land is owned by women in 11 per cent of cases in Brazil, 12 per cent in Peru, slightly above 20 per cent in Mexico and Nicaragua and just over 25 per cent in Honduras and Paraguay. In some African countries there are similar quotas: about 10 per cent in Zimbabwe and Benin, 14 in Morocco and 25 in the Congo and Tanzania.

Large gaps are also found in developed countries (Deere and Doss, 2006b, Sierminska and Girshina, 2017),<sup>3</sup> where the laws on inheritance, divorce and other aspects have long acquired gender equality, signalling the persistence of this phenomenon whose origin is mainly based on cultural and social norms.<sup>4</sup> Grabka et al. (2015), for example,

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<sup>1</sup> I would like to thank Andrea Brandolini, Luigi Cannari and Francesca Carta for their useful suggestions provided to a previous version of the paper. The views and opinions expressed in this paper are mine and do not necessarily reflect the official position of the Bank of Italy.

<sup>2</sup> The wealth distribution in Italy has been studied by several authors (Brandolini et al., 2006; Cannari and D'Alessio, 2006) who have shown how - from the point of view of its origin - it is linked to inheritances and gifts received, to capital gains earned on assets, and to savings over time. From the point of view of its destination, wealth can be seen as a reserve for future consumption, and it is linked to the inheritances planned for descendants (Cannari and D'Alessio, 2008; Cannari, D'Alessio and Gambacorta, 2008).

<sup>3</sup> According to the Global Gender Gap Report (World Economic Forum, 2017), Italy has quite marked gender differences, ranking 82nd among 144 countries, according to an index that takes into account various economic and social aspects.

<sup>4</sup> 'Comunione dei beni' (community property) and 'Separazione dei beni' (separation of property) are the two legal regimes allowed between spouses in Italy. Under the community property regime, wealth acquired after marriage is usually (if not explicitly stated differently) considered community property. Assets acquired before marriage remain the exclusive property of the spouse who is the owner, even in case of community property. Any goods acquired during the marriage by means of a donation or inheritance remain outside the community property.

using a special section of the German Socio-Economic Panel (SOEP) which collected data on individual wealth in its 2007 survey, show that in 52 per cent of couples, men have more wealth than women, against 29 per cent of the opposite case and the remaining 19 per cent have equal shares.<sup>5</sup> In France, where individual wealth data is collected, the average gender wealth gap in 2010 was 12 per cent (Bonnet et al., 2013).

Most of the studies on the gender wealth gap are conducted on households by comparing those made up of single women with those made up of single men or mixed couples. In such cases, the estimation of the gap is carried out using econometric models, based on some assumptions regarding the composition of the respective samples (for example Schneebaum et al., 2016). In some other cases, the analysis is restricted to the part of wealth that can be most easily attributed to each individual, such as pension wealth (Warren, 2006), which however tends to almost exclusively mirror the gaps in the labour market. There are very few analyses based on individual net wealth, which involve the estimation of the distribution of wealth among a household's members, based on information directly retrieved from respondents. The studies conducted by Sierminska et al. (2010) and by the aforementioned Grabka et al. (2015) and Bonnet et al. (2013) fall within this context.<sup>6</sup>

For the first time with reference to Italy, the present paper obtains a reconstruction of individual net wealth, starting from information collected in the SHIW; for financial assets in particular, we make use of the information collected in a special module of the survey for 2013. In this way, the paper tries to address the United Nations's call within the framework the EDGE (Evidence and Data for Gender Equality) project, for international statistical institutions to redress the lack of data on gender differences in health, education, employment, entrepreneurship and wealth. The reconstruction, shown in detail in Section 2, is more accurate with regard to real assets, and in particular real estate, than to financial assets and liabilities.

Evaluating the intrahousehold distribution of wealth is of considerable importance in terms of inequality: if there is an unequal distribution within households, the methods commonly used to assess poverty and inequality will lead to seriously underestimated estimates of these phenomena, providing a presumably more favourable picture for women (Findlay and Wright, 1996; Kanbur, 2016).

Furthermore, establishing who owns the wealth within the household can help better understand some household behaviour. Evidence of investment behaviour differentiated by gender has long been highlighted by several researchers. Hinz, McCarthy and Turner (1996) showed that in the United States the share of pension wealth invested by women in risky instruments was significantly lower than that of men. Other works (Barsky, Juster, Kimball, and Shapiro, 1995; Jianakoplos and Bernasek, 1996; Bajtelsmit and Bernasek, 1996) have confirmed a greater aversion to risk on the part of women. Guiso and Jappelli

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<sup>5</sup> Bolin and Palsson (2001), using individual wealth data, show that married women in Sweden are rewarded for their lesser job opportunities with a greater share of wealth.

<sup>6</sup> Even when data on wealth are collected at individual level, information is usually requested from a single family member (generally the most knowledgeable member), which may the results. An experiment conducted in Uganda by World Bank researchers shows the importance of this aspect (Kilic and Moylan, 2016).



(2002) highlighted how Italian women tend to be more risk averse, selecting assets that are judged to be safer; these results were confirmed by Bertocchi et al. (2011).

The intrahousehold inequality of wealth is linked to the most frequently examined gender gaps, concerning work activities and wages (Bianco, Lotti and Zizza, 2013; Zizza, 2013). Ruel and Hauser (2013), for example, using data from the Wisconsin Longitudinal Study, show how the wealth of US individuals tends to reflect in part the imbalances in employment rates and in incomes, which in turn are partly explained by levels of education and other social and cultural factors. Although some considerations on this point will be made in this paper too, it is not the main focus of this study, which aims primarily to measure and provide evidence of the gap in terms of wealth between men and women. The other socio-economic characteristics that distinguish men from women, such as education, employment or wages, are simply used to describe the gap.

The distribution of wealth refers to the legal ownership of assets, from which the law derives a series of rights and obligations.<sup>7</sup> Of course, within a household, the use by one member of an asset owned by another is probably quite frequent, or the selling or renting of a good may benefit not only the owner but also other members of the household. However, several studies have shown that the legal ownership of resources implies an imbalance in the relationships between household members and produces effects that can be measured.

According to Thomas (1999), who conducted a study on consumption behaviour in Brazil, the availability of income for female members leads to a greater share of expenses for family services, health and education. According to Beegle et al. (2001) income received by women is associated more with prenatal care. Similarly, Duflo (2003) describes how in South Africa the pension income of women is positively correlated with the anthropometric status of granddaughters, unlike that of grandsons. In other words, these studies have shown that the allocation of resources within the household may have a substantial value in terms of its members' behaviour, according to their degree of control over them.

It should also be considered that the legal headings may sometimes not correspond to reality, for example for tax reasons. This should, however, lead to the observation of more egalitarian legal headings than in reality. From this point of view, it is likely that the estimates reported here tend to underestimate the differences in the ownership of intrahousehold resources.

After having illustrated the data used and the method adopted for the reconstruction of individual wealth in Section 2), the main results are examined in Section 3). In particular, we analyse how the gender gap in the ownership of real estate has evolved, starting from the mid-eighties to the present day (Section 3.1). The analysis also refers to

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<sup>7</sup> In the already mentioned Mexa project (Kilic and Moylan, 2016), the answers provided by a sample of respondents in Uganda on different definitions of ownership are compared, depending on whether the respondent: 1) declares him/herself to be the owner of the property; 2) declares him/herself to be the beneficiary of the income generated by the property; 3) formally demonstrates ownership; 4) declares the right to indicate the heirs; 5) or to sell it; 6) or to rent it; 7) or to use it as collateral; 8) or to make investments with or improvements to it. These profiles do not always coincide in the experiment conducted, giving rise to ambiguous situations. It is likely that legal ambiguity is lower in developed countries, which more precisely define the formal content of the right to property.

the way in which financial wealth (Section 3.2) and net wealth are shared among household members (Section 3.3); however, this analysis is only accurate from 2008 to 2016, years for which we have more information useful for the estimates. Section 3.4 shows some evidence concerning the gender gap found for received inheritances, while Section 3.5 presents the factors that could explain the differences that are shown. Finally, Section 3.6 presents an international comparison conducted on the second wave data from the ECB's Household Finance and Consumption Survey (HFCS). In Section 4 the main conclusions are illustrated.

## 2 Data and methods

The SHIW estimates household net wealth according to the scheme reported in Table 1 (Banca d'Italia, 2015). Net wealth is defined as the sum of real and financial assets, net of financial liabilities (mortgages, personal loans and so on). The real assets are in turn made up of properties (which include the houses of residence owned by the owner, other properties owned and advances paid for properties not yet acquired), the value of the companies in which the household members work, and valuables.<sup>8</sup> Financial assets consist of deposits, government securities, shares, other securities and trade credits and credit from other households. Financial liabilities, on the other hand, include debts to banks and financial companies, trade debts of companies owned and debts to other households.

The present section illustrates the method used to obtain estimates of the different components of wealth at an individual level. The reconstruction was carried out in different ways for the various components, depending on the additional information available (Table 1, last two columns).

For properties (AR1), which constitute the bulk of the assets, information concerning their owners has been available since 1986, but there is no information on the exact ownership quotas. If equal ownership is assumed among the various members reported as holders, it is therefore possible to easily calculate the wealth in real estate attributable to each one. Regarding the advances paid by the household in relation to properties of which they have not yet acquired ownership (and therefore whose holders are unknown), whose total value is equal to 0.08 percent of net wealth, we lack information useful for their distribution and the amount has been allocated in equal parts among the adult members of the household.

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<sup>8</sup> Real assets do not include durables.

Table 1

**SCHEME FOR THE COMPUTATION OF NET WEALTH IN THE SHIW AND  
THE METHOD FOR ESTIMATING INDIVIDUAL WEALTH**

Name	Description	Weight of the component in 2016 as a percentage of the sum of assets and liabilities	Information available for the intra-household allocation	Method used to estimate individual wealth
<b>AR</b>	<b>Real assets</b>	<b>82.8</b>		
AR1	Properties	75.7	Owner of each property. No information on the advances paid	Breakdown of the value of each property into equal parts among the owners. Property advances are broken down on the basis of a general criterion (1)
AR2	Business equity	5.5	Members of the household who work in the firm, number of hours worked and income earned by each one	Total value of company divided among the components that work in proportion to the work performed.
AR3	Valuables	1.6	No information available	Valuables are broken down on the basis of a general criterion (1)
<b>AF</b>	<b>Financial assets</b>	<b>12.6</b>		
AF1	Deposits	7.1	Number of deposit holders	Deposits are allocated taking into account the number of owners, based on the method described in the text
AF2	Government securities	1.0	Number of securities holders	Government securities are allocated taking into account the number of owners, based on the method described in the text
AF3	Shares and other securities	4.2	Number of securities holders	Shares and other securities are allocated taking into account the number of owners, based on the method described in the text
AF4	Trade credit and credit due from other households	0.2	The same information is available for trade credit as for the business equity to which it is linked (AR2). For credits due from other households no information available	Trade credits are allocated among the components that work in the company in proportion to the work performed. Credit due from other households are broken down on the basis of a general criterion (1)
<b>PF</b>	<b>Financial liabilities (-)</b>	<b>4.6</b>		
PF1	Liabilities to banks and financial companies	4.3	Debts linked to properties are connected to the owners; those linked to the business are connected with the member working in the firm and, if more the one, with the number of worked hours and income earned in that business. For other debts (i.e. consumer debts), no information available	Debts linked to properties are broken down on the basis of the corresponding real estate assets. those linked to the business are distributed in proportion to the corresponding assets. The other debts (i.e. consumer debts) are broken down on the basis of a general criterion (1)
PF2	Trade debt	0.1	For trade debts, the same information is available for credit as for business equity to which it is linked (AR2).	Trade debts are allocated among the components that work in the company in proportion to the work performed
PF3	Debt to other households	0.2	No information available	Debt to other households are broken down on the basis of a general criterion (1)
<b>W</b>	<b>Net wealth (W = AR + AF - PF)</b>	<b>90.7</b>		

- (1) The general criterion used for the partition of the elements for which no additional information is available is the allocation in equal parts to all adult household members. For evaluating the robustness of the results, the alternative criterion of imputation proportional to the other components of wealth of this kind was also used (for example, in proportion to real assets for advances, financial assets for credits with relatives and friends; other debts for debts from relatives and friends). In the absence of valid values to be used for the allocation, an equal distribution among the adult members is applied.

Wealth in business (AR2), which on average constitutes the second component of real assets, has been attributed to the members who work in their own company. Individual entrepreneurs have therefore been given the full value of their companies while in the case of family businesses, which represent less than 20 per cent of the total

of this item, the value of each company has been divided among the components that work in it, according to the share of hours worked.<sup>9</sup>

For valuables (AR3) there is no information useful for their specific imputation and they are equally shared among the adult members of the household, an allocation criterion followed for all the residual components.

For financial assets, the information available for an intrahousehold distribution is less precise than that collected for real estate. Since 2008, the survey has identified the number of member owners of these assets for both the deposits (AF1) and the other securities taken as a whole (AF2 + AF3), but without identifying them individually.

The information available can be of considerable help, especially if we consider the other information available, such as the household structure or the age of each component. In single-person households, which made up around 34 per cent in 2014, there are obviously no problems in estimating individual wealth. In couples of spouses with or without children but without other components (a type that accounts for more than half of Italian households) in almost 3 cases out of 4, there are two owners of securities and of bank or post office accounts; the imputation of these assets to both spouses appears to be a reasonable choice in these cases. In the remaining cases, the holder of the securities or deposit accounts is almost always one person and it is therefore necessary to make some assumptions to establish who is the owner; the same applies to the remaining household types (i.e. households where other adults cohabit with a couple).

In order to evaluate the possible hypotheses for the allocation of financial assets, we used the data collected in the experimental survey conducted in 2013 on approximately 2,000 panel households (all already interviewed for the 2012 SHIW). The information gathered in that survey made it possible to share the sum of financial assets consisting of deposits, government bonds and other securities among the head of the household, the spouse and the other members.

It is therefore possible to compare the estimation of financial assets obtained by applying the percentages provided during the 2013 survey with those reconstructed as described above and through some alternative methods with the stock of assets held in the 2012 survey. Table 2 shows the correlation coefficients between the amounts of financial assets reconstructed from the 2013 survey and the estimates obtained using the following methods: 1) equal parts among all the components; 2) equal parts among all the adult components only; 3) in proportion to income from work or retirement; 4) according to the number of owners, selecting the components ordered by age (adults/non-adults) and income; 5) according to the number of owners, selecting the components ordered by age (adults/non-adults), status in household (head of household, spouse, other member) and income.

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<sup>9</sup> The same criterion is used in the SHIW for the estimation of the individual income of members involved in a family business.

Table 2

**Correlation coefficient between individual financial assets reconstructed using information gathered in the 2013 survey and some intrahousehold allocations, 2012**

	Intrahousehold allocation				
	Per capita	Per capita (adults only)	Proportional to income (from work and retirement)	Estimation based on the number of owners (1)	Estimation based on the number of owners (2)
All the components	0.802	0.808	0.569	0.860	0.882
Only components with more than one adult	0.788	0.794	0.542	0.850	0.874
All the components (shares) (3)	0.332	0.596	0.675	0.677	0.688

(1) Components ordered by adults/non-adults and income; (2) Components ordered by adults/non-adults, status in the household (head of household, spouse, other member) and income; (3) Considering intrahousehold quotas only rather than absolute values.

The results confirm that knowing the number of holders of deposit accounts and securities significantly improves the estimate compared with other imputation rules. While sharing in equal parts among all members and all adults (methods 1 and 2 respectively) has a correlation of about 0.8 with the benchmark and the sharing proportional to income has a correlation of less than 0.6; the two rules that use the number of owners present a correlation with the benchmark of about 0.85 (method 4) and 0.88 (method 5).

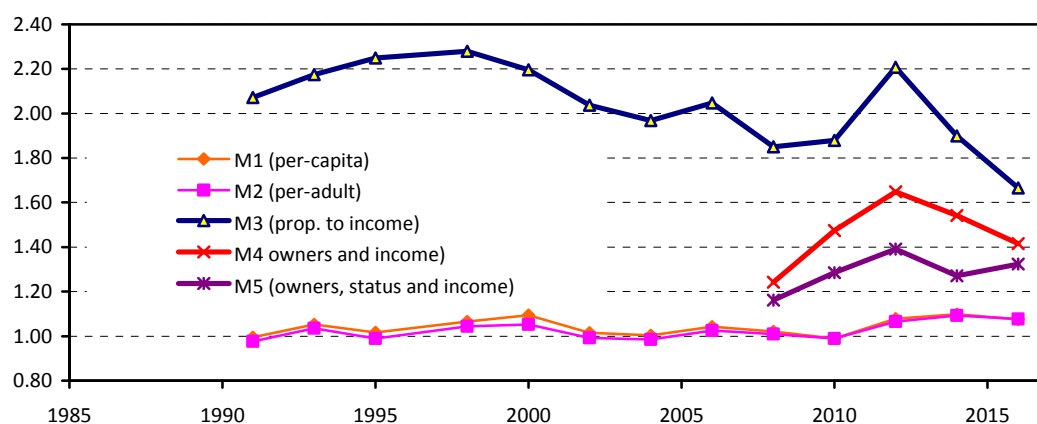
If we consider the intrahousehold shares instead of the absolute values of financial assets, the correlations are reduced but they confirm that method 5, based on the number of nominees and that identifies the owners on the basis of their status in the households and their income, is the most effective among those tested. This seems reasonable if we take into account that the head of the household (or reference person) is the one who defines him/herself as ‘responsible for the household budget’, and is therefore probably also the one most involved with household assets.

On the basis of this result we proceeded with the imputation of financial assets (AF1, AF2 and AF3) for the years for which this information was available (from 2008 onwards) using the latter method. For the previous years, the financial assets were equally shared among the adult components, a method that presents a higher correlation in the experiment compared with the per capita allocation, in particular when the effect of household wealth is removed, and considering the share of wealth in the household (Table 2).

The change from one criterion to another between 2006 and 2008 produces a significant break in the time series; while the financial assets held by men exceeded those of women by about 20-30 per cent between 2008 and 2016; in the same years the per capita or adult values showed significantly lower gaps (around 5-10 per cent). In contrast, the option based on proportionality with respect to income from work or retirement has a gap higher than that adopted (Figure 1).

Figure 1

**Gender gap in financial assets according to various estimation methods, 1991-2016**  
(Ratio of averages - men/women)



Information on trade credit (main part of the AF4 component) is collected together with that on companies and can therefore be shared among the members in a way similar to that used for wealth in business (AR2). As to credit due from other households, which represents about 0.2 percent of net wealth, there is no useful information for their imputation and it is therefore equally shared among the adult members of the household.

As to financial liabilities, the SHIW collects information on the value of the residual debts, distinguishing those linked to properties from other types.<sup>10</sup> The ownership of debts linked to properties (which makes up the largest part of the PF1 component) can be reasonably imputed according to the ownership of the same properties. No information is available for the imputation of other debts to banks and financial companies, so they are equally shared among the adult members of the household.

Trade debts (PF2) are shared between the members working in the company to which the debts refer in the same way as trade credits, i.e. in proportion to the hours worked.

For debts to other households (i.e. relatives and friends, PF3), we have no information useful for their imputation, and they are thus equally shared among the adult members of the household.

Overall, wealth items imputed to members on the basis of auxiliary information, and which we can therefore consider reliable, amount to about 90 per cent of total assets and liabilities, while only 10 per cent have been allocated on the basis of a more general criterion (equally among adult components). For the years before 2008, the absence of specific information useful for the imputation of financial assets brings the latter share to above 20 per cent, suggesting greater caution in the use of these data.

<sup>10</sup> Since 2010, the SHIW has distinguished the residual debts for residential buildings from those related to other properties and which would allow the share of each member for these two types of properties to be estimated, as they could have different owners. The chosen allocation criterion, which uses the value of all the properties to allocate the total sum of residual debt, favours the continuity of the estimate with respect to previous periods.

To assess the robustness of the estimates obtained, individual wealth was also calculated by modifying the imputation rule used for the residual components for which no specific useful information was available, substituting the proportionality to the other components of wealth with the criterion of equality between the adult members. In other words, the advances paid for real estate have been allocated in proportion to real assets, loans to relatives and friends in proportion to other financial assets, debts with relatives and friends in proportion to other debts and so on. Since the results are extremely similar, the considerations below will be based on an equal distribution between adults, which is precautionary to the topic under consideration.

### **3 Wealth gender gap**

#### *3.1 Property*

In this section we examine the distribution of individual real estate which, in addition to being the predominant part of the wealth of households, has been estimated on the basis of direct information about ownership and is thus reliable.

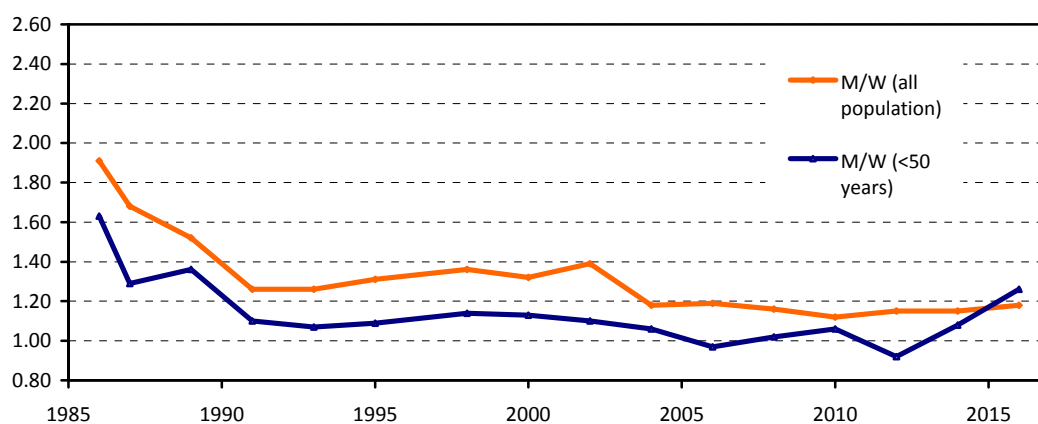
The trend in the estimates of average values of wealth in property held by men and women shows a certain convergence in the period examined (Figure 2). In the mid-eighties, the average value of property owned by men was almost twice that of women. Between 1986 and the beginning of this century, this gap was reduced, reaching a minimum value in 2010, when men had 12 per cent more than women. Between 2010 and 2014, the tendency towards convergence, already weakened in previous years, substantially came to a halt; in 2016 the wealth of men was 18 per cent higher than that of women.<sup>11</sup> The gap is always less pronounced when selecting subjects under the age of 50, but in 2016.

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<sup>11</sup> The trend shown here is similar to that observed for households by gender of the reference person (defined as the one with the highest income from work or retirement). In such a case, however, the trend is less pronounced: in the period considered, the advantage in terms of net wealth of households with a male head of households compared to those with a female head of household goes from under 50 to about 35 per cent.

Figure 2

**Properties held by men and women, 1986-2016**  
(Ratio of averages - men/women)



The gap shown above can be affected by a series of structural differences between men and women, such as the fact that in the Italian population, women are more concentrated in the older classes than men. Even the presence on the territory of men and women, by geographical area or size of the municipality, is not necessarily balanced between the sexes; this could influence the comparison just carried out.

An easy way to take into account some of these factors is to consider cohabiting or married couples. In this case the comparison takes place in the same territory and household situation (i.e. the presence of children or other members). The comparison is also of interest in itself, since it helps to describe the relationships within the family even if it does not solve all the problems of heterogeneity in the two sub-samples, such as the fact that married or cohabiting women tend to be younger than their respective partners.

If we only refer to the spouses who live together in the same household, the amount of property owned by men and women is more unbalanced than that found for the population as a whole. In this case, in fact, the wealth of men between 2012 and 2016 was 40 per cent greater than that of women (compared with 15 per cent as observed for the whole population).<sup>12</sup>

For the reasons mentioned above, it is interesting to evaluate not only the average values but also the balance of power between men and women implicit in the ownership of goods. For couples, the wealth in real estate in 2016 was equally shared between the two spouses/partners in about half of the cases (56.4 per cent). The egalitarian model is therefore the most widespread; in the remaining half of the cases, however, the situation in which the wealth of the male member is higher than that of the female is about twice as common compared with the opposite condition where female wealth prevails (respectively 28.6 and 15 per cent) (Table 3).

<sup>12</sup> The difference between these two measures is explained by the different age composition of males and female outside the couple: males have higher percentages among minors, characterized by very low wealth, and lower shares among the elderly (widowers), who on the contrary generally have higher than average wealth (Table A5).



In the long run, the equal distribution between the spouses decreased slightly (it was 63.1 per cent between 1986 and 1989 and fell to 56.5 per cent on average between 2008 and 2016), mainly due to an increase in the cases of women having more wealth, which rose from 6.3 per cent in 1986-1989 to 14.6 per cent in 2008-2016. The gap between the situation of greater male and female wealth decreased from 24 to 16 percentage points between the end of the 1980s and the 1990s, but then fell by less than 2 points thereafter.

Table 3

**Properties held by men and women living in couples, 1986-2016**

*(Shares of couples)*

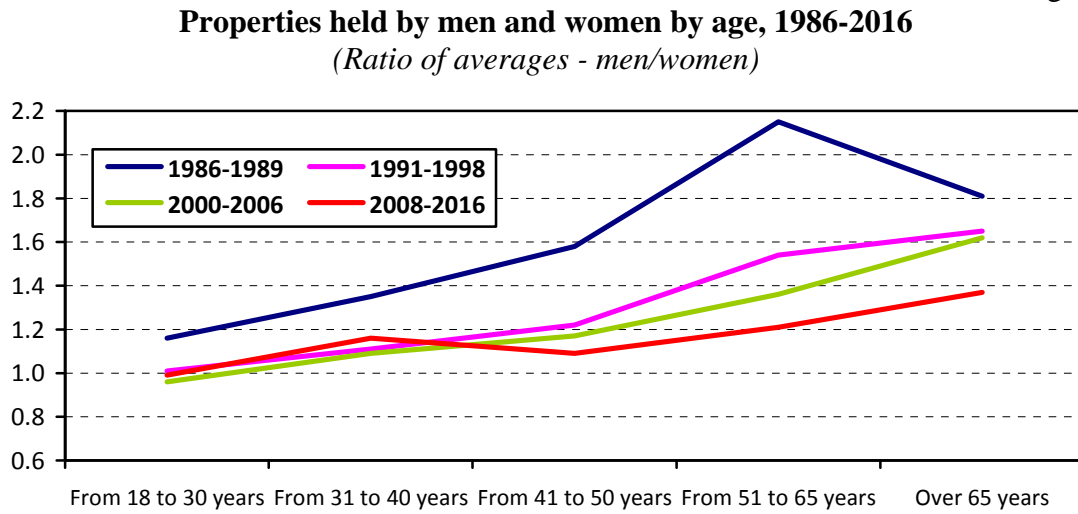
	Average 1986-1989	Average 1991-1998	Average 2000-2006	Average 2008-2016	2016
Women richer than men	6.3	11.2	11.7	14.6	15.0
Same wealth	63.1	61.4	61.5	56.5	56.4
Men richer than women	30.6	27.4	26.9	28.9	28.6
Balance (M>W) – (W>M)	24.3	16.2	15.2	14.3	13.6

The ratio of men to women with regard to property values is not constant across the age classes (Table A1); the gap between the average property of men and women tends to grow with age, but the relationship has been changing over time (Figure 3).

In the period 1986-89, men had more property than women by about 35 per cent between 30 and 40 years, 60 per cent between 40 and 50 years, more than double between 51 and 65 and 80 per cent over 65 years. In later periods the differences are smaller for all classes, but there remains a tendency to growth with age, which in the most recent period is only observed from the age of 40 onwards.<sup>13</sup>

<sup>13</sup> On the one hand, this result is due to the convergence initially highlighted of the average real estate wealth held by women and men, so that the cohorts born longer ago have gaps on average higher than those born more recently. On the other hand, the gender gap may also depend both on the age of individuals, i.e. elements that can be attributed to the life cycle of the subjects, independently of the cohort effect, and on the observation period of the data, according to events that have an effect on asset valuations, for example. The decomposition of these three effects, which are interlinked, requires special techniques (see for example Brandolini and D'Alessio, 2011).

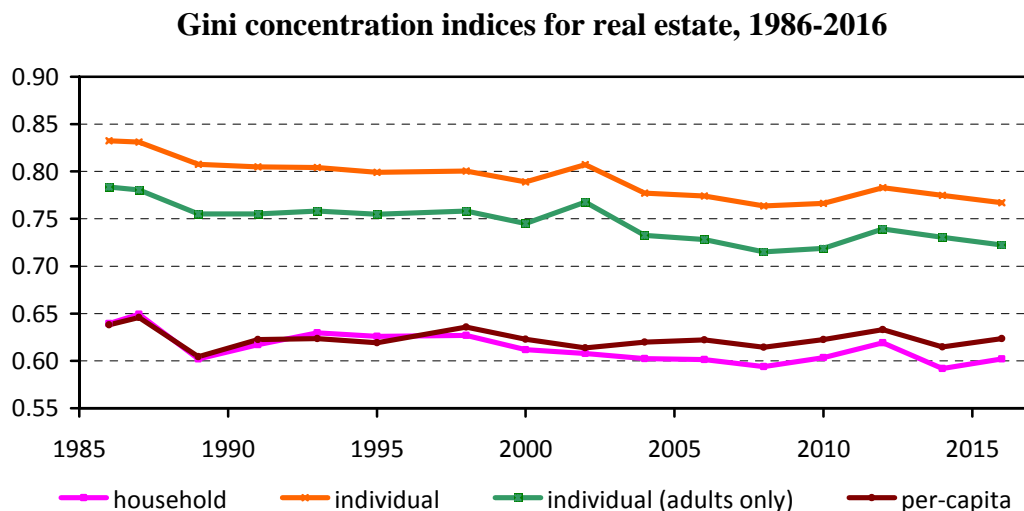
Figure 3



The concentration of real estate is declining over time, whether you consider the household, per capita or individual measure estimated here in both the versions that share the unallocated residuals among all the components or among the adult components only. This trend, slightly more pronounced for the individual estimations proposed here, reflects the access to residential house ownership for an increasing share of the population, at least until the end of the last century (Figure 4).

However, concentration levels are very different in the various definitions; household and per capita measures (obtained by hypothesizing the equal distribution between all family members), have been around 0.6 in recent years, while estimates based on individual allocation have reached levels of around 0.75 in the same years (a little higher if we consider all the components, a little lower if we consider the adults only).

Figure 4



The higher value of the concentration of individual wealth compared with the per capita one derives from the fact that the Gini index satisfies the ‘transfer principle’, according to which an index of inequality decreases if there is a transfer of wealth from a

richer individual towards a poorer one. Since per capita wealth can be obtained by a set of transfers from the richest to the poorest members within the same family, this results in a lower index value than that observed for individual wealth.

The difference between per capita and household concentration of wealth was small until the beginning of the century and has increased slightly over the last few years, as the negative relationship between wealth and the number of household members has become more evident.

The greater concentration of individual wealth compared with that of households is due to the aggregation of individuals into households, which absorb part of the inequality among individuals (D'Alessio and Signorini, 2000). In terms of variance, family groupings of individuals account for about half the variability of individual real estate assets.

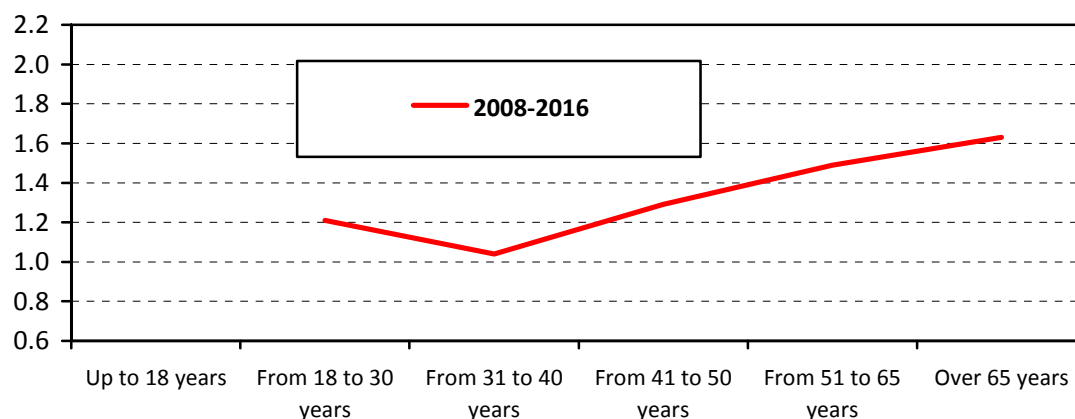
### 3.2 Financial assets

On the basis of the reconstruction carried out in this paper, the gender gap in terms of financial assets is more substantial than that found for real estate: on average, between 2008 and 2016, the advantage of men over women was around 35 per cent (against 15 per cent for property). It is possible that this reflects the income gap as well as men being more capable of managing financial assets.<sup>14</sup>

Up to 50 years there is a gap in favour of men of about 20 per cent, not far from that observed for real estate; in the oldest age groups, however, the gap is around 50 per cent, greater than what was observed for the same period for real estate (Figure 5).

Figure 5

**Financial assets held by men and women by age, 2008-2016**  
(Ratio of averages - men/women)



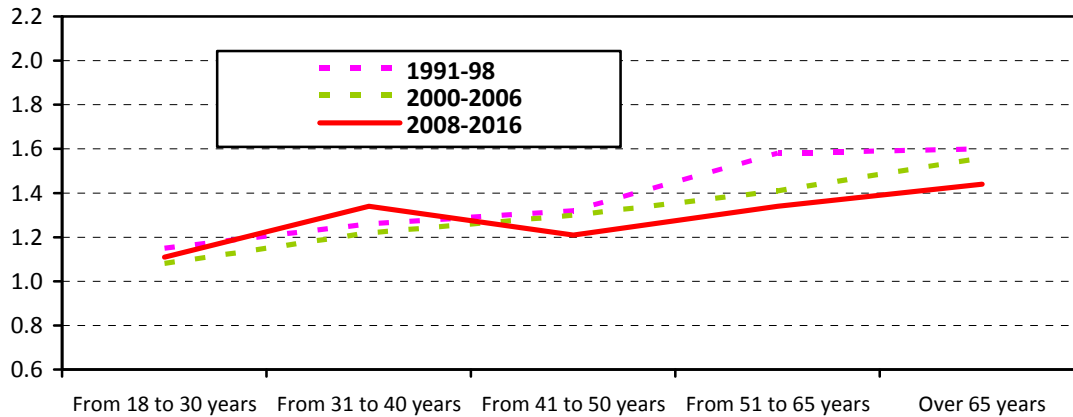
<sup>14</sup> Fornero and Monticone (2011) use SHIW data to show that women have less knowledge of financial mechanisms than men. According to Lusardi and Mitchell (2008), less knowledge of financial mechanisms by women leads to more conservative investments; Chang (2010) confirms this attitude and ascribes it to other social factors.

### 3.3 Net wealth

Overall, in the period 2008-2016 for which financial assets can be attributed according to a more accurate criterion, the gap in terms of net wealth is on average equal to 26 per cent in favour of men.<sup>15</sup> The gap is lower for those aged between 18 and 30, when household wealth is low; the gap rises for the older age groups (Figure 6).

Figure 6

**Net wealth held by men and women by age, 1991-2016**  
(Ratio of averages - men/women)



A synthetic evaluation of the gender gap, which takes into account the different ages of the subjects and assesses their significance more formally, can be obtained by using models.

In the first four columns, Table 4 shows the estimated coefficients and the relative levels of significance obtained with two different linear models in which the wealth of individuals estimated between 2008 and 2016 is the dependent variable. In the first model we refer to the whole population, while in the latter the observation is limited to subjects between 25 and 60 years, thus reducing the effect due to the usual predeceasing of males, which determines - through the inheritance between spouses - greater wealth for older women. In order to avoid the results being unduly influenced by the extreme values that typically characterize wealth distribution, we proceeded by Winsorizing the values of the wealth at 5 and 95 per cent, i.e. by setting the values lower than the 5<sup>th</sup> percentile and greater than the 95<sup>th</sup> percentile equal to the value of the same percentiles.

The remaining four columns of table 4 report the results related to two further models, in which the dependent variable is the IHS transformation of individual wealth;<sup>16</sup> in this case too we have estimated the model both on the whole population and on individuals aged between 25 and 60 years.

<sup>15</sup> In France, the gap over the entire population was 15 per cent in 2004 and 12 per cent in 2010 (Bonnet et al., 2013).

<sup>16</sup> The Inverse Hyperbolic Sine (IHS) transformation is used when, as in the case of net wealth, it is not possible to use the logarithmic transformation due to the presence of negative values. The applied transformation is:  $IHS(W) = \text{asin}(W) = \log(W + (W^2 + 1)^{1/2})$ . See Friedline et al., 2015.

In all four models the dummy referring to men is positive and significant, showing that the advantage of men is also found after taking age into account. The trend over time of this advantage, represented in the model by the interaction of the dummy indicating men and the year, is negative in all four models, even if the coefficient is not significant in those that refer to individuals between 25 and 60 years.<sup>17</sup> In other words, the gap in favour of men is significantly decreasing in models computed on the whole population, while it is not significant on the sample aged between 25 and 60 years; the latter result could be affected by the reduced time horizon considered (2008-2016).

Table 4

### Net wealth gender gap, 2008-2016

Parameter	Dependent variable = Individual wealth (values at 2016 prices winsorized at 5% and 95%)				Dependent variable = IHS transformation of the individual wealth (values at 2016 prices)			
	All ages		From 25 to 60 years		All ages		From 25 to 60 years	
	Coefficient	Pr >  t	Coefficient	Pr >  t	Coefficient	Pr >  t	Coefficient	Pr >  t
Intercept	-43276	<.0001	-139752	<.0001	-1.8202	<.0001	-2.5096	0.0243
Year 2008	-13996	0.0002	-25023	0.4367	-0.7089	<.0001	2.0561	0.1709
Year 2010	-12758	0.0005	-42365	0.1925	-0.6280	<.0001	3.6981	0.0148
Year 2012	-6280	0.0812	-46168	0.1621	0.0880	0.573	-1.1560	0.4532
Year 2014	-1746	0.6272	-22870	0.4849	0.0612	0.6948	0.2520	0.8691
Year 2016	0	-	0	-	0.0000	-	0.0000	-
Age * Year 2008	4588	<.0001	8108	<.0001	0.4057	<.0001	0.3225	<.0001
Age * Year 2010	4545	<.0001	9061	<.0001	0.3972	<.0001	0.2470	<.0001
Age * Year 2012	3861	<.0001	8889	<.0001	0.3362	<.0001	0.4401	<.0001
Age * Year 2014	3320	<.0001	7494	<.0001	0.3477	<.0001	0.3940	<.0001
Age * Year 2016	3308	<.0001	6415	<.0001	0.3498	<.0001	0.4152	<.0001
Age <sup>2</sup> * Year 2008	-26	<.0001	-46	0.0001	-0.0030	<.0001	-0.0021	0.0002
Age <sup>2</sup> * Year 2010	-25	<.0001	-59	<.0001	-0.0029	<.0001	-0.0013	0.0216
Age <sup>2</sup> * Year 2012	-20	<.0001	-61	<.0001	-0.0022	<.0001	-0.0035	<.0001
Age <sup>2</sup> * Year 2014	-15	<.0001	-47	0.0002	-0.0024	<.0001	-0.0030	<.0001
Age <sup>2</sup> * Year 2016	-16	<.0001	-36	0.0075	-0.0024	<.0001	-0.0033	<.0001
<b>Men</b>	<b>18107</b>	<b>&lt;.0001</b>	<b>12476</b>	<b>&lt;.0001</b>	<b>0.3170</b>	<b>&lt;.0001</b>	<b>0.2291</b>	<b>0.0067</b>
<b>Women</b>	<b>0</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>0.0000</b>	<b>-</b>	<b>0.0000</b>	<b>-</b>
<b>Men * Year</b>	<b>-770</b>	<b>0.0016</b>	<b>-79</b>	<b>0.836</b>	<b>-0.0183</b>	<b>0.0825</b>	<b>-0.0206</b>	<b>0.2456</b>
<b>Women * Year</b>	<b>0</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>0.0000</b>	<b>-</b>	<b>0.0000</b>	<b>-</b>
Sample size	95.595		43.810		95.595		43.809	
R <sup>2</sup>	0.198		0.109		0.391		0.0683	

Within couples, men are richer overall than women in 43.1 per cent of cases in 2008-2016, against 20.2 per cent of cases in which the wealth of women is prevalent and 36.5 per cent in which partners have equal wealth.<sup>18</sup> The percentages estimated by

<sup>17</sup> In the model using the IHS transformation on the whole population, the coefficient referring to the interaction between the gender variable and the year of the survey has a significance of 8.2 per cent.

<sup>18</sup> It should be considered that the condition of equality of wealth in the couple is in some cases violated only for limited amounts. For example, 46.4 per cent of couples have equal or only slightly different (allowing their respective shares to vary between 45 and 55 per cent) compared with 36.5 per cent with perfect equality.

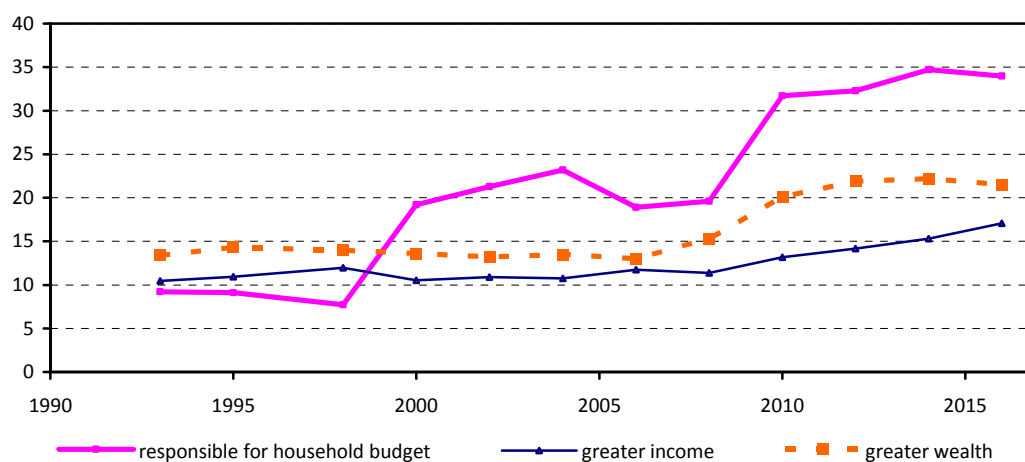
Sierminska et al. (2010) for Germany in 2007 are respectively 52, 25 and 19 per cent, with a balance in favour of men higher than the one estimated here for Italy. The comparison also highlights the greater diffusion in Italy of the model which provides equal shares of wealth with respect to Germany.

The time series unfortunately suffers from the imputation method which, for the period before 2008, shares financial assets equally among adults and therefore tends to overestimate the share of couples with equal wealth. The balances seem to indicate a rather stable prevalence of situations in favour of men compared with the opposite situations with the wealth of women prevalent, of about 20 percentage points (23.2 per cent on average for 2008-2016). The decline in situations of equality between spouses, although perhaps amplified by the estimation method, is probably affected by the growing spread of new forms of cohabitation, based on greater autonomy of spouses/cohabitants. On the one hand there is the growing number of non-marriage-based cohabitations (in the survey data, around 1 per cent of couples in the 1990s against over 5 per cent in recent years), which is associated with less sharing of assets; on the other hand, there is a consistent reduction in marriages celebrated following a 'community property' regime, which - according to ISTAT data - goes from 44 per cent in 2004, to 34 per cent in 2010 and to 27 per cent in 2016.

With regard to couples (with or without children) the number of cases in which women have greater wealth than men is only moderately increasing, showing a similar trend observed for income from work or pensions (Figure 7). However, it is noteworthy that the share of women who claimed to be responsible for the household budget (i.e. head of household) in the 1990s was lower than that calculated considering the prevalence of income or wealth; in other words, the prevalence of income or wealth of women compared with that of their spouses was not always considered a sufficient condition for claiming to be the person responsible for the household budget. In recent years there has been a clear reversal of this trend, with the share of women who define themselves as being chiefly responsible for family budgets greater than that corresponding to the prevalence of income or wealth. In any case, even in the absence of a precise link between a self-declaration and the measures based on income or wealth, some regressions conducted show that the latter are significant in explaining the qualitative condition expressed in the interview, providing empirical evidence to support the hypothesis that the personal distribution of wealth is an important element in defining the power relationship within the family.

Figure 7

**Shares of women with more income (from work or retirement) or wealth than spouses, or declaring they are responsible for the household budget, 1993-2016**



Equal wealth between spouses is very common in the lowest classes of wealth, with percentages of around 75 per cent in the fifth of the poorest families between 2008 and 2016 (Table 5). In the same period, the share of couples with equal wealth passes around 40, 35 and 30 per cent for the second, third and fourth fifths of households respectively. For the richest fifth, the partners with equal wealth are less than 20 per cent.

In addition, the imbalance between the situations of advantage for men and women shows a lower level for the poorest families (about 10 per cent), a higher level for the richest families (about 30 per cent) and an intermediate level (around 20-25 per cent) in the second, third and fourth fifths of net wealth.<sup>19</sup>

The concentration of household net wealth does not show a clear trend over the whole period examined (Figure 8). Between 1991 and 2004 we observe first a growth and then a decline, followed by a clearer upturn until 2012, while in 2014 there was another decline. The trend is slightly more marked upwards for per capita net wealth, indicating a change over time in the relationship between wealth and number of household members (Table A4).

The concentration indices that take the intra-family distribution of net wealth into account are significantly higher than those computed at household and per capita level; in terms of variance, households absorb about half of the variability of overall individual wealth.

<sup>19</sup> According to Forbes, which collects information on people with wealth exceeding \$1 billion, the share of Italian women among the rich is rather small (in 2015 around 15 per cent of Italians). This result appears to be consistent with that found by Atkinson et al. (2016) who, on examining the tax returns of 8 countries (Australia, Canada, Denmark, Italy, New Zealand, Norway, Spain and the UK) show that women represent between a fifth and a third in the tenth of the highest income individuals (in Italy 25 per cent in 1999 and almost 30 per cent in 2014), and between 14 per cent and 22 per cent in the top 1 per cent (in Italy 15 per cent in 1999 and 20 per cent in 2014). According to the authors, the share of women with among the highest incomes is increasing.

Table 5

### Net wealth of men and women by net wealth fifths, 1991-2016

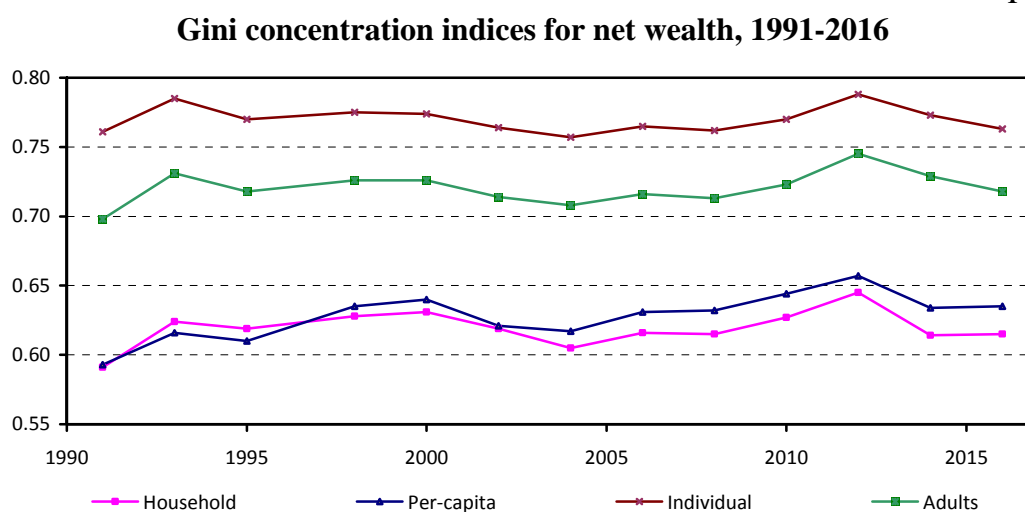
(Shares of couples)

	Average 1991-1998	Average 2000-2006	Average 2008-2016	2016
Total				
Women richer than men	13.2	13.3	20.2	21.5
Same wealth	53.6	54.2	36.5	35.3
Men richer than women	33.3	32.5	43.3	43.1
Balance (M>W) – (W>M)	20.1	19.2	23.2	21.6
Poorest fifth in terms of net wealth				
Women richer than men	2.7	2.5	7.4	8.3
Same wealth	94.3	94.4	74.8	73.7
Men richer than women	3.0	3.1	17.8	17.9
Balance (M>W) – (W>M)	0.3	0.6	10.4	9.6
2° fifth in terms of net wealth				
Women richer than men	10.9	11.5	18.2	20.7
Same wealth	63.4	60.7	39.7	42.2
Men richer than women	25.8	27.9	42.1	37.0
Balance (M>W) – (W>M)	15.0	16.4	23.9	16.3
3° fifth in terms of net wealth				
Women richer than men	13.7	13.9	22.4	27.0
Same wealth	51.0	49.8	34.6	31.6
Men richer than women	35.4	36.4	43.1	41.4
Balance (M>W) – (W>M)	21.8	22.5	20.7	14.4
4° fifth in terms of net wealth				
Women richer than men	15.6	14.3	22.5	21.2
Same wealth	45.2	49.3	30.3	28.7
Men richer than women	39.2	36.5	47.2	50.2
Balance (M>W) – (W>M)	23.6	22.2	24.7	29.0
Richest fifth in terms of net wealth				
Women richer than men	19.2	20.5	25.7	25.6
Same wealth	29.4	31.0	17.7	17.7
Men richer than women	51.4	48.6	56.6	56.8
Balance (M>W) – (W>M)	32.1	28.2	30.9	31.2

(\*) In italics the estimates obtained by dividing the financial assets among the adult components. In the remaining estimates, financial assets are attributed to individuals on the basis of the information available on the number of holders.



Figure 8



### 3.4 Inheritances

One of the channels that can significantly increase the wealth of individuals is that of inheritances and donations (Cannari and D'Alessio, 2008). The SHIW regularly collects information on properties, which as we have seen constitute a very important part of wealth. Households provide information about the way the family came into possession of the property, if it was purchased or received as a gift or inheritance. Since we know the owners of individual goods, it is therefore possible to check whether this channel favours men over women.

Table 6 shows the regression using the IHS transformation of the inherited property values, including as control variables the year to which the survey refers,<sup>20</sup> the age of the recipient and its square, the geographical area of residence, the sex of the recipient and the interaction of this with the year of detection.

The estimates show - both on the whole sample and on the subset of the individuals between the ages of 25 and 60 - the significance of the coefficient referring to males, which appear favoured with respect to females over the period examined. The coefficient of the interaction between sex and year is significantly negative on the sample of individuals from 25 to 60 years old, signalling a slow convergence in progress.

<sup>20</sup> Data on property owners are available only from 1986 onwards. In the absence of more precise information, the values of inherited property are those available at the time of the interview.

Table 6

**Inherited real estate, 1986-2016**

Parameter	All ages		From 25 to 60 years	
	Estimate	Pr >  t	Estimate	Pr >  t
<i>Intercept</i>	-0.2871	<.0001	-2.7971	<.0001
Year 1986	-0.7228	<.0001	-0.9487	<.0001
Year 1987	-0.6580	<.0001	-0.7952	<.0001
Year 1989	-0.6456	<.0001	-0.7657	<.0001
Year 1991	-0.7817	<.0001	-0.8833	<.0001
Year 1993	-0.5748	<.0001	-0.4984	<.0001
Year 1995	-0.4512	<.0001	-0.3939	<.0001
Year 1998	-0.3849	<.0001	-0.3190	<.0001
Year 2000	-0.3579	<.0001	-0.3774	<.0001
Year 2002	-0.5204	<.0001	-0.4151	<.0001
Year 2004	-0.2550	<.0001	-0.2763	<.0001
Year 2006	-0.2307	<.0001	-0.2395	0.0001
Year 2008	-0.1461	0.0002	-0.2187	0.0004
Year 2010	-0.2294	<.0001	-0.2182	0.0004
Year 2012	-0.1168	0.0029	-0.1733	0.0053
Year 2014	-0.1685	<.0001	-0.1953	0.0016
Year 2016	0.0000	-	0.0000	-
Age	0.0775	<.0001	0.1807	<.0001
Age <sup>2</sup>	-0.0004	<.0001	-0.0014	<.0001
North	-0.3031	<.0001	-0.3067	<.0001
Centre	-0.3488	<.0001	-0.2967	<.0001
South	0.0000	-	0.0000	-
<b>Men</b>	<b>0.2908</b>	<b>&lt;.0001</b>	<b>0.4645</b>	<b>&lt;.0001</b>
<b>Women</b>	0.0000	-	0.0000	-
<b>Men * Year</b>	<b>-0.0018</b>	<b>0.1868</b>	<b>-0.0086</b>	<b>&lt;.0001</b>
<b>Women * Year</b>	0.0000	-	0.0000	-
Sample size	345,910		168,888	
R <sup>2</sup>	0.0726		0.0324	

Information on the other inherited components is only collected occasionally in the SHIW, by means of special ad-hoc modules. Unfortunately, the most recent special module referring to inheritance, submitted in the 2014 survey, did not collect information on the recipient member of the inheritance within the family; the information gathered with the 2002 wave was therefore used (Banca d'Italia, 2004).

The information collected is characterized by a consistent measurement error,<sup>21</sup> as the low level of the R<sup>2</sup> coefficient suggests. However, both for the whole population and

<sup>21</sup> The survey asks respondents to provide assessments on transfers that may have occurred many years before; it is possible that memories are not always accurate. The values provided are revalued at 2004 prices using Istat indexes.

for those between the ages of 25 and 60, the model confirms - with reference to the IHS transformations of inheritances received until 2002 - the significant advantage of men over women (Table 7).<sup>22</sup>

Table 7

Parameter	All ages		From 25 to 60 years	
	Estimate	Pr >  t	Estimate	Pr >  t
Intercept	-2.51859	<.0001	-2.01183	0.1923
Age	0.116247	<.0001	0.070504	0.3284
Age <sup>2</sup>	-0.00091	<.0001	-0.00024	0.7653
North	0.965586	<.0001	1.168948	<.0001
Centre	0.635831	<.0001	1.06012	<.0001
South	0.0000	-	0.0000	-
<b>Men</b>	<b>0.410788</b>	<b>0.0002</b>	<b>0.486095</b>	<b>0.0003</b>
<b>Women</b>	0.0000	-	0.0000	-
Sample size	5.714		3.482	
R <sup>2</sup>	0.021236		0.035189	

### 3.5 Further factors explaining the gender wealth gap in Italy

In this section we examine the main structural aspects that can help in explaining the differences in wealth shown in the previous section (Table A5).

One difference that can affect the wealth gap concerns the age composition of men and women; in the average for the period 2008-2016, the share of men in each of the two young age groups (up to 18 years and from 19 to 30 years) is higher than that of women by about two and a half and one and a half percentage points respectively; the share of women is about three and a half points higher in the class over 65 years. As we have already mentioned, an age gap is also found - but in the opposite direction - in couples who live together, as women in couples are on average about three and a half years younger than men throughout the period examined.

In the population as a whole, women are characterized by lower education attainments than men, also due to the greater weight of the elderly population. The share of women with education up to primary level surpasses that of men by about 5.5 percentage points. It is well known, however, that the gap was first reduced and then reversed among the younger generations; in the most recent period female graduates are more or less one and a half points more prevalent than male graduates.

Furthermore, the employment gaps are substantial, even if they tend to decrease in the period examined. The percentage of males who work as employees is about nine percentage points higher than the corresponding quota estimated among women; the gap was about 17 points at the end of the eighties. The gap in favour of men is about five points for self-employed workers (almost nine points at the end of the eighties) while, on

<sup>22</sup> Selecting the 1,000 subjects up to 40 years only, the coefficient indicating the advantage of the males is reduced to 0.36 and is just over the limits of statistical significance.

the contrary, the share of unemployed females is almost 14 percentage points higher than the estimate for men (26 at the end of the eighties).

In addition to employment gaps, women are more likely to do part-time work, do fewer hours of work (in the market) and earn lower wages.<sup>23</sup> The result is a substantial gap in terms of individual income. By limiting the analysis to the couples of subjects, the average amount of earned employee income is about 40 per cent higher among males than women, almost consistently from the 1980s to 2016. The gaps in favour of men in income from self-employment and retirement are even more pronounced (47 and 59 per cent respectively), though both have come down slightly since the beginning of the nineties. Overall, the gap in couples is broad both in terms of income from work or retirement (around 60 per cent) and income received (around 50 per cent); while the first factor shows strong signals of convergence in the long run, the second indicator only shows a weak convergence.

To assess the extent to which these factors are associated with the wealth gender gap, some regression analyses have been performed. These are not intended as models to explain the origin of the gap but simply to allow a descriptive analysis of the phenomenon, keeping under control a plurality of potentially influential factors.

In an initial experiment, a regression was carried out to account for, within couples only, the (IHS transformation) wealth owned by each on the basis of their individual characteristics (sex, age, educational qualification, professional qualification, marital status), income from work or pension received (in logarithms), and some family characteristics (number of family members, geographical area and size of common residence). In this way it is possible to understand whether the observed differences remain even when some characteristics of individuals and their context are controlled for, or if, on the contrary, these factors are able to almost entirely explain the gap.

The estimated coefficients (Table A7 - Model A) for the main characteristics show the expected signs. Wealth is growing with age but at decreasing rates; it grows with the level of education and income from work or retirement, and decreases with the number of family members; it is greater for the self-employed and in the central and northern regions than for pensioners and employees and for residents in the southern regions and islands. The coefficient for men, which indicates the remaining part of the gender gap that the model fails to explain, is negative and significant for the periods up to 1998 and after 2008, while it is negative but not significant for the 2000-2006 period. In essence, the experiment seems to suggest that the wealth gap is well explained by the factors mentioned above and that, in fact, women in the past would have owned an even greater share (about 10 per cent) than the one that the model is able to estimate based on personal characteristics and perceived income. It is possible that this measurement accounts for the recognition within the couple of the greater work of caring for children and housework carried out by women, a recognition which, however, has not allowed women to achieve equality in the ownership of household assets.

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<sup>23</sup> For example, by selecting those who worked all year as employees and only including the main activities of the subjects, the part-time positions are 28 per cent among women and 6 per cent among men. Even excluding part-time positions, the weekly working time is 40.1 hours for men and 37.5 hours for women. As for the pay gap, see Zizza (2013).

A second experiment (Table A7 - Model B) estimated the wealth of men and women who do not live as a couple after a separation/divorce or widowhood, in order to understand how the differences in wealth between men and women translate after the separation or divorce from, or death of the spouse/partner. In this case the controls also show the expected signs, while the coefficient relating to men is positive and significant for the first two periods (up to 1998 and from 2000 to 2006); in the last period the coefficient remains positive but it is not significant. The results therefore seem to indicate that, given the aforementioned explanatory factors, the wealth of separated women or widows is lower than that of men, even if the gap seems to decrease over time, and the gap is not significant for the period following the 2008. The unexplained gap attributable to women is of about 10 per cent.

The last experiment, conducted on single and unmarried individuals, records unexplained and significant positive divergences in the first period for men, while in the most recent periods the unexplained gaps are close to zero and not significant.<sup>24</sup>

In conclusion, the models indicate that for women living in couples the observed differences can be attributed to a large extent to the explanatory factors considered, which refer to their lower age and to their generally disadvantaged working and income conditions. Women who live alone as a result of separation/divorce or widowhood, on the other hand, have a significantly lower level of assets than men with similar characteristics, but this effect seems to diminish over time. Even for unmarried women, the wealth not attributable to the explanatory factors considered was significantly lower than that owned by men before 1998 but subsequently this effect was nullified.

### 3.6 *International comparison*

To evaluate how the results found for Italy compare with those of other European countries, we proceeded by examining the data of the second wave of the harmonized HFCS. The HFCS collects information from the surveys conducted between the end of 2011 and mid-2015 from 20 European countries (Belgium, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Slovenia, Slovakia and Finland) out of a total of 84,597 households (ECB, 2016).

The survey makes possible a comparison of the levels of wealth of families residing in these countries. Since individual wealth data are not available, to analyse the gender wealth gap we proceeded to select, following Schneebaum et al. (2016), households with only one adult component, totalling 21,731 units (Table 8).

At the individual country level, gender differences are significant for Belgium, Germany, France and the Netherlands. For Italy, which like these other countries has lower average values for women than men, the difference is not significant.

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<sup>24</sup> These results, like those obtained in the previous experiment, cannot be extended to the whole population due to sample selection. A method for taking this aspect into account is discussed in the following section.

Table 8

**Net wealth of men and women, 2011-2014**  
(Only one-member households)

Country	Singles (with or without sons/daughters)				Singles (with or without sons/daughters) from 25 to 60 years			
	Sample size		Ratio of average wealth levels		Sample size		Ratio of average wealth levels	
	Men	Women	W/M	W/M *	Men	Women	W/M	W/M *
AT	482	801	1.047	0.988	285	323	1.099	1.077
BE	332	428	0.865	<b>0.821(**)</b>	160	177	0.726	<b>0.737(**)</b>
CY	79	116	0.525	0.554	54	57	0.660	0.706
DE	540	607	<b>0.792(**)</b>	0.960	306	278	<b>0.675(**)</b>	<b>0.827(**)</b>
EE	190	368	0.625	0.741	118	160	0.801	0.886
ES	470	805	0.925	1.012	193	208	<b>0.847</b>	<b>0.979</b>
FI	1311	1557	0.935	1.012	726	664	0.938	0.990
FR	1547	2403	<b>0.818(**)</b>	<b>0.885(**)</b>	968	1130	<b>0.594(**)</b>	<b>0.647(**)</b>
GR	297	427	0.876	0.932	179	165	0.659	0.706
HU	609	1435	0.797	0.932	328	455	0.917	0.989
IT	880	1634	0.879	0.955	405	436	0.886	0.992
LU	184	189	0.787	0.812	134	110	0.596	0.658
LV	101	316	0.776	0.860	62	141	0.843	0.949
NL	180	240	0.792	<b>0.739(**)</b>	107	115	<b>0.449(**)</b>	<b>0.440(**)</b>
PL	331	551	1.143	1.078	163	183	1.281	1.185
PT	383	875	1.351	1.227	215	336	1.827	1.424
SI	163	284	0.660	1.028	92	90	0.415	0.856
SK	166	450	1.074	1.089	91	128	1.091	1.096
Total sample size	21.731				9.742			

(\*) Winsorized estimates at 5 per cent and 95 per cent. (\*\*) Differences of averages (M – W) significant at 95 per cent.

The comparison of net wealth using only one-member households significantly reduces sample size (for Italy, for example, it goes from 8,156 to 2,514 units, equal to about 30 per cent); moreover it poses some methodological problems. In fact, among men and women in such conditions there can be systematic differences in their characteristics that could bias the results, when referring to the whole population. For example, women live longer than men and live together more frequently with children in their youth. The same decision to live alone is a factor subject to social norms, which may differ from country to country. The condition of singles characterizes a typology of people that cannot be defined as representative of the whole group of individuals and it is therefore necessary to adopt techniques that allow this aspect to be taken into account.

Therefore, a two-phase regression model was estimated. In the first phase the probability of being single (with or without children) is estimated on the overall sample of the HFCS families, including sex, country, age, squared age, as well as family income, with the explanatory factors comprising number of members, the marital condition and the ownership of the home of residence interacted with the country and gender. This equation provides an estimate of the probability of being single for each unit of the sample according to its characteristics.

In the second phase we estimate a linear regression model in which the IHW transformation of the household wealth of the single member aged between 25 and 60 is related to the sex and age of the adult individual. The regressors also include the Inverse

Mills Ratio (IMR), which is obtained from the estimation of the probabilities of the first phase, in order to neutralize the bias effects due to the non-random selection of the units.

Only in four countries (Germany, France, Holland and Finland) is the dummy referring to men positive and significantly different from zero (table 9); for Italy the coefficient is positive, consistent with the results obtained in the previous section, but not significant. In this regard it should be noted that in this analysis only the 2014 data are considered for Italy and that the previous estimates showed a decreasing gap in recent years. Furthermore, the sample selection and estimation process make the signal weaker than what is achievable using the individual wealth data examined above.

Table 9

### Net wealth held by men and women, 2011-2014

(Only one-member households)

Parameter (*)	Estimate	Standard Error	t Value	Pr >  t
Intercept	14.881	16.457	0.900	0.366
Country AT - Men	-0.637	0.810	-0.790	0.432
Country AT - Women	0	-	-	-
Country BE - Men	-1.004	0.734	-1.370	0.172
Country BE - Women	0	-	-	-
Country CY - Men	5.244	3.955	1.330	0.185
Country CY - Women	0	-	-	-
<b>Country DE - Men</b>	<b>1.430</b>	<b>0.238</b>	<b>6.020</b>	<b>&lt;.0001</b>
Country DE - Women	0	-	-	-
Country EE - Men	-0.686	2.173	-0.320	0.752
Country EE - Women	0	-	-	-
Country ES - Men	-0.429	0.567	-0.760	0.449
Country ES - Women	0	-	-	-
<b>Country FI - Men</b>	<b>2.107</b>	<b>0.951</b>	<b>2.220</b>	<b>0.027</b>
Country FI - Women	0	-	-	-
<b>Country FR - Men</b>	<b>0.575</b>	<b>0.289</b>	<b>1.990</b>	<b>0.047</b>
Country FR - Women	0	-	-	-
Country GR - Men	0.300	0.961	0.310	0.755
Country GR - Women	0	-	-	-
Country HU - Men	0.143	0.885	0.160	0.872
Country HU - Women	0	-	-	-
Country IT - Men	0.204	0.371	0.550	0.582
Country IT - Women	0	-	-	-
Country LU - Men	1.168	3.264	0.360	0.720
Country LU - Women	0	-	-	-
Country LV - Men	-0.898	2.133	-0.420	0.674
Country LV - Women	0	-	-	-
<b>Country NL - Men</b>	<b>2.169</b>	<b>0.530</b>	<b>4.090</b>	<b>&lt;.0001</b>
Country NL - Women	0	-	-	-
Country PL - Men	-0.802	0.573	-1.400	0.162
Country PL - Women	0	-	-	-
Country PT - Men	-0.169	1.135	-0.150	0.882
Country PT - Women	0	-	-	-
Country SI - Men	1.605	2.123	0.760	0.450
Country SI - Women	0	-	-	-
Country SK - Men	-1.413	1.564	-0.900	0.366
Country SK - Women	0	-	-	-
IMR*Country AT	7.888	4.207	1.880	0.061
IMR*Country BE	5.935	3.059	1.940	0.052
IMR*Country CY	5.348	17.726	0.300	0.763
IMR*Country DE	1.704	1.078	1.580	0.114
IMR*Country EE	6.048	9.107	0.660	0.507
IMR*Country ES	-2.474	1.977	-1.250	0.211
IMR*Country FI	7.101	4.571	1.550	0.120
IMR*Country FR	-2.028	1.159	-1.750	0.080
IMR*Country GR	-3.133	4.701	-0.670	0.505
IMR*Country HU	-0.445	3.932	-0.110	0.910
IMR*Country IT	0.265	1.607	0.170	0.869
IMR*Country LU	2.380	16.530	0.140	0.886
IMR*Country LV	-2.216	6.688	-0.330	0.740
IMR*Country NL	-3.178	2.850	-1.120	0.265
IMR*Country PL	0.024	2.806	0.010	0.993
IMR*Country PT	-4.469	3.988	-1.120	0.263
IMR*Country SI	1.459	9.264	0.160	0.875
IMR*Country SK	-3.480	7.594	-0.460	0.647
Sample size			9.732	
R <sup>2</sup>			0.076	

(\*) Further effects considered in the model (not shown above): Country, Country \* age, Country \* age<sup>2</sup>.



## 4 Conclusions

The paper, using data from the Bank of Italy's Survey of Household Income and Wealth (SHIW), carried out a reconstruction of the data on individual wealth in Italy. This reconstruction has used a wide range of information available in the survey and can be considered satisfactory, although in some cases it has required the adoption of some ad hoc hypotheses.

The results show a substantial gender wealth gap: in the most recent period men have on average a net wealth about 25 per cent higher than that of women; the gap is greater than that recorded in France in 2010 (12 per cent).

The gap is greater for financial assets (35 per cent) than for real assets and in particular for real estate (15 per cent). Among the couple's spouses/partners, the differences are even greater, around 50 per cent for net wealth and 43 per cent for real estate.

The gaps are reduced in youth and tend to grow as people move towards adulthood (over 40 years). Over time, a reduction in these differences has been observed, but they remain significant even in the 2016 survey.

The HFCS data make it possible to compare the results with those of other European countries. Only in four of the 20 countries considered (Germany, France, Holland and Finland) is there a significant gap in favour of men; for Italy, the coefficient is positive, consistent with the other results obtained, but not significant.

Despite the imbalance in favour of men observed in couples, the model of equal distribution is most widespread for real estate, observed in about half of the cases; in the remaining half the frequency of prevalence of wealth owned by men is about double that of the opposite case. As to net wealth, there is equal distribution between the partners in over a third of the cases; even here, the cases in which the wealth of men is greater than that of women is about twice the number of opposite cases, where the wealth of women is greater than that of men (43 against 20 per cent). The prevalence of male to female wealth is more common in very rich classes. In Italy, the share of couples adopting an equal distribution model has been decreasing in recent years; it is more widespread than in Germany.

The Gini concentration indices of individual net wealth are far greater than those calculated on household wealth or per capita wealth, which shares household wealth equally. This result highlights the redistributive role of the household, which absorbs a significant share (50 per cent in terms of variance) among individuals. On the other hand, inequality within the household is not necessarily without consequences, in particular in the relationship between men and women, as analysed here. The gender wealth gap may assume importance in terms of power when addressing consumption or savings and may affect other individual behaviours within the family. The trend of concentration indices calculated in the various versions, however, does not change substantially.

Some regressions have examined the extent to which the differences observed in wealth can be attributed to structural differences between genders in terms of age,

educational qualifications, employment and income.<sup>25</sup> The results seem to indicate that these factors are able to account, at least to a certain extent, for the differences observed in terms of wealth. In terms of policy, this implies that the reduction of gaps mainly on the grounds of employment, income and education should lead to a downsizing and perhaps even the elimination of wealth gaps. The inheritances that the interviewed subjects have received during their life also show signs of a prevalence of transfers in favour of men compared with women.

These are preliminary results that deserve to be investigated in further studies. The issue of the consequences of this gap is still to be explored; on the basis of previous studies, we believe it may concern the riskiness of investments, the destination of economic resources and the balance of economic power within the couple. Future studies will undoubtedly benefit from the reconstruction carried out here, although further surveys would be desirable to shed more light on the distribution of economic resources within the family. A substantial improvement in the analysis would come from collecting information on financial wealth at individual level; moreover, it would also be useful to verify, even for a limited sample, the hypothesis that the owners of buildings have equal shares.

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<sup>25</sup> In the most recent years, women have had better results than men in education and training, with a trend of the gap increasing in their favour. However, there are still some gender differences in university choices that could mean/lead to lower economic returns for women (Piazzalunga, 2017).

## Statistical tables

Table A1

### Real assets by age, 1986-2016

	1986-89	1991-98	2000-2006	2008-2016	2016
	Men				
Up to 18 years	644	994	618	569	1,266
From 18 to 30 years	10,241	13,497	11,656	10,798	6,490
From 31 to 40 years	43,484	55,251	61,104	61,375	57,208
From 41 to 50 years	74,970	100,340	107,474	107,427	100,076
From 51 to 65 years	98,118	126,919	152,048	155,881	129,420
Over 65 years	68,619	98,130	139,526	165,413	144,261
Total	44,204	60,979	79,024	89,060	78,635
	Women				
Up to 18 years	779	626	502	897	327
From 18 to 30 years	8,864	13,330	12,171	10,913	7,943
From 31 to 40 years	32,166	49,702	56,311	52,766	44,674
From 41 to 50 years	47,554	82,036	91,490	98,252	70,636
From 51 to 65 years	45,539	82,532	111,426	128,527	106,129
Over 65 years	37,854	59,426	85,865	120,591	113,525
Total	26,346	46,888	63,045	77,458	66,793
	Men/Women				
Up to 18 years	0.83	1.59	1.23	0.63	3.87
From 18 to 30 years	1.16	1.01	0.96	0.99	0.82
From 31 to 40 years	1.35	1.11	1.09	1.16	1.28
From 41 to 50 years	1.58	1.22	1.17	1.09	1.42
From 51 to 65 years	2.15	1.54	1.36	1.21	1.22
Over 65 years	1.81	1.65	1.62	1.37	1.27
Total	1.68	1.30	1.25	1.15	1.18

Table A2

**Financial assets by age, 1986-2016 (\*)**

	1986-89	1991-98	2000-2006	2008-2016	2016
	Men				
Up to 18 years	-	-	-	-	-
From 18 to 30 years	-	9,893	9,642	3,220	3,769
From 31 to 40 years	-	11,810	12,182	6,971	7,701
From 41 to 50 years	-	13,761	15,370	13,901	18,200
From 51 to 65 years	-	13,886	16,661	23,310	18,819
Over 65 years	-	15,439	21,047	23,305	27,198
Total	-	10,119	12,218	12,738	13,705
	Women				
Up to 18 years	-	-	-	-	-
From 18 to 30 years	-	9,542	9,628	2,670	1,996
From 31 to 40 years	-	11,746	12,756	6,704	7,521
From 41 to 50 years	-	12,251	14,772	10,754	12,288
From 51 to 65 years	-	13,562	15,402	15,692	14,888
Over 65 years	-	11,903	15,239	14,309	17,225
Total	-	9,774	11,550	9,442	10,475
	Men/Women				
Up to 18 years	-	-	-	-	-
From 18 to 30 years	-	1.04	1.00	1.21	1.89
From 31 to 40 years	-	1.01	0.95	1.04	1.02
From 41 to 50 years	-	1.12	1.04	1.29	1.48
From 51 to 65 years	-	1.02	1.08	1.49	1.26
Over 65 years	-	1.30	1.38	1.63	1.58
Total	-	1.04	1.06	1.35	1.31

(\*) In italics the estimates obtained by dividing the financial assets among the adult components. In the remaining estimates financial assets are attributed to individuals on the basis of the information available on the number of holders.

Table A3

## Net wealth by age, 1986-2016 (\*)

	1986-89	1991-98	2000-2006	2008-2016	2016
	Men				
Up to 18 years	-	-	-	-	-
From 18 to 30 years	-	31,002	25,971	16,068	13,668
From 31 to 40 years	-	82,183	87,292	73,472	65,725
From 41 to 50 years	-	131,846	147,285	134,102	121,957
From 51 to 65 years	-	157,918	189,822	199,550	158,191
Over 65 years	-	117,673	172,653	198,318	177,958
Total		80,858	103,775	110,668	96,764
	Women				
Up to 18 years	-	-	-	-	-
From 18 to 30 years	-	26,905	24,095	14,469	9,812
From 31 to 40 years	-	65,207	71,352	54,853	49,358
From 41 to 50 years	-	99,668	113,640	110,415	81,431
From 51 to 65 years	-	100,163	134,426	148,656	123,568
Over 65 years	-	73,650	110,587	137,501	132,912
Total		59,793	79,699	88,074	77,733
	Men/Women				
Up to 18 years	-	-	-	-	-
From 18 to 30 years	-	1.15	1.08	1.11	1.39
From 31 to 40 years	-	1.26	1.22	1.34	1.33
From 41 to 50 years	-	1.32	1.30	1.21	1.50
From 51 to 65 years	-	1.58	1.41	1.34	1.28
Over 65 years	-	1.60	1.56	1.44	1.34
Total	-	1.35	1.30	1.26	1.24

(\*) In italics the estimates obtained by dividing the financial assets among the adult components. In the remaining estimates financial assets are attributed to individual on the basis of the information available on the number of holders.

Table A4

**Gini concentration index of net wealth and its components**

	1986	1987	1989	1991	1993	1995	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016
	Net wealth															
Household				0.591	0.624	0.619	0.628	0.631	0.619	0.605	0.616	0.615	0.627	0.645	0.614	0.615
Per capita				0.593	0.616	0.610	0.635	0.640	0.621	0.617	0.631	0.632	0.644	0.657	0.634	0.635
Individual				0.761	0.785	0.770	0.775	0.774	0.764	0.757	0.765	0.762	0.770	0.788	0.773	0.763
Adults				0.698	0.731	0.718	0.726	0.726	0.714	0.708	0.716	0.713	0.723	0.745	0.729	0.718
	Real assets															
Household	0.649	0.652	0.598	0.610	0.636	0.629	0.638	0.628	0.620	0.608	0.615	0.608	0.620	0.634	0.603	0.605
Per capita	0.644	0.645	0.595	0.609	0.625	0.618	0.641	0.633	0.618	0.617	0.629	0.623	0.633	0.643	0.621	0.622
Individual				0.789	0.798	0.791	0.797	0.789	0.783	0.771	0.776	0.765	0.771	0.786	0.774	0.762
Adults				0.736	0.751	0.744	0.754	0.745	0.738	0.726	0.730	0.717	0.724	0.743	0.730	0.717
	Of which: Properties															
Household	0.640	0.649	0.602	0.617	0.630	0.626	0.627	0.612	0.608	0.602	0.601	0.594	0.603	0.619	0.592	0.602
Per capita	0.638	0.646	0.604	0.622	0.624	0.619	0.636	0.623	0.614	0.620	0.622	0.614	0.623	0.633	0.615	0.623
Individual	0.832	0.831	0.807	0.805	0.804	0.799	0.800	0.789	0.807	0.777	0.774	0.764	0.766	0.783	0.775	0.767
Adults	0.784	0.780	0.755	0.755	0.758	0.755	0.758	0.745	0.768	0.732	0.728	0.715	0.719	0.739	0.731	0.723
	Financial assets															
Household		0.743	0.694	0.672	0.717	0.737	0.743	0.808	0.769	0.732	0.768	0.763	0.773	0.800	0.782	0.798
Per capita		0.743	0.698	0.685	0.723	0.742	0.752	0.817	0.777	0.750	0.777	0.773	0.788	0.810	0.800	0.811
Individual				0.736	0.765	0.782	0.791	0.843	0.809	0.783	0.809	0.831	0.852	0.866	0.858	0.862
Adults				0.668	0.709	0.733	0.745	0.810	0.769	0.739	0.769	0.798	0.823	0.842	0.834	0.838
	Financial liabilities															
Household				0.921	0.909	0.908	0.936	0.925	0.924	0.921	0.926	0.907	0.910	0.917	0.919	0.935
Per capita				0.912	0.894	0.896	0.927	0.910	0.911	0.908	0.916	0.892	0.897	0.902	0.909	0.926
Individual				0.954	0.947	0.945	0.961	0.955	0.953	0.949	0.952	0.941	0.946	0.950	0.951	0.959
Adults				0.942	0.934	0.933	0.952	0.946	0.943	0.939	0.942	0.929	0.935	0.939	0.941	0.951

Table A5

### Distribution of household members by gender and other characteristics

	1986-89	1991-98	2000-2006	2008-2016	2016
	<b>Men</b>				
<b>Age</b>					
Up to 18 years	25.6	22.3	19.3	19.1	18.2
From 19 to 30 years	17.3	18.0	15.1	12.6	13.3
From 31 to 40 years	13.6	14.6	16.0	13.6	13.2
From 41 to 50 years	13.0	13.2	14.2	16.1	15.7
From 51 to 65 years	19.1	19.2	20.0	20.3	20.3
Over 65 years	11.3	12.8	15.5	18.4	19.5
<b>Educational qualification</b>					
None	8.5	15.4	13.2	11.6	9.8
Primary school certificate	24.4	23.4	19.5	15.6	14.3
Lower secondary school c.	22.6	32.8	36.9	38.3	39.5
Upper secondary school d.	17.1	22.8	23.4	25.0	26.4
University degree	4.4	5.7	7.1	9.5	10.0
<b>Marital status</b>					
Married	52.8	51.9	52.2	50.2	47.6
Unmarried	43.7	44.4	42.8	43.5	45.3
Separated	1.0	1.4	2.1	3.1	3.6
Widower	2.6	2.4	2.9	3.2	3.4
<b>Occupational status</b>					
Employee	36.0	33.5	35.6	35.1	34.8
Self-employed	13.0	12.1	11.4	10.0	9.8
Not employed	51.0	54.4	53.0	55.0	55.4
<b>Total</b>	100.0	100.0	100.0	100.0	100.0
	<b>Women</b>				
<b>Age</b>					
Up to 18 years	23.5	18.8	17.2	16.5	16.2
From 19 to 30 years	16.5	16.7	13.0	11.1	11.3
From 31 to 40 years	13.8	14.3	15.7	13.5	11.4
From 41 to 50 years	12.9	13.5	14.5	15.8	16.6
From 51 to 65 years	19.5	19.4	19.7	21.2	21.2
Over 65 years	13.9	17.4	20.0	21.8	23.4
<b>Educational qualification</b>					
None	10.9	17.8	15.5	12.8	11.8
Primary school certificate	20.6	29.2	25.1	20.0	18.2
Lower secondary school c.	14.1	27.1	30.5	32.0	32.8
Upper secondary school d.	12.8	21.3	22.1	24.2	25.1
University degree	2.8	4.6	6.9	11.0	12.1
<b>Marital status</b>					
Married	50.0	48.9	48.8	47.0	44.4
Unmarried	37.6	36.5	35.1	35.2	35.9
Separated	1.5	2.1	3.3	5.2	6.0
Widower	10.9	12.6	12.7	12.7	13.7
<b>Occupational status</b>					
Employee	18.8	19.9	23.5	26.0	26.6
Self-employed	4.1	5.1	4.7	4.5	4.4
Not employed	77.1	75.0	71.8	69.4	69.0
<b>Total</b>	100.0	100.0	100.0	100.0	100.0

Table A6

**Income from work and from retirement by gender (only couples), 1986-2016<sup>(\*)</sup>**

	1986-89	1991-98	2000-2006	2008-2016	2016
	<b>Men</b>				
<b>Average wages and salaries</b>	4930	6353	8020	9342	9803
Earners	52.2	46.8	45.8	46.0	45.3
Average income per earner	9444	13574	17510	20320	21640
<b>Average income from self-employment</b>	2347	2641	3885	3329	3304
Earners	20.6	19.2	17.8	14.9	14.9
Average income per earner	11395	13739	21798	22307	22177
<b>Average income from pensions</b>	1565	3222	4842	6294	6362
Earners	30.5	37.5	40.1	42.8	41.0
Average income per earner	5130	8597	12089	14706	15518
<b>Average income from work or pension</b>	8842	12216	16747	18966	19470
Earners	98.0	97.4	97.9	96.2	94.9
Average income per earner	9022	12539	17111	19720	20516
	<b>Women</b>				
<b>Average wages and salaries</b>	1663	2590	3839	4927	5369
Earners	24.0	25.9	29.7	33.1	34.4
Average income per earner	6927	10002	12915	14884	15607
<b>Average income from self-employment</b>	333	672	984	975	944
Earners	4.7	7.9	7.1	6.4	6.0
Average income per earner	7076	8559	13914	15182	15738
<b>Average income from pensions</b>	609	1108	1599	2255	2471
Earners	18.3	22.4	22.2	24.5	23.8
Average income per earner	3328	4956	7194	9224	10384
<b>Average income from work or pension</b>	2604	4370	6422	8157	8784
Earners	46.4	54.8	57.3	60.9	61.3
Average income per earner	5612	7982	11213	13405	14330
	<b>Men / Women</b>				
<b>Average wages and salaries</b>	2.97	2.45	2.09	1.90	1.83
Earners	2.18	1.81	1.54	1.39	1.32
Average income per earner	1.36	1.36	1.36	1.37	1.39
<b>Average income from self-employment</b>	7.06	3.93	3.95	3.41	3.50
Earners	4.38	2.45	2.52	2.32	2.48
Average income per earner	1.61	1.61	1.57	1.47	1.41
<b>Average income from pensions</b>	2.57	2.91	3.03	2.79	2.57
Earners	1.67	1.68	1.80	1.75	1.72
Average income per earner	1.54	1.73	1.68	1.59	1.49
<b>Average income from work or pension</b>	3.40	2.80	2.61	2.33	2.22
Earners	2.11	1.78	1.71	1.58	1.55
Average income per earner	1.61	1.57	1.53	1.47	1.43

<sup>(\*)</sup> Sample of couples only (spouses/partners with or without sons/daughters) – Annual income is set to 0 for non-earners.



Table A7

Regression model of individual net wealth owned, 1991-2016<sup>(\*)</sup>

Parameter	Model A – Only couples			Model B – Only separated or widower			Model C – Only single unmarried		
	Estimate	t	Pr >  t	Estimate	t	Pr >  t	Estimate	t	Pr >  t
Intercept	2.478	21.720	<.0001	4.166	9.430	<.0001	3.633	11.150	<.0001
Survey 1991	1.727	25.440	<.0001	-0.186	-0.520	0.605	1.809	5.420	<.0001
Survey 1993	1.529	22.450	<.0001	-0.892	-2.530	0.012	1.642	5.160	<.0001
Survey 1995	1.501	22.030	<.0001	-0.695	-1.950	0.052	1.267	3.950	<.0001
Survey 1998	1.359	19.670	<.0001	-0.523	-1.460	0.144	1.382	4.320	<.0001
Survey 2000	1.370	19.830	<.0001	0.901	3.030	0.003	1.459	5.320	<.0001
Survey 2002	1.381	19.950	<.0001	0.678	2.260	0.024	1.310	4.790	<.0001
Survey 2004	1.350	19.370	<.0001	1.022	3.390	0.001	1.596	5.830	<.0001
Survey 2006	1.405	19.960	<.0001	0.910	3.000	0.003	1.294	4.670	<.0001
Survey 2008	0.555	13.000	<.0001	0.295	3.060	0.002	0.512	3.740	0.000
Survey 2010	0.437	10.250	<.0001	0.134	1.370	0.171	0.502	3.710	0.000
Survey 2012	0.064	1.500	0.135	-0.016	-0.170	0.868	-0.204	-1.560	0.120
Survey 2014	0.151	3.490	0.001	-0.107	-1.130	0.258	0.062	0.480	0.634
Survey 2016	0.000	-	-	0.000	-	-	0.000	-	-
Age	0.203	53.880	<.0001	0.127	11.200	<.0001	0.147	13.810	<.0001
Age <sup>2</sup>	-0.001	-37.680	<.0001	-0.001	-9.720	<.0001	-0.001	-7.720	<.0001
No educational qualification	-3.203	-65.990	<.0001	-3.171	-27.370	<.0001	-4.037	-20.380	<.0001
Primary school certificate	-2.090	-62.870	<.0001	-2.232	-21.450	<.0001	-2.931	-23.720	<.0001
Lower secondary school certificate	-1.424	-47.330	<.0001	-1.777	-17.500	<.0001	-1.852	-20.270	<.0001
Upper secondary school diploma	-0.483	-15.650	<.0001	-0.543	-5.180	<.0001	-0.324	-3.600	0.000
University degree	0.000	-	-	0.000	-	-	0.000	-	-
Employee	-0.013	-0.480	0.628	-0.295	-3.670	0.000	-0.489	-4.690	<.0001
Self employed	1.274	39.740	<.0001	0.944	8.660	<.0001	0.994	8.010	<.0001
Not employed	0.000	-	-	0.000	-	-	0.000	-	-
Income from work or retirement –1991/1998	0.048	10.570	<.0001	0.393	12.310	<.0001	0.118	4.150	<.0001
Income from work or retirement –2000/2006	0.055	12.010	<.0001	0.244	10.640	<.0001	0.091	3.980	<.0001
Income from work or retirement –2008/2014	0.126	29.350	<.0001	0.312	15.910	<.0001	0.190	10.020	<.0001
Number of members	-0.131	-16.270	<.0001	-0.071	-3.080	0.002	0.011	0.300	0.762
Separated/divorced	-	-	-	-0.974	-14.430	<.0001	-	-	-
Widower	-	-	-	0.000	-	-	-	-	-
North	0.626	34.220	<.0001	0.432	8.940	<.0001	0.563	7.570	<.0001
Centre	0.687	30.470	<.0001	0.741	12.690	<.0001	0.775	8.480	<.0001
South and Islands	0.000	-	-	0.000	-	-	0.000	-	-
Town up to 20,000 inhabitants	0.672	25.940	<.0001	0.645	10.090	<.0001	0.555	6.120	<.0001
Town from 20,000 to 40,000 inhabitants	0.489	15.860	<.0001	0.537	6.870	<.0001	0.178	1.520	0.128
City from 40,000 to 500,000 inhabitants	0.368	13.450	<.0001	0.284	4.250	<.0001	-0.296	-3.150	0.002
City with more than 500,000 inhabitants.	0.000	-	-	0.000	-	-	0.000	-	-
<b>Men –1991/1998</b>	<b>-0.121</b>	<b>-3.840</b>	<b>0.000</b>	<b>0.478</b>	<b>4.920</b>	<b>&lt;.0001</b>	<b>0.487</b>	<b>3.740</b>	<b>0.000</b>
<b>Men – 2000/2006</b>	<b>-0.037</b>	<b>-1.120</b>	<b>0.262</b>	<b>0.254</b>	<b>2.950</b>	<b>0.003</b>	<b>-0.032</b>	<b>-0.290</b>	<b>0.771</b>
<b>Men – 2008/2016</b>	<b>-0.070</b>	<b>-2.320</b>	<b>0.020</b>	<b>0.114</b>	<b>1.590</b>	<b>0.113</b>	<b>-0.025</b>	<b>-0.290</b>	<b>0.771</b>
Observations	133.087			23.501			10.665		
R <sup>2</sup>	0.170			0.136			0.196		
Average wealth									
Men/Women –1991/1998	1.53			1.72			1.17		
Men/Women – 2000/2006	1.49			1.65			1.02		
Men/Women – 2008/2016	1.50			1.36			1.19		

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