Regional Science Association
38 th European Congress
Viena, Austria

The influence of age on household savings behaviours and motives: Evidence from Spain

Fernando Lera López
Department of Economics,
Public University of Navarre
Pamplone, Spain.
Email: lera@upna.si.es, Phone: 948-169705

Abstract:

The role which savings plays in the economy is beyond the scope of discussion. Hence, the prolonged fall of the family savings rate has caused great worry in developed countries. In Spain, this situation is especially serious with falls beyond the family savings rate.

In this context it is absolutely necessary try to understand what the reasons are for savings and what the variables are which have a determined influence on savings.

This paper intends to define the socio-demographic variables which determine the behaviour, from an analysis of an average inhabitant of Navarre in terms of financial savings. According to a survey of 1,000 people in Navarre, it is shown that the age can explain not only the savings behaviour of families but also the motives and attitudes.

Moreover, the defining capacity and differential of the age in the behaviour of average citizens of Navarre is reflected primarily in the savings motives of particular citizens of Navarre.

Similarly, taking into account the savings motives, the authorities can apply appropriate policies in order to increase the level of family savings and achieve sustainable growth in a time of macroeconomics magnitudes.

1. Introduction

The role which savings plays in the economy is beyond the scope of discussion. Hence, the prolonged fall of the family savings rate has caused great worry in developed countries. In Spain, this situation is especially serious with falls beyond the family savings rate.

In this context it is absolutely necessary try to understand what the reasons are for saving and what the variables are which have a determined influence on savings. In order to try to respond to these two questions, this paper, primarily, examines the recent revolution of savings at an international level as well as particularly in Spain, with special emphasis on family savings.

Subsequently, a series of factors was collected which fall in the two principle theories about savings: the Life Cycle Theory and Altruism Model. Thirdly, from a survey of 1,000 people in Navarre in terms of financial savings states explicitly the socio-demographic variables which determine the behaviour of savings in terms of savings motives and attitudes to saving.

The marketing research consists of a personal survey with a sample of 1000 people, with a margin of error (sample error) of +/- 3.2 percent, and a 95 percent confidence interval. The target population was people living in Navarre over the age of 14, which included 435.000 Navarrese. The sample quota was based on demographic variables such as age and sex. The survey was made between march 17th and April 6th, in 1995.

2. Recent evolution of savings

The evolution of total savings in the economy (national savings) is a result of the behavior of three principle classes of economic agents: companies, families Government.

Of these three components, the study of family savings has taken the most distinguished place among them, not only because of its quantitative importance, rather also for the greater reduction which, in comparison with other components of national savings, had been experienced in the 80s.

2.1. Evolution of savings at the global level

In the decades between 1950-1970 the growth of savings at a global level was continuous and intense, presenting a maximum level in the 70s just during the time of the two oil crises. At the root of the second oil crisis, savings rate fell drastically, such that during the 80s and 90s it was at a much inferior average level in contrast to that of the previous decades.

According to the IMF (1995a), the average global rate of savings in 1973-1980 represented 25% of GDP. This percentage was reduced to 22.5% in the period between 1981-1994. In 1992 and 1993, the last years for which such information is available, the global savings rate hardly reached the average of 21.75%.

Nevertheless, it is helpful to point out that savings behavior has not been homogenous throughout the world. While in developing countries, the savings rates have increased in the last decade, industrialized countries have shown a decline, according to that gathered in IMF (1995b).

It may be helpful to illustrate the fact that in 1992-1993, China, Japan, and other developing Asian economies composed 34% of world savings while their participation in GDP. was only 21%. Industrialized countries participate in 35% of global savings, compared to a GDP. rated at 46%.

The fall in savings which has happened at a global level is also expressed in the states of the European Union, as can be seen in Table 1.

Table 1. **Fall in savings in the European Union. Percentage of GDP**

Years	**National Savings**	**National Savings**	**Public Savings**	**Public Savings**	**Private Savings**	**Private Savings**
	Spain	**E.U.**	**Spain**	**E.U.**	**Spain**	**E.U.**
1970	27,3	26,7	4,0	5,2	23,3	21,5
1994	18,0	19,0	-2,4	-2,2	20,4	21,2
Difference	-9,3	-7,7	-6,4	-7,4	-2,9	-0,3

Source: Raymond (1996)

This fall is fundamentally concentrated in the 70s, while in the 80s a more reduced level is established, going from 26.7% to 19% in the European Union, and from 27.3% to 18% in Spain (a reduction of 7.7 and 9.9 percentage points, respectively). After the years 1994 and 1995, savings in the European Union has steadily increased.

By breaking down gross national savings, it is evident that the fall is fundamentally due to public savings. In effect, public savings experienced a decrease of gross national savings of 7.4 percentage points in the European Union. This explains all of the decrease in national savings while in Spain, the decrease in public savings accounts for 69% of the total decrease in savings, according to the statistical annexes number 59 of the *European Economy* from the year 1995.

In the case of the United States, the fall in the private savings rate was relatively clear, according to Bosworht, Burtless, and Sabelhaus (1991), who indicate that the whole American society is saving generally less as gathered in table 2.

Table 2. **Savings Rates in the United States according to the *Survey of Consumer Finances*. Period 1963-1985 (in age groups)**

Savings rate	25-34 years	35-44 years	45-54 years	55-64 years	+ 64 years	Total
1963	14,7	11,3	17,2	14,2	11,2	14,0
1983-85	13,6	10,1	10,3	10,6	2,5	9,5
Difference	-1,1	-1,2	-6,9	-3,6	-8,7	-4,5

Source: Bosworth, Burtless and Sabelhaus (1991)

2.2. Evolution of savings in Spain

Although in Table 1 one observes the strong parallelism existent between the two savings behaviors in Spain and in the states of the European Union, there exists a series of characteristics which direct the study on the situation in Spain in greater detail. In Table 4 one can more efficiently see the evolution of Gross Domestic Product and its distinct components from 1964 to 1995, divided into three periods.

Thus, one can observe, as in recent decades, that gross national savings, as a percentage of GDP., has decreased without interruption. In short, the fall in savings has been 20.6%, caused in large by the abrupt fall in public savings (a decrease of 93.7%) and secondly by the fall in family savings (a decrease of 30.5%).

The causes of the fall in public savings have been the rapid growth in public spending caused by the increase in transfers linked to the economic crisis of the 80s and 90s, just as by the extension and addition of unemployment and retirement loans. Furthermore, the rapid increase in interest payments from public debt as financial necessities increased should be pointed out.

In short, the increase in the size of the so called Welfare state, in its facet of presenting social services and transfers, has been the cause of the fall in public savings.

Table 3. **Savings in the Spanish Economy:1964-1995. As a percentage of GDP**.

	Averages			**Differen-ces**		**Increments**
	1964-73 (A)	**1974-84 (B)**	**1985-95 (C)**	**(B - A)**	**(C -B)**	**[(C-A)/A]*100**
National Savings	26,2	22,3	20,8	-3,9	-1,5	-20,6
Public Savings	3,7	0,8	0,1	-2,9	-0,7	-97,3
Business Savings	11,7	12,2	13,2	0,5	1,0	12,8
Family Savings	10,8	9,4	7,5	-1,5	-1,8	-30,5

Source: Marchante (1997)

Nevertheless, that which has distinguished the Spanish economy from other countries has been the percentage fall which represents the net savings of families in GDP. This fall, including the interrupting character of such in the period between 1964 and 1973, has been greater than in other countries with a drop of 30.5% since 1964.

This situation explains that the average in net family savings in Spain has only been 7.5% of GDP throughout the last period mentioned, which goes from 1985 to 1995. In a context characterized by the increase in employment, growth in salaries in real terms and an increase in physical wealth by the real-estate boom in the second half of the 80s, a fall in savings was produced.

But, faced with the Spanish economic crisis in 1993, families responded to the fall in employment and during especially rapid and intense worsening economic expectations, savings increased. This evolution was not maintained in 1994, just as in 1995 savings levels rose.

3. Theories concerning the reasons for savings

In order to understand the different reasons for the decline in saving, a brief review is presented of the most important theories concerning personal savings.

3.1. Life Cycle and Permanent Income Theories

Modigliani and Brumberg (1954) developed the Life Cycle Hypothesis, based on the assumption that people are not short-sighted and are able to make decisions in light of their entire lives.

In that sense, it is assumed that the individual maximises the utility derived from consumption throughout life, subject to a budgetary restriction dependent on the amount of wealth he accumulates during his life. This model gives saving only one purpose: allocation of income with the aim of consuming throughout one´s life according to rational planning. As a consequence, individuals save during a period of time (labour life), and dissave (spend) during another (retirement). In the end, the principal purpose of saving is to accumulate wealth for retirement.

Nevertheless, the problem is that the so-called Life Cycle model considers man as rational and limited, unable to see beyond his own life, and restricted to acting in his own life. But the economic agent does not only take care of himself, but also of his family and of other human beings. This fact explains the new existing model: intergenerational, altruism or dynasty model, where relations and transfers among generations play an essential role.

3.2. Altruism model

The main idea which distinguishes this model, established by Barrow from the Life Cycle model, is the fact that the temporal horizon is broader than an agent's life. The temporal horizon of the individual includes his descendants and heirs. In this context, bequests as well as private income transfers made during one´s life play an important role.

To sum up, we are in front of an agent with a finite life, but with an infinite point of view with respect to consumption and utility. This fact makes the altruistic agent very different from the life cycle agent. This has important implications on Bank Marketing.

Primarily, if retired individuals save, the number of individuals with a considerable amount of money rises. These individuals have specific savings motives, for which financial institutions should design specific assets for these needs.

Secondly, it is important to note that this group of individuals is characterized by certain conservative and traditional behaviours which are clarified in the following pages.

3.3. Theories about precautionary savings

A third explanation of personal savings motives, suggests that individuals save for precautionary reasons. The precautionary model states that consumers try to optimise the intertemporal distribution of consumption during their finite life. Nevertheless, while this is a new condition, the agent experiences different uncertainties during his life.

The most important or frequent uncertainties are considered to be: temporary reduction of income due to unemployment, possible illness or labour handicaps, life-span uncertainty, uncertainty

caused by unexpected inflation, etc. These uncertainties motivate the individual to save with the purpose of covering himself in the case of certain eventualities/contingencies.

4. Causes of the current fall in savings rates

The presentation of these causes is not exhaustive. The majority of the causes mentioned in the studies do not take into consideration the importance of the altruism model. Following this tendency in other authors, we have found other possible causes presented, such that all of them can explain the fall in savings rates and shed light on their solutions.

4.1. The fall in growth and increase of public debt

Modigliani (1990), for example, uses data from 21 countries within the OECD from the period of time between 1960 and 1987. Applying the cycle of life model, we see that the least growth recently experienced in developed countries, together with the public deficits in countries in which they have been incurred, explains, according to Modigliani, the current fall in savings in OECD countries as well as in Spain.

Without neglecting the importance of these two variables, we have observed that the emphasis which Modigliani puts on them as an explanation of the current situation seems excessive. Modigliani's argument is based on the fact that savings rates do not change between age groups. This would then mean that when the current baby boom generation reaches the age to save, it will save just as much as the children's parents did when they were that age. Similarly, it assumes that people who retire between 30 and 40 years of age will have the same spending patterns as the current retirees when the rhythm and standard of living of both age groups have nothing to do with each other.

Bosworht, Burtless and Sabelhaus (1991), advocates of the life cycle, realized that the baby boom generation in the United States will not save in the future when they reach the same age as their parents, and that the whole American society in general is saving, according to that which can be seen in table 2. Therefore, according to these authors, the demographic structure may be limiting in explaining the fall in savings.

4.2 The effect of social security on savings rates

Although it is difficult to conclude something categorically, the existence of social security can be considered as a, more or less perfect, substitute for private savings from the provisional motive.

Therefore, according to the position maintained by Feldstein (1974) in a pioneering article, social security decreases, as it reduces, private savings. This is what has been the called the Feldstein effect. Concerning the conflicting effects which the existence of social security could have on savings, Feldstein attempts to estimate the global effect.

He obtains estimations from the aggregate data for the United States in the period between 1941 and 1946. The data to calculate the wealth of social security was obtained from the Social Security Bulletin. The direct effect of the existence of social security fully surpasses the anticipation of retirement. Therefore the total effect is a sharp fall (by half) in private savings.

4.3. The development of the Welfare state

The development of the Welfare state, by way of an always more generous social security and growing transfers in all social areas, has been able to create a paternal vision of the State. In this way, the common conscience is raised to think that in facing any problem, the State and the Public System is always there: unemployment insurance, medical care, education, subsidies for companies and sectors, etc.

This situation has been able to affect provisional savings, precautionary savings and the dynastic model, to confide before the appearance of any problem, in the State, more than in one's own capacities and help from one's family.

This situation is certainly turning out to be unreasonable as the current loan levels do not appear to be able to continue in the future. Just as Kotlikoff (1992) shows, one must make others conscious to the fact that future generations are those who will have to face the problem of maintaining a Welfare State which is impossible to sustain at this time in the current terms.

4.4. The contribution of wealth effects to the fall in savings

One determining factor in the decision to save has been seen to be the family wealth variable. This factor has taken on greater importance in Spain since the second half of the 1980s. The situation of the family and, in general, the whole of the private sector, experienced a clear improvement in the 80s, in spite of the fall in the stock market in 1988 by the bullish evolution of 1987 and 1988, which could move to an increase in consumption and a fall in savings, just as predicted by the vital cycle theory.

4.5 The development effect of financial markets

The development and liberalization of the financial markets can facilitate falling into debt for those families that prefer it with greater ease than in past years. Therefore, it is feasible to recognize a certain influence of this variable on the fall in savings.

The existing data seems to confirm these affirmations: the intensity of the process of falling into debt of families in the 1980s coincides with the movement in favor of greater liberalization of financial markets in western countries.

4.6. The effect of an aging population

The aging population can explain, according to the authors, a reduction in the savings rate. If age groups which save the least carry more weight in the society, aggregate savings should decrease. Nevertheless, it is not that clear that retirees do not save, just as shown by García-Durán (1992), Patxot (1995), Lera (1997) and Garriga (1998).

The explanation given by the OECD seems more plausible in that, possibly, the most negative effect of an aging population on a gross national savings rate is produced not by the obvious lesser savings rate among retirees, but rather indirectly, as a result of the consumption by the retired population (among other goods received from the state) as in public health, that receives retirement money but does not produce GDP.

4.7 Savings and direct taxes

The rapid progression of family taxes in the most recent decades is considered, also, as one of the determinant factors in the fall in savings rates among families in the majority of western countries.

In Spain, the increase in fiscal pressure (income and family wealth taxes) expressed as a percentage of available gross family income has gone parallel to the fall in the family gross savings rate, above all in recent years.

4.8 Savings and spending on lasting consumption goods

The restoration of stock in lasting consumer goods, after 1985, should have contributed to reducing the gross family savings the years immediately following.

Given that the renovation of this stock was very slow during the period of economic stagnancy, an accumulation of purchases could have been produced. These could be called postponed purchases, which are created when the economy began its recuperation at the beginning of the 1990s.

4.9. Other explanations

We have seen different reasons that could explain the fall in savings. Surely all of them play an important role in explaining the fall in savings. But given the complexity of savings, none of them are sufficient to completely explain the evolution of family savings, given its heterogeneity

What additional factors can help us explain this situation? From the altruism theory, the loss of family ties could have seriously and profoundly affected the savings rate.

On one hand, the savings value in a current society has been impaired by the ideas of consumption and the Keynesian inspiration to consume, as demonstrated by Cabrillo (1991).

But it is not only that savings has been lost, but thanks to Keynes, its social and personal value has been lost just as the sense of savings itself. Within modern families, (in those which the number of children has substantially decreased, with a generalized increase in divorce which generate a profound instability in family institution, as demonstrated by Buchanan (1994).This can be explained, for example, by the fact that savings rates in Japan are so high: the family is the core of Japanese society, parents live with their children, etc.

Furthermore, family institutions have been substituted in certain ways by the State, in a way in which the cooperative incentives and behavior which the family has created, have been substituted by the Welfare state (Cabrillo, 1996).

If we connect this with the series of previous factors, with the Welfare state which with its transfers advocates the slogan “from the cradle to the grave” the individual is seen to be motivated to reduce those savings which otherwise would have been reserved for the changes in income during one’s years in retirement. This is to say that one’s provisional savings is reduced.

Similarly, confronted with any unexpected event, the State offers an increasingly generous social security, with which savings by the provisional motive as well as the money to cover oneself in any contingency is reduced. In this framework, the fact is that future generations will have to be in

charge, by means of strong tax increases, of maintaining the current standard of living, regardless of whether the dynastic motive looses importance.

It is therefore that the fall in savings can be so profound as the solution is difficult, tedious and costly. While family values and savings are not promoted, one becomes conscious that the current situation is not viable in the long run. One also assumes the cost that this situation will have in the future. It will not be possible to generate a substantial and prolonged increase in savings rates.

For now, an analysis of the influence of age on family savings may provide keys to influencing concrete segments of the population with specific measures.

5. The influence of age on the family savings

5.1 Empirical evidence on the influence of age on the savings rates

To start with, García-Durán (1992) in Spain, studies the savings behavior reflected in the survey of Family Budgets in 1981, analyzing the relationship between savings and age in addition to other variables. From his results, it can be deduced that the average savings of the population increases with age after 36 years, although it does diminish after age 80.

Another contrast is that provided by Patxot (1994) coming from the Basic Survey of Family Budgets and from the Continuous Survey of Family Budgets in the period from 1985 to 1990. It is seen how adults of 65 years consume less and, therefore, save a greater proportion of their available income than the rest of the population.

Finally, the author carries out a temporal analysis with the aim of contrasting the results according to the Continuous Survey of Family Budgets from 1985 to 1989. The conclusion which he obtains is that the consumption rate decreases for all age groups, which is to say, savings increases.

Other empirical contrasts have been carried out in other countries. In Germany, Börsch-Supan (1993), which measure savings as a flux in net stock purchases, from the data of a survey (*Einkommen und Verbrauchsstichproben*) which obtaines that savings rates do not decrease as age increases.

In the United States, Danziger *et al.* (1983) obtain similar results. Maddison (1992), Avery and Kennickell (1991), and Hayashi, Ando and Ferris (1998), have shown how adults of 65 years of age continue to save, probably motivated by the wish to leave inheritance to one's descendants.

Recently, Deaton (1997, section 6) and, Hurd and Lee (1995, 1997), and Schultz (1998) have examined the variation in savings rates according to the age of the household head. For example, Schultz (1998) has examined Taiwan with data from the Survey of Personal Income Distribution from 1976 to 1995. There is a tendency for the savings ratio to increase at the end of the employed life cycle, between about ages 45 and 65. Before and after these ages the ratio of savings to disposable income is about 20-25 percent.

At this stage of Schultz´ inquiry, there is little support for the lifecycle consumption hypothesis that links the rapid population aging in Taiwan to an imminent decline in its household savings rate.

5.2. The influence of age on savings motives

In our market research in Navarre, the subjects polled were asked about their main motive for saving, present or future, with six answers offered. The previous theoretical explanation and a previous empirical investigation allow us to introduce five different motives with their meanings.

a) Foresight motive, referred to the so-called Life Cycle Hypothesis.

b) Bequest motive, in the altruistic framework.

c) Precautionary motive or precautionary savings, explained by the precautionary theory.

d) Finalist saving: when people start saving to buy durable consumer goods and to pay their debts.

e) Independence motive: saving with the purpose of being able to emancipate themselves and live alone.

An analysis of the influence of age on savings motives can offer us a good example of the influence of age on the savings behaviour of a household, as described in table 5.

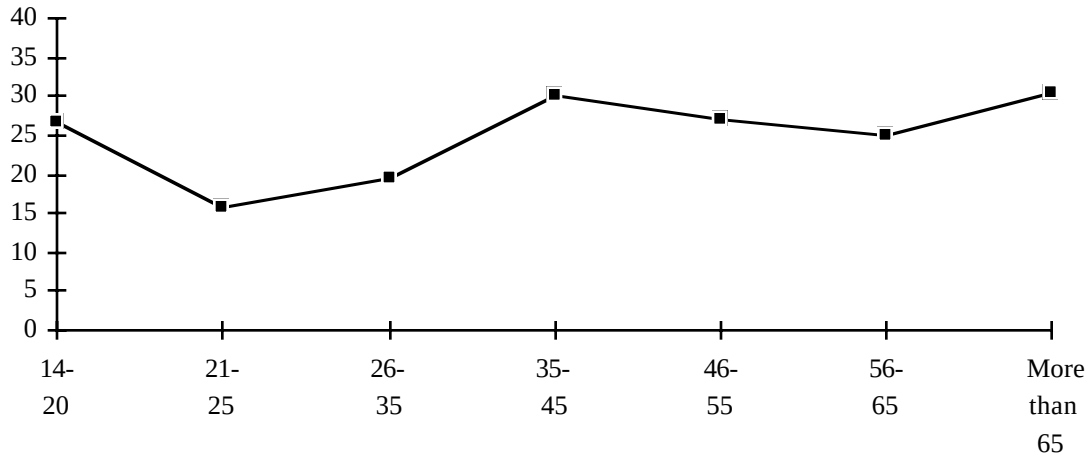
Table 4**. Distribution of savings motives according to surveyed age (in percent values)**

Savings motives	**14-20**	**21-25**	**26-35**	**36-45**	**46-55**	**56-65**	**+ 65**
Foresight	1,5	0,9	8,4	8,5	22,4	25,8	15,6
Precautionary	26,9	15,9	19,5	30,3	27,2	25	30,6
Finalist	29,9	31,9	32,6	18,3	5,4	3,2	2,7
Bequest	8,2	1,8	12,6	15,5	23,1	22,6	22,4
Independence	20,9	38,1	16,3	17,6	6,1	6,5	8,8
None/Others	12,7	11,5	10,5	9,9	15,6	16,9	19,7
Base	134	113	190	142	147	124	147

According to table 4, the following observations can be made:

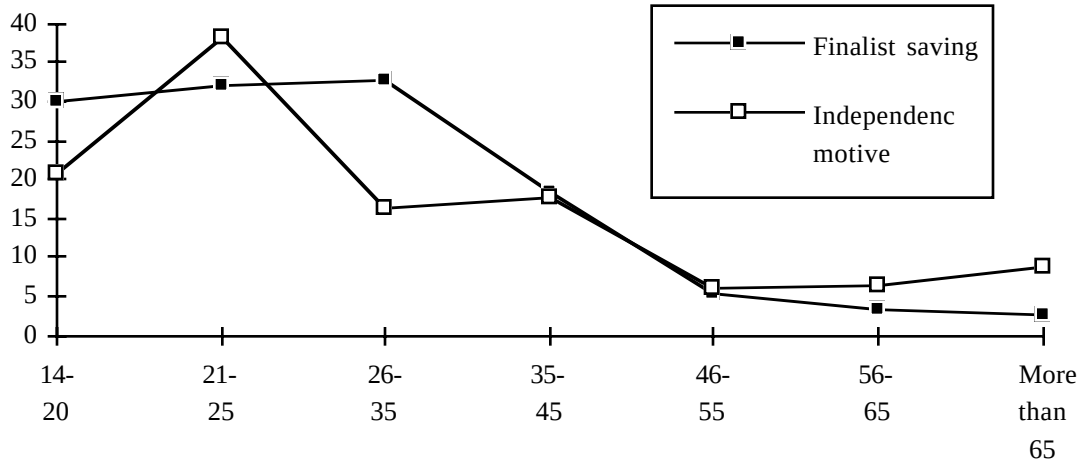
1. Precautionary motive is important regardless of age, reaching its peak among elderly, retirees, as presented in Graph 1. This could be caused by the wish of retirees to protect themselves in case of possible illness.

Graph 1. Evolution of precautionary motive according to surveyed age



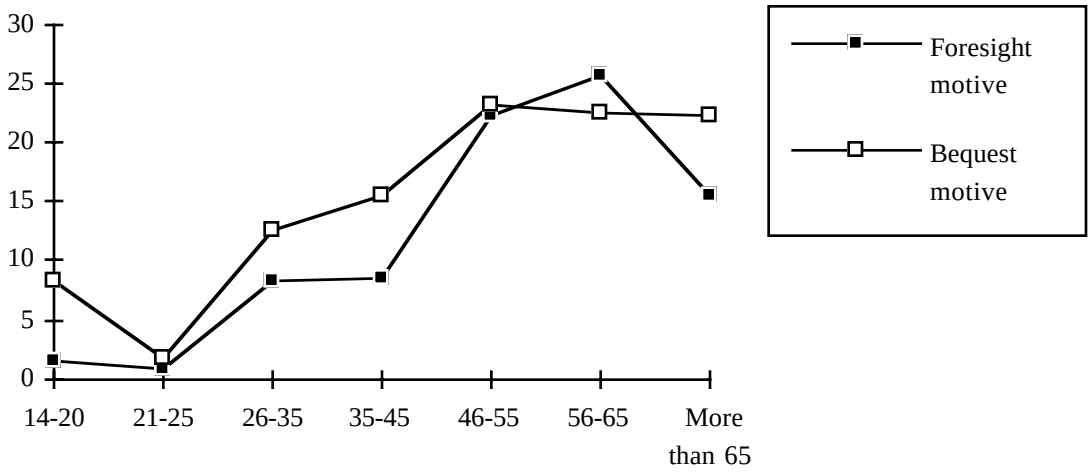
2. In the young and middle-aged, those from 14 to 45, finalist saving and independence motives are predominant. The younger attach a great value to independence from their parents and save with purposes such as buying a car or motorbike, travelling, etc. Meanwhile, the middle-aged save in order to pay for their first house, as described in Graph 2.

Graph 2. Evolution of finalist saving and independence motive according to surveyed age



3. In adulthood and old age, encompassing those over the age of 46, long term motives such as bequest and foresight motives are more important, as Graph 3 shows.

Graph 3. Evolution of foresight and bequest motives according to surveyed age



4. To sum up, it can be seen that short-term motives (finalist saving and independence motive) are predominant among the young and middle-aged. They save for their freedom and for downpayments. On the other hand, long-term motives (bequest and foresight motives) are more important among adults and retirees.

In any case, the previous graphs show us that the three theories of saving are important depending on the person's age. This difference in savings motives is reflected also in the financial behaviour which we will observe in the next section.

5.3. Influence of age on savings behaviour in families

5.3.1. Introduction

In order to analyze contextually the age influence on domestic economic behaviour in the realm of saving, there has been created a by-group or by-type classification analysis. The objective of this technique is to search for a division among those surveyed into a small number of types or groups in such a way that said groups might be very different between themselves and show a significant internal homogeneity, according to that expressed by Santesmases (1995).

The selected technique has been the clustering or the cluster analysis; opting for the utilization of the classifying algorithm (neither hierarchical nor partitive K-means) better known as the "method of the centroids, center of gravity or mobile centers". This algorithm works with the initial statistics matrix, permitting the analysis of amply sized populations, as in our case, with the greatest time economy.

In the present research, five groups have been obtained that almost make up the totality of the 999 people surveyed, according to the following distribution into groups.

Table 5. **Distribution between groups for five groups**

GROUPS	POPULATION	% POPULATION
1	305	31,41%
2	192	19,77%
3	160	16,48%
4	188	19,36%
5	126	12,98%
Total Considered Population	971	100%

Each group is defined by the average values which the members adopt in terms of each analyzed behaviour. In this manner, once the groups are identified along with the individuals who comprise them, one can interpret each one of the groups, observing how they differ and what they share, assigning a name or identifying characteristic to each group.

For certain, the result which is to be obtained is:

- What actions and ways of acting characterize the groups as such i.e. why such groups as these?

- Who selects these groups, and what are these groups like, by means of their relation to the most important socio-demographic variables?

5.3.2. Obtaining groups according to age

By separating the five groups according to their behaviour in terms of financial savings and to the age variable, one can subgroup them into three age groups.

Primarily, older people, of ages higher than 65 years, make up two groups: the group of the insouciant and comfortable individuals and the group of the faithful and loyal individuals.

Secondly, we have separated middle aged individuals into rational conservatives and risk seeking individualists. Finally, there is the youth which is characterized by their insouciance towards these matters and their distrust in their financial institution.

Let us look at each group with greater detail.

5.3.2.1. Senior citizens

Group 2. Passive and indifferent individuals

This group is formed, preferably, by retirees of ages greater than 56 years, women, who are either married or widowed, with greater domestic responsibility. They pertain to the lower class with little education.

The group is further defined by the following basic characteristics.

- Attitudes:

1.Lack of worry about profitability, which brings them to:

1.1. Present a meagerly active behaviour in respect to the search for information about different organizations with the aim to recognize the different conditions and advantages offered.

1.2. Show contrary behaviour for a change of financial institution motivated exclusively by the intent to obtain a profitability exceeding the current norm.

2. Those who, to a lesser extent, consider the decision of "where to put savings" as personal, preferring to ask advice from the institution of which this person is a client.

3. Prefer liquidity to profitability.

The savings motives of this group are composed by precautionary and foresight motives. They disregard the finalist and independence motives: those motives which are dominated by the "short run".

- Behaviour:

When these savings assets are in their possession, the group is characterized by having various assets, especially term investments and pension funds, where the major part of their savings is placed.

Group 5. Loyal and self-satisfied individuals

This group is composed of older people surveyed and in general retirees who are widowed or married with the family role of "head of the family". They are part of the lower class and have a limited education.

They are characterized by the following specific features:

- Attitudes:

1. Lacking evaluation of profitability, manifested in:

1.1. A shortage of motivation to search for information in respect to the conditions offered by the different financial institutions.

1.2. Refusal to change from an organization of which the person is a member with the possibility of obtaining greater profitability.

1.3. Lack of importance given to the search for greater fiscal profitability.

1.4. Preference for liquidity rather than profitability. This is the group which on average opts for availability and liquidity instead of profitability.

2. An important aversion to risk, preferring lesser return but greater security.

3. Lack of influence by the social and economic climate in making investment decisions.

4. Lack of importance granted to savings distribution into varied assets with the aim of achieving greater security.

5. A refusal to ask advice from the organization of which this person is a member together with greater sentiment that "where to place savings" falls into the personal realm of decision making.

In respect to the motives to save, foresight, precautionary and finalist motives strengthen as the importance of the bequest motive lessens. The independence and other motives hardly varied in respect to the result totals.

- Behaviour:

1. By majority, they have one single asset, with less importance given to term investments, investment funds and pension funds. This might signal a lesser capacity to save.

2. Regarding institutions, the majority of this group works with only one financial institution, especially with savings and loan banks, and cooperatives.

Definitively speaking, this group is distinctive due to its more traditional features: a resistance to changing institutions, risk-aversion, refusal to ask advice, lack of fiscal importance and the socio-economic climate, etc.

5.3.2.2. Middle aged individuals

Group 1. Traditionalists in search of profitability without risk

This group is characterized by middle aged people between 26 and 60 years, men, heads of families and belonging to the middle and upper classes.

The differential features which constitute this group are:

- Attitudes:

1. Show attitude apt to the search for information about the various conditions available from the different financial institutions.

2. Relating to the previous feature, they find it a personal decision as to where to put their savings.

3. Are rather risk averse, preferring greater security although a loss of profitability is expected.

4. In relation to profitability, they value most highly the fiscal component therein. They are ready to change institutions with the aim of receiving greater profits.

5. They consider saving as an important virtue which parents should teach to their children.

The most important savings motives in the heart of this group are the motives dominated by the "long term motives" i.e. foresight and bequest motives which are the first and second savings motives respectively.

- Behaviour:

1. In respect to the savings products, they have on average a greater number of assets. Investment and retirement funds deserve special attention which are considered as the most important assets.

2. Referring to financial organizations, this group is made up of people who are clients of various institutions (mostly commercial banks) according to the result totals.

Group 3. Modern risk-seeking individualists

This group is primarily formed by middle aged men up to 45 years of age. They are mostly from the middle class with medium and high levels of education.

This group possesses the following differential characteristics:

- Attitudes:

1. Show the least amount of risk aversion of all the groups. In other words, this is the group which is most willing to assume risk with the aim of receiving a greater return.

2. In relation to the previous point, they value profitability:

2.1. They prefer profit to liquidity.

2.2. They are willing to change their institution in order to obtain better profit.

3. Admit a lack of fiscal concern in deciding where to place their savings.

4. They are the most reluctant to ask advice from their own institution even though they do not consider (any more than the other groups) the decision of placing one's savings as a personal decision.

5. They do not consider the attitude to save as a virtue that should be tought to their children.

The principle savings motive of this group is centered around "short term" motives (finalist and independence) or just as well the lack of motivation to save.

- Behaviours:

1. They represent the lowest percentage of having any kind of savings asset. If they do have any asset, they have only one which is most often a checking account.

2. In respect to the institution, they are clients who prefer one institution which is usually a savings and loan bank.

From this three way qualification we get: modernists by the first trait, risk seekers from the second and individualists by the third.

5.3.2.3. Youth

Group 4. Youths who are unfaithful

This group is characterized by a greater predominance, in respect to the sample values, of people between the ages of 14 to 25 years, single, coming from the upper-middle class with secondary and university educations.

This group presents the following differential attitudes:

- Attitudes:

1. Extreme lack of influence by the social and economic climate in choosing where to put their savings.

2. A favourable attitude towards a change of financial institutions in order to achieve greater profitability. This attitude is stronger in youth regardless of their insouciance to know the banking conditions of other institutions.

3. Lack of fiscal importance as a factor of profitability.

4. A lesser disposition to personally dedicate oneself to the placement of savings.

The principle savings motive is the "short term" motive, due to the finalist aspect of savings. The motivation could also be to achieve independence from the family which is considered the second important motivating factor.

- Behaviours:

1. In that which is referred to as assets, this group is characterized as possessing, to a large extent, only one asset. Hence, the assets given greatest consideration are the checking account and bank account which offer the most liquidity.

2. In respect to the institutions, they are clients of one institution with certain preference for S+L banks and cooperatives instead of banks.

In summary, the most important trait is the apt and favourable attitude towards changing institutions with the aim of maximizing profit. This group is dominated by unfaithful youth. Together with this trait, a certain passiveness is indicated: the tendency to ask advice and to not make a decision on their own. They also show little inclination to search for information concerning other institutions.

6. Conclusion

As displayed in section 2 of this paper, a fall in savings rates has been produced at a general level in industrialized countries, especially in family savings. In Spain, this fall in savings has been even greater than in other countries.

In this context, an interest has been generated to understand what the reasons are for saving, and what the variables are which have a determined influence on savings. These variables are different according to the theory on savings that we can consider: life cycle theory, altruism model and theories about precautionary savings.

As the life cycle theory has for a long time been the dominant theory, other possible causes of this fall in savings from the altruism model have been presented.

Some possible arguments that may account for the recent declines in the familiar savings rates in the world and especially in Spain, supported by the altruism model, are the following:

1. The Public Welfare State, in general, reduces private transfers and affects savings, which fall. As an income is offered during the retirement period, namely Social Security, foresight saving is reduced. Finally, as people are covered for uncertainty such as unemployment or illness, the precautionary saving also declines.

2. The loss of familiar values and a gradual family dissolution, provoked by the increasing number of divorces, the reduction in the number of children, the increasing independence of children, etc., can explain the loss of importance of altruistic motive. Therefore, family dissolution could have a significant negative impact on saving.

The importance of each mentioned argument concerning the declining rate of saving reflects the possibilities to more or less quickly modify the present tendencies. If the family dissolution can partially explain the recent decline in savings, due to the reduction of private *inter vivos* transfers and bequests caused by altruistic motive, the recovery of savings rates will be a long and expensive labour.

Subsequently, the analysis focuses on the influence of age on family savings: first by gathering different macroeconomic research in Spain and abroad, then by presenting the most important results of the research on markets conducted in Navarre in order to determine the importance of age in the motives, attitudes and behaviors of families confronted with the option to save.

The age is the most influential socio-demographic variable. Throughout the entire research, age was the socio-demographic variable which permitted us to differentiate clearly the attitudes and behaviours of the Navarrans surveyed. Age offers a considerable advantage; it permits the easy

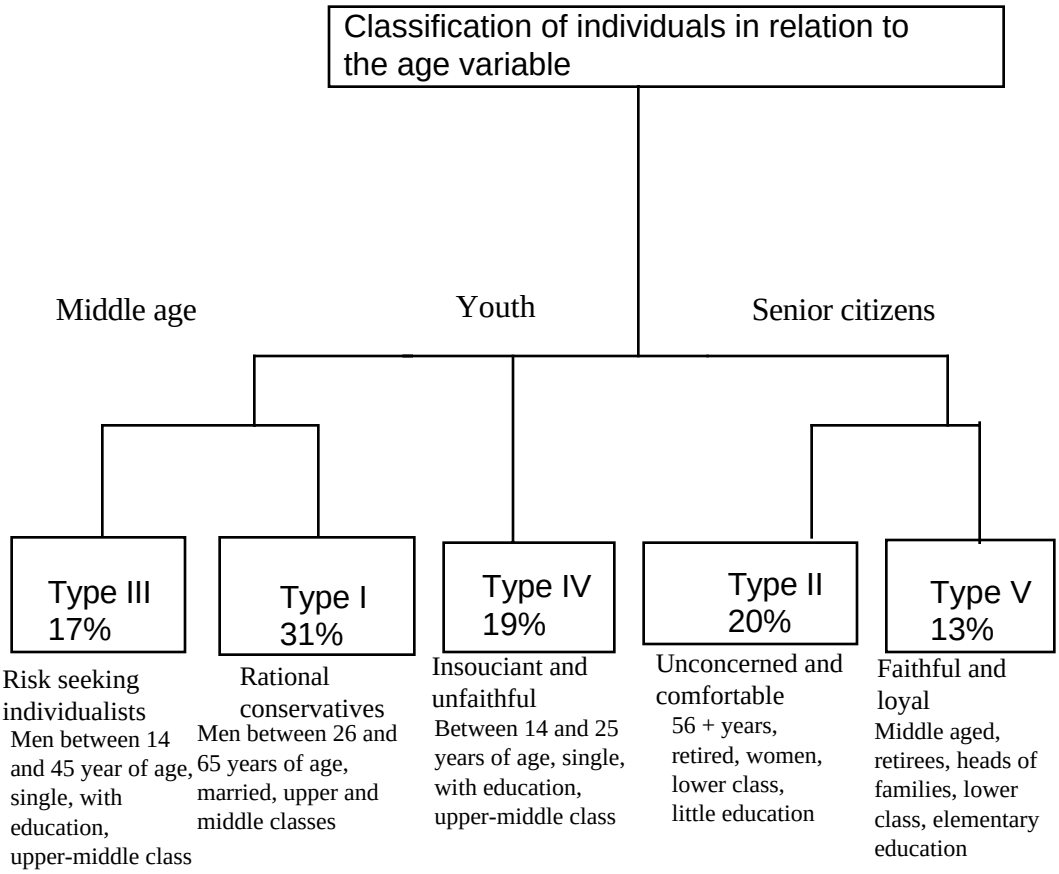
identification of the population size which is especially useful in forming a the perspective of commercial activity.

Certain important considerations are hidden behind age. Primarily, there is a close relationship between age and other socio-demographic variables such as social class, education level, family role and civil status. Secondly, age indicates a series of obligations and family and economic capacities. Family responsibilities of the father or lack of income for a young student is reflected in this. Finally, age expresses the evolution of new behaviours and attitudes just as it shows the most important traditional attitudes.

The explicative and differentiating capacity of the age, attitude and behaviour of certain Navarrans is fundamentally reflected in the savings motives of these Navarrans. The middle aged and youth between 14 and 45 years of age, save, fundamentally, for short-run motives: finalist and independence motives.

On the other hand, long-run motives, bequest and foresight savings motives, are more prevalent in people surveyed of 40 years of age. The foresight savings motive reaches its maximum during the years prior to retirement, while the bequest motive is maintained thereafter.

Diagram 1. Classification of particular Navarrans in relation to the age variable



A second manifestation of this explicative capacity resides in a survey which includes different types of individuals varying in attitudes and behaviours according to age. Individuals more than 45 years of age are depicted as having more conservative attitudes while the youth and middle aged present less traditional attitudes.

In this way, the combination of attitudes, treatment and behaviour in the financial realm, including age, allows us to achieve five distinct groups (diagram 1): three traditional and conservative groups (senior citizens and a group of middle-aged individuals), and two more modern and risk-seeking groups (youth and the second group of middle-aged individuals).

7. References

ARGANDOÑA, A. (1995) "Factores determinantes del ahorro", en *El papel del ahorro e inversión en el desarrollo económico*, Federación de Cajas de Ahorros Vasco-Navarras, Vitoria, pp. 13-60.

ARGIMÓN, I. (1996) *El comportamiento del ahorro y su composición: evidencia empírica para algunos países de la Unión Europea*, Estudios Económicos, nº. 55, Banco de España, Servicio de Estudios.

BÖRSCH-SUPAN, A. (1993) "Household savings in Germany, part I: Incentives", en HEERTJE, A., *World Savings. An International Survey*, Blackwell, Oxford.

BOSWORTH, B., BURTLESS, G. and SABELHAUS, J. (1991) "The Decline in Saving: Evidencie from Household Surveys", *Brookings Papers on Economic Activity*, nº. 1, pp. 183-256.

BUCHANAN, J.M. (1994) *Ética y progreso económico*, Colección Estudios e Informes, núm. 3, Caixa, Servicio de Estudios, Barcelona, 1995.

CABRILLO, F. (1991) "El ahorro y el sector público en la economía española", *Cuadernos de Información Económica*, nº. 56/57, pp. 1-7.

CABRILLO, F. (1996) *Matrimonio, familia y economía*, Minerva, Madrid.

DANZINGER, S., VAN DER GAAG, J., SMOLENSKY, E. and TAUSSING, M. (1983) "The cycle hipothesis and the consumption behavior of the elderly", *Journal of Post Keynesian Economics*, vol. 5, pp. 208-227.

DEATON, A. (1997) *The Analysis of Household Data*, Baltimore, MD, Johns Hopkins University Press.

FELDSTEIN, M. (1974) "Social Security, induced retirement, and aggregate capital accumulation", *Journal of Political Economy*, vol. 82, nº. 51, pp. 905-926.

GALE, W. G. and SCHOLZ, J.K. (1994) "Intergenerational Transfers and the Accumulation of Wealth", *Journal of Economic Perspectives*, vol. 8, nº. 4, pp. 145-160.

GARCIA-DURÁN, J.A. (1992) *Ahorro, riqueza y edad. España 1980*, Mimeo, Barcelona

GARRIGA, A. (1997) *Ahorro según características: España en la primera mitad de los noventa*, tesis doctoral en preparación, Universidad de Barcelona.

HURD, M. (1987) "Savings of the Elderly and Desired Bequest", *American Economic Review*, vol. 77, nº. 3, pp. 298-312.

HURD, M. and LEE, H.K. (1995) "Household Saving Rates in Korea", *Journal of the Japanese and International Economics*, Vol. 9, nº. 1, pp. 174-199.

HURD, M. and LEE, H.K. (1997) "Tests of the Permanent Income-Life Cycle Hypothesis Based on Household Level Panel Data from Korea", *Journal of the Japanese and International Economics*, vol. 11, nº. 1, pp. 105-122.

INTERNATIONAL MONETARY FUND (1995a) *Perspectivas de la economía mundial*

INTERNATIONAL MONETARY FUND (1995b) "Saving behavior in industrial and developing countries", *Staff Study for the World Economic Outlook*, Documento de Trabajo.

KOTLIKOFF, L.J. (1992) *Generational accounting*, Free Press, Nueva York.

KUZNETS, S. (1946) *National Income. A summary of findings*, National Bureau of Economic Research, Nueva York.

LERA, F. (1997): *Análisis de las actitudes y comportamientos de los navarros frente al ahorro financiero. Fundamentos macroeconómicos y aproximación empírica*. Tesis doctoral no publicada, Universidad de Navarra, Pamplona.

MADDISON, A. (1992) "A long-run perspective of saving", *Scandinavian Journal of Economics*, vol. 94, nº. 2, pp. 181-196.

MARCHANTE, A.J. (1997) "El ahorro nacional: componentes institucionales", en GARCÍA DELGADO, J. L., MYRO, R. y MARTÍNEZ, J. A., *Lecciones de Economía Española*, Civitas, Madrid, pp. 423-443.

MODIGLIANI, F. (1990) "Recent Declines in the Savings Rate: a Life Cycle Perspective", *Rivista de Politica Economica*, nº. 80, pp. 5-41.

MODIGLIANI, F. and BRUMBERG, R. (1954) "Utility analysis and aggregate consumption functions: An attempt at integration", en ABEL, A., *The Collected Papers of Franco Modigliani*, vol. 2, MIT Press, Cambridge, 1980, pp. 128-197.

OECD (1995) *Perspectives Economiques*, junio 1995.

PATXOT, C. (1994) *Efectos del envejecimiento de la población sobre el ahorro*, tesis doctoral no publicada, Universidad de Barcelona, Barcelona.

POTERBA , J. (1994) *International comparison of household savings*, Massachusets, NBR, MIT.

RAYMOND, J.L. (1995) "Realidad actual y perspectivas del ahorro mundial", *Cuadernos de Información Económica*, nº. 103, pp. 3-13.

SCHULTZ, T.P. (1998) "Savings Behavior and the age composition of households". *12th Annual Conference of the European Society for Population Economics*, Universiteit van Amsterdam, 4-6 june 1998.