EVIDENCE ON HOUSEHOLD SAVINGS IN ITALY

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ABSTRACT

Recent financial crises have revealed the importance for the industrial and financial development of countries. In Italy, in the first quarter of 2009, growing concerns about personal economic prospects and the evolution of the labor market have impaired consumers confidence providing motivation for increasing precautionary savings. Generally the savings propensity of Italian households is undergoing a series of changes that are related not only to the dissemination of innovative financial instruments but also to the changing demographic structure of the population. The aim of this research is to analyze the relationship between population structure and Italian household savings. Data is collected on Italian household saving published by the Bank of Italy, and data related to some demographic and economic indicators. The study finds that, in the current Italian population, saving choices are markedly different between generations, geographic areas and qualifications.

JEL: E21, G20, G21, J10, J11

KEYWORDS: Household saving, demographic transition, financial data

INTRODUCTION

Saving is an important element for country growth. The current climate is characterized by increasing levels of concern and uncertainty by Investors and households. Because of severe financial recently, the saving potential of households has decreased. Moreover, the recent vicissitudes in international financial systems have increased mistrust towards financial instruments. This mistrust has put a strain on the relationship between investors and financial operators. Historically, financial investment was oriented primarily towards instruments issued by banks such as intensified disposals of investment fund units. Following the financial crisis of 2007, the household saving rate rose from 0.4 percentage points to 11.9% in 2008. The increase interrupts a downward trend under way for over twenty years. In the mid-1980s the saving rate stood at around 28% (Bank of Italy, 2009).

The literature on saving includes several studies on the effects that the changing population structure plays on the formation and accumulation saving (Miles, 1999; Rossi and Visco, 1995). Particular interest is shown towards demographic transitions indicating a shift from a traditional regime characterized by high fertility and high mortality, to a modern regime with low birth rates and mortality rates. Italy is distinguished by the aging process expected in the coming decades. This aging process could lead to a reduction in savings, due to a low savings rate among young people. This could adversely affect the accumulation process (Borsch-Supan, 1996; Jappelli, 1999; Jappelli and Modigliani, 1998).

The aim of this research is to analyze the relationship between population structure and Italian households saving. The research uses a multi-disciplinary approach and is developed through the collection and re-elaboration of data published by the Bank of Italy. Specifically, data on a survey of Italian household income and wealth in 2006 are examined along with some demographic, economic and financial indicators. The remainder of the paper is organized as follows: Section 2 discusses household savings and demographic transition in the literature, Section 3 describes the data and methodology and Section 4 presents the results. Section 5 concludes the paper.

LITERATURE REVIEW

The literature review section is divided into two parts. The first part discusses the literature related to household savings. The second part discusses the literature related to demographic transitions.

The Household Savings

Recent financial crises have led to serious repercussions in the global economy because of deep economic and moral losses of investors (Gorton, 2009). These events revealed the relevance of saving and especially its allocation in the nation economy (Bernhiem and Shoven, 1991). Indeed, saving is very important in the development of industrial and financial systems (Attanasio, 1998; Bosworth, Burtless and Sabelhaus, 1991; Deaton and Paxson, 2000). For example, due to the absence of credit and insurance markets, household saving is a welfare factor in developing countries. On the one hand, without savings, households have few other mechanisms to smooth out unexpected variations in their incomes, and so, shocks may create some problems of human capital accumulation at early ages. On the other hand, the capacity to save becomes one of the main tools of social mobility and of future income-earning possibilities.

Although there is controversy about the relationship between savings and economic growth, it is generally agreed that once savings start to rise, perhaps due to increases in income, the potential to finance investment improves, and leads to the creation of more opportunities in the economy (Paxson, 1996). In fact domestic savings finance the bulk of any country's investment.

Theoretical literature on the determinant factors of saving is rooted in consumption theory and, consequently, largely concerns factors affecting households. Loayza, Schmidt-Hebbel and Servén (2000) provide an overview of empirical studies in this area in developed and developing countries. They found, through a cross-country study, that private sector and national savings are affected by many factors. The factors include demographic changes, an increase in young and old dependency rates, the level of development, per capita income, influences the countries development, fiscal policy, pension reform, and financial liberalization, and credit supply.

It is necessary to consider the meaning of savings. First, savings is characterized by a general restriction of expenditures, reduced to an extent strictly necessary to achieve a certain purpose (Dell'Amore, 1972). In general, the aim of savings is to provide resources to face unexpected expenses, precautionary savings, to ensure future income in addition to the income offered by the pension system, to leave a legacy or to make an investment. Second, savings is the balance of the income distribution, i.e. the positive difference between income and expenditure (Lisle, 1971). In this context, saving is a variable flow, because it measures the size of a phenomenon over a given period of time, unlike the patrimony which is a variable stock.

In Italy, attention to the savings doctrine is not new in the literature. But it is necessary to note the positions taken by leading scholars and theorists are so different that it is necessary to distinguish between economic science evaluations and financial science. In fact, while the economic literature uses mathematical models and focuses on the difference between income and expenditure, the financial literature emphasizes quantitative and qualitative analysis of savings by focusing on its evolution and on the techniques of allocation (Jappelli and Pagano, 1999).

Savings trend into investments, usually facilitated by the banking system. This is even more evident in the Italian context, in which banks have always been interested in the transfer of resources within the macro-economy, channeling the flow of funds from surplus areas to deficit ones, and ensuring allocation of resources. In recent years, the Italian legislature realized the need to enact a law to protect forms of

savings (Legislative Decree of 24 February 1998, n. 58 of the Testo Unico della Finanza (TUF)). This Law n. 262 of 28 December 2005, known as the "law for the protection of savings and discipline of financial markets", which replaced some articles of the TUF and established: greater transparency of banking contracts, restrictions on ownership, regulation on corporate governance and greater information disclosure to public.

Recently, the literature has shown increasing attention to household savings, particularly on the allocation of the financial components of wealth and the influences of demographic household changes on savings (Guiso, Haliassos and Jappelli, 2002; Cannari, 1994).

The Demographic Transition

It is evident that population changes are usually the effect of some particular demographic phenomena: fertility, mortality, migrations. In demography, but also in other sciences, it is possible to define demographic transition (Lesthaeghe and Surkyn, 1988). It deals with a theory which explains the trend or transition of a population from high birth rates and high death rates to low birth rates and low death rates as part of the economic development of a country from a pre-industrial to an industrialized economy. It is based on an interpretation begun in 1929 by the American demographer Thompson (1929) which involves observed changes, or transitions, in birth and death rates in industrialized societies over the past two hundred years.

Specifically, this model is described by four transition phases. The first transition, i.e. in a pre-industrial society, is characterized by very high levels of fertility and mortality that fluctuate rapidly according to natural events, such as drought and disease, to produce a relatively constant and young population.

The second stage, in a developing country, leads to a fall in death rates with a life rate increase, a disease reduction and an increase in population. These changes were due to improvements in food, farming techniques, access to technology, basic healthcare, and education. Without a corresponding fall in birth rates this produces an imbalance and countries can experience a large increase in population in this stage (Lesthaeghe and Surkyn, 2004).

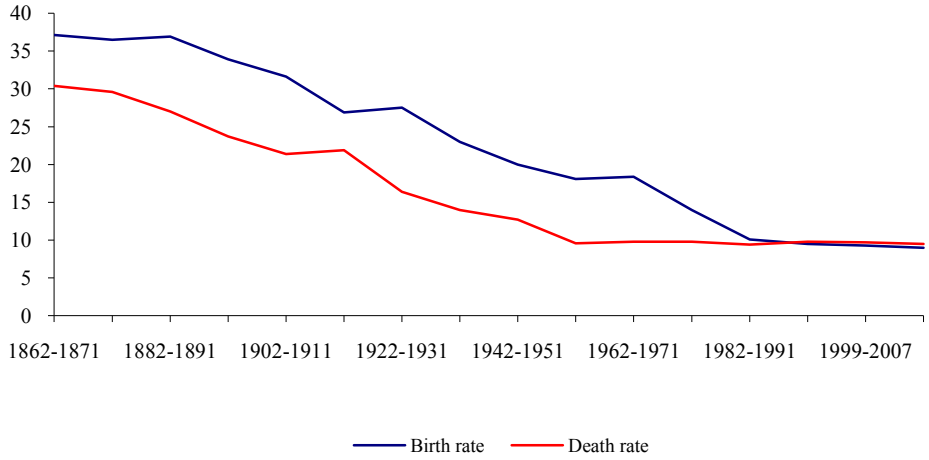
The third phase moves the population towards stability through a decline in the birth rate. There are several factors contributing to this eventual decline including the availability of contraceptives, urbanization changing traditional values on fertility, the cost of dependent children to a family, reduction of the number of children working, a reduction of agriculture, an increase in status and women education, and an increase in wages. The resulting changes in the age structure of the population includes a reduction in the young age dependency ratio and eventually population aging. The population structure becomes less triangular and more like an elongated balloon. During the period between the decline in young age dependency and rise in old age dependency, there is a demographic opportunity that can potentially produce economic growth through an increase in the ratio of working age to dependent population; the demographic dividend.

The last transition phase occurs where birth and death rates are both low. Therefore the total population is high and stable. Some theorists consider there are only 4 stages and that the population of a country will remain at this level. The demographic transition model is only a suggestion about the future population levels of a country; it is not a prediction (Beaver, 1975). We can observe the Italian demographic transition from the Italian unity (1862) up to current day in Figure 1.

During the last two decades, European countries have been characterized by several changes in their demographic patterns: the drop in their fertility and mortality rates and the notable increase in their life

expectancy. These demographic changes, which have been identified as the key elements of the "Second Transition", especially affect the social science. These aspects have contributed to the emergence of new and particular needs in welfare. Western European countries have adopted, with different intensity since the 1960's and 1970's, some demographic patterns that pose new challenges for these societies. The principal demographic feature of the second demographic transition is the decline in fertility below the replacement level, which is set at 2.1 births per woman. If fertility declines below this level, population sustainability will not be guaranteed (Van de Kaa, 1987). The other feature of the second demographic transition is the increase of life expectancy from which population aging derives. The decline of fertility, the increase of life expectancy and aging population can determine the changes in public society. Aging population is studied both for its implications on the progress and sustainability of accounts, and for the consequences on the formation of savings and accumulation.

Figure 1: Italian Demographic Transition



This figure shows the evolution of the demographic transition (birth and death rates) of the Italian population during the period going from 1862 to 2010, besides it shows the different transition phases: from 1862 to 1901 the first phase; from 1902 to1991 the second phase; from 1992 to 2010 the third phase.

A demographic phenomenon further studied and discussed by economists is the increase of the dependency ratio, defined as the ratio between the number of people over 65 years old and that of individuals between 15 and 64 years old. If the fertility rate remains at the same levels as the previous decade and average life expectancy continues to lengthen, this ratio is expected to rise continuously until 2040, with radical consequences for major financial institutions of social protection. However, the demographic transition determines other changes in relationships between the abundance of related generations. A significant aspect, but perhaps less examined for its macroeconomic implications, is analysis of passage of the baby-boom along the middle-age and end of life stages. Over the next two decades these generations, more numerous than the others currently, live in a period where the level of disposable income and savings are higher. What effect might this phenomenon on macroeconomic variables and their relative prices have? What are the effects on the formation of private savings? (Baldini and Mazzaferro, 2003).

DATA AND METHODOLOGY

Data regarding a survey on Italian household income and wealth in 2006 published by the Bank of Italy, are related to some demographic, economic and financial indicators (Bank of Italy, 2008). The survey covered 7,768 households, 19,551 individuals, from which 13,009 are income earners.

From the structural point of view, the sample is composed of 48.7% male and 51.3% female, 39.7% are head of household, 29.9% are head of household partners, 17.8% are children, and 9.3% are head of household parents, and 3.3% are other members of the family (Table 1). Collected data show that the household is mainly composed of four components (27.2%), while 9.9% live alone and 24.2% live in couple relationships. The percentage of couples without children continues to increase, while the head of household percentage with more than one child decreases. The average family member is higher in the South, especially in Campania. In terms of geographical distribution, 44.6% of households reside in the North, 20.1% in the Centre and 35.3% in the South and Islands. 29.97% of the Italian families live in towns with fewer than 20,000 inhabitants, 19.69% in municipalities with a population between 20,000 and 40,000 inhabitants, and the remaining 50.34% in the bigger cities. The sample is principally composed of Italian citizens (97.4%). Only 2.6% do not have Italian citizenship and entered Italy after 2001. With regard to the educational qualification of the sample, the major part of the sample has a middle school level (29%), while only 7.5% has a university degree. This distribution is more interesting if age is considered. In fact, there is a large presence of over 65 years old people and individuals of 30 years old and under (29.6%).

Table 1: Household Structure (Values In Unit and %)

	Frequency	*Percentage*
	Gender	
Male	9,514	48.7
Female	10,037	51.3
Total	19,551	100
	Age	
30 to under	5,782	29.6
31-40	2,474	12.7
41-50	2,973	15.2
51-65	4,191	21.4
over 65	4,131	21.1
Total	19,551	100
	Educational qualification	
None	2,293	11.7
Primary school	4,240	21.7
Middle school	5,671	29.0
Secondary school	5,884	30.1
University degree	1,463	7.5
Total	19,551	100
	Members in the family	
Head of household	7,768	39.7
Partner	5,841	29.9
Child	3,475	17.8
Others	2,467	12.6
Total	19,551	100
	Numbers of members in the family	
1	1,927	9.9
2	4,732	24.2
3	4,959	25.4
4	5,316	27.2
5+	2,617	13.4
Total	19,551	100
	Citizenship	
Italian	19,045	97.4
Not Italian	506	2.6
Total	19,551	100
	Work status	
Employee	5,746	29.4
Self employed	1,408	7.2
Not employed	12,397	63.4
Total	19,551	100

This table shows some social characteristics of all the households of the analyzed sample, indicated in absolute and percentage values.

With regard the work status, the households are composed in large part of people who do not have a job (63.4%), while 29.4% are employees and 7.2% are self employed. More specifically, 16.4% are occupied in the industrial sector, 14.9% in the Public Administration, 8.8% in commerce and 5.2% in agriculture.

For our analysis, it is important to note some characteristics of the head of household who represent the main person responsible for family finances. The head of household is a man in 63% of the cases and a woman in 37% of the cases. With regards the male, he is less than 30 years old for 2.9% of the cases and more than 65 years in 30.2% of the cases. The most common educational qualification is secondary school and only 3.2% has no educational qualification. He attended a technical institute while he has a university degree in 9.4% of the cases prevalently in liberal arts. With regards the female, she is under 30 for 3.2% and over 65 in 41.7% of the cases. Only 8% of women have a university degree (Table 2).

Table 2: Age and Educational Qualification of the Head of Household (Values in Unit and %)

		Gender				Total	
		Male		Female			
		Frequency	*Percentage*	*Frequency*	*Percentage*	*Frequency*	*Percentage*
Age	30 to under	144	2.9	93	3.2	237	3.1
	31-40	667	13.6	341	11.9	1,008	13.0
	41-50	973	19.9	532	18.5	1,505	19.4
	51-65	1,634	33.4	708	24.7	2,342	30.1
	over 65	1,478	30.2	1,198	41.7	2,676	34.4
	Total	4,896	100	2,872	100	7,768	100
Educational qualification	None	159	3.2	270	9.4	429	5.52
	Primary school	1,100	22.5	960	33.4	2,060	26.52
	Middle school	1,520	31.0	671	23.4	2,191	28.21
	Secondary school	1,656	33.8	742	25.8	2,398	30.87
	University degree	461	9.4	229	8.0	690	8.88
	Total	4,896	100	2,872	100	7,768	100

This table shows the distribution of the head of household by gender in age classes, and the different educational qualification of the head of household distinct per gender, too.

The head of household has a non-professional status in 54.9% of the cases, and is more frequently a dependent employee (34.8% against 10.2% of the independent employee). In 2006 the average annual head of household income, net of income taxes and social security contributions, is 31,792 euros, equal to 2,649 euros per month, and it is higher for males (34,785 euros) than for females (25,081euros). Moreover, average head of household income is higher for households with head of household graduates, working independently or as a manager, between 41 and 65 years old.

From the methodological point of view, the research uses a multi-disciplinary approach and is developed through the determination of economic and financial indicators that describe head of household saving in Italy. Specifically, the bivariate analysis identifies the relationship between two variables showing the correlation (Corbetta, 1992; Piccolo, 2000).

RESULTS

Based on the head of household structure, the research analyzes some indicators of saving in Italy. The indicators are: bank or post office current accounts, saving forms as bonds, mutual funds and equity, and payment instruments.

With regard to the first indicator, 89.9% of the households owned a bank or postal current account in 2006, and the distribution for gender shows a situation in equilibrium (Table 3). Among the deposit bank or post office forms, the current account is very spread out. Most households have an account at a bank and use it for more than 10 years. This choice is linked to proximity from housing. Typically, through the

account it is possible to pay bills and to receive the salary. The financial instruments used increase according to the income and educational qualifications. Moreover, financial instruments are generally more common in the North and the Centre of Italy, with the exception of post office deposits that are more common in the South. Specifically, 75% of the families residing in the South have at least a deposit, against 93% in the Centre and 97% in the North. The gap between North and South is relatively more pronounced in the case of shares, bonds and government securities that is six times higher in the North than the South.

Table 3: Bank or Post Office Accounts (Values in %)

	Bank/post office current accounts	**Bank/post office savings accounts**	**Bank/post office deposit accounts**
Male	89.9	18.3	91.3
Female	82.7	18.5	84.5

This table shows the percentage of hold of household distinct per gender that owns a bank or post office current account, a saving account and a deposit account.

As regards the saving forms, in 2006, 10.4% of the households owned Italian shares and other equities, among these 49.3% are male head of household while 50.7% are female head of household; beside, 10.7% of the households owned bonds and 12.3% owned mutual funds. Interesting observations can be extrapolated from the bivariate analysis between mutual funds and bonds owned by the households (Table 4).

Table 4: Bonds and Mutual Funds (Values in %)

			Bonds		
			Yes	No	*Total*
Mutual Funds	Yes	*Male*	22.6	27.4	50
		Female	21.7	28.3	50
		Total	44.3	55.7	100
	No	*Male*	2.9	45.5	48.3
		Female	3.1	48.6	51.7
		Total	6	94	100

This table shows the relation between bonds and mutual funds owned by the head of household distinct per gender. For example, 22.6% of the male owns both bonds and mutual funds, while 2.9% owns only bonds.

Other forms of investment are less common such as the postal saving certificates (5.9%), certificates of deposit or repos (2.1%), form of loans in cooperatives (1.6%), and individual investment portfolios (1.4%). Only 0.7% invested in foreign securities. Also, a wider distribution of government bonds is observed for households with head of household as a manager (13.6%), retired (10.6%), contractors and freelancers (15.2%) and is particularly low when the breadwinner is a worker (3.6 %). For other forms of savings accounts, workers are more oriented towards bonds and mutual funds, while a high percentage of managers also invest in the stock market.

The survey shows that there is a gradual replacement of traditional payment instruments such as cash and checks, with most advanced and flexible payment method, like a credit and debit card. The use of new technologies to make payments and manage relationships with intermediaries is extending, but still remains limited to a small portion of the population. 63% of the head of household have a payment card; specifically, 60% are in possession of a debit card, 31% of a credit card and 2.2% are in possession of a prepaid card. The average monthly expenditure made in cash by households amounted to 943 euros, 48% of the total monthly expenditure. Regarding the different payment instruments, Table 5 shows that credit and debit cards are distributed in a similar percentage between male and female.

Table 5: Payment Instruments (Values in %)

Banking relationship	Debit card		Credit card		
			Yes		Total
One bank	Yes	*Male*	44.2	55.8	100
		Female	44.0	56.0	100
		Total	44.1	55.9	100
	No	*Male*	7.2	92.8	100
		Female	9.4	90.6	100
		Total	8.4	91.6	100
Several banks	Yes	*Male*	70.1	29.9	100
		Female	69.1	30.9	100
		Total	69.9	30.4	100
	No	*Male*	29.2	70.8	100
		Female	33.9	66.1	100
		Total	31.3	68.8	100

This table shows the percentage of hold of household distinct per gender that owns credit card and debit card, relating to the relationship with one bank or several banks. For example, 44.2% of the males own credit and debit cards and have a relationship with only a bank.

The share of expenditure is higher in the South and Islands, for families with head of household with low educational qualifications or with less disposable income. The most common way families receive their income is the direct payment on current account (74.5%). The number of payments made over the internet by households is still low; in fact the majority of households do not use computers at home even though they own it. But 8.5% of the households use an evolved form of communication with financial intermediaries such as remote banking. The use of new technology is particularly diffused among households living in the North or in the cities, or with head of households between 30 and 50 years old, highly educated, manager or entrepreneurs.

The analysis of the Italian household structure and the saving provides evidence of how saving choices are markedly different depending on the household structures. The value of expenditure rises with the educational qualification of the head of household and is correlated with the household size. Levels are higher in the North and the Centre (25,770 euro and 26,942 euro respectively) than in the South and Islands (18,654 euro). The saving average is equal to 8,244.8 euro and 25% of the sample save up to 850 euro. Besides, there are cases where saving is negative because of the household deficit status, or equal to zero (Table 6).

Table 6: Income, Expenditure and Saving (Values in Euro)

		Income	Expenditure	Saving
Average		31,892.8	23,648.0	8,244.8
Median		26,216.5	20,400.0	4,711.4
Mode		13,000.0	16,800.0	0.0
Standard deviation		27,275.6	14,322.6	20,344.7
Min value		-8,643.0	40.0	-93,919.4
Max value		811,087.8	246,100.0	776,087.8
Percentile	25	14,500.0	850.0	850
	50	20,400.0	4,711.4	4,720
	75	28,800.0	12,210.2	12,260

This table shows some statistical indicators determined on the income, expenditure and saving.

CONCLUSIONS

The devastating effects produced by the latest market crises have clearly shown the need to analyze the relationship between the saving household formation and the population structure. In fact, the research analyzed the structure of the Italian head of household in 2006 and, through some economic and financial indicators, provides evidence on the saving status in Italy. The sample includes 7,768 households that are

analyzed through some indicators: number in the household, geographic location, citizenship, employment type, educational qualification and income.

Data confirm that the spread of financial assets is linked to household characteristics, and primarily to its economic characteristics. In fact, the use of financial instruments increases with income and educational qualifications. Furthermore, the ability of individuals to make appropriate decisions regarding the management of their finances varies in relation to their degree of financial literacy. The growth of levels of financial knowledge is a topic of great interest to economic institutions and is an essential condition to conscious choices of savings. Households of the South have less financial knowledge than the rest of Italy, but there is no significant difference between the educational qualification of the Northern head of household and that of the Centre of the Italy. With regard to occupational status, households where the head of household is an entrepreneur or self-employed, are financially educated. The university degree of financial literacy is higher for households with head between 41 and 50 years old, the elderly are less financially educated than younger people.

This description makes difficult to define the saving status of the Italian households. It would be interesting to consider the situation of past saving trends, and to analyze a prevision on Italian saving. Future research will examine the relationship between household savings and demographic transitions in Italy through historical data series selected for cohorts related to surveys of the Bank of Italy in the period going from 1995 to 2008. It is interesting to identify the savings profile per age and cohort of the Italian household that can be used to provide an estimation of the impact on Italian households saving in the period 2010-2040.

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