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Decline in family savings rate in Europe: Explanations and consequences in regional policy

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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. Thus, in the course of the last three decades the national savings relative to income ratio has undergone profound changes, especially among the european countries.

These changes have tended to run in the same direction for all countries, namely down. In Spain, this situation is especially serious with falls beyond the family savings rate. Also there is important differences among the european countries, with great impact in the Regional Policy and the future of the European Monetary Union (E.M.U.).

Saving theories have tried to explain this fact, pointing out possible explanations, a majority of them being provided by the Life Cycle Hypothesis, rather than the altruism model. An analysis of the altruism model's explanations could offer additional point of view in order to understand and avoid this situation which have important consequences in the sustainable growth of the european countries who belong to the E.M.U.

First, the paper presents evidence of the decline in the savings rates in U.S.A. and Europe (with differences among countries). Second, it is presented evidence of the importance of the different macroeconomics theories concerning the accumulation of wealth by domestic economies.

Third, it is pointed out some explanations, provided by the Life Cycle Hypothesis. Changes in family size, changes in the number of adult workers, mortality, and ageing itself, for example, may systematically alter the marginal utility of consumption over the life cycle and leaded to an optimal fall in consumption around retirement. In order to offer other ideas, in the section five, some situations are provided by the altruism model.

In section six, the analysis of saving is related to the process of convergence in Europe and the consequences in terms of Regional Policy in the E.M.U. The differences among countries and regions in the E.U. in converge, in a context of declining in saving, could make more difficult the cohesion in terms of rates in economic growth in Europe.

1. Decline of savings

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

1.1. Evolution of savings at the global level, in USA and Europe

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 global savings rate hardly reached the average of 21.75%.

Nevertheless, it is helpful to point out that savings behaviour has not been homogenous throughout the world. While in developing countries, the savings rates have increased in the last decade, industrialised 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%. Industrialised countries participate in 35% of global savings, compared to a GDP rated at 46%.

Studying U.S.A. and E.U., all measures of capital accumulation show a marked downturns that starts in the 1980s and continues into the 1990s. For example, and following Laibson (1997), U.S. personal savings as a percent of disposable personal income fell from an average of 7.3 percent from 1946-1984 to an average of 5.3 percent from 1985-1994. The 1985-1994 period had the lowest average saving rate of any ten-year span in the post-war period.

According to Gokhale *et al.* (1996), in the 1950, the rate of net national saving in the United States was 12.3%. In 1994, it was only 3.5%. The U.S. saving rate averaged 9.1% per year in the 1950s and 1960s, 8.5% in the 1970s, 4.7% in the 1980s, and just 2.7% in the first five years of the 1990s.(1) Therefore, the data illustrate a dramatic long-term decline in U.S. saving in the 1980s and 1990s. The fall in savings which has happened at a global level is also expressed in the states of the European Union (Table 2).

Table 1**. Saving and Spending Rates (in percent).**

Period	**Net national saving rate**	**Government spending rate**	**Household consumption rate**	**Household saving rate**
1950-59	9.1	21.0	69.9	11.5
1960-69	9.1	22.1	68.8	11.7
1970-79	8.5	21.4	70.1	10.8
1980-89	4.7	21.3	74.0	5.9
1990-94	2.7	20.7	76.6	3.4

Source: Gokhale *et al.* (1996). Authors' calculation from the National Income and Product Accounts.

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. 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.

Table 2. **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 (1997).

In the case of the United States, the fall in the private savings rate was relatively clear, the whole American society is saving generally less as gathered in Table 3.

Table 3. **Savings rates in the United States according to the *Consumer Expenditure Survey*. Period 1972-1985 (in age groups)**

Savings rates	25-34 years	35-44 years	45-54 years	55-64 years	+ 64 years	Total
1972-73	9.5	12.1	16.8	22.9	14.9	15.1
1982-85	9.6	8.6	10.5	15.8	11.5	10.8
Difference	0.1	-3.5	-6.3	-7.1	-3.4	-4.3

Source: Bosworth, Burtless and Sabelhaus (1991).

1.2. Evolution of savings in Spain

Although in Table 2 one observes the strong parallelism existent between the two savings behaviours 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%).

Table 4. **Savings in Spain: 1964-1995 (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).

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.

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.

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.

Table 5. **Evolution of Savings in Spain (in percentage of National Income)**

Years	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
National.	21,9	21,7	21,1	19,2	18,9	19,0	21,2	21,0	21,2	21,6
Private	19,6	20,0	19,8	18,4	20,7	20,6	23,7	21,9	20,2	19,4

Source: Author's elaboration from Bank of Spain (1999).

Table 6. **Structure of National Savings in percentage of GDP.**

	National Savings		
Years	**Families**	**Public**	**Enterprises**
1970-74	11,07	3,38	12,69
1975-79	9,64	1,94	12,08
1980-84	8,50	-0,91	12,45
1985-89	7,33	0,89	13,44
1990	7,85	1,76	12,06
1991	8,53	1,28	11,18
1992	7,34	0,76	10,94
1993	9,48	-1,70	11,01
1994	7,38	-1,54	12,79
1995	8,99	-2,41	14,63
1996	8,44	-0,88	12,29
1997	7,67	0,88	12,58
1998	7,2	2,2	12,1

Source: Author's elaboration from *InformesEconómicos98* , BBV (1999).

2. Importance of the theories concerning the households savings

After presenting the decline of savings in USA, E.U. and Spain, especially in households savings, a brief review is presented of the most important theories concerning personal savings and variation of motives in savings behaviour in families.

2.1. Life Cycle Theory

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 the light of their entire life cycle.

In this regard, it is assumed that individuals maximise the utility derived from consumption throughout life, subject to budgetary restrictions, made dependent on the amount of wealth they accumulate during their lifetime. Individuals, being aware that once their productive life eventually ceases, their income will decrease considerably, will save during those productive years in order to maintain a constant level of consumption during retirement.

This entails a consumption function for every period which depends on current income, future income, inherited and accumulated wealth, age and other variables, including the agents' preferences, interests rates, and so on. Yet, not only does current income have a bearing on this, but also financial assets and inherited wealth.

Put in a simplified manner, the following consumption function shows these variables:

$$C = a * R + b * Y_e \ , \qquad (1)$$

R being current income and Y_e the expected income.

This model yields quite appealing results. First, an agent is found who is no longer short-sighted, and is able to make optimum use of resources for a long period of time. Moreover, this model surmises only one basic purpose for saving: the setting apart of income with an aim to consume during the total life-cycle according to rational planning.

Despite these appealing features, the Life Cycle model appears hampered by its tendency to regard man as a rational subject and short-sighted, unable to see beyond his own life, and restricted to act within its own confines. Yet, economic agents do not only take care of themselves, but also of their families and of other fellow-human beings as well. This fact explains the emergence of a new model, namely the intergenerational, altruism or dynasty model, where relationships and transfers among generations play an essential role.

2.2. Altruism model

The main distinctive feature setting apart this model, established by Barro (1974), from the Life Cycle model, is the fact that its time frame is broader than the agent's lifetime. Here the individual's time frame includes his or her descendants and heirs. In this context, bequests as well as private income transfers made during life play an important role.

Following Patxot (1994), inheritance models based on altruism take the fact that parents do care about their offspring's well-being as its basic assumption. Therefore, the parents' utility function must embody the children's utility function, deducted to a rate denoted by the greek letter ß.

The utility function of the first generation, or generation 0, as it is named by the author, would be:

$$U0 = V(c0) + ß\ U_1 \qquad (2)$$

where subscripts denote generation, and U is utility during the total life of the individual. V(c0) would be utility derived from consumption, and ß U_1, utility provided by children's consumption. ß will be between zero and one, assuming that when perfect altruism obtains, the resulting value will be one.

To sum up, here an agent is found who has a finite life, but one who holds an infinite point of view with respect to consumption and utility. This fact makes the altruistic agent very different from the Life Cycle agent.

2.3. Theories about precautionary savings

A four explanation about personal saving motives suggests that individuals save for precautionary reasons. In trying to explain savings in old age, the Life Cycle model has resorted to this reason as a possible explanation. Here, as in the Life Cycle model, the temporal frame under consideration is restricted to the individual's finite lifetime.

The precautionary model states that consumers try to optimise the intertemporal distribution of consumption during their finite life. Nevertheless, and this is a new condition, the agent faces different uncertainties during their lifetime (Deaton, 1992).

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 individuals to save with an aim at providing some cover for themselves in case of those eventualities/contingencies.

3. Explanations provided about the decline of savings

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.

3.1. 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. He 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.

3.2 The effect of social security on savings rates

To assess the effect of the existing Social Security System on national saving, one must recognise that social security affects public savings as well as private savings.

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.

Barro (1974) argues that individuals who have operative utility-maximising bequest motives offset fully the impact of social security wealth by increasing their saving in order to compensate future generations for the tax burdens implied by the social securities liabilities.

But, according to the position maintained by Feldstein (1974) in a pioneering article, social security decreases, as it reduces, private savings. Answering to Barro, Feldstein believes that an unknown number of individuals who are irrational or myopic may not respond at all to the provision of social security benefits.

He obtains estimations from the aggregate data for the United States (Social Security Bulletin) in the period between 1941 and 1946. 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. In a recent research, Feldstein (1996) estimates that the existing social security wealth reduces overall private saving by nearly 60 percent.

3.3. 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 (Argandoña, 1995). 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.

3.4. The development effect of financial markets

Borrowing restrictions, normally limited access to financial markets, have complex effects on saving. The development and liberalisation 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 recognise 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 favour of greater liberalisation of financial markets in western countries.

For example, Laibson (1997) suggests that financial innovation may have caused the ongoing decline in U.S. savings rates, since financial innovation increases liquidity, eliminating commitment opportunities. Following this author, the 1980s was a period of rapid expansion in the U.S. consumer credit market. Increasing access to instantaneous credit has reduced the effectiveness of commitment devices like illiquid assets. One example of the expansion in instantaneous credit has been the growth in credit cards. In 1970, only 16 percent of all U.S. families had a third party credit card. By 1989, 54 percent had one.

3.5. The effect of an ageing population

According to Attanasio and Banks (1998), annual population growth, averaging 1.1% in the 1960s in the OECD, fell to 0.8% in the 1980s and is projected to slow down to 0.2% by the 2020s. Fertility rates have fallen sharply in OECD countries, and are project to stabilise only by 2025. Life expectancy will probably rise in most OECD economies, by four to five years.

These trends imply ageing populations. This ageing population can explain, according to the life-cycle supporters, a reduction in the savings rate. If age groups which save the least or disave carry more weight in the society, aggregate savings should decrease.

Nevertheless, it is not that clear that retirees do not save or save less, just as shown by García-Durán (1992), Patxot (1994), Raymond *et al.* (1995), Lera (1997, 1999) and Garriga (1998) in Spain, Börsch-Supan (1993) in Germany, Danzinger *et al.* (1983) in USA, Ando and Ferris (1988) in Italy and Japan, Schultz (1998) in Taiwan, etc.

The explanation given by the OECD seems more plausible in that, possibly, the most negative effect of an ageing population on a gross national savings rate is produced not by the possible 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.

3.6. 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 (Argandoña, 1995).

Finally, Attanasio and Banks (1998) find little evidence for the assertion that tax incentives to promote national saving are needed now to stave off a future drought in household saving.

3.7. Savings and spending on lasting consumption goods

The restoration of stock in lasting consumer goods in Spain, 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. Altruism explanations: the development of the Welfare State and the influence of the familiar values

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 household savings. The Altruism Model presents two additional explanations.

First, 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 previsional 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.

Second, from the altruism theory, the loss of family ties or links 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. 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 generalised increase in divorce which generate a profound instability in family institution, as demonstrated by Buchanan (1994) narrow familiar links.

Table 7. **Relation between savings rates in USA and Japan, according to the familiar structure (in percentage)**

Familiar structure	**United States**	**Japan**
Retirees in family	20	63
Retirees without family	70	27
Savings rates	3,2	12

Source: Garriga (1998).

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., as it is shown in Table 8, where it is compared Japan to USA.

Therefore, family dissolution could have a significant negative impact on saving, because the family dissolution can explain the loss of importance of altruistic motive. Table 7 and 8 is a good example of the impact of familiar links in the savings rates.

Table 8. **Households' consumption rates in Spain (with and without grandparents)**

Years	**1985**		**1989**	
Grandparents	**With**	**Without**	**With**	**Without**
Total households	0,9282	1,0377	0,8968	0,9788

Source: Patxot (1994).

5. Saving, convergence and consequences in Regional Policy

First, I would like to present evidence of the importance of convergence in terms of the european integration. Second, it is inevitable to indicate the actual situation of the convergence in Europe, particularly in terms of regions and in terms of spanish economy. Finally, it is pointed out the necessity of the larger economic growth in order to improve the convergence and for this, it is necessary the increase of the savings rates in some regions and countries, particularly in Spain.

5.1. Importance of convergence in the european integration

Since it was adopted the Single Act in 1987 and was signatured the Maastrich Treat, the cohesion policy has become into one of the three pillars in the european integration. In this context, the Cohesion Funds and Structural Funds were established

in order to avoid the inequalities among the european countries, with great amount of money.

In period 1989-1993 were utilised more than 68.000 millions of ecus. For the period 1994-1999 were established 152.000 millions of ecus as Structural Funds. Besides, the Cohesion Funds have established 14.5 millions of ecus to Spain, Ireland, Portugal and Greece. Nevertheless, in the next years, the funds will be reduced in order to prepare the accession to EU of the western countries.

Nowadays, the european countries and regions do not have many instruments in their economics policies. The monetary policy is one for all the E.U., and the fiscal policy is strongly limited by the Estability Agreement. Then, what can we do when the countries and the regions suffer asimetrics shocks? In order to avoid this risk, the european countries have pay special attention to the convergence, not only in nominal terms but also in real terms. This attention has important consequences in terms of Regional Policy, in the context of the convergence among regions and countries.

The nominal convergence was established in the Maastricht Treat. According to the Treat, in order to be allowed to belong to the monetary union, it was compulsory to fulfil five criteria: interest rates, price stability or inflation, public debt and so on. Finally, 11 countries were allowed to belong to the monetary union.

Anyway, in this context it is essential to get the real convergence(2), related to the development rates (GDP per head, unemployment, etc.).

5.2. The situation in terms of convergence in Europe

There are striking disparities in economic performance between different parts of Europe, particularly between the central and peripheral regions, in spite of the effort in Regional Policy for cohesion in the E.U. (Cohesion and Structural Funds). Although the analysis here presented is among the european countries and no in terms of regions, it is inevitable to say that the GDP per head (measured in terms of purchasing power standards, PPS) is typically half to two-thirds of the E.U. average in the Southern periphery (including the Southern and Western Spain) and around 60% of the E.U. average in most of Eastern Germany.

In 1986, the year of the accession to the E.U. of Spain and Portugal, the four cohesion countries (besides Spain and Portugal, are Ireland and Greece) had a combined GDP per head, in PPS terms, of around 65% of the E.U. average. Over the next years, growth in the four was higher than that in the rest of the Union and by 1996, their GDP per head had risen to 76.5% of the E.U. average, an increase of around 10 percentage points over the decade. Then, the Regional Policy of cohesion in the four countries could be described as positive.

If we analyse this process of convergence during this period, 1986-1996, following E.U. (1999), we can see that this convergence has been strongly dependent on

the economic climate. The cohesion countries outperformed the E.U. average in the boom years of 1986 to 1990. During the recession convergence was stopped. Since 1995, with recovery, the gag has begun to narrow again and forecasts for 1999 suggest that GDP per head in Ireland, Spain, Portugal and Greece has risen to 79% of the E.U. average.

Nevertheless, the gap in GDP per head remains wide despite the progress made. Significant disparities continue and convergence remains a long-term process. For example, nearly 20% of people in the E.U. still live in regions with output per head 25% or more below the E.U. average. By comparison, following E.U. (1999), just 2% of people in the USA are in similar position.

Also, the regional differences has decreased less than national differences, when the GDP per head of the poorest 25 regions is the 55% of the E.U. average, with three spanish regions in this situation (Extremadura, Galicia and Andalucia). Recently, Villaverde (2000) has pointed out that the regional differences in Europe has not decreased from 1986 to 1997.

Focusing in the spanish situation, in spite of the european funds, the internal disparities do not seem to decrease, with only three regions in similar levels with Europe, Madrid, Cataluña and Baleares. The Table 9 presents the real convergence in the spanish regions.

Table 9. **Real convergence in the spanish regions in terms of GDP per head (E.U. average = 100)**

CC.AA.	1995	1996	1997	1998	1999
Andalucía	56,21	56,69	57,17	58,32	69,73
Aragón	89,15	89,33	90,34	93,28	94,75
Asturias	67,19	66,41	66,59	67,09	67,98
Baleares	114,02	112,71	112,93	114,36	119,12
Canarias	78,60	79,89	79,91	80,44	82,18
Cantabria	73,24	73,06	73,69	75,38	76,51
Cast.Mancha	68,51	68,53	68,82	69,94	71,12
Cast. y León	73,25	73,98	74,77	77,27	78,26
Cataluña	92,60	92,39	93,07	94,47	95,89
C. Valencia.	80,84	80,93	81,53	82,61	84,47
Extremadura	58,45	58,51	59,21	60,31	62,45
Galicia	67,75	68,22	68,87	70,06	71,19
Madrid	104,38	105,30	105,99	107,72	110,72
Murcia	68,06	67,95	68,08	68,46	69,51
Navarra	89,95	89,77	89,69	91,77	92,54

País Vasco	83,97	84,31	85,22	86,84	88,28
La Rioja	97,81	98,38	98,57	100,26	100,96
Ceuta	65,42	64,91	64,02	63,75	64,98
Melilla	65,78	65,32	64,78	64,55	65,12
España	79,17	79,46	80,05	81,45	83,14

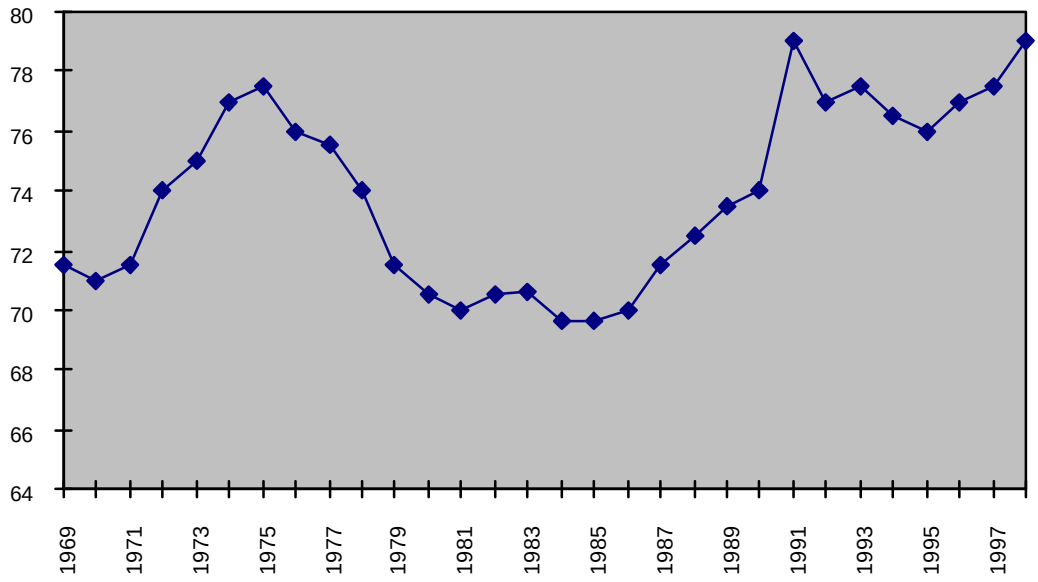
Source: Alcaide y Alcaide (2000).

In terms of national level, Spain has experienced relatively high growth since 1986, GDP per head increasing from 70% of the E.U. average in 1986 to 79% in 1996. Recession hit particularly hard in 1993, GDP being lower in 1994 than two years earlier. Despite the recession, growth has been above average since then and GDP per head is projected to increase to 80 of the E.U. average in 1999 (E.U., 1999).

Following Alcaide and Alcaide (2000), in 1997 the GDP per head was 80,05% of the E.U. average, in 1998, 81,45%, and in 1999, 83,14%, with a growth rate of 4,25%, greater than the E.U. average, 1,9%.

Nevertheless, this process of real convergence has not been continuos, following a cycle. In 1960 the GDP per head was 60,2% of the E.U. average, and in 1999 has been 82-83%. But if we compare the situation in 1975 and in 1999, as it is presented in Graph 1, the convergence has not been very important.

Graph 1. Evolution of real convergence
Spain/E.U (15). PIB per capita.



Source: Author's elaboration following E.U. (1999) and Bank of Spain (1999) following Eurostat, calculations DGXVI, EUR15= 100.

If we compare the process of convergence in Europe following the pattern of unemployment, the differences among regions and countries are greater. In general, unemployment rates differ strikingly between regions. Following E.U. (1999), in parts of the South, i.e. Spain, Italy and France, unemployment rates of 20-30% are prevalent, higher than anywhere else in the Union. Another example, in the 10 worst affected regions, average unemployment was 28.1% in 1997, 8 times higher than in the least affected regions, where the average was just 3.6%.

Spain is a special case because unemployment in Spain is the highest in the Union, affecting nearly 1 in 5 of the labour force. Nevertheless, it is important to point out that there are huge disparities across the country. Following E.U. (1999), the rate in the Northern regions of Navarra, La Rioja and Aragón ranging between 10% and 15%, similar to many regions elsewhere in the E.U.. In the Southern regions of Andalucía and Extremadura, it was around 30%. More over, the real problem, in terms of convergence and economic growth are the low activity rate in Spain, suggesting a large underused pool of labour.

Apart from the GDP per head and the unemployment, the convergence can be studied analysing human and technological capital, and expenditure in social security and protection.

Human capital can be defined as the percentage of potential active population (from 15 to 64 years old) who have the university degree. Since 1986 to 1996 this indicator has increase from 58% to 64% of the E.U. average.

Capital stock presents a great disparity in Spain compared to the E.U. average. In 1996, it was only the 34%. Finally, the last indicator is the percentage of expenditure in social security and protection. In contrast with the pattern of unemployment and human stock, and similar to GDP per head, in this indicator it is observed a clear convergence to the E.U. average: from 74% in 1986 to 82% in 1996.

Table 10. **GDP per head and unemployment by Member State**

Member State	**GDP per head (PPS)**		**Unemployment (% labour force)**		
	1986	**1996**	**1986**	**1996**	**March, 2000**
B	102.8	112.1	11.0	8.9	8,5
DK	112.1	119.3	5.8	5.7	4,8
D(1)	116.1	118.5	6.3	7.9	8,4
EL	59.2	67.5	7.4	9.6	--
E	69.8	78.7	20.8	21.1	14,9
F	109.8	103.9	10.3	12.0	10,2
IRL	60.8	96.5	18.1	10.1	5
I	100.4	102.7	10.2	12.3	--
L	137.3	168.5	2.5	2.5	2,2
NL	101.8	106.8	9.9	5.2	2,8
A	103.2	112.3	3.8	4.4	3,4
P	55.1	70.5	7.0	6.7	4,1
FIN	99.7	96.9	5.2	14.8	10,6
S	111.5	101.2	2.5	10.4	6,5
UK	98.6	99.8	11.0	7.1	--
EUR15	100.0	100.0	10.5	10.7	8,7

(1) Excluding new Länder. Source: E.U. (1999), following Eurostat and calculation DGXVI.A4.

To sum up, and after analysing the five convergence indicators, we can point out that Spain has keep narrowing the gap with E.U. in terms of real convergence. Nevertheless, the gap remains wide despite the progress made, particularly in terms of unemployment rates and human and capital stock.

5.3. The necessity of a larger economic growth to allow the convergence

The stylised fact, that convergence occurs at a more rapid rate during periods of economic growth and closer integration, is a simple yet powerful observation. And also, the necessity of a wide period of time in order to advance in convergence is another powerful observation. For example, in the spanish case, and with a differential growth of 0.8 points, it will be necessary more than 35 years to get the same economic development as the european citizens have.(3)

More over, this is real observation when it should be waited a huge reduction of Cohesion Funds between the european countries in the next years meanwhile the emphasis is made in the new western members countries.

Anyway, if Spain wants to reduce the disparities between the spanish regions and the european regions, it should absolutely necessary a faster economic growth. We need to growth more quickly than the rest of european countries. Until now, this necessity has become into reality, but what can occur in the future?

In order to maintain a greater economic growth rate, we will need higher savings rates than european savings rates. But this implication, unfortunately, is not a reality in Spain. For example, since 1995 the national savings were not enough to allow investment in Spain and it was compulsory to go to international savings markets.(4)

As Valle (1997) presents in Table 11, we can see the necessity of additional savings in Spain in order to converge to E.U..

Table 11. **Spanish convergence to E.U.**

Years(1)	**Differential growth in Spain(2)**	**Increment in savings rates(3)**
10	2.69	6.9
15	1.78	4.6
20	1.34	3.4
25	1.07	2.8
30	0.89	2.3

(1) Shows the number of years to converge to E.U., based in the situation in 1996 (76.7% GDP per head with respect to the E.U. average.

(2) Indicates the differential economic growth in percentile terms in respect of the E.U. average growth.

(3) Indicates the increment in savings rate in order to guarantee the differential growth to converge to E.U..

Source: Valle (1997).

In order words, we need to save more than the E.U. average, and this fact, in this moment, does not happen, particularly if we consider household savings. As we have seen in the section 2, if decline in savings rates in Spain is a reality, process of convergence to E.U. could be in danger in order to maintain the capital accumulation rate similar to Portugal or Ireland. In Table 12, we can observe that differences between the E.U. average savings rate are not very different to Spain average.

Table 12. **Private savings rate (in percentage of GDP) in E.U.**

Years	E.U.-15	Spain	Germany	France	Italy	U. K.	USA
1994	21.1	20.5	19.8	21.1	24.3	17.7	15.5
1995	21.8	24.2	21.3	21.3	24.9	16.9	17.0
1996	21.1	22.7	21.4	19.7	24.5	16.4	16.6

Source: Author's elaboration from Carbó and Rodríguez (1998)

6. Conclusions

In the course of the last three decades the national saving to income ratio has undergone profound changes, especially among the industrialised countries. These changes have tended to run in the same direction for all countries, namely down. Special attention is paid to the spanish situation, with a great decrease of the household savings rates.

Saving theories have tried to explain this fact, pointing out possible solutions. Almost all the solutions have been provided by the so-called Life Cycle Hypothesis, rather than the altruism model: social security effects, the fact that the relative size of the retired population is climbing, the recent inflation experience, financial market development and an easier access to credit, an increase in quick fiscality, a rise in the unemployment rate, etc.

Nonetheless, it cannot be forgotten the altruism model. The high divorce rate and closely linked rise in the number of marriages, the substantial decline in the number of children, and the and the increase in the number of retirement homes have contributed to family dissolution, which has a significant negative impact on saving.

In addition, the existence of a Social Welfare State, with the slogan "from the cradle to the grave", leads people to reduce the amount they would have saved in order to guarantee a minimum consumption during retirement. Similarly, with a generous social security system, money to cover oneself in any contingency is reduced.

The analysis of the decline in savings rates is very important in terms of growth, inversion and real convergence. The more prolonged will be the decrease in savings rates, the more difficult will be to converge to the E.U. average.

This analysis is particularly important in a context of the regional and national differences in Europe. Nowadays, there are important differences among regions in E.U. and in Spain, and in this context is important to maintain Regional Policy in order to increase the process of the real convergence, particularly when the extension to the East is a reality in the next years.

7. Footnotes

(1) The decline in savings in the United States has been associated with an equally decline in domestic investment. Since 1990, net domestic investment has averaged 3.6% per year, compared with 8.2% in the 1950s, 7.9% in the 1960s and 1970s, and 6.1% in the 1980s. See Gokhale *et al.* (1996).

(2) It is necessary to point out that there is no consent about what is the meaning of real convergence. Normally, the real convergence, following Villaverde and Sánchez-Robles (1998), can be divided into sigma-convergence and beta-convergence.

(3) The spanish government, according to the Program of Convergence, the period of time to reach GDP per head of the european countries has been estimated in 55 years.

(4) Also, another problem is the less importance of household savings in percentile terms into the national savings in Spain. In period 1986-1996, household savings was 40% of national savings, meanwhile in Europe was 55%.

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