



The Role of the Public Sector in the Decline of the European Middle Class: The Spanish Case

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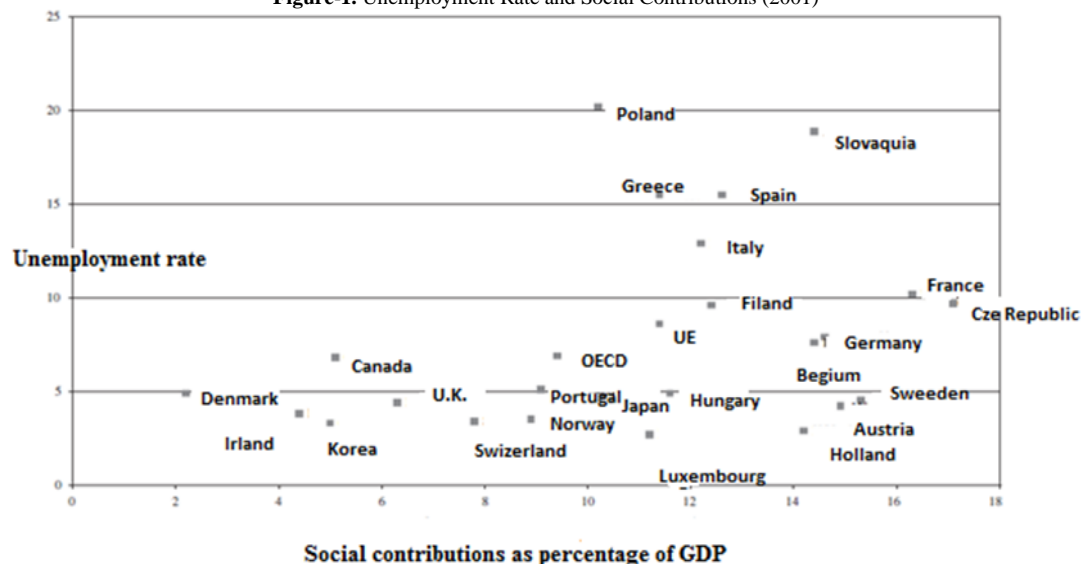
Abstract: In the years following to the financial crisis of 2008, middle class has been particularly affected by the tax burden exerted in all societies. Besides, the pressures of indirect taxes, particularly reverting on people with lower incomes, and taxes that assess the income earnings of citizens. Currently, it is necessary to make reference to the fiscal gap triggered by the difference between what the employee really supports and the cost that his or her salary represents for his payer. This fiscal gap is particularly large in Mediterranean countries, where the difference between the net salaries charged by employees is far from the actual cost (gross pay) for the employer. The experience demonstrates a direct relationship between high fiscal gaps and high unemployment rates. A different issue is how to get a redistributive effect, if this gap decreases. Furthermore, taxation is not unaware to population policies, and a decrease in fertility rates to a medium term causes societies to have a smaller workforce, which harms the redistributive levels. Therefore, this article intends to analyze whether the States require from a fiscal system to raise tax rates, in order to allow efficient policies in favor of the family.

Keywords: Income taxes; Middle classes fiscal gap; Fiscal burden on labor income.

1. Labor Income Taxation, Fiscal Gap and Unemployment

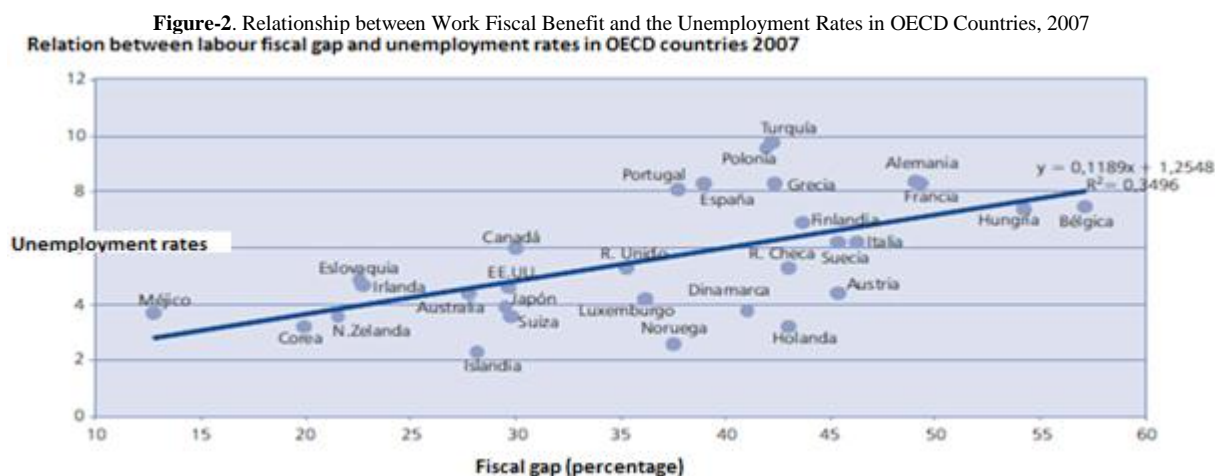
The existence of an excessive tax wedge is interpreted by some writers as the cause of high unemployment rates. There are studies regarding the role of social security contributions in Spain, like those of Fernández (1995), Polo and Sancho (1996) and Bajo and Gómez (1995) analyze this issue within a general equilibrium framework. Polo and Sancho (1996) use a framework of perfect competition and some degree of wage flexibility; while Bajo and Gómez (1995) specifically studied the tax reform of 1995, a competitive and a non-competitive environment, and with the same type of labor market Polo and Sancho (1996). Bajo and Gómez (1995) focus on the effects of social contributions on unskilled workers. Gómez (2007). In case of Spain, unemployment levels are very high, both in absolute terms and in comparison with neighboring countries. Some authors attribute this to the employment tax gap, that exists in our country (Gómez, 2007).

Figure-1. Unemployment Rate and Social Contributions (2001)



Source: Gómez (2007) data from OECD (2003)

The foregoing analysis shows that for the year in reference there is a direct and positive relationship between high unemployment levels and a high fiscal gap (Doménech and Taguas, 1997). But if this analysis¹ is carried out with data of 2007, the trend is confirmed with a higher correlation index, reassuring the issue reinforced by the authors, which confirms the direct relationship between high unemployment rates and a high fiscal gap over labor earnings as shown in the next figure.



Source: Tanzi (2010) data from OECD (2008)

Besides the possible negative effects upon the labor market, the fiscal gap implies a decrease in the workers ability to pay². In Spain the percentual structure of the taxable base of the Personal Income Tax indicates that the majority of the income sources come from labor income, specifically for 2008 the labor income accounted for 78.8% of the taxable base and in 2009 and 80.5%, which represents an increase of 1.7 points, as an example of the importance of this type of income on individuals³ statement.

2. The Spanish Case: Micro Simulation Exercise on the Assessment of Labor Income Perceived According to Family Size. Year 2012

Incomes earned by individuals in OECD countries are taxed differently by each of the fiscal structures. However, within the components of taxable income, labor incomes are widely perceived by Western individuals, since they constitute approximately 90% of the total amount of the tax bases declared.

In addition, the fiscal gap thereof may diminish the economic capacity of citizens and families, since, although social contributions act as an automatic stabilizer, useful for the orchestration of the economic policy, they can cause a substantial modification in the economic capacity of the citizens, as instrumented.

In an effort to compare the accessible income of the various citizens of many other countries, hereafter is analyzed the existing fiscal gap in labor income earned by Spaniards, to subsequently compare this situation with the life style of those citizens of countries with a demographic behavior which is likely to motherhood. Four scenarios are presented for all cases, corresponding to as many different family situations possible, consistent with the different family circumstances.

2.1. The Study of the Case: Spain

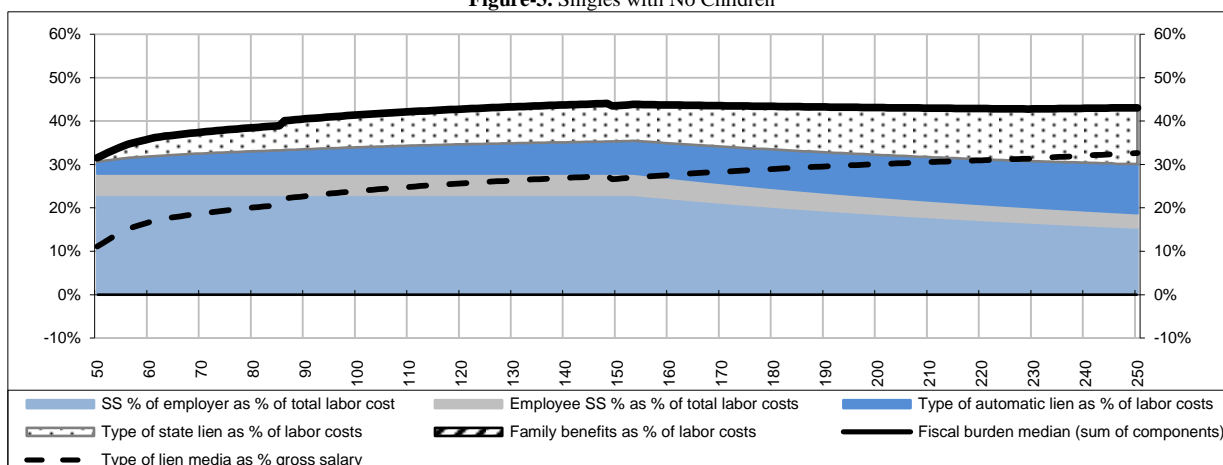
OECD (2012) allows the following simulation exercises, where the tax gap supported by the labor income is compared among the different countries with regard to what it is considered an average wage, varying the personal and family circumstances of the tax payers.

¹ For further analysis of the empirical literature referred on the relationship between tax wedge and unemployment see Melguizo (2007). *Una Panorámica De La Literatura Empírica. Documentos de Trabajo del Instituto de Estudios Fiscales*, (27/07): 1-70.

² For a deeper study of the subject and the possibility of replacing the VAT rather than social security contributions see: León Benelbas et al., "Efectos sobre la Demanda de Empleo de la Sustitución de Cuotas Empresariales a la Seguridad Social por IVA". *Información Comercial Española*, n°. 647: 7-23.

³ According to data from the State Agency of the Tax Administration extracted from the records of 2010, in 2008 the capital income represented 8.3% of the taxable bases, in 2009; the percentage was of 8.4%. The incomes from economic activities represented 6.9% in 2008 and 6.1% in 2009. The imputations of income coming from the imputation regime (scheme) 1.2% in 2008 and 1.1% in 2009, other imputed rents 0.6% in 2008 and 0.6% in 2009. The patrimonial profits and losses represented 4.2% in 2008 and 3.2% in 2009 of the declared taxable bases.

Figure-3. Singles with No Children

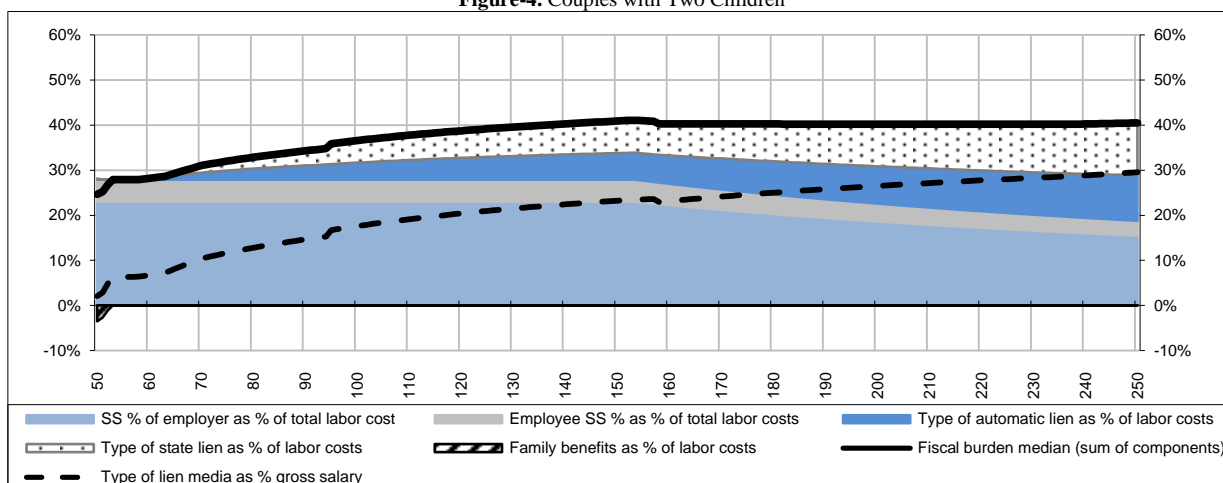


Source: OECD (2012)

In Spain the tax pressure upon labor income in 2012 was situated as an average in 41.4 %, while the average in the OECD countries was of 35.6 %, however the situation varies according to the personal or family situation of the individuals. For a single person the average of tax burden increased 2.8 percent, thus, passing the tax burden from 38.6% in 2000, to 41.4% in 2012. There was an increase between 2009 and 2012 of 3.1 percent.

Compared to average figures from OECD a decrease of 1.1 percent was observed, passing from 36.7% in 2000 to 35.6% in 2012, whereas in 2009 and 2012 it increased 0.6 percent.

Figure-4. Couples with Two Children

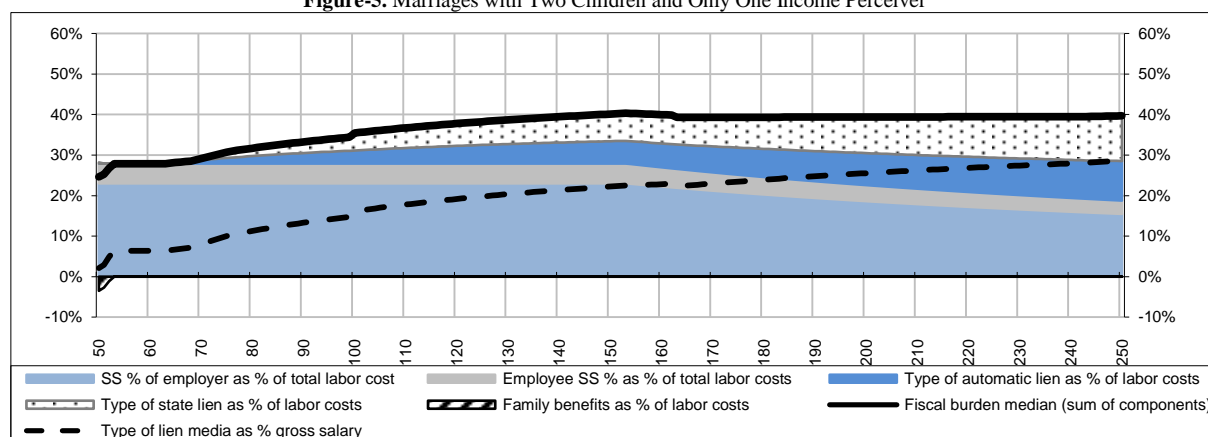


Source: OECD (2012)

If taken into consideration the reality of a couple with two children, the tax burden increased in 3.1 percent, passing from 32.3% in 2000 to 35.4% in 2012. There was an increase of 3 percent between 2009 and 2012.

The OECD media the tax burden decreased in 1.6 percent, going from 27.7% in 2000 to 26.1% in 2012, denoting an increase of 1.1 percent between 2009 and 2012.

Figure-5. Marriages with Two Children and Only One Income Perceiver



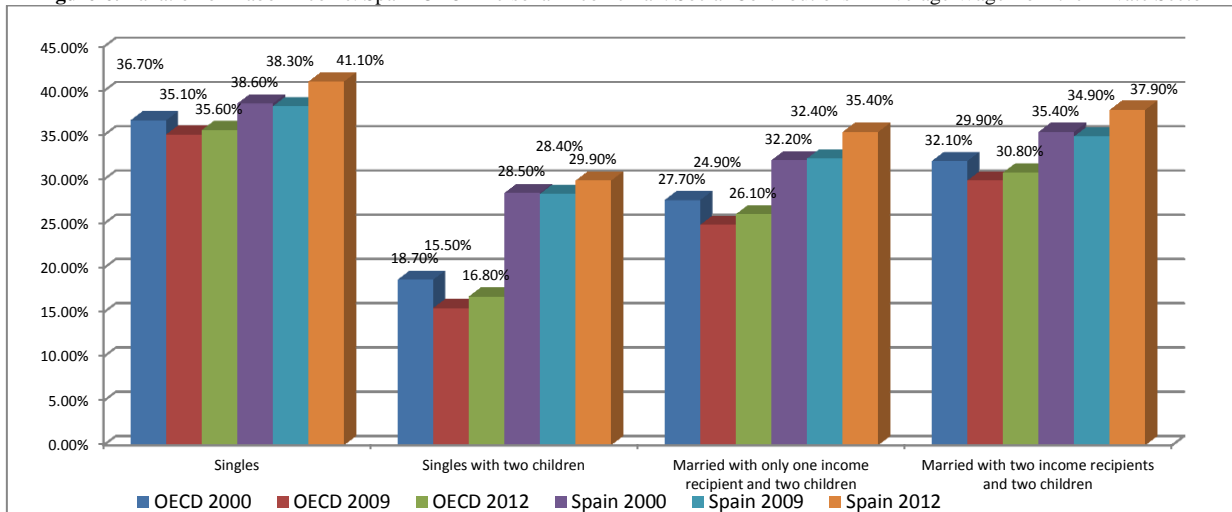
Source: OECD (2012)

The differences on the fiscal pressure exerted on taxed incomes in Income Tax, and upon the fiscal gap in labor incomes, specifically pose situations in which the real purchasing power of citizens varies significantly from one country to other.

3. Compared Fiscal Gap Consistent with Family Situation in Different Countries

This section presents the comparison between fertility rates and tax revenues from labor income, considering only, that which refers to the type of lien that falls on taxes. Currently considering all coercive revenue taxed on wages and salaries of Spaniards that highlights the existing tax wedge of labor income assessed. Thus, in addition to considering the types of State and Regional taxes, Social Security accrued contributions are included, supported by both the employee and the employer. Thus we can estimate the average tax rate on labor costs borne by different labor income earners according to their personal and family circumstances. The following simulation analysis featured by the OECD show the different fiscal treatment granted to the labor incomes perceived by the citizens in four different settings.

Figure-6. Taxation on Labor Income. Spain-OECD Personal Income Tax. Social Contributions in Average Wage from the Private Sector

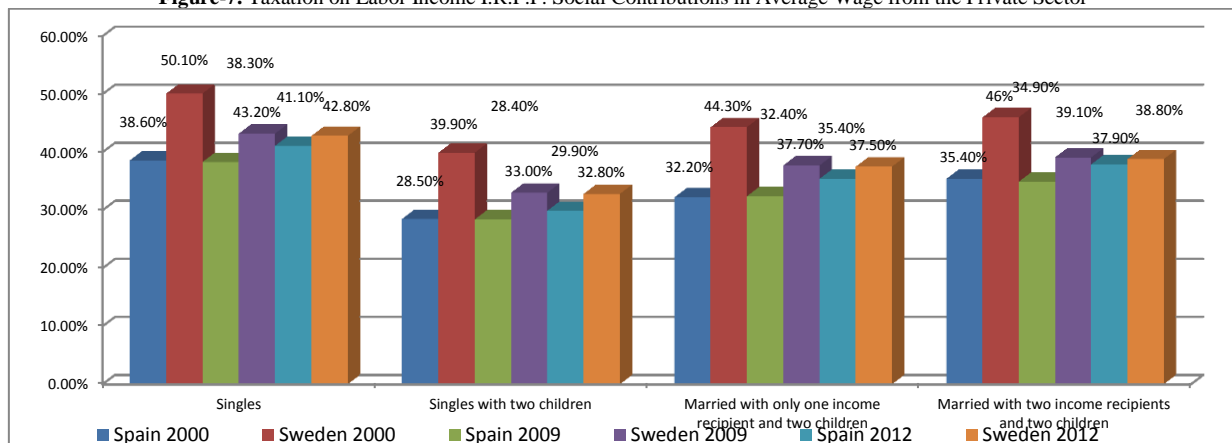


Source: elaboration by author, data from OECD (2012)

Analyzing the fiscal pressure supported by marriages with two children, it is observed that in all analyzed years the Spanish fiscal pressure is higher to the average supported by the OECD countries, specifically in the year 2000 it exceeded 3.3 points, in 2009 the Spanish pressure exceeded the occidental average in 5 points and has reached its peak in 2012, year in which the difference between the average pressure supported by the people of the countries within the environment of de OECD is 7.1 points lower than the supported by the Spaniards.

As follows is a simulation exercise which compares the fiscal gaps of the countries with better demographic behavior with respect to Spain. This intends to analyze if the uneven incorporation by women to the employment market in the analyzed economies has something to do or not, with the available income that is left to the citizens after having supported the fiscal burdens arising from the taxation in IRPF such as the corresponding contributions to the Social Security.

Figure-7. Taxation on Labor Income I.R.P.F. Social Contributions in Average Wage from the Private Sector



Source: elaboration by author, data from OECD Better policies for better lives. Tax policies

As shown in the graphic above, the employment gap, derived from a high social cost is higher in Sweden than in Spain in all of the cases, both for singles without children as for those who have two children, as well as for married couples in the two analyzed assumptions.

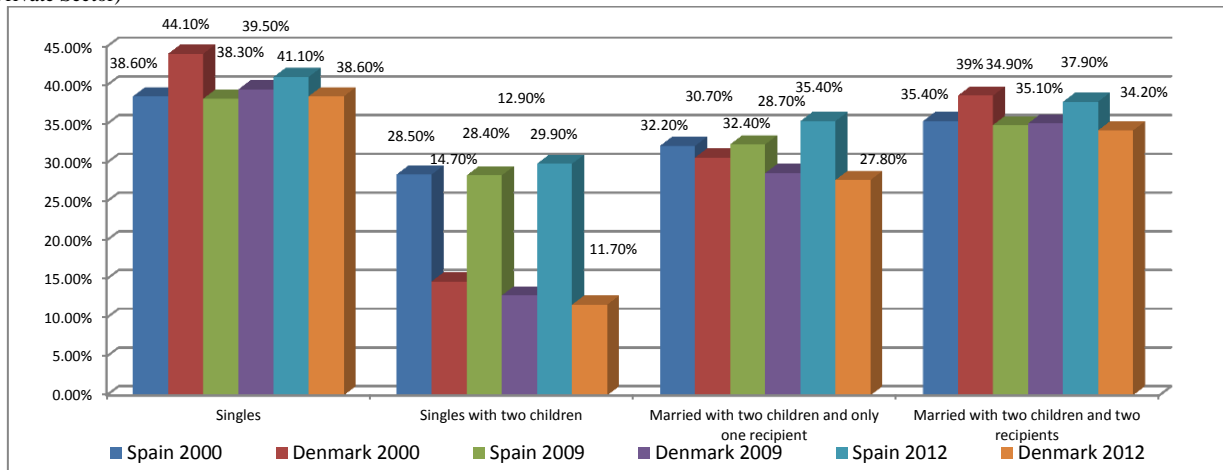
Whereas, in Sweden it is shown a decrease in the fiscal gap in which married couples have two children and both parents are income receivers, it is the reality that in 2012 the Spanish fiscal gap approached the most to the Swedish.

Notwithstanding, as it was shown in the previous chapters, the Swedish demographic reality guarantees the generational replacement in all of the studied years while in Spain the cyclical indicator of fertility, as an average in the last ten years do not exceed 1.5 children per woman for which the decline in the compared purchasing power arising from the higher taxation of the labor incomes seems not to adversely affect the Swedish fertility.

On the other hand, while in the Scandinavian country the employment access rates by women do not constitute an obstacle for motherhood in Spain both situations are shown as irreconcilable realities, as indicated in chapter one. The Swedish employment market show symptoms of a greater degree of flexibility that makes compatible motherhood and the reincorporation to the employment world after a temporary absence to take care of their family needs, for which the Swedish family composition is substantially different to the Spanish.

In third term, the family benefits in Sweden, are broader than in Spain, as analyzed in the previous section. Consequently there are no justifying reasons, from the stand point of family public policies so that the Swedish employment tax gap approaches to the Spanish, as indicated by the data of 2012. This increase in labor costs in Spain without an improvement in the family support will not result in an improvement of the situation of Spanish working mothers.

Figure-8. Taxation of Labor Income. Comparative Spain-Denmark (Personal Income Tax and Social Contributions in Average Wage from Private Sector)



Source: elaboration by author, data from OECD (2012)

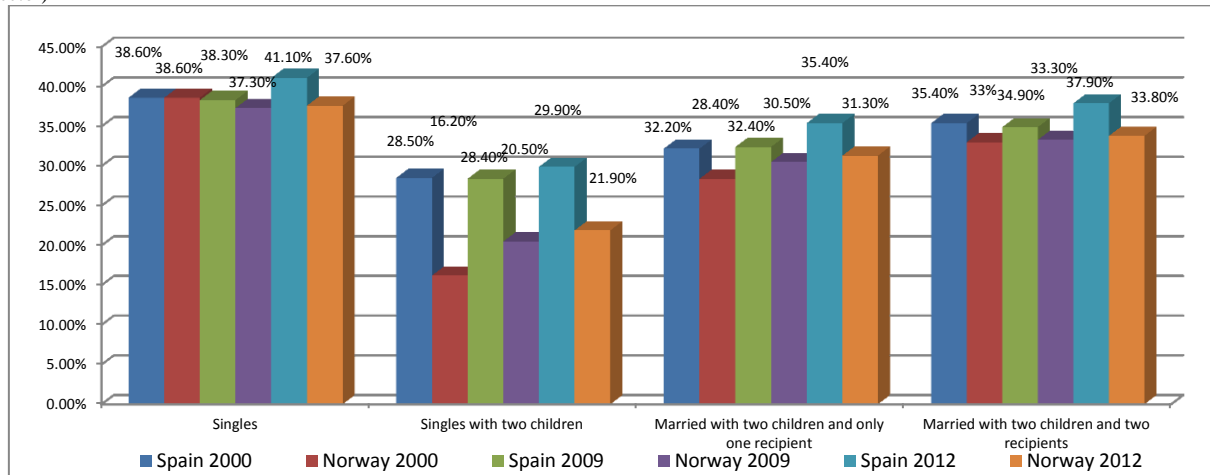
Denmark is an example of a society where a most favorable treatment is granted to single parent households with dependent children than those led by two parents, whether only one is the receiver of income or those in which the income is received by both spouses. It was previously reiterated that the circumstances of single parenthood entail a higher risk of falling into the threshold of poverty and in Denmark this reality is taken in special consideration.

The difference between Danish labor and demographic situation is similar to the one analyzed for Sweden. Nevertheless, in Spain at the beginning of the millennium the taxation for singles was lower than the Danish and the progressive decrease of the fiscal gap in the Scandinavian country and the progressive increase in Spain has prompted that in Spain in 2012 the fiscal gap for singles is situated in 41%, while Denmark taxes the labor incomes in 38.6%.

Singles with children, in Denmark in all the cases support less tax in any of the three years analyzed; similar to married persons with children, which difference in 2012 was of 7.6 points.

Married couples with children supported a higher taxation in Denmark the first reference year, while in 2012 the Danish situation is more advantageous than the one in Spain 3.7 percentage points.

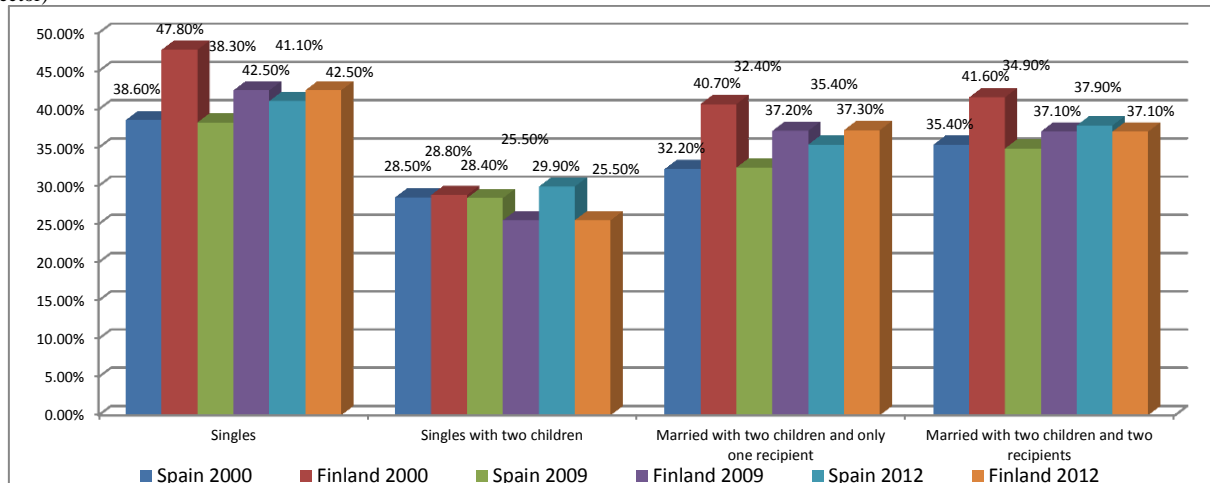
Figure-9. Taxation on Labor Income. Comparative Spain-Norway (Personal Income Tax. Social Contributions in Average Salary from Private Sector)



Source: elaborated by author, data from OECD (2012)

Norway shows a situation very similar to Spain in the taxation of the labor incomes to single individuals without children, even though in 2012 the fiscal gap of Norway was of 3.5 percentage points lower than Spain. Nevertheless, in Spain the fiscal treatment to singles with children is significantly less advantageous than in Norway. Finally the taxation on the income received by married individuals in any of the three reference years is higher in Spain than in the Nordic country.

Figure-10. Taxation on Labor Income. Comparative Spain-Finland (Personal Income Tax. Social Contributions in Average Salary of the Private Sector)

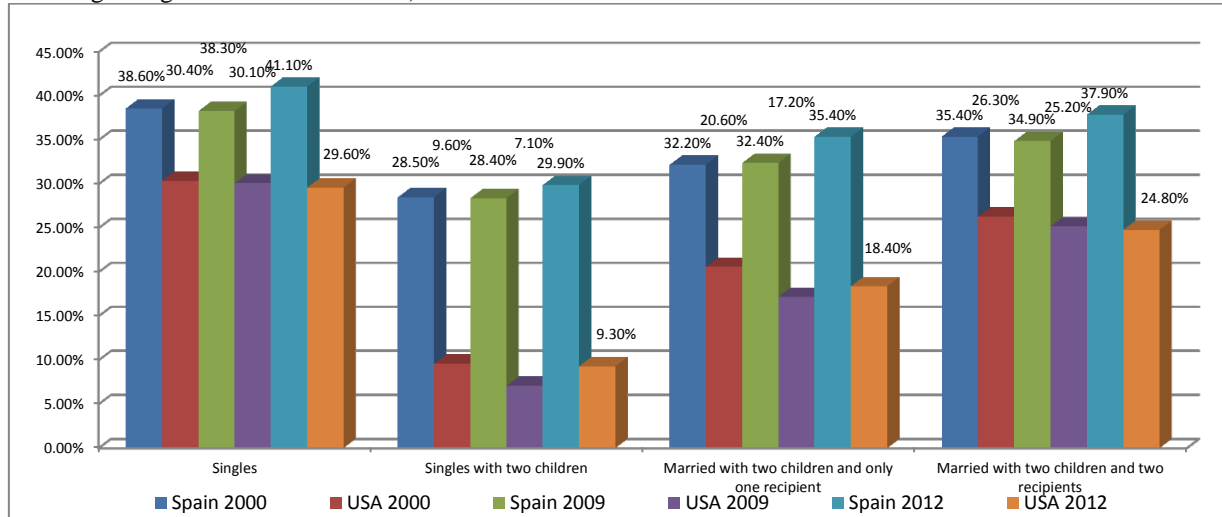


Source: elaborated by author, data from OECD (2012)

In Finland the taxation of labor income is higher in every referred year among single individuals without children. Nevertheless, among singles with two children the fiscal gap over the labor income is lower in Finland than in Spain, since year 2009. Finland meanwhile, penalizes the situation of marriages with two dependent children if only one of the spouses receives income, in comparison with the Spanish situation, in each of the three referenced years. However, the situation of marriages with two children in Finland was more burdensome than in Spain in 2000 and 2009, however, the increase in the Spanish fiscal gap in 2012 has prompted that the fiscal gap between the income received in Spain and in Finland be away 0.8 points with regards to the Spanish incomes.

This second block analyzes the fiscal gaps of countries in which the demographic behavior and the fiscal pressure is high, as seen in previous pages, is not as high as in Scandinavian societies, this is the case of: United States, United Kingdom, France and New Zealand.

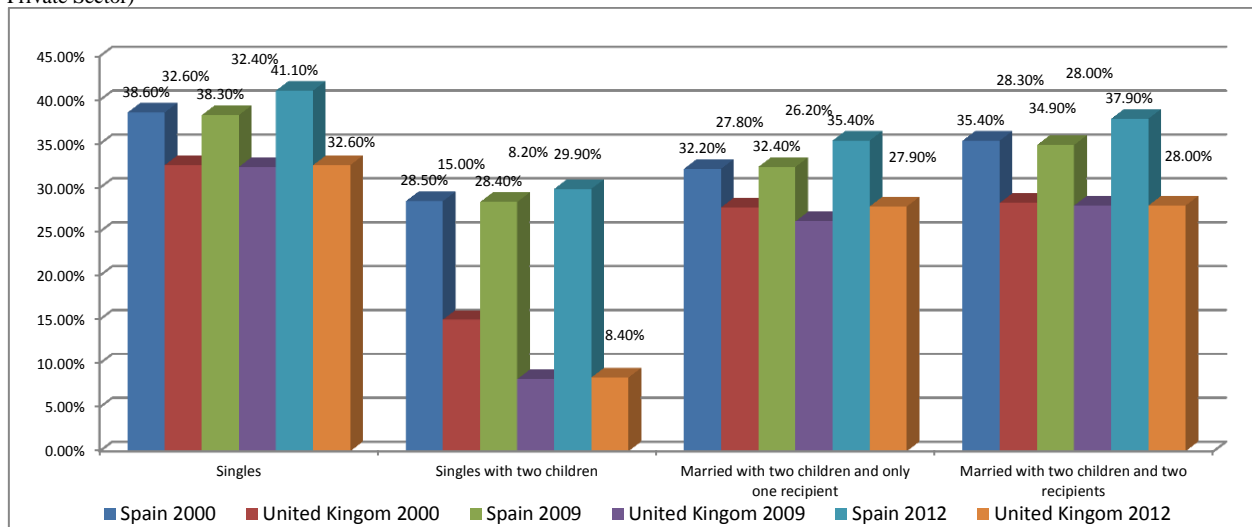
Figure-11. Taxation on Labor Income. Comparative Spain-United States(Personal Income Tax Social Market Rates on Average Wage in the Private Sector)



Source: elaborated by author, data from [OECD \(2012\)](#)

The US shows a significantly lower taxation over labor income than Spain in the four scenarios proposed, being especially favorable the taxation over incomes perceived by single individuals with two children still under care. In the US the fiscal gap in 2012 for a tax payer supposes a lien of 9.3%, for married couples with children still under care and for singles, only one income perceiver, 18.4%; and for marriages with two income perceivers the lien is of 24.8%. Consequently, this situation demonstrates that the highest lien is supported by singles without children. Though, the fiscal gap in the United States is of 29.6% and in Spain is of 4.1%.

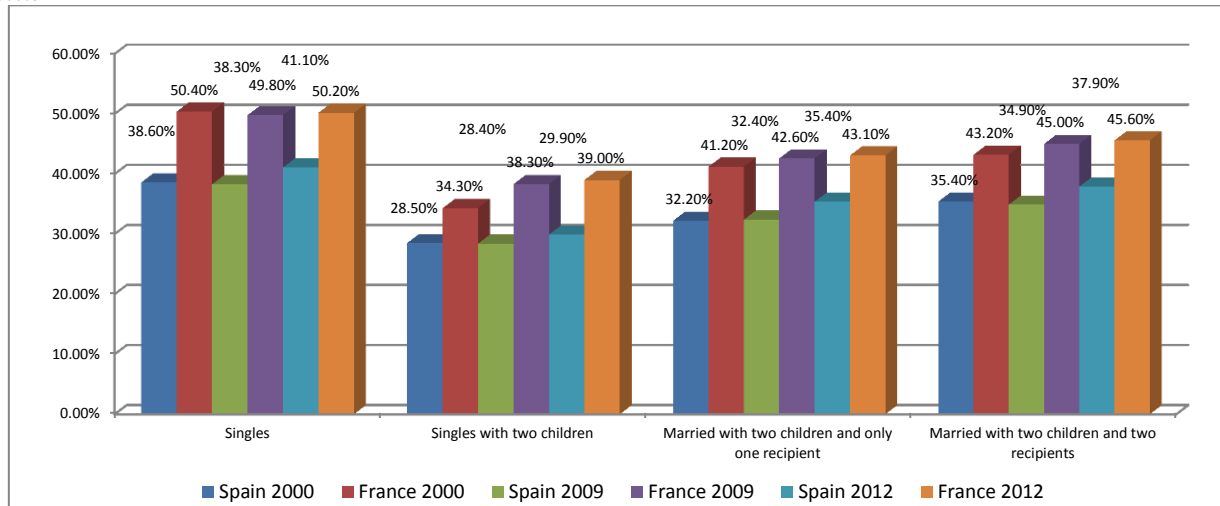
Figure-12. Taxation on Labor Income. Comparative Spain-United Kingdom (Personal Income Tax. Social Market Rates on Average Wage in the Private Sector)



Source: elaborated by author, data from [OECD \(2012\)](#)

The lien on labor income in the United Kingdom is lower than in Spain, in all the analyzed cases. Particularly significant is the treatment given to singles with children still under care.

Figure-13. Taxation on Labor Income. Comparative Spain-France (Personal Income Tax. Social Market Rates on Average Wage in the Private Sector



Source: elaborated by author, data from OECD (2012)

In France the lien on labor income is significantly higher than in Spain, in the four reference scenarios and in all years analyzed.

4. The Taxation of the Labor Income and Its Relation to Family Size

The need to implement a reform aimed at Income Tax for Natural Individuals in Spain, with the purpose of adapting the lien to the economic capacity of the citizens is unanimously demanded from most sectors of society. But it is necessary that the reform takes into account the special circumstances in which the Spanish families currently are, and correct the errors and the fiscal imbalances, at the moment of comparing the Spanish situation to the existing reality in other OECD countries.

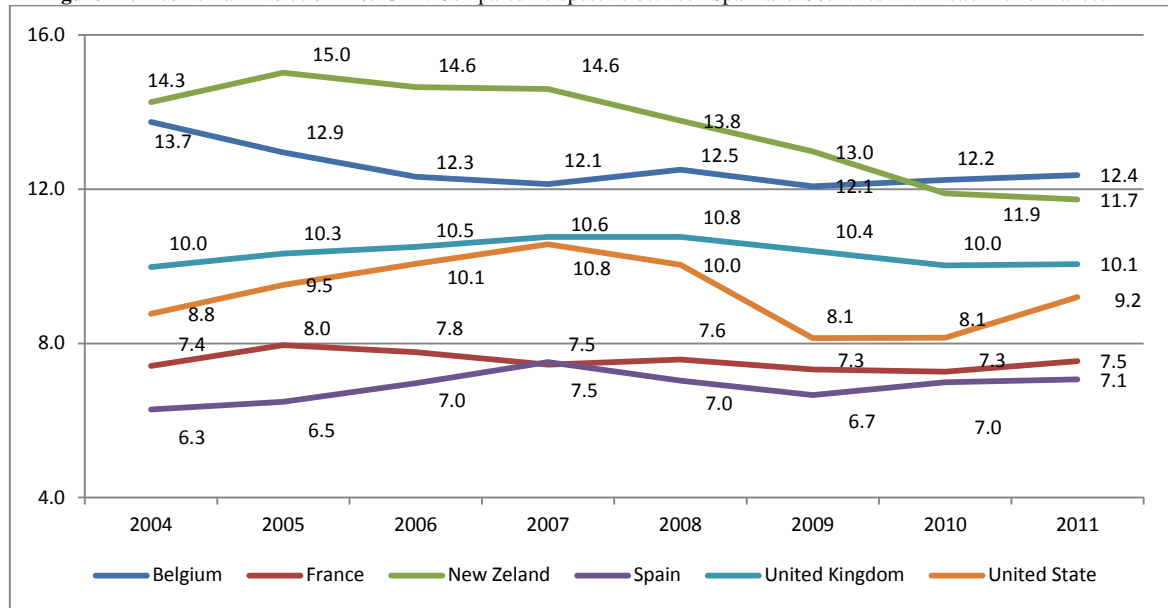
Therefore, over the next few pages, will be discussed the different forms for labor income taxation, as well as the fiscal pressure supported by the economies in reference. All of this, with the aim of comparing the different tax burdens versus the achieved family benefits, and allowing issuing a judgment on whether spending and tax burden redound or not, in an improvement of the fertility rates in the referred countries.

The reason why the tax gap resulting from the taxation of income is considered a variable is dual. First, because the taxation of labor income represents the most significant amount of the total revenue collected from individuals in the form of tax on their income, at around 90% in some cases. The second reason is that the difference between gross and net wages can lead to money impression in people, so that their actual economic activity on which to make their purchases of goods and services, and even investments, is far from actual economic capacity.

5. Income Tax on Natural Individuals *versus* Public Spending in Families

5.1. Outcomes on Fertility Rates

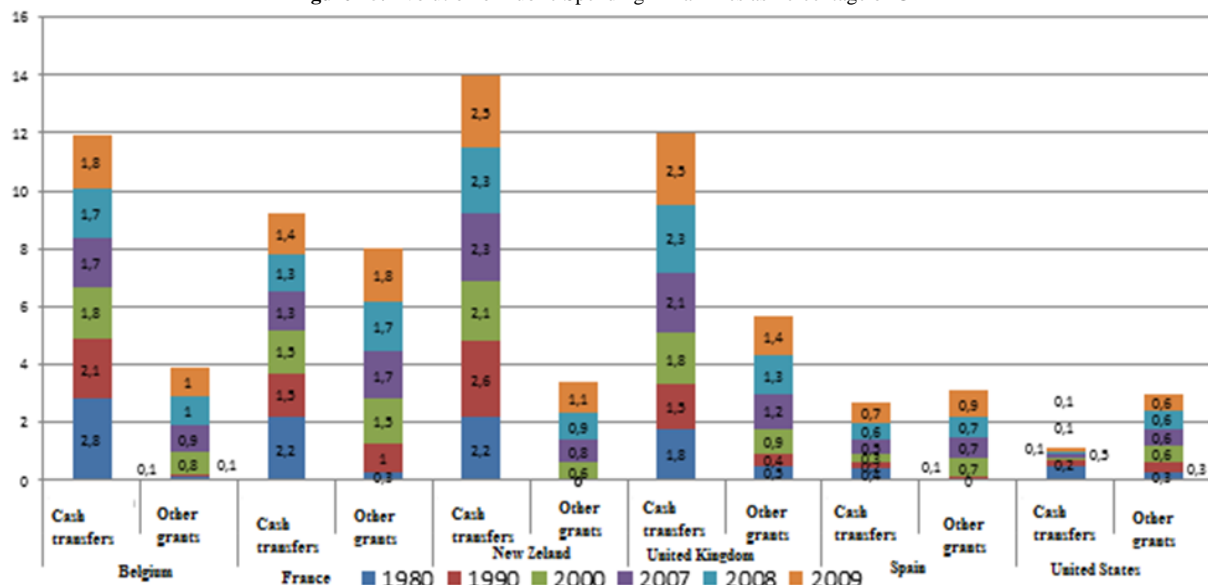
The analysis of the tax burden from a temporal perspective, in particular between 2004 and 2011 allows deducing conclusive results for each of the analyzed countries. In one first group the Spanish situation is compared with the reality of Belgium, France, New Zealand, United Kingdom and United States. Following the analysis of the fiscal burden in each of them with respect to income taxes, levels of public spending reached on family policies, as well as their impact on fertility rates observed in the referred countries in 2011. Having examined the fiscal situation, from the point of view of income and expenditure and its impact on birth rates, the same analysis is reproduced in Scandinavian countries.

Figure-14. Income Tax Evolution in % GDP. Compared Perspective between Spain and Countries with Better Performances

Source: by author with data from OECD (2009)

Among the referred years, one can observe a variation in the tax burden derived from income taxes with a very similar trend in France and the UK, where the collection of income tax in terms of GDP during the years in reference has increased one tenth. Note that Belgium and New Zealand evidenced a fall in the tax burden, whereas in US the revealed increase was four tenths. Finally, Spain is experiencing the greatest increase, going from 6.3 to 7.1.

The information gathered in the graph below, intends to determine whether or not there is a relationship between the raise in the tax burden and the expense devoted to the family.

Figure-15. Evolution of Public Spending in Families as Percentage of GDP

Source: elaboration by author based on OECD (2010)

Belgium shows a significant decrease in government spending in family since 1980, however, it remained steady since 2004, despite a reduction in the tax burden on earned income, allowing Belgians to benefit from a greater purchasing power.

France experienced a significant decline in monetary transfers since 1980, although it was accompanied by an increase in other types of family benefits that offset this decline, while the fiscal burden on labor income remained stable between 2004 and 2011.

New Zealand is an example in making possible a reduction in the tax burden and an increase in family tax expenditures, since both cash transfers, which augmented until 1990 to soon after decrease until the beginning of the millennium but that later on followed an upward trend, as well as aid derived from other type of benefits which upward trend has been constant since 2000.

The United Kingdom, with an almost stable tax burden between 2004 and 2011 has followed an increasing trend in monetary benefits given to families as of 2000; and since 1980 have not stop increasing other family benefits.

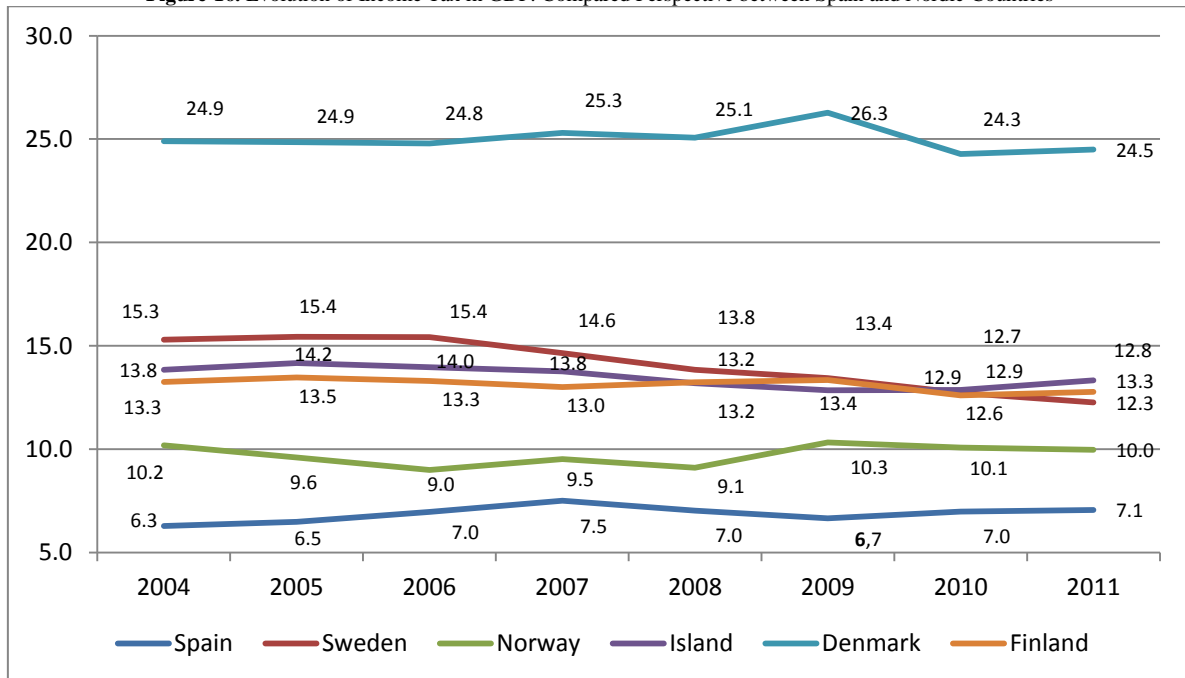
In Spain the monetary aid decreased significantly between 1980 and 1990 and then followed an upward trend, although far from those offered in the referred countries. Regarding other family benefits, nonexistent at the beginning of the analysis period have followed a growing tendency, although, again, far from the referred aids in the surrounding countries.

Finally, the tax burden in the US fluctuated slightly between 2004 and 2007, date from which it dropped until the year 2010. During this interval of time the cash transfers decreased significantly in favor of other family benefits.

As it can be determined, among the analyzed countries, Spain maintains a cyclical indicator of fertility significantly lower than the rest of the countries, and lower than the OECD media, consistent with levels of household spending.

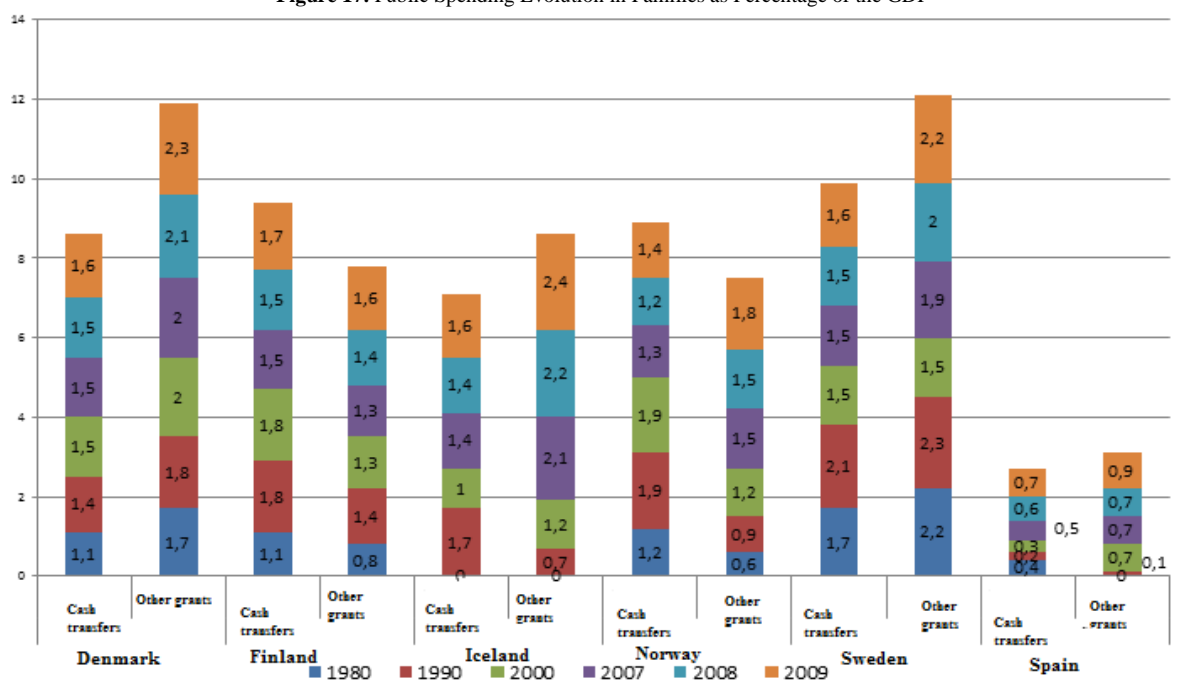
The second comparison is between Spain and the group of Scandinavian countries that have a better demographic performance.

Figure-16. Evolution of Income Tax in GDP. Compared Perspective between Spain and Nordic Countries



Source: elaboration by author based on OECD (2010)

Figure 17. Public Spending Evolution in Families as Percentage of the GDP



Source: elaborated by author, based on OECD (2010)

The fiscal pressure exerted on employment earnings in Denmark is particularly high, approximately 25% in all analyzed years, similar to Finland that also supports a pressure close to 13%. Sweden experienced an increase until 2007 and since this year began to decrease.

Something similar happens in Iceland, which pressure fluctuates around 13% all of the years in reference and from 2009 began to fall. Norway reduced its tax burden on labor income up to year 2008 and then began to rise. The Spanish situation is far from the fiscal pressure over labor income earned by the citizens of the Scandinavian countries.

The northern European countries follow a very similar trend as far as monetary aids are concerned, since all of them increased during 1980, 1990 and 2000, to decline later on, as of 2007. With respect to other family benefits they all followed a similar trend; they rose or remained stable between 1980 and 2000, like in the case of Norway, and remained stable in Denmark, in Norway and Sweden raised.

In none of them is possible to establish a causal relationship between the trend followed by the fiscal pressure and the family aids (benefits) offered, but it is confirmed that the total amount of family assistance follows a growing trend and in, very significant levels, if measured in terms of GDP, and in all cases the percentage of family benefits according to the GDP are far distant from the amounts granted in Spain.

5.2. Fertility Rates and Lien on Labor Income

Following the assessment of the lien on labor income supported in the different OECD countries during 2011, in an isolated manner, as this is the latest data that is available and is the year which indicates a trend in the route of economic recovery.

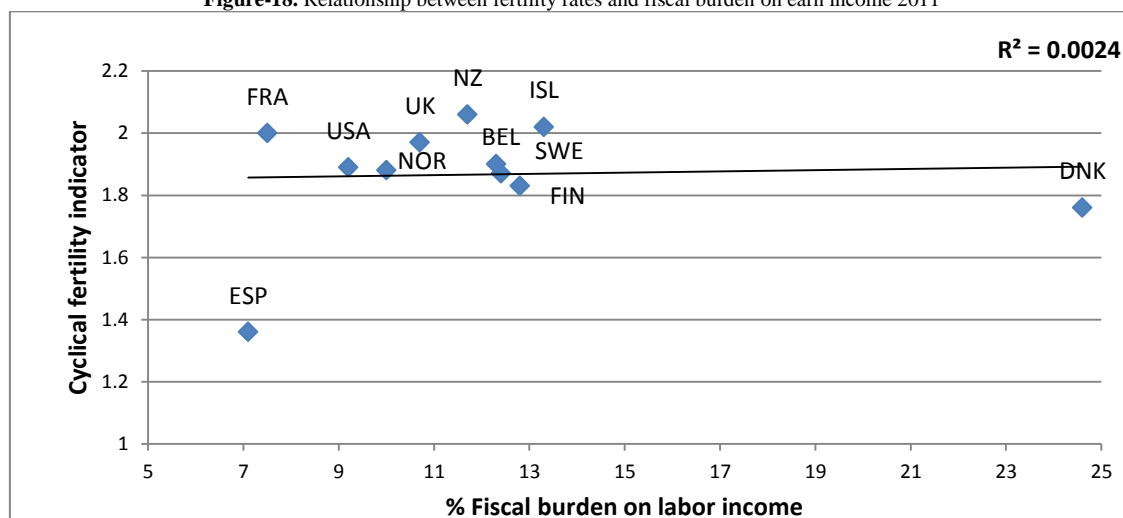
As observed, the highest levels of fiscal burden appear in those economies where higher family benefits are granted, as in the Scandinavian countries; Denmark, Finland, Iceland, Norway and Sweden. New Zealand, United Kingdom and United States are countries in which the taxation over labor income is also above the OECD average.

However, the revenue capacity in each country is very different, as is the tax burden derived from the various taxes on income in effect in 2011. The country that supports higher fiscal pressure is Denmark (24.5) and individuals who support the lower taxation are Czechs (2.5). The fiscal pressure for countries with better demographic performance the range varies from 7.5 in France to 13.3 in Iceland. Among this range also are; United States (9.2), Norway (10), United Kingdom (10.1), Sweden (12.3) and Finland (12.8).

The correlation between those variables: tax burden and fertility rates; indicate a very low level, as shown, not necessarily a high degree of tax collection should have a positive impact in the cyclical indicator of fertility. As an example of this behavior is enough to mention Denmark, with a tax burden of around 25% and a fertility rate of 1.76, the lowest of the countries selected as economies with good demographic behavior. In the opposite end Spain indicates that with low levels of fiscal pressure on labor income there are very low birth rates, although the available data does not allow drawing more conclusive results. The United States and France with fiscal pressures of 9.2 and 7.5 respectively, reveal that this situation is compatible with fertility rates of 1.89 and 2, respectively, being considered examples of societies where high birth rates are consistent with moderate tax rates.

For the rest of the Nordic countries the type of liens that apply to labor income show a pressure ranging between 10.1 in the UK and 13.3 in Iceland and a cyclical indicator of fertility of 1.83 in Finland and 2.02 in Iceland. Therefore, there cannot be concluded that countries where fertility exceeds or is close to replacement level are related to high levels fiscal pressure over labor income. If, in addition to the observational analysis, the results from a correlation study are provided, it can be demonstrated that the results do not vary significantly.

Figure-18. Relationship between fertility rates and fiscal burden on earn income 2011



Source: elaboration by author with data from (OECD, 2012)

The preceding pages made reference to the authors who defended the positive relationship between fertility and the accomplishment of certain income level, since, from a certain economic capacity, cyclical fertility rates began to

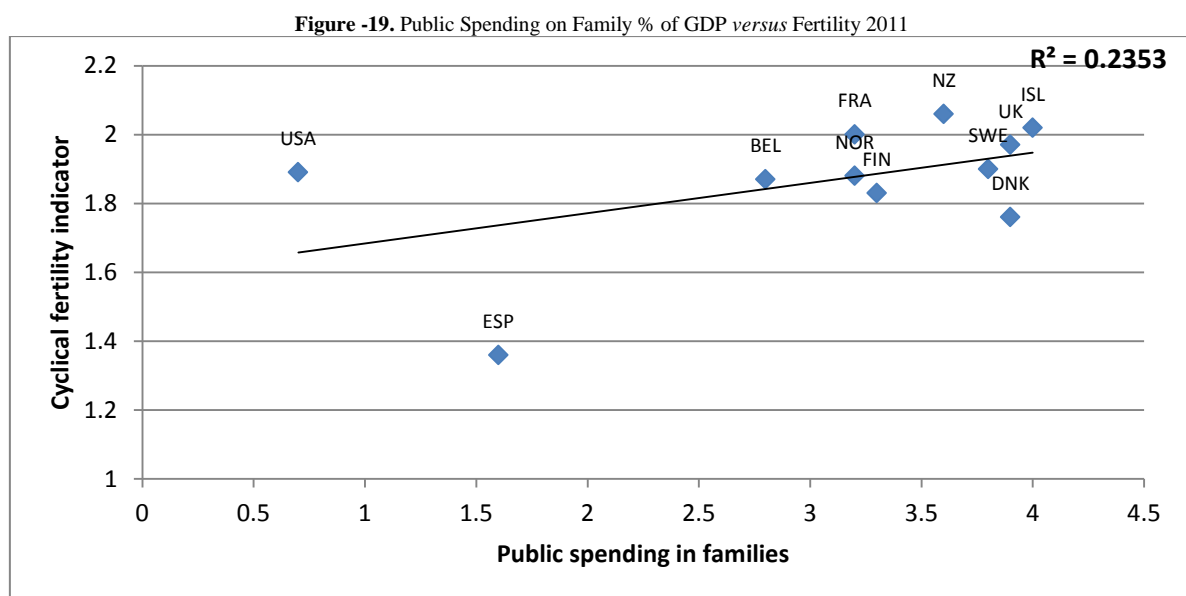
increase. The following analysis is carried out, in an effort to ascertain whether the fiscal pressure on labor earnings increased in OECD countries, and consequently increased the capacity to pay, thus, the cyclical indicator of fertility may also experience certain degree of development.

If trying to establishing a linear correlation between tax pressure on labor income and fertility rates, during 2011 in the countries concerned, notice that it is insignificant but positive. The data provided by this analysis do not allow establishing a relationship between an increase in the economic capacity and the growth in births, from a given level of income, as the result of income (R^2) is practically negligible. France is the example of a country where the cyclical indicator of fertility is high and compatible with an extremely moderate tax burden over wage income, while Denmark presents significant higher levels of fiscal pressure that the countries in reference and its birth rates are not especially high among the group of Nordic countries.

Finally, Spain reflects very low rates in both variables. In any case, based on the outcome of the correlation analysis, it must be said that still there is a relationship between those variables.

5.3. Fertility Rates and Public Spending on Family

After analyzing the relationship between fertility rates and tax revenues from earned income, and since the results are not conclusive in all the referred countries, in this section are brought in connection fertility rates with public spending on family in 2011, since this is the last year for which data is available.



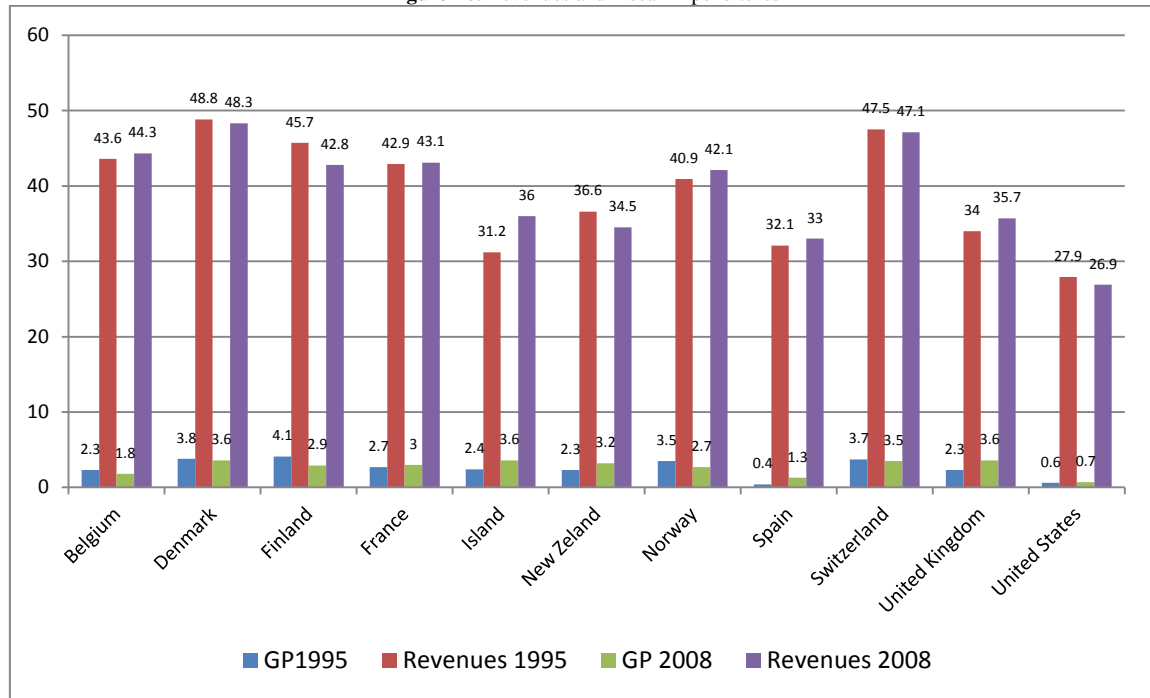
Source: elaboration by author with data from Stat [OECD \(2012\)](#)

The correlation index between public spending on family and fertility is positive and moderate, as shown by the positive trend followed by both variables, however, an extremely reduced part of the births grow can be explained by an increase in public spending, in average in the OECD. However, some countries spend large amounts of public spending on family policies and obtain positive results on the birth rates, as in the case of the UK, New Zealand and Iceland that devote a significant proportion of their budgets to family transfers, as previously mentioned; or, France, Denmark, Iceland and Sweden, countries where household spending is focused on other family benefits.

The relationship between public spending and birth rates is not so clear in the United States, as their fertility rates are close to replacement level and yet family public spending is actually below the level of Spanish public spending. Spain is, however, a paradoxical example because, although it has increased public spending on families in recent years, both in the form of cash transfers as well as in other type of family benefits, birth rates still do not stop decreasing among Spanish women.

5.4. Fiscal Pressure and Demographic Behavior

The countries analyzed as follows, show an increasing trend, between 1995 and 2008, as far as tax revenue is concern, Belgium, France, Iceland, Norway, UK, and also Spain. Tax revenues decreased during the referred years in the United States, New Zealand, Denmark, Finland and Sweden.

Figure-20. Revenues and Fiscal Expenditures

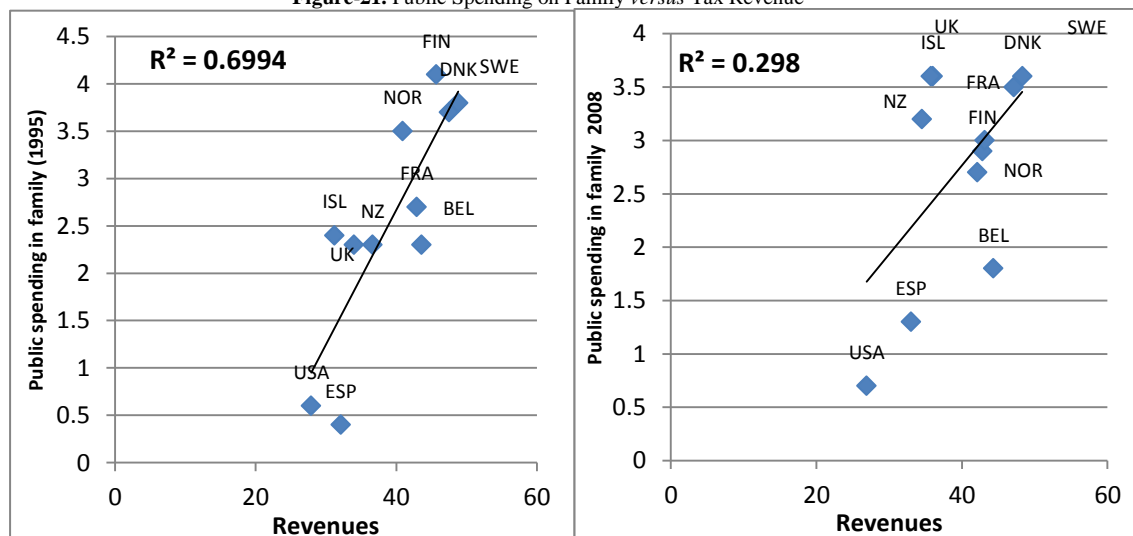
Source: elaboration by author, based on data of OECD (2012)

The levels of public spending on family carried out in France, Iceland and Spain, follow the same trend as the tax revenues, since in all of these countries the public spending on family increased, as well as the level of income. While in Denmark, Finland and Sweden decreased both tax revenue and the public spending on family.

The amounts invested in public spending on family also rose in New Zealand, and slightly in the US; while in Belgium, Britain and Norway, experienced a decline.

5.5. Tax Revenue and Public Spending on Family

In an effort to establish whether there is a relationship between public spending on family and tax revenue, a correlation analysis for the years 1995 and 2008 is carried out and through which it can be concluded that there is a positive and strong correlation between the two variables in the first analyzed year, thus, as the tax burden increases, so does the portion of the proceeds destined to public spending on family.

Figure-21. Public Spending on Family versus Tax Revenue

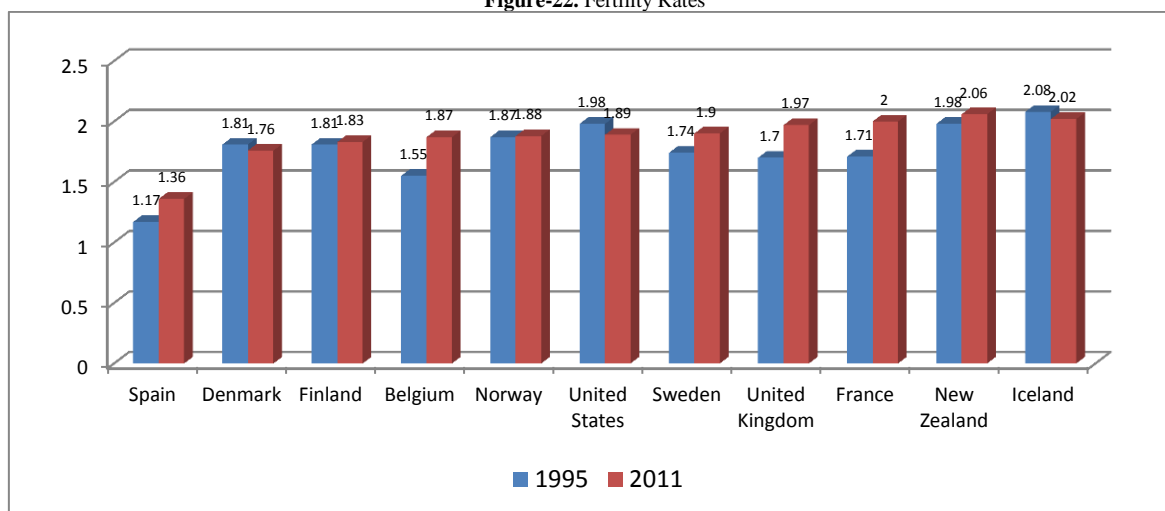
Source: elaboration by author with data of OECD (2009)

In 1995 part of the public spending on families was explained due to an increase in tax revenues. However, if the above analysis is reproduced thirteen years later, the results are not as conclusive, because R^2 is a figure much lower than the figure for 1995. It can be said that this year, both variables follow the same trend, for example, as the tax burden increases, so does the portion of public expenditure devoted to family policies, although the relationship between the two variables is much milder, consequently public spending in families is explained by a variation of the tax burden in a more trivial manner than in the previous analysis.

Spain constitutes the clearest example of the independence between rates of fertility and public spending on families, since in the time when fertility rates were higher, the lowest percentage of public spending on families was noted, this trend inverts in the early nineties, when the levels of public spending increased, as did the overall tax burden; however, birth rates dropped dramatically in 1995 and, despite its modest recovery mainly due to the effect of immigration, they decreased since 2009 without ensuring replacement level in any of the years, due to the cyclical indicators of fertility shown by the Spanish women.

Fertility rates of the analyzed countries show a stable and growing trend in almost all the countries between 1995 and 2011.

Figure-22. Fertility Rates



Source: elaboration by author, based on data of OECD (2012)

If levels of public spending are related with fertility rates throughout the years in reference, between 1995 to 2008 or 2011, we found that only Denmark experienced a decrease in public spending on families and a drop in birth rates. Spain, France and New Zealand the other hand evidenced the opposite to this phenomenon, since levels in public spending on families increased on family and so did fertility rates in the reference years. However, in countries like Norway, birth rates remained stable and the levels of household spending declined.

Concluding, we can determine that, since there is a relatively high correlation between revenues and tax spending devoted to families, as, conversely, in certain economies the positive relationship between public spending on families and fertility rates is demonstrated, it seems critical that each fiscal reform that represents an increase in fiscal burden among the citizens, reverse in an enhancement in the capacity of payment of the families, enabling them to improve their cyclical indicators of fertility.

6. Conclusion

Empirical evidence shows that taxes on labor earnings may play a determinant role in unemployment rates. The contributions paid by employees can condition the work offer in terms of future compensations they may receive. No wonder the Employment Strategy for OECD in 1994, recommended the implementation of policies to directly reduced labor costs not wage costs. Likewise, in 2006, this International Organization expressed its concern with regards to excessively high tax rates on work income since these may cause a reduction on the work offer, and even a decrease in productivity. This negative effect is observed whether the contribution of employees rises, or if the employer contributions increase, because the entrepreneur transfers the higher wage cost to the employee.

An excessive tax burden on employment income may deteriorate the welfare of the citizens and is especially harmful to the middle classes, which can be particularly harmed. This impoverishment may lead them to a reduction in the number of children, which in the medium term will cause a decrease in human capital available, thus, deteriorating available work offer.

There is a fiscal gap in the taxation of the labor income, that is the one that represents 80% of the tax bases declared in the IRPF (Spaniard Personal Income Tax), substantially higher than other countries, even though variable according to the country analyzed. In the actual moment it is necessary to decrease this gap adapting it to the citizen's personal and family needs, so as it has been shown, the countries with better demographic behavior are the ones that show less labor gaps.

On other hand, the fiscal burden exerted over the Personal Income Tax does not necessarily shows a positive relation with the family aid given in the analyzed countries, because some of them show high levels of fiscal pressure with very low fertility rates, while in others, such in the case of those in the north of Europe, along with their high levels of fiscal pressure show high levels of fertility rates and, finally, countries like the US show low fiscal pressure and positive results in their fertility rates.

The previous analysis demonstrates that it is possible to decrease the fiscal pressure over the labor income and to increase the family public expenditure, like shown by New Zealand and the United Kingdom. In Spain, however,

although the fiscal pressure rises and the family expenditure too, the birth rates are very far from the reality of these countries.

France maintains similar levels of fiscal pressure in all the analyzed period, compatible with an increase of the family support, while Denmark is the country that exerts the highest fiscal burden and yet, shows the lowest fertility rate of all the Nordic countries.

The fiscal gap supported in Sweden, Denmark or France is higher than the one supported in Spain, even though all of them show higher birth rates than Spain. Nevertheless, the United Kingdom and the United States are examples of societies in which the labor fiscal gap is weaker than in Spain and, again, its cyclical fertility rate exceeds the Spanish reality.

The heterogeneity of situations does not allow establishing a causal relationship among the increase of the fiscal pressure, the increase of family public support and the increase in births. What can be indicated is that it is necessary to analyze the results obtained by the public policies because, not in all countries an increase in public spending has prompted an increase in births.

Besides, the personal income tax in the different countries is a non-neutral contribution with regards to family composition, and in some societies a favorable treatment is given to single persons with dependent children in a clear plea for protecting particularly vulnerable realities. However, the fiscal gap on employment income shows significant differences in each of the societies in the case of marriages with dependent children, whether it is one spouse's the income recipient, or if income is perceived by both parents.

Finally, all analyzed countries evidenced a very moderate relationship between revenues and public spending in family, not allowing ratifying, that an increase in the personal fiscal burden redounds in an increase in the families' fiscal benefits.

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