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French economy since 2008 and pension system in France

Introduction

On September 15th 2008, economic crisis started with the bankruptcy of Investment Bank Lehman Brothers. Since this, France was obviously hit by the economic and financial crisis like all the European countries. According to the media, the crisis is less severe for France than for Southern European countries (such as Greece, Italy, Spain or Portugal) but is more severe than for Germany. In those times of economic crisis presenting the French pension system seems interesting. The aim of the article is to present French demography since 1945 (part one) and French economy since 2008 through a statistical analysis (part two), and in the final part of the article, the French pension system is described through a literature study.

1. Demography of France since the end of World War 2

1.1. Demography of France from 1945 to 2000

From 1945 to 2000, French population didn't keep growing, passing from 40.3 million in 1945 to 59 million in 2000. Such a growth was never seen in the history of French demography before. From 1946 to the 1970's, there was a "baby boom" in France, and after 1975, population growth rate was lower. Immigration played also an important role in the growth of French population in the second part of the twentieth century.

In France, like in every industrialized countries, there was a strong increase of fertility after the second world war till the beginning of 1970's, called "baby boom". The fertility index, which was always between 2.5 and 3 children per woman from 1945 to 1970, confirms this statement. After 1972, fertility index decreased strongly and was stabilized around 1.8 children per woman from 1980 to 2000. From 1946 to 1973, the number of births was always higher than 800 000.

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After 1974, number of births started to decline, and was higher than 800 000 only in 1980 and 1981. Globally, the birth rate decreased during the second half of the twentieth century, passing from 20.5 per 1000 in 1950 to 13.1 per 1000 in 2000. Death rate decreased during the period from 1945 to 2000, passing from 12.7 per 1000 in 1950 to 9 per 1000 in 2000. This indicator even doesn't show completely the reduction of mortality, because there were more and more elderly people during this time. Death rate would be only from 6.2 per 1000 in 1993 if the structure of the population would be the same than in 1950. Medical progress is the most relevant factor to explain the decrease of death rate. The strong decrease of infant mortality rate, passing from 51.9 per 1000 in 1950 to 4.4 per 1000 in 2000, is also a consequence of medical improvements. Natural surplus of the population was always higher than 300 000 people till 1974 and higher than 200 000 people after 1975. In other words, French population didn't stop growing during the period from 1945 to 2000, and mostly due to the natural surplus.

Over the period 1945-2000, the quarter of the population growth in France was due to immigration. After 1945, France was a rebuilding and strong growing economy which had to deal with a lack of labour force due to stagnation of its population between the two world wars and the decrease of population during world war two. In order to solve the problem of lacking workforce, French state and government encouraged immigration. Decolonisation also led to the arrival of many foreigners in France in the 1950's and 1960's, like for example 650 000 Algerian people in 1962. After 1974, economic growth slowdown and French authorities wanted to limit the growth of the number of foreigners. Permanent immigration of foreigner workers was officially stopped. Indeed, the highest migratory balances were reached between 1955 and 1973 and were from 100 000 to 200 000 people. Contribution of immigration to the global population growth differs over the different periods: 13% from 1946 to 1954, 36% from 1955 to 1973 and 19% from 1974 to 2000. As a consequence of the immigration, the part of the population who was born abroad nearly doubled, passing from 6% of the population in 1945 to 11% of the population in 2000.

France was the first country in the world which had a process of ageing of its population because the fertility rate started to decline already at the end of the eighteenth century. In 1950, France was the country in Europe which had the biggest part of people over 65 years (11,3%). However, due to a high birth rate from 1946 till the mid-1970's, France had about 16% of its population over 65 years in 2000, close to the average in the European Union. Table 1 illustrates with some basic demographic indicators the process of ageing for the French population since the middle of the twentieth century.

Since 1945, French population is ageing, but not only because birth rate declined progressively. The decrease of mortality due to medical improvements consequently increased life expectancy for more than ten years between 1950 and

2000 for men and women (see table 1). At the same time that population was ageing, population was also getting younger during the period of the “baby-boom”; the part of young people in the global population passed from 29.9% in 1950 to 34% in 1966. As a consequence, part of adults decreased to reach a historical minimum level in 1966, at 54% of the global population. After, children of “baby-boom” became adults, and consequently their part in the global population increased to 58,5% in 2000, globally the same proportion than after the second world war.

Table 1. Life expectancy and structure of the population in France for the period 1950–2000 (life expectancy in years)

	1950	1960	1970	1980	1990	2000
Men life expectancy	63.4	67	68.4	70.2	72.7	75.3
Women life expectancy	69.2	73.6	75.9	78.4	80.9	82.8
Young people (under 20)	29,9%	31,9%	32,8%	30,4%	27,5%	25,4%
Adults (20–65)	58,8%	56,6%	55,1%	55,6%	58,4%	58,5%
Elderly people (over 65)	11,3%	11,5%	12,1%	14,0%	14,1%	16,1%

Source: INSEE (French statistical central office).

1.2. French population since 2000 and future prospects

Since 2000, French population didn't keep growing, passing from 59.3 million in 2000 to 66 million as of January 1st 2014 (estimation). Fertility index in France was one of the highest in the European Union during the past ten years, with an average of 1.95 children per woman. Fertility index reached a high in 2010 at 2.02 children per woman. French population is still ageing. During the period from 2000 to 2013, the part of young people (under 20 years of age) in the global population passed from 25.4% to 24.4%. Opposite, the part of elderly people (over 65 years of age) in the global population passed from 16.1% to 18.2%. Since 2006, “baby-boom” generations progressively get retired, the phenomenon is sometimes called “papy-boom” and pension system has to take this tendency into consideration. In 2013, life expectancy was from 78.7 years for men and 85 years for women. In 2013, the natural surplus of population was from 219 000 people (3.4 per 1000).

However, even if fertility rate is much higher than in many EU-member countries, natural surplus tend to decrease from year to year. In 2013, natural surplus of population was 20% lower than in 2008. These tendency can be explained by the fact that fertility index decreases from 2010 to 2013 (passing from 2.02 to 1.97 children per woman) and that number of deaths increases slowly because

population is ageing. Migration balance was also relatively low in 2013 (0.8 per 1000) compared to other European countries such as Germany, Austria, Italy, Switzerland or Norway. In the coming years, natural surplus of population is likely to continue diminishing. Even if the number of births is likely to keep stable, the number of deaths is probably going to increase because French population is ageing.

According to the prospects of INSEE (French demographic institute) in October 2010, French population will continue to grow in the next fifty years to reach the number of 74 million in 2060. The proportion of young people in the global population is going to diminish and the proportion of elderly people is going to increase strongly till 2035, and more slowly after 2035. Globally, the number of people over 60 years of age is likely to increase from 80% in the next half-century. French pension system will have to take this evolution into account in order to guarantee a decent level standard to elderly people in the future.

2. The French economy since 2008

2.1. Global overview of the economic situation

France was strongly hit by the economic crisis in 2009, and as a consequence of the crisis income per capita and household consumption decreased. Even during times of crisis, there was a price stability, with an inflation rate under 3%. However, there was an economic upswing in 2010 and 2011. In 2012, there was no GDP growth, and in 2013 GDP growth rate was from 0.4%. It shows that it was possible to have economic growth in France, but in 2012 and 2013 there was no economic growth due to restrictive budget policies. Table 2 shows with the impact of the economic crisis in France with some basic macroeconomic indicators.

Table 2. Basic macroeconomic indicators for France since 2008.

	2008	2009	2010	2011	2012
GDP growth rate (%)	-0.1	-3.1	1.7	2.0	0.0
Inflation rate (%)	2.8	0.1	1.5	2.1%	2.0
Income per capita (current USD)	43 992	40 488	39 186	42 522	42 722
Household consumption (billion USD)	1 611	1 522	1 479	1 599	1 507
Industrial production growth rate (%)	-1.8	-8.8	3.5	2.4	0.8

Source: The World Bank.

In those times of crisis, an interesting indicator to analyse is consumer confidence index (CCI), which is calculated by the French central statistical data office. It's an indicator with a basis 100 which represents the average of CCI over the period from January 1987 to December 2013. A correlation between GDP growth rate and CCI index is clearly identifiable. CCI decreased from about 105 to 80 in 2008, and stayed constantly under 100 since 2008 (around 85 in 2013). In other words, consumers have less confidence than before the crisis.

2.2. Effects of the crisis on the labour market

As a consequence of the crisis, the unemployment rate globally increased. In 2010 and 2011, the short economic upswing allowed to stabilise unemployment rate around 10%. However, since 2012, unemployment rate increased constantly due to very low economic growth rate. Table 3 illustrates how the active population (divided by age group) is affected by unemployment since 2008.

Table 3. Labour market indicators in France for the period 2008–2013

	2008	2009	2010	2011	2012	2013
Global unemployment rate (%)	8.4	10.0	9.6	9.8	10.7	10.8
Youth unemployment rate (%)	17.3	23.4	23.4	21.4	24.3	24.2
Seniors unemployment rate (%)	4.9	6.7	6.4	6.6	7.3	7.0

Source: INSEE (French statistical central office).

Young people were the most concerned by unemployment, since 2012 youth unemployment rate seems to be stabilized but is however very high (24.2% in 2013). By contrast, people over 55 years of age were less affected by unemployment in the last five years. Unemployment hit also more unskilled workers (19% of them in 2013) than executives and middle level professions.

2.3. Consequences of the crisis on public finance

Economic crisis increased strongly the public debt in France, passing from 68.2% of GDP in 2008 to 90.2% of GDP in 2012. Between 2008 and 2009, the budget deficit of public finance increased from 3.3% of GDP to 7.5% of GDP. Table 4 shows the consequences of the crisis on public finance. Since 2009, budget deficit of public finance decreased slowly because French government took austerity measures. France has to reduce its budget deficit of public finance under 3% of GDP as soon as possible in order to respect Maastricht criteria, and this goal is planned to be reached in 2015. However, austerity measures were mostly fo-

cused on increase of taxes (personal income taxes, value added taxes, taxes on alcohol, tobacco...) than on saving. And these increase of taxes obviously slow down consumption, and consequently the economic upswing that started after the recession of 2009.

Table 4. Evolution of the public finances in France since 2008

	2008	2009	2010	2011	2012
Current account balance (US \$ Million)	-49 877	-35 439	-33 733	-49 217	-57 246
Budget deficit of public finance (% of GDP)	-3.3%	-7.5%	-7.1%	-5.3%	-4.8%
Public debt (% of GDP)	68.2%	79.2%	82.4%	85.8%	90.2%

Source: The World Bank.

3. Pension system in France

In 2010, France counts 16 million retired people, that is to say 25% of French population. Pensions represented 279 billion EUR in the same year, the equivalent of 14% of French GDP.

3.1. Structure of the pension system and main reforms since 1945

French pension system was created in 1945 (for basic pension schemes) and is characterized by a huge diversity of pension schemes. The system is organized in two steps: basic pension schemes and supplemental pension schemes. In France, workers are obliged to pay contributions to a basic pension scheme and a supplemental pension scheme.

There are nowadays in France more than 20 basic pension schemes, which can be classified by socio-professional groups. We can identify the three following groups:

- employees' of the private sector scheme, managed by "Mutualité Sociale agricole" (MSA) and represents 70% of the workers.
- self-employed workers, concerned by many pension schemes and represents 10% of the workers.
- special schemes, for civil servants and workers of public states enterprises, and represents 20% of the workers.

Supplemental pension schemes were created after 1947, and became progressively obligatory for every worker in France. Today, workers are obliged to pay contributions to a supplemental pension schemes. Basic and supplemental pen-

sion schemes are both contributory pension schemes, this means that workers' contributions pay directly pensions of retired people. Since 2003, workers are encouraged to form retirement savings by capitalization process. In 2010, retirement savings represented 11.4 billion EUR of contributions.

French pension system was reformed many times since 1945. I have summarized here the most important reforms. In 1982, retirement age decreased from 65 years to 60 years. To get full pensions, workers had to pay contributions during 150 quarters (37.5 years). It was also decided that pension amounts were calculated on the best 10 years of contributions.

In 1993, pension system was in strong deficit: 40 billion Francs (6 billion EUR nowadays). In order to reduce this huge deficit, there was a new reform. To get full pensions, workers had to pay contributions during 160 quarters (40 years), and it was decided that pension amount were calculated on the best 25 years of contributions. In 2003, decision was taken to extend contribution period to 164 quarters (41 years) to get full pensions.

On November 9th 2010, new pension system reform was voted. Retirement age was increased from 60 to 62 years for workers who were born after 1955. In private sector, compulsory retirement was fixed at 67 years after 2010 reform. In public sector, compulsory retirement was fixed at 67 years for sedentary categories and at 57 or 62 years for active categories. Workers who were born after 1956 need to contribute 166 quarters (41.5 years) to get full pensions.

3.2. Rules for calculation of pension's amount

The total pension's amount of a pensioner is equal to the pension of basic and supplemental schemes amounts. For active people, contribution rates differ for each pension scheme, even if a harmonization of all contribution rates till 2020 was planned by 2010 reform.

For basic pension schemes, pension amount is based on the contribution period, that is to say how long the worker has contributed, count in quarters. Three factors are taken into account in the calculation of pension's amount: clearance rate, reference wage and pro-rata coefficient (ratio of the contribution duration over the necessary period for full rate). A quarter is considered as validated when a worker has a wage higher than 200 hourly SMIC (French minimum wage) during this quarter. The reference wage is calculated as the average of the 25 best years of contribution.

Pro-rata coefficient applies for workers who had not contributed the needed amount of time to get the full clearance rate. In that case, the calculation of the clearance rate is the following one:

$$\text{clearance rate} = \text{pro-rata coefficient} \times \text{full clearance rate.}$$

The full clearance rate is from 50% for employees' of the private sector and self-employed workers, and from 75% for special scheme workers. In order to get full clearance rate, workers need to contribute for 166 quarters (41.5 years). For workers who didn't contribute for 166 quarters, there exists a discount rate, fixed at 1.25% per quarter in the limit of twenty quarters. On the contrary, for workers who contributed for more than 166 quarters, there exists a premium rate fixed at 1.25% per quarter.

In supplemental schemes, pension's amount is calculated on number of points. Points that a worker gets every year are added up till the worker retires. A point has a specific value in each supplemental scheme. The pension's amount for a supplemental scheme is so equal to the number of points multiplied by a point's value. During the retirement period, pension's amount changes according to pension's revaluation coefficient. For basic pension schemes, revaluation coefficient is calculated every year on April 1st according to the general price level (Tobacco excluded). For supplemental schemes, pension's amount changes every year according to a point's value.

3.3. Solidarity measures

In France, possibility of earlier retirement with full clearance rate exists in three cases: "long professional career", disabled people and painfulness of the work.

For workers who had a "long professional career", there is the possibility to retire with full pension at the age of 60 if they have contributed at least 8 quarters before the age of 20 and the number of quarters needed for full clearance rate (166 quarters for workers born after 1956). This possibility was created by the 2003 reform. Disabled workers who have a permanent disability rate from at least 80% can retire with full pension at the age of 55 if they had contributed during 60 to 100 quarters. This possibility was also created by the 2003 reform. Since July 2011, workers have also the possibility to retire with full pension at the age of 60 due to painfulness of the work. To get this privilege, they need to justify either from an accident at work or an occupational disease, or from a permanent disability rate higher than 20%.

Retirement schemes fix minimum pension's amount, in order to guarantee that retired people have a minimum standard of living. In 2012, the average of minimum pension's amount guaranteed by retirement schemes is from 621 EUR monthly. In 2011, five million retired people received minimum pension's amount guaranteed by retirement schemes.

Outside the retirement schemes, national solidarity to elderly people is guaranteed by a minimum social, called the "solidarity grant for elderly people". The aim of this social minimum is to guarantee to elderly people a living standard

close to the poverty line. Solidarity grant for elderly people is paid to every people over 65 years of age (or 60 years of age in case of disabilities) under no other conditions than living in France, and obviously to don't get pension from the retirement scheme. As of April 1st 2012, the amount of solidarity grant for elderly people is fixed at 777 EUR per month and is paid to 600 000 people.

Here the most relevant solidarity measures provided by the French pensions system are summarized. Obviously some other privileges and solidarity measures are granted, for example for parents who stop working to bring up a disabled child or for parents who had more than three children.

3.4. Economic and social situation of pensioners

Pensioners living standard improved strongly since 1970. A relevant measure of pensioners living standard is to calculate the following ratio: pensioners' average living standard/ active people's average living standard. In 1970, this ratio was from 0.68, but since the 1990's, pensioners' average living standard is close to active people's average living standard. In 2010, the ratio was from 0.98. Pensioners' average living standard was from 1913 EUR per month and active people's living standard was from 2002 EUR per month in 2010. From 2004 to 2010, pensions' amount had grown from 1.3% each year, that is to say higher than inflation rate in France. It means that pensions' amount increase represented also and increased in purchasing power for retired people.

Even if pensioners have an average living standard close to active people, there are still important disparities of income between retired people. At the end of 2010, the average pensions' amount is from 1216 EUR per month (1552 EUR per month for men and 899 EUR per month for women). Women's average pension is only 53% of men's average pension. The poorest 10% of pensioners get less than 521 EUR/month from pension fund, and the richest 10% of pensioners get more than 2495 EUR/month at the end of 2008.

The average pension of widow people (for 90% women), was from 1200 EUR/month in 2008.

There are also huge disparities between socio-professional groups, proved by the average pension's amount in 2008:

- average pension for workers of the private sector: 1166 EUR/month;
- average pension for self-employed workers: 793 EUR/month;
- average pension for civil servants and workers of public states enterprises: 1757 EUR/month.

3.5. The place of the pension system in the economy

In order to show the importance of the pension system in the economy, the elderly dependency ratio and the spending of pensions are two interesting indicators to analyse.

The elderly dependency ratio (ratio of elderly people on working people), increased constantly during the second half of the twentieth century, passing from 17% in 1950 to 26% in 2000. The increase of the elderly dependency ratio can be interpreted as a simple consequence of the evolution of the French demography. Indeed, during the last half of century, natality rate in France decreased and there was a process of ageing of the population.

The spending of pensions passed from 4.5% of GDP in 1950 to 14% of GDP in 2010. Obviously, when a population is ageing, the number of pensioners is increasing and the spending of pension increases. It's possible to identify a correlation between those two indicators. During the period from 1950 to 2010, the spending of pensions increased as a consequence of the increase of the elderly dependency ratio because the French population is ageing.

Conclusions

The presentation of French pension system shows that the system is relatively advantageous for retired people, who have an average living standard close to active people. However, pension system in France is in important deficit, which is expected to pass from 13.2 billion EUR in 2011 to 20.2 billion EUR in 2017. According to the Australian consulting firm Mercer, France is ranked at the 13th place among 20 countries for its retirement system, behind countries such as Denmark, the Netherlands, Australia, the United States, Germany and Chile. Australian consulting firm recommend to increase retirement age in order to reduce deficit. In 2008, there was 1.5 worker per 1 pensioner. In 2050, there will be 1 worker per 1 pensioner according to demographic forecasts. Increasing retirement age seems the only solution to reduce the system's deficit, because life expectancy increases and French population is ageing.

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Summary

French population has been growing very fast since 1945, due to immigration and to natural growth. According to the demographic prospects, population will be constantly growing during the next fifty years and the part of elderly people is also going to be growing. The state has obviously to take this tendency in consideration for reforming the pension system.

Economic situation has worsened in France since the start of the crisis in 2008, like in the most European countries. In the last six years, the situation on the labour market and public finances have deteriorated. Young and unskilled workers are the most vulnerable people on the labour market in France now. The pension system as it exists today in French was built progressively since World War II. The organisation of the pension system is relatively complex and is divided between basic and supplemental schemes. There were many reforms since 1945, which didn't solve the main problem of the system which is the deficit, and for this reason an increase of the retirement age seems the only possible solution.

Keywords: demography, pension system, 2008 economic crisis, macroeconomic development

FRANCUSKA GOSPODARKA OD 2008 ROKU A SYSTEM EMERYTALNY WE FRANCJI

Streszczenie

Liczba ludności francuskiej rosła bardzo szybko od 1945 r., zarówno ze względu na poziom imigracji, jak i przyrostu naturalnego. Według prognoz demograficznych, liczba ludności będzie stale wzrastać w ciągu najbliższych pięćdziesięciu lat, jednak udział osób starszych w populacji również będzie rosnąć. Państwo powinno uwzględnić tę tendencję w ramach reformy systemu emerytalnego.

Sytuacja gospodarcza pogorszyła się we Francji od początku kryzysu w 2008 r., podobnie jak w większości krajów europejskich. W ciągu ostatnich sześciu lat, sytuacja na rynku pracy i struktura finansów publicznych uległy pogorszeniu. Najbardziej zagrożona na rynku pracy we Francji jest grupa pracowników młodych i niewykwalifikowanych. System emerytalny istniejący dziś we Francji był budowany stopniowo od II wojny światowej. Struktura systemu emerytalnego jest stosunkowo skomplikowana i jest podzielona między system podstawowy i uzupełniający. Po 1945 r. wprowadzano wiele reform, które nie rozwiązały głównego problemu systemu, którym jest deficyt finansowy, z tego zaś powodu podwyższenie wieku emerytalnego wydaje się jedynym możliwym rozwiązaniem.