7th Annual Conference of the

EuroMed Academy of Business

The Future of Entrepreneurship

Edited by: Demetris Vrontis,
Yaakov Weber,
Evangelos Tsoukatos

Published by: EuroMed Press

7th EuroMed Conference of the

EuroMed Academy of Business

CONFERENCE READINGS BOOK PROCEEDINGS

September 18-19, 2014

Kristiansand, Norway

The Future of Entrepreneurship

All full papers and abstracts submitted to the EMRBI Conference are subject to a peer reviewing process, using subject specialists selected because of their expert knowledge in the specific areas.

ISBN: 978-9963-711-27-7 Published by: EuroMed Press

EFFECTS AND DETERMINANTS OF HOUSEHOLD DEBT IN PORTUGAL

Morais, Lavínia[1]; Ribeiro, Humberto[2]; Pereira, José[3]; Silva, Amélia[4]

[1]High School of Management, IPB-Bragança Polytechnic Institute, Portugal
[2]GOVCOPP & ESTGA, Aveiro University, Portugal
[3]High School of Management, IPCA-Polytechnic Institute of Cávado and Ave, Portugal
[4]Institute of Higher Education in Accountancy and Administration of Porto, IPP - Polytechnic Institute of Porto, Portugal,

ABSTRACT

As the amount of debt has gradually increased, particularly in recent years, Portugal is currently one of the European countries exhibiting one of the highest levels of overall indebtedness, including in both sovereign and private sectors. Indeed, this condition is the outcome of increasing levels of debt assumed not only by the government, but also by companies and families, being the later mostly due to mortgage loans and due charges. This paper focuses on the study of borrowing by Portuguese households. The research has been made in respect to the notion of debt, the consequences of recent developments in debt, among other factors. In order to analyze the factors that are most associated with debt, a study was developed using two multiple regression models, one using a longer time series and another shorter, evaluating the effect of several variables, such as consumption, savings, unemployment, inflation and interest rates, in order to check whether they could be associated with a higher level of debt.

Keywords: *Indebtedness Portuguese families, Multiple Regression Model*

This work is funded by FEDER funds through the Operational Programme for Competitiveness Factors - COMPETE and by National Funds through FCT - Foundation for Science and Technology under the project with the reference PEst-C/CJP/UI4058/2011

INTRODUCTION

In less than twenty years, Portugal increased from a leverage ratio of just over 18% in 1990 to a rate of 130% of disposable income in 2007 (Frade, 2003). This was one of the highest increases in the rate of indebtedness of the European Union's countries. Although this data does not serve to indicate the risk of default of families allows, nevertheless, to show how the Portuguese were able to take advantage

during recent decades of favorable conditions associated with the opening of the credit market and the sharp decline in interest rates, the rising real incomes and improvements in the labor market that have led to a significant decline in the unemployment rate.

However, with the recent reversal of the economic cycle, the Portuguese population lives now difficult days and is faced with gloomy news about the state of the Portuguese economy; rising taxes, rising unemployment, cuts in subsidies, reductions in wages among other things, that the Portuguese people have to cope with. This situation is strongly associated with unbridled consumption experienced in recent years, which led to indebtedness of Portuguese Families. For many families the credit is a way to manage a short income budget, resulting in families that give use to credit cards and end up spending more than what they actually earn. It is for this reason that they have been living in standards far beyond their means. These factors have now led many families to renegotiate their loans leading many other to a situation of insolvency.

This status often creates a vicious cycle of debt since, after contracting a loan, families tend to have difficulties in settling this to respond before their financial commitments, so they tend to repeat the process, contracting new loans even leading to situations out of over-indebtedness (outstanding principal and interest value greater disposable income). The rapid accumulation of debt by households also justifies increased monitoring of their ability to repay loans. If the ability to continue to pay the debt on a regular and timely is particularly affected and a significant number of families fail to repay their loans, there may be consequences on financial stability in two main parts. On the one hand, on the financial situation of households own. On the other hand, from the point of view of the parties providing the credits. The current condition of the Portuguese financial sector portrays very well this consequence.

This study aims to determine the determinants and effects of borrowing by Portuguese Families. For such, several topics are researched, such as the concept of debt, debt indicators in Portugal, explanatory theories of debt, the factors influencing the debt will be studied; the effects of debt/debt in the economy, and finally analyzing whether the factors influencing the debt are negatively or positively associated. Household debt results from imbalances between receipts and expenditures of households, ie the result of mismanagement families with what you earn and what you can spend. However, debt is also related to loans that are granted to households, since we live in an era in which credits are made immense, often credits in order to pay other claims are also made. Thus, the problem of indebtedness arises when families can not meet their obligations.

 ISBN: 978-9963-711-27-7

DEBT FRAMEWORK

According to OCR Macro (2001), it is argued that although there is no common European definition of indebtedness, this can be defined as the result of an imbalance between spending and consumer income, thus leading to a failure to make payment under a or more debts, ie when the level of debt is unsustainable. The debt has been the subject of several studies in recent decades. This has been understood as a multifaceted behavior, since it had the contribution of various disciplines such as psychology, economics, sociology and political science. Indeed, according to Lea, Webley and Levine (1993), contract or having debts is not only related to economic variables, since these authors were studied by social and psychological variables to justify the debt, such as social support debt, styles financial management, consumer behavior, among other variables.

For Friedman (1957), one of the bases of the indebtedness theories is the theory of permanent income. This theory explains consumer behavior in relation to consumption and the formation of expectations. This considers the permanent income as a proportion of income that people consider in the future and maintain transitional income as the deviation of current income relative to permanent. According to this author the permanent consumption is defined by consumption that is planned by individuals, the transitional consumption results of specific factors in life such as job loss. This theory argues that the consumption plan of individuals depends on their expectations regarding permanent income, having a key role in making financial decisions.

Authors such as Modigliani and Brumberg (1954) and Wärneryd (1989), argue that the theory of life cycle is another perspective to explain consumer behavior. This theory is based on two assumptions which are: "individual behavior is oriented to the future"; and individuals optimize their resources throughout life; when you are optimizing their resources lifelong, individuals are sensitive to changes in interest rates; this income is an indicator of what the future will yield. Thus, individuals are rational economic actors, ie individuals who trace their financial behavior for the future in order to maintain a pattern of stable life. Young individuals tend to borrow at midlife settle debts incurred in the initial phase of your life and start worrying about the savings, so use them in retirement to maintain a stable standard of living (Modigliani and Brumberg 1954).

There are several factors that, according to several authors, influence the debt (eg Raaij and Gianotten, 1990). According to Raaij and Gianotten (1990), the people with higher income spend and contract more loans and show a greater propensity to use credit cards. In the study by Boddington and Kemp (1999), they found that the sex of the individuals also influences the debt. These authors found that men have higher amounts of debt to women. To Godwin (1998), the household size is another factor that is related to the increase in debt. The marital status of individuals, according to Kinsey (1981), is also related to the debt, because the study was carried out by these authors concluded that when one

is married, spending on credit cards are higher. According Lea et al. (1995) when a household is composed of a greater number of children of this household debt is higher, thus the number of children is another factor influencing the debt.

The educational level is indicated as another factor, as referred by Canner and Luckett (1991), and Lea et al. (1993), that influences the debt. These authors argue that households with less schooling and households with a higher level of education tend to have more debt relative to income. Cameron and Golby (1990) argue that age is negatively correlated with the amount of debt held by households. The debt is related to the life cycle in which it is the aggregate, since the financial commitments usually increases with age, and older individuals are more likely to have higher than younger individuals debts. Another factor that is related to debt are the attitudes to credit cards, since individuals who have a favorable attitude to credit cards have a higher likelihood of having multiple cards, have a higher level of indebtedness and are more subject advertising (Chien and Devaney 2001; Davies and Lea 1995). Social class, according to Solomon, Bamossy and Askegaard (2002) influences the debt, because when the individual belongs to a higher social stratum, believes that it is more advantageous to use credit to purchase luxury goods than those who belong to middle class or casualties. Bird, Hagstrom, and Wild (1997), argue that the employment situation is also strongly linked to debt, since the employed people tend to have a greater number of debts of the unemployed.

Factors influencing on debt

Braucher (2006), argues that excessive debt can be understood through two factors, cultural factors and structural, as can be seen in the following table.

Structural factors	
1. Credit supply - Legal framework; - Promotion Techniques of credit risk management and credit available to credit institutions.	2. Seeking Credit -Insecurity of income / wage stagnation; -Reduced social protection in sickness, unemployment and disability;
Cultural factors	
3. Affect supply - Ideology of market liberalization; - Culture of indebtedness: - Marketing to the over-indebted; - Having as target the over-indebted; - Explore the minorities have been excluded from traditional banking.	4. Affect demand Culture-satisfaction of needs and desires; -Development of expectations regarding future income by individuals (media influence); -Debt is more accepted and considered normal; -Savings is becoming less common; -Cognitive biases (eg, optimism)

Source: Adapted from Braucher (2006).

Table 1 - Structural and Cultural Factors Influencing Over-indebtedness

 ISBN: 978-9963-711-27-7

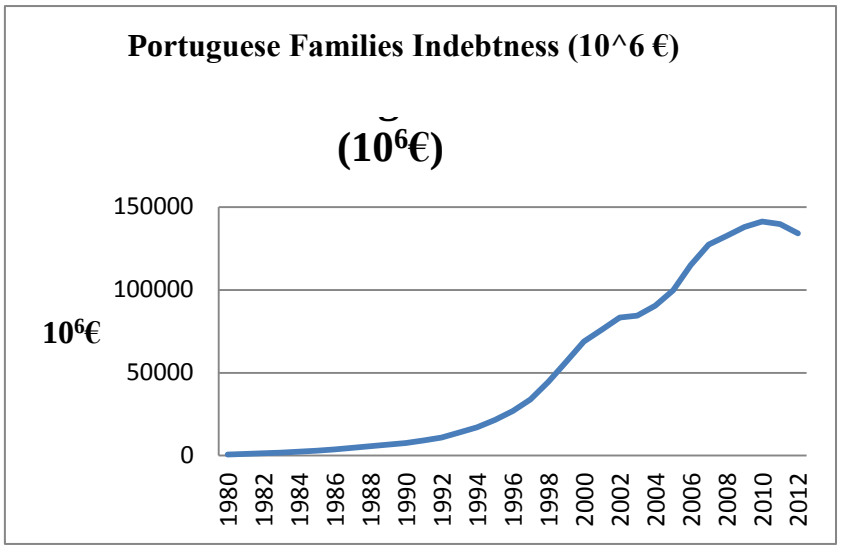
The large increase in debt by households, according to Worthington (2006), constitutes a threat to the welfare of this, which leads to a successive increase of the debt in default and many orders of insolvency or over-indebtedness, this has been more sense in Western societies. This is a situation that entails a greater number of consequences for the individual and undermines your budget or your household balance, which leads to strong implications for social and psychological level these individuals, leading to an increased level of financial stress Worthington (2006). Once the economic and social consequences of over-indebtedness are important is essential to analyze the trend of debt and proceed to study the nature and extent of over-indebtedness. In addition to the implications for society, one can not forget the problems that over-indebtedness leads to the real sector of the economy, because the increase in cases of families unable to meet their financial commitments affect levels of trust necessary for the normal functioning of credit market.

The study of over-indebtedness of households, can be done from two perspectives, namely the microeconomic and macroeconomic perspective (OEC 2002). Studies of microeconomic origin, household indebtedness, are very important at the present time, due to the high level share of this sector and the increase of the breaches. This work studies the individual data of concrete, broken households by socio-economic characteristics, with the aim of assessing the extent and nature of the cases. The use of macroeconomic aggregates using data to establish through empirical models, the relationship between the number of cases of over-indebtedness and the evolution of certain socio-economic variables may be regarded as a solid approach according to existing literature.

The portuguese Debt case

Over recent year, according to Faria and Noorali (2004), the indebtedness of Portuguese Families increased a dramatic pace. A value of about 20% of disposable income in 1990 to 40% in 1995, arriving in 2004 to reach a value of 118%. For Flour (2007), this large increase was predictable and can be understood as part of the catching-up process. During this period the sharp decline in the rates of nominal and real interest, the abolition of some legal barriers as well as the climate of increased competition between banks, provided access to credit to a broader set of households compared to the previous decade.

 ISBN: 978-9963-711-27-7



The large growth of household indebtedness, according to the Centre on Consumer Debt, CSG (2002), reflected the rational adjustment of families and alterations to credit institutions, both supply-side and demand-side credit. On the supply side, the liberalization and deregulation of the Portuguese financial system and the consequent increased competition in the credit market have led institutions to invest in the segment of loans to individuals with low levels of debt. On the demand side, changing cultural patterns, the decline in interest rates, the increase in disposable income and the containment of unemployment have also promoted the growing indebtedness of Portuguese Families.

Over the years the public debt of countries has increased in most advanced economies and this trend was accompanied by a dynamic GDP growth. In many countries, including Portugal, public debt increased, on average about 30% of GDP in the sixties to just over 60 % of GDP in the last decade (Rother and Westphal, 2012). As the debt increases is important to analyze the economic impact as well as the strategy to exit the crisis. For Reinhart and Rogoff (2010) the debt in peacetime can be considered more problematic for the future growth of an economy, since the debt tends to be persistent for long periods of time compared to the explosions of debt in times of war. These authors argue that the economic and financial crises are conducive to contribute to the accumulation of public debt. The financial and economic crisis that has come to feel since 2008 has placed considerable strains on the debt and in general on the public finances of the euro area countries. The ratio of the budget deficit in the euro area increased rapidly from 0.7 % of GDP in 2007 to 6 % of GDP in 2010, while the gross government debt rose from 66% to 85 % of GDP in the same period.

According Rother and Westphal 2012, the literature on the relationship between public debt and economic growth is scarce, but has gained great importance. However, the existing literature points to a negative link between the ratio of government debt to GDP and the growth rate of steady state GDP per capita. However, some endogenous growth models show that it may be possible there is a positive impact on the transition to the steady state, depending on the type of public goods financed with debt.

 ISBN: 978-9963-711-27-7

In the study by Reinhart and Rogoff (2010), where we analyzed the evolution of public debt and the rate of GDP growth over more than two centuries, they concluded that there is a long period for a weak relationship between public debt and growth debt/GDP below a threshold of 90 % of GDP and above this threshold, the ratios average growth rate falls by one percentage point.

VARIABLES THAT INFLUENCE THE INDEBTEDNESS

The indebtedness of Portuguese Families can be influenced by several factors, as previously mentioned. However at this point the variables (or factors) that will be used in the case study, what more can influence household debt, and the following are presented: Income of Families Portuguese; Savings of Portuguese Families; household consumption; the unemployment rate; the inflation rate; the interest rate; GDP.

ANALYSIS MODELS DEBT

Methodology

Household debt has been a major obstacle in resolving the deep economic and social crisis that Portugal is going through. Given this situation it is intended, at this point, make a study on the indebtedness of Portuguese Families, ie analyze which determinants and effects of borrowing by Portuguese Families. For this one goes to use two statistical estimation models.

Samples and Models

For this study will resort to an econometric model that has as dependent variable the " Indebtedness of Portuguese Families ", a separate component, called the constant ($\beta 0$) is not influenced by the different explanatory variables . This study consists of two models, the first model where observations total 33, while the second model consists of 10 observations. Statistical data are presented as a time series. The Model 1 consist of six independent variables as the disposable income, savings accounts, the private consumption the unemployment rate, the inflation rate and the interest rate. The Model 2 consists of four explanatory variables being the disposable income, the rate unemployment, the interest rate housing loans to GDP. In order to study, interpret and analyze the data contained in gretl software, a statistical model, the OLS model will be used. The main problem consists in estimating the model that is best suited to the characteristics of the subject in question, ie the "Indebtedness of Portuguese Families".

Hypotheses to be tested

At this point we want to identify those factors that may influence the indebtedness of Portuguese Families, using the development of hypotheses. Thus, one can formulate the following research

hypotheses, for Model 1:

H1: The disposable income of individuals is positively associated with household debt.

H2: The savings is negatively associated with household debt.

H3: Private household consumption is positively associated with household debt.

H4: The unemployment rate is negatively associated with household debt.

H5: The inflation rate is positively associated with household debt.

H6: The interest rate is negatively associated with household debt.

Regarding Model 2, we intend to test the following hypotheses:

H1: The disposable income of individuals is positively associated with the indebtedness of Families.

H2: Interest rate housing loans is negatively associated with the indebtedness of Families.

H3: Unemployment rate is positively associated with the indebtedness of Families.

H4: The GDP is positively associated with the indebtedness of Families.

Analysis and discussion of results

Univariate analysis

Over the years the indebtedness of Portuguese Families, measured in this study through borrowings by them, has been increasing steadily and quite sharply since 1980. But it was from the year 1992 we noticed the most increase in debt. Regarding household consumption, this has also increased over the years he has had a more significant increase from the year 1989 with the value 28.3046 billion euros, though there was a decrease in the last two years under review. However, variables such as savings, the unemployment rate and inflation rate fluctuations have had quite a few over the years under study, and saving a larger peak in 2012 with € 14,452,500,000, the inflation rate in 1984 with 28 38% and the unemployment rate also in 2012 with 16.80% (as can be seen in the following table). Regarding the performance of individuals, these have gradually increased during most of the years under study, with a decrease in recent years.

Descriptive Statistics, using the observations 1980 - 2012				
	Average	Minimum	Maximum	Standard Deviation
End_	51626,3	26849,0	729,000	141210,
Rend__Disp_	46428,0	45368,4	4399,33	86694,4
Poup	7736,34	8305,30	1230,40	14452,5
cons	60768,6	60819,8	3145,21	114957
Tx_des	0,0728047	0,0669218	0,0401534	0,168058
Tx_inf	0,0814515	0,0422000	-0,00830000	0,283800
Tx_juro	0,0919697	0,0700000	0,000000	0,250000

Table 2 - Descriptive statistics

 ISBN: 978-9963-711-27-7

Bivariate analysis

By analyzing the correlation matrix it follows that the dependent variable is more correlated with saving, consumption and the interest rate, ie the increase of these variables is involved with the study variable. However, it also appears that the use is related to the interest rate and the rate of inflation and the inflation rate is related to the interest rate.

Correlation coefficients using all observations 1980 - 2012							
End_	Rend__Disp_	Poup	cons	Tx_des	Tx_inf	Tx_juro	
1	0,7678	0,8189	0,9465	0,6686	-0,7105	-0,8607	End_
	1	0,6346	0,7032	0,5997	-0,5662	-0,6304	Rend__Disp_
		1	0,9129	0,509	-0,8423	-0,8833	Poup
			1	0,5168	-0,8595	-0,9447	cons
				1	-0,2598	-0,3758	Tx_des
					1	0,9276	Tx_inf
						1	Tx_juro

Table 3 - Correlation matrix

Multiple regression analysis

Given the variable under study, the indebtedness of Portuguese Families of two multivariate analysis models were constructed to sustain the developed theoretical concepts and hypotheses as defined.

Analysis of the estimated model (model 1)

The estimation model that is presented below was estimated by the method of least squares (OLS). Thus, the following model was obtained:

End_ = -34230,8 + 0,193254 *Rend_Disp_*- 3,52141 *Poup* + 1,29804 *Cons* + 349975 *Tx_des* + 236641 *Tx_inf* – 212104 *Tx_juro*

In the model obtained previously had a R-Squared (R2) of 0.974941, which means that the estimated model is satisfactory. As for the adjusted coefficient of determination, is a coefficient which discounts the effect of a large number of explanatory variables. Thus it can be seen that the model formulated is 0.969158. The formulated model can check the level of significance of each variable and its probative value. Thus, it appears that the significance level of 5% the income variables available and interest rate and constant are statistically significant and savings, consumption, unemployment rate and inflation rate variables are statistically significant and a significance level of 1%.Finalmente, o modelo respeita as hipóteses clássicas do modelo de regressão múltipla, nomeadamente homocedasticidade, ausência de autocorrelação dos erros e distribuição normal dos resíduos.

 ISBN: 978-9963-711-27-7

Analysis of the estimated model (model 2)

As previously stated this model was constructed over a shorter range (10 observations). Thus were obtained the following format:

*End_* = -182581 + 0,365418 *Rend_*- 190487 *Tx-Juro_habi* + 136961 *Tx_des* + 1,63188 *PIB*

In the model obtained previously made an R2 of 0.990384, which means that the estimated model is satisfactory, it is 0.982691 also high. In the model formulated it turns out that the significance level of 1% is it constant and a significance level of 10% the variables unemployment rate and GDP. What demonstrates that these variables may not be sufficient to explain the dependent variable.

Finally, the model satisfies the classical assumptions of multiple regression including homoscedasticity, no autocorrelation of errors and a normal distribution of residuals model.

Discussion of results

At this point of the thesis are made comparisons between the results obtained and the expected results. In Table 4 it can be seen that the results obtained for each of the study variables and the expected results for Model 1.

Variables	Expected Results	Obtained Results	Significance
Income	+	+	95%
Savings	+	-	99%
Consumption	+	+	99%
Unemployment rate	-	+	99%
Inflation Rate	+	+	99%
Interest Rate	-	-	95%

Table 4 - Comparison of results (Model 1)

It also appears that the variables household savings and unemployment have not had the results the same as expected. Regarding savings, theories pointed to a positive association with the debt, but this has not turned out so the savings are negatively associated with debt, ie the more the savings increase more debt decreases. Regarding the unemployment rate, this was also not the result we expected, since the theories suggested a negative association towards the debt and turned out to be a positive association, ie the higher the unemployment rate, indebtedness. For the remaining variables (income, consumption, inflation rate and interest rate), it was found that the result was equal to the expected outcome variable interest rate is negatively associated to debt, so its increase results in a decreased in debt. Variable yield, consumption and inflation are positively associated, since the increase these variables leads to an increase of the variable debt households.

The following table (Table 5) relating to Model 2 , it can be seen that only the variable rate of unemployment had a result different from the result expected. The income variable interest rate

housing loans to GDP submitted a result equal to the expected result.

Variables	Expected Results	Results Obtained	Significancia
Income	-	+	
Unemployment rate	-	+	90%
Interest rate for housing loans	-	-	
GDP	+	+	90%

Table 5 - Comparison of Results (Model 2)

It was also found that the variables income and GDP are associated with the indebtedness of families in a positive way, so that the increase of these variables leads to an increase in household debt dependent variable. Only the variable interest rate housing loans had a negative towards the debt variable, so the increase in this variable leads to a decrease in debt variable association. When making a comparison between the two models (model 1 and modelo2), one can conclude that the variables that both models had in common even reached the results, we conclude also that both variables were not meeting with expected, but the results are better specified variables in Model 1 since they have greater statistical significance. Thus, it appears that to study the indebtedness of Portuguese Families, in this particular case is better than model 1 model 2 because model 1 is best explained and model 2 is not sufficient to analyze a fact so important to worldwide.

CONCLUSIONS

This study's main objective was to determine what the determinants and effects of borrowing by Portuguese Families, since this topic is fairly current and only now has given a greater importance by modern literature on debt. To enable it to meet this objective, we carried out a research study, using firstly existing literature on the debt. Portugal has a large debt level, which was progressing very rapidly over the years, so its rate evolved much since the 90s to the present day, which meant that the risk of debt also increased sharply.

The debt can be defined as a result of an imbalance between spending and income of the consumer, in this particular case of Portuguese Families is also associated with loan commitments, most commonly mortgage and consumer debt, being mortgage loans the main source of debt. This can have a negative effect on the economy, since the increase in debt may cause a long term decrease in the growth rate of a country's economy, as families are indebted and do not have as much capacity to consume, having to pay debt interests and fess, which may result the country economy to fall into recession.

There are several factors that can lead to debt. In the examination made in this paper, referring to model 1 these factors include disposable income, savings, consumption, unemployment rate, inflation rate and interest rate. As for Model 2, the variables examined were disposable income, the interest rate of loans to housing, unemployment and GDP. While making this study it was concluded that all variables used could bring significance to the model, ie, they are all important when studying the debt

because they gave predictive explanation power to the model. Regarding Model 2 only two variables, the unemployment rate and GDP, have some significance to the model, but it is not enough to demonstrate that the chosen variables in Model 2 are satisfactory when analyzing household debt.

After obtaining the results of the regression model one can conclude that there was an association between the independent variables and the dependent variables. We also found that most of the results were against the expected results, namely the variables income, consumption, unemployment, inflation and interest rate. As in the model with 2 variables yield, interest rate housing loans to GDP. Thus it is concluded that the study variables in Model 1 are determinants of debt, which was not observed in model 2, and that the income variables available, private consumption, unemployment and inflation are positively associated with debt that is, an increase these variables results in an increase in the debt variable. As the savings and interest rate variables are negatively associated to debt, so when there is an increase in these variables the debt decreases.

It can also be noted that for the purpose of this paper, ie to analyze the determinants and effects of household debt in Portugal, the model 1 is the most powerful, since the variables associated with the model have more statistical significance, being therefore concluded that that this model was better specified.

When compairing the results obtained with the expected results, it can be concluded that four of the variables were against the expected result, as the variable interest rate presented a negative association with respect to debt and equities, while consumption and inflation exhibit a positive association with respect to the indebtedness of Portuguese Families. The other variables, such as the savings and unemployment, had also a model result opposite to the expected result.

It is important to note that increasing debt is a hot topic, this is due to the phase of crisis that Portugal, and other developed economies, are going through, so it continues to be important to develop studies on it such as to research other possible effects on the economy caused by indebtedness by other than households, such as by corporations, and the financial sector.

REFERENCES

Banco Central Europeu / European Central Bank. Data and information available at http://www.ecb.europa.eu/ecb/html/index.pt.html

Banco de Portugal / Portugal Central Bank. BP stat. Disponível em http://www.bportugal.pt/pt-PT/Paginas/inicio.aspx.

Bird E., Hagstrom P., and Wild R., (1997). *Credit Cards and the Poor*. Institute on Poverty.

Boddington L., e Kemp S., (1999). *Student debt, attitudes towards debt, impulsive buying, and financial management.* University of Canterbury.

Braucher J., (2006). *Theories of Overindebtedness: Interaction of Structure and Culture.* Discussion Paper No. 06-04 *Arizona Legal Studies.*

Cameron S., and Golby D., (1990). *Na economic analisis of personal bebt*. Bulletin of economic Research.

Canner G., and Luckett A., (1991). *Payment of household Debts.* Board's Division of Research and statistic.

Chien Y., and Devaney S., (2001). *The effects of credit attitude and socioeconomic factors on credit card and installment debt*. The journal of consumer affairs.

Davies E., and Lea S., (1995). *Student attitudes to student debt.* Journal of Economic Psychology

Eurostat (2013). Available at http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home

Farinha L., (2007). *O endividamento das Famílias Portuguesas: evidência recente com base nos resultados do ipef 2006-2007.* Financial stability report. Banco de Portugal.

Farinha L., and Costa S., (2012). *O endividamento das famílias: uma análise microeconómica com base nos resultados do inquérito à situação financeira das famílias*. Financial stability report. Banco de Portugal.

Farinha L., and Noorali S., (2004). *Endividamento e riqueza das Famílias Portuguesas.* Financial stability report. Banco de Portugal.

Frade C., (2003). *Desemprego e sobreendividamento dos consumidores: contornos de uma ligação perigosa*. Research project. Centre for Social Studies of the Faculty of Economics of the University of Coimbra.

Frade C., (2008). *Um perfil dos sobreendividados em Portugal*. Research project. Centre for Social Studies of the Faculty of Economics of the University of Coimbra.

Friedman M., (1957). *Theory of the Consumption Function.* Princeton University Press.

Godwin D., (1998). *Household Debt Quintiles: Explaining Changes 1983-1989*. The Journal of Consumer Affairs.

INE. National Accounts. Available at http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine cnacionais.

Kinsey J., (1981). *Determinants of credit card accounts an application of tobit analysis.* Journal of consumer research.

Lea S., Webley P., and Levine R., (1993). *The economic psychology of consumer debt.* Journal of Economic Psychology.

Lea S., Webley P., and Walker C., (1995). Psychological factors in consumer debt: Money management, economic socialization, and credit use. *University of Exeter, Department of Psychology.*

Modigliani F., and Brumberg R., (1954). *Utility analysis and the consumption function: na interpretation of cross-section data.* Post keynesian Economics.

OCR Macro (2001). *Study of the problem of Consumer Indebtedness: Statistical Aspects.* United Kingdom.

OEC (2002). *Endividamento e sobre-endividamento das famílias conceitos e estatísticas para a sua avaliação.* Centre for Social Studies of the Faculty of Economics of the University of Coimbra.

Pordata, 2013 Base de Dados Portugal Contemporâneo –Francisco Manuel dos Santos fountheon - Available at http://www.pordata.pt.

Raaij W., and Gianotten H., (1990). C*onsumer confidence, expenditure, saving, and credit.* Journal of Economic Psychology

Reinhart C., e Rogoff K., (2010). Growth in a Time of Debt. *American Economic Review*

Rotter J., (1966). *Generalized expectancies for internal versus external control of reinforcement.* Psychological Monographs: general and applied.

Solomon M., Bamossy G., and Askegaard S., (2002). *Consumer Behaviour A European Perspective.* Pearson Education Limited.

Webley P., and Nyhus E., (2001). *Life-cycle and dispositional routes into problem debt.* British Journal of Psychology.

Westphal C., and Rother P., (2012). The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area. European Economic Review.

Worthington A., (2006). *Debt as a source of financial stress in Australian Households.* University of Wollongong.