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THE FISCAL SYSTEM AS A FACTOR OF SOCIO-ECONOMIC DEVELOPMENT

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Questions concerning the socio-economic development of a country are complex and their determinants have interested me ever since I finished my Masters degree at University. Working at the Italian Revenue Agency was an essential step to gaining better knowledge, not only of fiscal policy and tax law, but also of the "real world" in this regard. I then worked for a short period of time, at the European Commission on "Tax and Development", where I was involved with international talks on this subject. I thus decided to do a PhD, to investigate fiscal policy as a factor of socio-economic development, both at national and international levels, and to assess the connected problems and limitations for governments, multinational companies and micro-companies.

I like to think of the work of the thesis, as that of a craftsman – it is a work of perseverance, tenancy and humility where you get your hands dirty. It was a project where many hands contributed, and thus, many people require to be thanked.

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'I feel the wind on my skin, the sun is arising and I know that it is time; behind the mountain there is the sea, and then other mountains and others seas…'

RESUMEN

En esta tesis, se investiga la relación existente entre la economía informal y el desarrollo de un país, centrándose en cómo la economía informal afecta a los ingresos públicos. Junto a la delimitación de este concepto, se muestra la relación entre la percepción de la corrupción y la carga fiscal y se lleva a cabo una cuantitativa de la evasión fiscal en los países de la Unión Europea. Como una dimensión de la economía informal, se analiza la transparencia en la normativa tributaria internacional. Así, se estudia la medida en que los nuevos estándares internacionales relativos a la documentación sobre precios de transferencia podrían mejorar la transparencia en la tributación de empresas multinacionales. Por último, se analiza si las fuentes de financiación afectan al pago de impuestos y al margen aplicado por las microempresas, y como esto podría generar ineficiencias, que a su vez favorecerían la economía informal.

Con respecto a la carga fiscal, se halla evidencia de una relación positiva entre el Índice de percepción de la corrupción y el Índice de pago de los impuestos. Se observa, también, una relación negativa entre la economía informal y el tipo impositivo para las empresas. Esto implicaría que un tipo de impuestos de sociedades alto es sinónimo de buen gobierno.

Con respecto a la brecha del IVA o *VAT gap*, se estudia su evolución en la última década en los países europeos. Se aprecia que este diferencial resulta ser más alto, con respecto al PIB, en Italia, Grecia los países del este de Europa. Asimismo, se calcula el peso de la crisis sobre la esta brecha del IVA; en este sentido, se encuentra que las economías más afectadas son las de Letonia, Rumania, Eslovaquia, Irlanda, Francia y España. Por último, se ofrece una estimación del déficit recaudatorio del IVA para el año 2013. La brecha del IVA resulta de utilidad a la hora de explicar el volumen de la evasión de impuestos: considerando que parte del déficit se refiere a IVA no declarado y que éste expresa ventas no declaradas, se aplica sobre estas últimas una tasa de impuesto medio, para sociedades y autónomos, para estimar la evasión de impuestos de los países de la Unión Europea. El resultado obtenido indica que Grecia, Eslovaquia e Italia son los países con una mayor evasión sobre el total de impuestos.

Con respecto a la transparencia internacional, se comparan las diferentes propuestas de lo que se conoce como "Información país por país" (*Country By Country Reporting*, CBCR). Las propuestas han sido realizadas recientemente por la OCDE, EE.UU., la Comisión Europea, el *Extractive Industries Transparency Initiative* (EITI) y Canadá. La tesis se centra

en la versión de la OCDE, que es la más difundida y la que podría ser adoptada a nivel internacional. En este contexto, se propone que sería necesario establecer una información país por país específica para grupos de empresas. Éstas deberían ser desagregadas según su tamaño, forma jurídica y actividad. Cada grupo debería proporcionar información acerca de la actividad y de las empresas que participan en la cadena de producción. Tal información podría ser utilizada no sólo para el control de precios de transferencia, sino también para la investigación de muchos otros propósitos tales como: los controles de corrupción, el respeto de los derechos laborales, el control del impacto ambiental, la prevención del blanqueo de capitales y la financiación del terrorismo, la sostenibilidad del comercio y el grado de transparencia de las instituciones públicas. Al mismo tiempo, sería útil disponer de más información contable y extracontable.

En la tesis se investiga también la relación entre el acceso al crédito por las empresas y la economía informal. El acceso al crédito constituye una parte fundamental en el desarrollo de una economía. Por eso, se estudia cómo la crisis financiera afecta al acceso al crédito, centrando el análisis sobre España, Francia e Italia. Se propone una comparación de medias, donde se observa que la tasa efectiva del Impuesto de sociedades es, en promedio, durante ese período, de 24,41% para España, 16,47% para Francia y 55,69% para Italia. Además, se calcula que la media de impuestos pagados por cada 1.000 euros de ventas para este período es: 6,2 euros para España, 9,3 euros para Francia y 12,9 euros para Italia. La comparación de medias de los recargos entre el precio de venta y el coste de adquisición muestra una diferencia importante entre países: 81,4% para España, 100,4% para Francia y 70,7% para Italia. Tal diferencia se aprecia también desagregando las empresas según la fuente de financiación que utilizan. Adicionalmente, se elaboran dos modelos de regresión para explicar mejor el efecto de la crisis financiera y de las fuentes de financiación sobre los impuestos pagados y en el margen aplicado por las microempresas durante el periodo 2007-2014, en España, Francia e Italia. En este ámbito, cabe destacar que en España y Francia las diferentes fuentes de financiación influyen significativamente en el impuesto pagado, al mismo tiempo que el margen aplicado resulta ser dependiente de estas variables, sobre todo en Italia.

Como se muestra en la tesis, los países con mejores instituciones tienen sistemas fiscales más eficientes. Los gobiernos y la comunidad internacional han propuesto estándares para favorecer la cooperación a nivel internacional en materia transparencia, los cuales tienen un alto potencial, pero deben ser consensuados e implementados de la manera más eficiente

para crear no sólo un sistema fiscal más equitativo, sino una economía sostenible. Finalmente, se ha visto cómo existen situaciones en las que la economía informal y la evasión de impuestos pueden relacionarse con otros problemas tales como la disponibilidad de financiación para las microempresas cuyo conocimiento puede permitir abordarlos. En estos casos, un aumento de recaudación podría derivar de la solución de estos problemas más que por una subida de impuestos. Finalmente, se mantiene que la economía informal y la evasión de impuestos son, en gran parte, resultado de las políticas fiscales más que una elección particular y que reflejan el nivel de desarrollo de un país.

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INTRODUCTION

Informal economy is a complex matter that can be seen as the result of the economic status of a country and has thus become a *modus operandi*. Many factors contribute to establishing the context of informal behaviours. The State plays a major role contributing to strengthening institutions and enforcing legislation. Thus fiscal policy can contribute to reducing informal economy. In this thesis the problem of informal economy has been reviewed using various approaches.

Informal Economy is defined in the first chapter. Since there is no universal definition of informal economy, various perspectives are investigated in the literature. Concurrently it may be seen that different approaches to the problem reveal varying causes. The focus of this thesis is the effect of informal economy on government revenue. In this regard an analysis is provided into the main causes of tax burden, intensity of regulation and governance, and their contribution to informal economy. From this prospective, informal economy may be seen as a result of the combination of the aforementioned variables and not as the cause of them. Thus in order to consider development or revenue mobilization, it is first necessary to focus on tax policy, institutions and the like. Moreover, to better evaluate the informal economy, it is first necessary to get an estimate of the problem. However, since informal economy is essentially unmeasurable, an estimation is given for the retail sector of European Countries. At the base of the calculation the VAT gap was used, and an analysis

provided of the different methods to calculate VAT gap. In the literature there are two approaches, namely the 'bottom-up' and the 'top-down' methods. The bottom-up method calculates the VAT gap starting from the consumption aggregate and applying the right VAT rate. The result gives the VTTL which should be collected by the government after discounting the loss in VAT due to exemptions, rate reductions and all the other losses accepted by the law; the difference between this theoretical value and what it is recollected gives the VAT gap. Conversely, using the top-down method, the Full VAT is calculated first, that is the VAT the governments could be collecting if they apply the standard rate to all the operations. From this value is subtracted the policy gap, which is equal to the VAT loss due to rate reductions and exemptions, and the result is equal to VTTL using the bottom-up method. Over-riding this, an investigation is made of the impact to VAT of the economy down turn during the recession period. Ultimately, due to the VAT gap it is possible to calculate (with the right assumptions), the level of tax evasion.

In the second chapter there is an investigation into how the informal economy could be also an expression of international standards in tax matter. For the last decade and especially since the financial crisis started, it has been observed that problems concerning tax avoidance and tax evasion were getting more attention at an international level. The last important project related to this area was the Base Erosion and Profit Shifting (BEPS) carried out by OECD. Among multiple topics, specific focus is placed on Country By Country Reporting (CBCR). CBCR is a report that large multinational companies will have to submit to improve transparency in transfer pricing operation and in tax planning. This proposal by the OECD was one of several that was suggested in recent years. Another example, the Extractive Industry Transparency Initiative (EITI) applies its standards in the natural resource sector, especially in developing countries. The European Commission, United States and Canada have also made their own proposals. These different solutions to improving transparency in the operation of multinational companies are compared. A major problem is that many countries do not know what multinational companies do at international level; the advantages and limitations of each proposal are highlighted and compared.

The final chapter provides a study into how access to finance changed during the financial crisis as this could spread the effect of the it and in this way undermine the margin of the companies and the revenue the government could collect. The first part of the chapter gives the result of a survey done by European Commission and European Central Bank. The

different factors of the shadow bank are assessed as well as the change of success rate in obtaining finance in equity, loan and other forms, in order to give a better understanding of the effect of the crisis in the financial sector. The next section provides an analysis sample of more than 8,000 micro companies of the retail sector of three countries, namely, Spain, France and Italy, in three year periods. The years 2008, 2011 and 2014, were selected to better illustrate the effect of the crisis. The results highlight the effective corporate tax rate, and by means of comparison, changes in taxes paid and margin applied with respect to the source of finance which the countries prefer. Although, Spain, France and Italy have similar economies they present different results. A regression model was built to investigate a casual effect relation in the previous variables. This analysis shows how in the three countries, the different source of finance and response to the financial crisis effects the taxes paid and the margin that the countries applied.

The thesis is completed with an overall summary and conclusion of my findings, a bibliography and annex are also supplied.

1

Definition of Informal Economy and Estimation of Tax Evasion for European Countries

1.1 THEORETICAL FRAMEWORK

1.1.1 Introduction

In these last years, especially with the economic-financial crisis that has affected many countries, states have admitted that tax evasion and tax avoidance have reached a level that undermines economic activities and democracies.

At the international level, major organizations such as the Organization for Economic Co-Operation Development (OECD), the World Bank (WB) and the International Monetary Fund (IMF) are searching for strategies to address these problems both in developing and developed economies.

1.1.2 Definition of informal economy

There is no a universal definition of **informal economy**, authors use what best fits with the object of their analysis.

Joshi for example (Joshi, et al., 2013), discriminates between registered or unregistered economic activity[1].

Other authors, like Andrews (Andrews, et al., 2011), first give a general definition of informal economy, such as "*economic activities and transactions that are sufficiently hidden*" and then explain the areas and subjects that are most affected. The areas identified are social protection, tax evasion and economic growth, while subjects are employees, self-employed and companies.

Perry (Perry, et al., 2007), relates informal economy to "*bad things*", such as unprotected workers, evasion of the rule of law[2], and like Andrews, he analyses three groups: workers, micro-businesses and companies.

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1 *"The conception of the informal sector thus moved to a focus on the legal status of the business: whether or not it was registered and followed appropriate legislation. It is this legal definition that has widespread use today (Gerxhani 2004, Kenyon 2007)"* (Joshi, et al., 2013).

2 *"The term informality means different things to different people, but almost always bad things: unprotected workers, excessive regulation, low productivity, unfair competition, evasion of the rule of law, underpayment or non-payment of taxes, and work "underground" or in the shadows".* (Perry, et al., 2007).

Schneider (Schneider & Buehn, 2009) defines informal economy as, *¨all market-based legal production of goods and services that are deliberately concealed from public authorities to avoid: payment of income, value added, social security contributions, legal labour market standards and administrative procedures*¨. All these different definitions highlight the need to delineate the concept of informal economy taking into account subjects and areas.

In this paper, we define the informal economy as **what should be formal according to the law of a state but it is not**. We will limit the analysis to the activities that **affect public revenue and expenditure and**, at the same time, **cause a distortion in the market**.

In summary, informality will be defined as that the part of the economy affecting efficiency of both public revenue and expenditure, undermining the potential socio-economic development of a country or a region.

With respect to public revenue, the informal economy decreases them and alters the distribution of the tax burden. Regarding expenditure, ineffective and/or inefficient management policies cause a waste of public resources.

From this perspective, we can also consider the informal economy when the ratio between tax burden and public services established by the State does not match the one desired by its citizens. This happens when citizens consider tax burden too high in comparison with the level of public service.

There are several reasons why people choose to stay in a formal or an informal economy. For example, someone may consider a formal economy to be too high and an unnecessary cost. In contrast, others may prefer a formal economy because they expect to increase their activity or not to pay a fine, or simply because it is correct to do so. That is to say, it is important that the government should offer concrete advantages to being formal and not only justify the tax burden with generic public services. So, if there are not relevant advantages to being formal (albeit not paying a fine), then it is more likely that people would prefer to be totally or partially informal. In that case, the informal economy is the result of a personal cost-benefit analysis in the short to medium term.

"*A study by the French Ministry of Foreign Affairs (MAE) on strengthening local taxation in Africa, based on surveys in Benin, Cameroun, Ghana, Mali and Mauritania, showed that people often refused to pay tax because they could see little in return in terms of government services or investments. The study showed that this circle of non-compliance is hard to break. Lack of resources and a lack of capable local administration staff resulted typically*

in low quality goods and services to citizens. […] *However, in some cases local authorities made efforts to communicate and explain actions they had taken to provide services.* […] *For example to inform citizens of a market renovation which was carried out with public funds coming from local taxes. Experience showed that these awareness-raising measures only succeed when a link could be established between taxes and a concrete project considered useful by citizens*". (OECD, 2008)

There is also a different approach based on the fact that taxation should be included in the social responsibility of a company. In this consideration, taxation should not be considered as a cost, but "*a distribution out of profits. That puts tax in the same category as a dividend—are returned to the stakeholders in the enterprise. This reflects the fact that companies do not make profit merely by using investors' capital. They also use the societies´ in which they operate, whether that is the physical infrastructure provided by the state, the people the state has educated, or the legal infrastructure that allows companies to protect their property rights. Tax is the return due on this investment by society from which companies benefit. Moreover, tax is properly due to the state in which a company generates its profit, not to that state to which it can relocate its profit for taxation purposes*". (Eijsden, 2013)

Finally, we specify that this concept of informal economy, does not consider illegal activities that are naturally part of the informal economy. This could be relevant considering that illegal activities affect the formal economy in several ways.

1.1.3 Main causes of the informal economy

Many factors cause or encourage an informal economy depending on the country and the historical period to which we refer. It is important to be aware of the main factors of the problem in order to adopt appropriate policies.

The informal economy also has a historical and cultural nature. There are countries where it is widespread and is not perceived as such, but as another way of doing business, often the only way. In most cases, when the informal economy has reached a significant size, we have a problem of poor public governance (Moore, 2007) (OECD, 2008).

First, the form of government affects the informal economy. When there is not a strong relationship between the state and its citizens, then the latter seek alternative ways to operate forming what could be defined as an informal economy (this time with a wider connotation

than when it is purely motivated in tax matters). An example of a form of government that can counter the rise of the informal economy is a democracy.

However, for good governance, you also need an appropriate institutional apparatus upon which the relationship between citizen and government is founded. In these countries, people have a particular interest to operate in the formal economy, as an economic activity, to grow, requires public institutions and the informal economy consequently has a reduced dimension.

The literature highlights three main factors that have a strong correlation with the informal economy. These are "tax burden", "intensity of regulations", "governance structure". (OECD, 2010) (Schneider & Buehn, 2009)

This vision is not exhaustive, but it gives a better understanding of what we should consider when we study how to lower an informal economy.

Thus we select the following three factors that could have a main correlation in an informal economy: fiscal burden, intensity of the law and public services[3]. (Schneider & Buehn, 2009)

1.1.3.1 Tax burden

Fiscal burden is a primary factor to incentive people to choose the informal economy. Supposing a State gives money instead of demanding it, then people would comply with the formal economy.

"*The literature frequently cites tax evasion as a key reason for firms to operate informally. Firms evade taxes when they under-report their income or profits in order to evade taxes or fail to pay valued added, sales, real estate or other taxes.*" (OECD, 2010)

Schneider (2009) divides between tax and social security contribution burdens. "*The bigger the difference between the total cost of labour in the official economy and the after-tax earnings (from work), the greater is the incentive to avoid this difference and to work in the shadow economy. Since this difference depends broadly on the social security burden/payments and the overall tax burden, they latter are key features of the existence and the increase of the shadow economy*" (Schneider & Buehn, 2009)

[3] The actors of the informal economies are divided into three groups: black employees; self-employed without employees working in the informal way; production of goods and services by formal and informal companies. (Andrews, et al., 2011)

This is mainly because the labour force has a special connection with the informal economy. Moreover, a way to quantify the informal economy is through the number of black workers. (Perry, et al., 2007)

There are three main type of taxes: direct taxes (corporate and personal), indirect tax (mainly VAT) and social security contributions.

In our analysis, like other authors[4], we found a positive correlation when we considered fiscal burden for the overall 2013 *Paying Taxes* ranking[5] by the World Bank versus the rank 2013 of Corruption Perception Index (CPI).

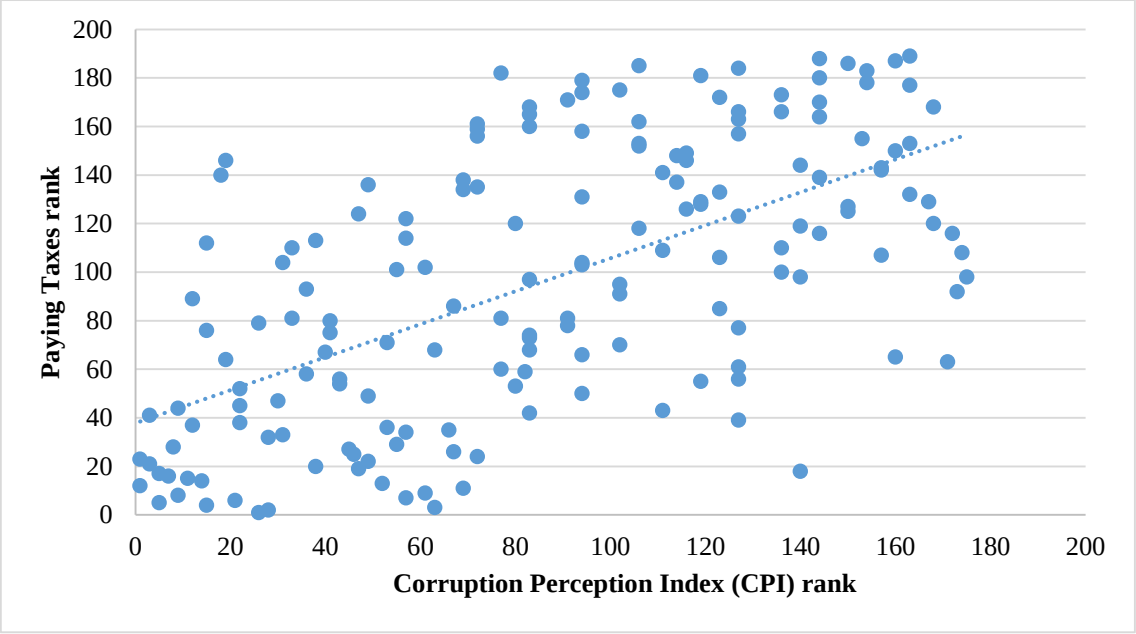


Figure 1–1. Correlation between Corruption Perception Index (CPI) rank 2013 (Transparency International, 2013) and Paying Taxes rank 2013 (World Bank, 2013)- Own calculation-

Therefore, we analysed whether the fiscal corporate burden has a strong correlation with ICP, and in more general terms with the informal economy. We compared corporate tax rate

[4] "*Empirical results of the influence of the tax burden on the shadow economy is provided in the studies of Schneider (1994b, 2000, 2004, 2005, 2007) and Johnson, Kaufmann and Zoido-Lobatón (1998a, 1998b); they all found statistically significant evidence for the influence of taxation on the shadow economy*". (Schneider & Buehn, 2009).

[5] This rank is a combination of three index: Payments (number per year); Time (hours per year); Total tax rate (% of profit).

of 108 countries throughout the world. We took the rate from 2006 to 2013 and the Corruption Perception Index (CPI) and we did not find any significant linear correlation[6]. Kuehn records the same result "*despite a positive relation between tax rates and the informal economy, for countries with equally high tax rates, informal economy estimates are strikingly different.*" (Kuehn, 2007 Version 2009) In the conclusion of his analysis, Kuehn reckons that: "*differences in tax rates alone do not account for differences in the informal economy across high-income countries.* […] *The quality of governance plays a more significant role in accounting for the observed differences in informal economy.*" (Kuehn, 2007 Version 2009)

Furthermore, when we compare Informal Economy 2012, calculated by Schneider (Schneider, 2012), versus the corporate tax rate 2013 (KPMG, 2014) for European countries and others[7] we found a negative linear correlation. This means that, high tax rates match to low informal economies.

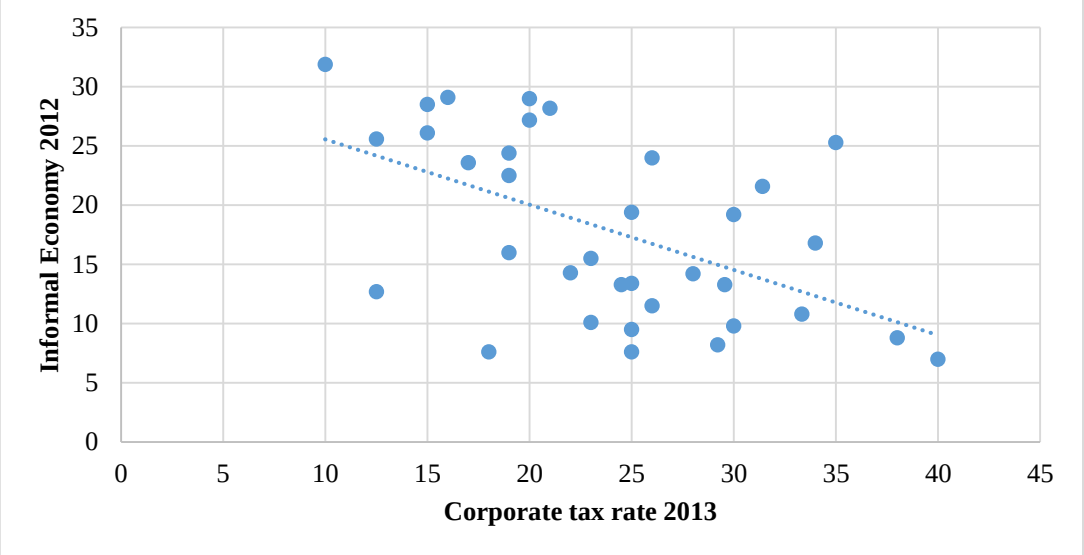


Figure 1–2. Correlation between Informal economy 2012 (Schneider, 2012) and Corporate tax rate 2013 (KPMG, 2014) - Own calculation

[6] Change in tax rate 2006-2013 / CPI 2013 Score - Pearson correlation 0,185; Corporate tax rate 2013 / CPI 2013 Score - Pearson correlation 0,075; Change in tax rate 2006-2013 / Country Rank CPI 2006-2013 - Pearson correlation -0,115. We repeat this correlation with 31 Europe countries and we found no correlations.

[7] Norway, Switzerland, Turkey, Australia, Canada, Japan, New Zealand, United States (USA).

Moreover, there is a positive correlation between high percentage of tax revenue over GDP and developed economies where informal economy is lower.[8] A high rate of this percentage is matched with quite advanced public institution. Except for the Anglo-Saxon countries that usually have a lower share, from 1965 to 2012 the fiscal income in percentage of GDP has increased. (OECD, 2013) In this way, the real fiscal burden could be symptomatic of the robustness of the institutional framework of that country.

High rate tax could also be a real problem of competitiveness. "*Higher tax rates can remove the productivity advantage of large formal firms. When the cumulative cost of complying with tax and other regulations is high, informal firms will have a substantial competitive advantage over formal firms, which may prevent the entry or expansion of formal firms in the market.*" (OECD, 2010)

Less competitiveness is correlated with an informal economy: "*the negative relation across 21 high-income OECD countries between the Global Competitiveness Index and estimates of the informal economy. This negative relationship is robust to various alternative measures of institutional quality by the World Bank such as the Government Effectiveness Index, the Rule of Law Index, or the Control of Corruption Index. (Kaufmannet al 2006*)" (Kuehn, 2007 Version 2009)

The fiscal burden is not a stand-alone problem: it is a political matter. It has a strong impact upon the citizens, and it is, quite often, a relevant factor of the political agenda. Changes in the fiscal burden could be better way to handle the fiscal function of redistribution of the wealth. So for example, there could be a reduction in tax rate for new companies or companies with high investment on innovation.

Talking about informal economy and tax rate, what we are looking for is the equilibrium between the level of the tax rate and the income needed by the State. Thus, we do not find a strong linear correlation between high tax rate and informal economy, we know that taxes are a cost for companies and people, therefore the lower the better.

With this focus, we could say that the level of tax rate could have a stronger impact on private cost than on informal economy and so it could be a tool of economic policy.

[8] "At the top level of informality, we find Sub-Saharan Africa, and at the lowest level of informality, we find the OECD countries." (Schneider, et al., 2010)

For example, between 2007 and 2012 Germany and Canada lowed their corporate tax rate respectively to 9,00% and 10,00% (KPMG, 2014). This reduction, during the economic crisis, has given a lower tax cost of compliance for companies. This is important because there is a correlation between tax rate and public revenue. In a curve obtained by Laffer we find an inverse u correlation between tax rate and public revenue. Some of the problems of this curve are to determine which tax rate maximizes the revenue and the elasticity of the two variables.

We already know that when taxes do not cover all the public expenditure, governments usually borrow by issuing government bonds or acquire finance directly from a supranational organization (e.g. the World Bank) or international financial institutions. Moreover, the margin for a possible increase in the tax rate is also due to the economic trend. So when the economy is growing this margin tends to increase too; unlike during a financial-economic crisis the fiscal cost is more relevant and thus the margin becomes less. In these cases, a State could offset the drop in revenue produced by the crisis with an increase in the tax rate. However, if the tax burden was already quite high a further increase could depress economic activities and encourage tax evasion; and thereby increase the informal economy.

Therefore, some countries, especially in Europe, are paying greater attention to public finances. In particular, they try to divide the current public spending by the extraordinary, and to find the elasticity of revenue with respect to the economic trend.

In summary, when asking what relation exists between the tax burden and the informal economy and in general economic growth, we have found that there is a positive linear correlation between paying taxes and the informal economy (or ICP). However, this correlation disappears when we take into consideration the corporate tax rate.

In a period of recession, it could be more difficult to determine a tax compliance behaviour. If the State does not have the opportunity to reduce the rate, then it should probably increase it in order to avoid a high public deficit. This could result in an excessive cost that could increase the informal economy. Therefore, countries with a good public accountability have low informal economies

1.1.3.2 Intensity of the law

Legislation in tax administration is not only necessary but it is important because it guarantees the redistribution function of the fiscal system. It could be described as an inverse

U curve. Too much legislation increases the fiscal compliance cost and at the same time it could be used to legitimate elusion methods[9].

In the converse "*specific and targeted rules which link the tax treatment in the country concerned to the tax treatment in another country in appropriate situations hold significant potential to address certain hybrid mismatch arrangements and have recently been introduced by a number of countries*." (OECD, 2012)

So, if on the one hand, legislation is necessary to better handle tax evasion and manage public services, but on the other, an abuse of it provokes, as we have already said, more loopholes. "*Overly burdensome or inefficient regulation can, in turn, significantly increase the cost of both joining the formal economy and operating within it. By reducing these barriers, policy makers can increase participation in the formal economy. Furthermore, reducing unnecessary restrictions on businesses may increase the intensity of competition in the formal economy as more firms may be willing to enter it*." (OECD, 2010)

The World Bank quantifies the size of intensity of the legislation around the world in their study "Doing Business", "*The DBIs are designed to capture that ease of doing business in ten areas, one of which monitors the ease of registering a business.*" In measuring the ease of starting a business, countries are ranked on:

- the number of procedures that a company needs to complete before legally starting operations;
- the time (in terms of number of days) necessary to complete each of these procedures;
- the cost to complete each of these procedures and to start operating the business (as a percentage of income per-capita) and

[9] This happens because there are political reasons in legislation. Therefore, broadly, there is not poor governance at all but political measures defend the interest of the elite instead of all of population. *"…the state is behaving in a deliberately and coherently exclusionary manner, manifesting an underlying stable political-economy equilibrium where incumbent business and labour elites defend their rents and will find ways to offset and nullify any tinkering*" (Perry, et al., 2007)

- the minimum capital that must be paid in by firms in order to start a business (as a percentage of income per-capita). (OECD, 2010)

Talking about labour regulations cover hiring, firing, severance pay, minimum wage, and overtime hours and pay as well as mandatory benefits packages, social security payments, rights of association and collective bargaining rights, among others. "*They are often enacted and designed to protect workers from unfair and discriminatory actions". "While governments try to find the right balance between protecting workers and ensuring labour market flexibility, most developing countries put excessive rigidity to the detriment of businesses and workers alike. Businesses, as a result, are more likely to hire informally when regulations are less flexible*". (OECD, 2010)

Research backs this up and finds an association between intensity of tax and the extent of informality within an economy. (World Bank, 2007)

Also, a competition agency, in addressing market distortion caused by the informal economy, has to understand why firms operate in the shadows rather than as part of the formal economy. While there are many reasons, one documented cause is that burdensome regulations can make it difficult for entrepreneurs to enter the formal market and thus drive them underground (OECD, 2010).

Business registration regulations burden.

"*De Soto (1989), Djankov et al. (2002), Friedman et al. (2000), Loayza, Servén, and Oviedo (2005), and Schneider (2005), among many others, have stressed the very high registration costs, the regulatory burden to becoming formal, as well as the high ongoing costs of fully integrating with the state that drive firms to stay off the state's radar."* (Perry, et al., 2007)

"*Recent studies have conducted extensive empirical testing of this proposition using Doing Business and other related indicators. Bruhn (2011, 2013), among the leading studies employing natural experiments, use quarterly national employment data collected by the Mexican government between 2000 and 2004 and the fact that different regions started implementing business registration reform—called Systems of Fast Opening of Firms (SARE)´´* (World Bank, 2013)

As Hernando De Soto notes: "*As in Peru, for example, it takes a new entrepreneur thirteen years to overcome the legal and administrative hurdles required to build a retail market for food that would help take vendors off the street; twenty-one years to obtain authorisation to construct a legally titled building on wasteland; twenty-six months to get authorisation to operate a new bus route; and nearly a year, working six hours a day, to gain the legal license to operate a sewing machine for commercial purposes*" (Soto, 2002)

"*Only 3 OECD countries (United States, Australia and Denmark) are listed among the top 10 in terms of ease of employment. High severance costs encourage firms to use informal labour as employment decisions do not always work out well and economic downturns may lead to costly layoffs.*" (OECD, 2010)

1.1.3.3 Governance and public services

Another relevant factor when studying the cause of informal economy, is public service and the general governance. We do not refer only to the public services to the community, but also to the policies to reduce informal economy and, among other things, increase tax compliance.

We analysed the following three dimensions in which a State relates to their economic activities: governance in general, public services and community interests. They are not fixed areas since governance could also include the other two sections.

Therefore, our question was how a State through governance, public sector and community interests could maximize the formal economy, the social and economic development. We started from the concept that in a globalized world, a region is strategic for economic activities, basically, for two reasons: it is an important market to sell in and/or it is rich in resources (human, capital, naturals…).

When we talk about governance in general, we refer not only to public institutions but also the organization of the government. Some studies show the importance of the State for the private sector. The State´s role changes, due to the context, to follow or anticipate the evolution of the economy. "*Sound public institutions that can adequately secure property rights, establish an impartial judiciary and reduce corruption are perhaps the most fundamental contributions that public policy can make to promoting participation in the formal sector´´ (Loayza, 1996; de Soto, 1989). ''Indeed, countries with a strong rule of law*

– proxied by a legal system that protects property rights, have an independent judiciary and an impartial court system – tend to have a smaller informal sector."[10] (Andrews, et al., 2011)
In this context, we could also talk about effectiveness of governance: "*…firms may either be under reporting revenue or the number of employees in order to hide activities from corrupt government officials or because firms simply do not want to pay taxes and finance an ineffective government*". (OECD, 2010)
Kuehn (2007 Version 2009) presents a model where he found correlation between governance and informality. Furthermore, when he took into account different levels of tax rate the correlation got stronger.
Next, we will analyse the relationship between public services, informal economy and fiscal burden.
In other words, public services could justify part of the fiscal burden and they have an effect on informal economy. Moreover, we postulate the hypothesis that an economy activity needs a set of public services to operate, at least at the basic stage. Law, policies, infrastructures are some of these services.
"*Disclosure of public expenditure information, and the participation of and supervision by citizens—that is, "voice"—in the way taxes will be spent, may also help increase trust in the state and may contribute to social norms of compliance. These factors have been credited with success in increasing tax compliance (and collections) in Chile and Spain, particularly through widespread consensus among political parties about the need for the reform of the tax system, improved democratic governance, and highly visible enhancements in social and other public services.*" (Perry, et al., 2007) Moreover, "*this finding indicates that countries with better institutional quality (e.g., bureaucracy quality or corruption) can potentially raise tax collection without undue extra burden on the economy*". (Minh Le, et al., 2012)

[10] Rule of law refers is an index based on seven components: judicial independence, impartial courts, protection of property rights, military interference in rule of law and the political process, integrity of the legal system, legal enforcement of contracts and regulatory restrictions on the sale of real property. These indicators were assembled from three primary sources: the International Country Risk Guide, the Global Competitiveness Report, and the World Bank's Doing Business project. Source: Euro Barometer 2007 Survey of undeclared work in the European Union, OECD STAN Database, and Economic Freedom of the World, Annual Report 2010

Among the services directly connected with tax compliance, we agree with Perry (2007) when said: "*Promoting taxpayer education and developing taxpayer services in filing returns and paying taxes, broadcasting advertisements that link taxes with government services, stimulating voluntary compliance by lowering compliance costs, simplifying taxes and their payment, and promoting a taxpayer—and a tax administrator—"code of ethics" have proved to be useful complementary measures to the punishment paradigm to enhance compliance.*" (Perry, et al., 2007)

Keeping tax rate fixed, we could increase tax compliance through the "*carrot and stick*" approach where the "carrot" is the set of policies and public services to promote, directly and indirectly, compliance and the "stick" is the tax burden apparatus of resources to audit and control the respect of the law. This is just to say that the two thing come together because both are services. Likewise, we could also think that the private sector gives "carrots" to the government by paying taxes and if it does not receive the right set of services through the election's system the "stick" is used on the government. "*Effective government enforcement encourages firms to comply with tax and other regulations. When insufficient resources are dedicated towards audit and collection programs for example, the incentive of firms to evade the rule of law increases, however. Low and inconsistent penalties also encourage such behaviour. In particular, perceptions of government ineffectiveness are associated with greater informality while corruption is positively related to it*". (OECD, 2010)

In this area, it is important to tax administrative structure and management. "*The use of semiautonomous revenue authorities has been shown in several countries to improve tax administration with a more service-oriented approach to tax enforcement. The service paradigm fits squarely with the perspective that emphasizes the role of social norms in tax compliance. Experience from other countries shows that a government's commitment to even handily enforce the tax laws while facilitating taxpayer compliance can have an important effect on the pervasive culture of noncompliance found in many countries in the region.*" (Perry, et al., 2007) So, *"... reforms should also emphasize the "service paradigm" with policies to enhance the role of the tax administration as a facilitator and a provider of services to taxpayer-citizens.*" (Perry, et al., 2007)

Other literature testifies that tax compliance is a corporate responsibility. "*Tax is the missing element in corporate responsibility debates. Corporate responsibility should start with tax compliance. Anti-tax lobbies seek to portray tax as a cost. This is the wrong way to see it.*

Tax is not a cost, but a distribution out of profits. That puts tax in the same category as a dividend—a return to the stakeholders in the enterprise. This reflects the fact that companies do not make profit merely by using investors' capital. They also use the societies in which they operate, whether that is the physical infrastructure provided by the state, the people the state has educated, or the legal infrastructure that allows companies to protect their property rights. Tax is the return due on this investment by society from which companies benefit. Moreover, tax is properly due to the state in which a company generates its profit, not to that state to which it can relocate its profit for taxation purposes"[11]. (Eijsden, 2013)

In addition, the European Commission promotes the three principles of good tax governance – namely "transparency", "exchange of information" and "fair tax competition" – in relations between States. Enterprises are encouraged, where appropriate, to also work towards the implementation of these principles (EC, 2011).

Turning to the third point, the State has to defend the interests of the community against a particular economic interest. In this area, such as the environment, labour law and so on the State limits the economic activities.

"*Citizens are more likely to hold their governments accountable when they have to pay more taxes; and as a result, the governments have incentives to design and implement policies that improve the welfare of the population. However, in a poverty-ridden country, without prior redistribution of a small share to citizens, taxation is likely to remain impossible*". (Devarajan , et al., 2010)

Consequently, the more people interested and involved in the government policies the more accountable the government has to be to better answer social needs.

To sum up, finding the right equilibrium between governance, public services and community interests is the way to increase economy activities, tax compliance, and more broadly development. Meanwhile we know that all these policies, to be really implemented, first have to be found at an international level. At international level, there are more problems because it is more complex, and governance could be less transparent and less accountable. During the last decade many international organizations such as the World Bank, IMF, OECD and others have stressed the need for more transparency and fair competition at the international level. At the same time non-governmental organizations such as the Extractive

[11] More about the connection between tax and corporate responsibility in Tax Justice and Christian Aid.

Industries Transparency Initiative (EITI), are trying to do the same. the EU and US have tried to go in the same direction, but progress is very slow.

There are many unanswered questions, such as tax havens, or anonymous companies, however the main problem is competition. At the international level, countries compete with each other in every sector and in strategic areas like natural resources, and raw materials in general, which are extremely important.

Uncontrolled globalisation tends to uniform standards in transparency, accountability, human right, labour right, environment, and so forth.

1.2 VAT GAP AND TAX EVASION ESTIMATION

1.2.1 Introduction

In the first part of this dissertation we focused on how informal economy could be defined. It is considered that an activity which is not deemed formal according to the laws of that State is therefore informal. At the same time, this activity has to be relevant and should have consequences for both public revenue and expenditure. Then, we discussed factors which could increase informal economy such as tax burden, intensity of law, governance and public services.

In this section of the paper, we try to quantify the informal economy. To do this we focus on informal economy affecting the public revenue. It is impossible to exactly quantify how big the informal economy is. The problem is that the informal economy represents missing data which can only be estimated. There is not a unique method to measure the informal economy because there is not a common definition of it. Also because, it can be seen as the sum of a number of factors. Transfer pricing, unreported sales, unregistered activities or illegal workers, are each examples of where the informal economy can be found.

Another problem we face, in measuring the informal economy, is that it may vary depending on the region or the State we are referring to. As we have already said, governance, institution, legislation and corruption, are some of the indicators which we could defined as the "*friendly informal economy*". When they score badly, they foster an informal economy.

So, in the next analysis we estimate informal economy for European countries doing an indirect calculation of the tax evasion through the VAT gap. First, we report the estimation of VAT gap provided by The European Commission, OECD and other authorities. Secondly, we try to calculate the effect of the economy on tax evasion to better focus on tax compliance without economic distortion. Finally, using the data available, we estimate the VAT gap and the level of tax evasion for 2012.

1.2.2 Informal economy VAT gap estimation in the literature

Due to the difficulty in quantifying the real informal economy, we try to estimate the level of tax evasion using data about the VAT gap. To calculate the VAT gap we can choose between two methods: the "bottom-up" or the "top-down". The terms used suggest the difference in calculation method, according to whether the data, has components added or deducted.

In the following pages, we present the estimations of VAT gap for the European countries. We propose this data as evidence of differing approaches to the matter. For comments concerning the difference in the estimation and the result we refer to each study where the authors discuss it in detail.

1.2.2.1 The "Bottom-up" method: The European Commission estimation

A recent study sponsored by The European Commission - Director General TAXUD- quantifies the VAT gap for European Countries using a bottom-up method. The VAT gap is estimated as the difference between the VAT really received and the VAT which should have been received, this is also called VAT Total Tax Liability (VTTL). The VTTL takes into account the loss of revenue due to exemption, special regime, reduced rate, etc.

In the study by the commission, the VTTL is calculated using a bottom-up method by summing-up the VAT result related to every national consumption to the correct VAT rate. (EC, 2013) (EC, 2014)

The main groups of consumption expenditure are:

- **Household Consumption Liability**: this is the main factor. The amount of VAT is calculated by splitting the consumption between taxable amount and tax received. In other words, as the product of the appropriate VAT rates and the amount of consumption by individual products or services;
- **Intermediate Consumption on trade**: the amount of VAT paid on inputs by industries that cannot claim a credit because their sales are exempt from VAT;
- **Gross Fixed Capital Formation (GFCF)**: VAT paid on inputs to GFCF activities of industries that cannot claim a credit because their sales are exempt from VAT.
- **Government Consumption**: the amount of VAT on inputs on government consumption that cannot be recovered because most government activities are exempt from VAT.

For example, Government consumption in Education is composed of wages and salaries for Education workers, plus inputs into the education activities of the government at all levels. The VAT paid on such inputs is generally not recoverable, and therefore included into the VTTL.

The difference between the VTTL, so calculated, and the VAT actually received gives us what we already termed as the VAT gap. The VAT gap so calculated is usually called compliance VAT to distinguish it from the gap related to the policy. The policy gap is that part of the VAT not collected by legislation previsions. This is the case for a reduced rate for primary products or exemptions for services like health and education.

VAT gap - Millions Euros	VAT gap - Millions Euros 2012	VAT gap on VTTL 2011
Austria	€ 3.244	12%
Belgium	€ 2.991	10%
Bulgaria	€ 957	20%
Czech Republic	€ 3.267	22%
Denmark	€ 2.141	8%
Estonia	€ 255	14%
Finland	€ 905	5%
France	€ 25.583	15%

Germany	€ 21.957	10%
Greece	€ 6.651	33%
Hungary	€ 2.971	25%
Ireland	€ 1.262	11%
Italy	€ 46.034	33%
Latvia	€ 818	34%
Lithuania	€ 1.436	36%
Luxembourg	€ 204	6%
Malta	€ 241	31%
Netherlands	€ 1.966	5%
Poland	€ 9.317	25%
Portugal	€ 1.228	8%
Romania	€ 8.841	44%
Slovakia	€ 2.787	39%
Slovenia	€ 270	9%
Spain	€ 12.412	18%
Sweden	€ 2.886	7%
United Kingdom	€ 16.557	10%

Table 1–1. (EC, 2014)

1.2.2.2 The "Top-down" method

Due to the difficult process of estimating the VAT gap with the "bottom-up" method, some authors, like OECD (OECD, 2012), prefer to calculate the VAT Revenue Ratio (VRR), also called, *c-efficiency*. The VRR is the amount of VAT that could be collected not taking into consideration the legislation on VAT and applying the standard VAT rate. In other words, is it a hypothetically value which combines the compliance gap (what we call simply VAT gap) and the policy gap.

The VRR is the ratio between the actual VAT revenue and a Full VAT revenue, which is also called, "Notional Ideal Revenue". The Full VAT is the theoretical amount of VAT that should be collected applying the standard VAT rate with no exemption or reduce rate and with a completed tax compliance. In other words, it is a VAT that includes, also, the compliance gap (what we simply call VAT gap) and the policy gap, a situation with a zero VAT Gap.

$$VRR = \frac{Actual\ VAT\ revenues}{Full\ VAT}$$

"*It is clear that the VRR is a combination of the "Policy Efficiency Ratio" and the "Compliance Efficiency Ratio". Methods may be developed to produce breakdowns of the composition of the VRR. One method may consist in using the tax expenditure (i.e. the revenue cost of departure from the application of the standard rate to the "entire" tax base) which may allow for calculating the policy efficiency ratio. The remaining difference between Policy Efficiency Ratio and the actual VRR would provide the compliance efficiency ratio by deduction".* (OECD, 2012)

The estimation of VAT gap with a top-down method follows the calculation developed by Richard Murphy. (Murphy, 2014)

$$VRR\ GAP = 1 - \frac{Actual\ VAT\ revenue}{Full\ VAT}$$

Thanks to VRR gap calculated by the European Commission (EC) (EC, 2013) it is possible to calculate the amount of full VAT.

$$Full\ VAT = \frac{Actual\ VAT\ revenues}{(1 - VRR\ GAP\ )}$$

This VAT includes the VAT receipt, the compliance gap and the policy gap.[12]
In this way, if we can deduct the policy gap from the VRR gap to find a VTTL

$$VTTL = Full\ VAT\ (1 - Policy\ gap)$$

The VTTL as we already stated is the VAT that is expected after taking into account a reduction due to exemption and the reduced rate in VAT legislation.
The difference between VTTL and Actual VAT revenues give the VAT gap

[12] Keen (Keen, 2013) divide the policy gap between VAT exemptions and reduced rate operations.

$$VAT\ gap = VTTL\ - Actual\ VAT\ revenues$$

The VAT gap, calculated in this fashion, is similar to the value calculated with the bottom-up method.

A. European Commission estimation

The European Commission -Director General TAXUD- has also commissioned a study of VAT gap using a top-down method. The estimation reported below is from the research carried out by Reckon LLD to calculate the VAT gap "*by identifying and measuring the categories of expenditure that give rise to irrecoverable VAT. The main categories of relevant expenditures that give rise to irrecoverable VAT are final consumption expenditure by households, non-profit institutions serving households (NPISH) and government, intermediate consumption expenditure on goods and services used in making exempt supplies of goods and services; and gross fixed capital formation on assets and changes in the stock of valuables which can be allocated to exempt supplies of goods and services*". (Reckon LLP, 2009)

VAT gap, 2006 (EUR million) (Reckon LLP, 2009)

Member State	Theoretical VAT liability	VAT receipts	VAT gap	VAT gap as a share of theoretical liability
AT	22.844	19.735	3.108	14%
BE	25.360	22.569	2.791	11%
CZ	9.216	7.541	1.675	18%
DE	164.115	147.150	16.965	10%
DK	23.611	22.560	1.051	4%
EE	1.325	1.215	111	8%
ES	63.013	61.595	1.418	2%
FI	15.176	14.418	758	5%
FR	140.817	131.017	9.800	7%
GR	21.746	15.183	6.563	30%
HU	8.882	6.813	2.070	23%
IE	14.043	13.802	241	2%
IT	119.197	92.860	26.337	22%
LT	2.335	1.826	510	22%
LU	1.961	1.941	20	1%
LV	1.751	1.374	378	22%
MT	463	410	53	11%
NL	41.269	39.888	1.381	3%
PL	23.784	22.127	1.657	7%
PT	14.371	13.757	614	4%
SE	29.294	28.487	807	3%
SI	2.764	2.647	116	4%
SK	4.632	3.320	1.312	28%
UK	155.697	128.721	26.976	17%
EU-25	907.667	800.955	106.712	12%

Table 1–2. Note: EU-25 excludes Cyprus. Non-Euro currencies converted to EUR using the average exchange rate in 2006

B. OECD estimation

The VAT Revenue Ratio provided by the OECD gives the percentage of actual VAT revenue on the theoretically VAT. The ratio is usually less than 1; because VAT legislation always gives special regime, exemption, reduced rate etc.

"*The aim of the VRR is to provide a comparative measure of a country's ability to secure effectively the potential tax base for VAT. The VRR measures the difference between the VAT revenue actually collected and what would theoretically be raised if VAT was applied at the standard rate to the entire potential tax base in a "pure" VAT regime and all revenue was collected*". (OECD, 2012)

As reported in the study of The European Commission (EC, 2013) of more interest could be the so-called VRR gap. The VRR gap is the ratio between the actual VAT and the theoretical VAT minus one. This part represents the lost part of VAT due to policy and compliance gap.

VAT Revenue Ratio (VRR)															
	Standard VAT rate 2009	1976	1980	1984	1988	1992	1996	2000	2003	2005	2006	2007	2008	2009	Difference 2000 2009
AUSTRALIA	10,0								0,55	0,56	0,55	0,54	0,50	0,52	0,52
AUSTRIA	20,0	0,65	0,65	0,66	0,61	0,60	0,60	0,62	0,61	0,61	0,59	0,61	0,61	0,61	-0,01
BELGIUM	21,0	0,57	0,61	0,50	0,53	0,50	0,47	0,51	0,48	0,50	0,52	0,51	0,48	0,47	-0,05
CANADA	5,0					0,44	0,48	0,51	0,51	0,52	0,48	0,52	0,51	0,49	-0,02
CHILE	19,0					0,62	0,67	0,64	0,67	0,67	0,64	0,67	0,70	0,59	-0,05
CZECH REPUBLIC	19,0						0,43	0,43	0,41	0,57	0,53	0,55	0,58	0,56	0,13
DENMARK	25,0	0,64	0,61	0,60	0,60	0,55	0,58	0,60	0,60	0,62	0,64	0,65	0,62	0,59	-0,02
ESTONIA	18,0						0,73	0,70	0,69	0,75	0,81	0,80	0,67	0,76	0,05
FINLAND	22,0						0,54	0,60	0,60	0,60	0,61	0,60	0,58	0,55	-0,05
FRANCE	19,6	0,65	0,68	0,62	0,61	0,52	0,51	0,50	0,50	0,51	0,51	0,51	0,49	0,46	-0,04
GERMANY	19,0	0,56	0,57	0,52	0,50	0,62	0,60	0,61	0,56	0,55	0,57	0,55	0,56	0,56	-0,05
GREECE	19,0				0,46	0,46	0,43	0,50	0,49	0,48	0,47	0,48	0,46	0,39	-0,10
HUNGARY	20,0					0,30	0,43	0,52	0,46	0,49	0,55	0,59	0,57	0,62	0,10
ICELAND	24,5					0,56	0,54	0,59	0,54	0,62	0,65	0,60	0,54	0,47	-0,12
IRELAND	21,5	0,30	0,21	0,44	0,42	0,46	0,52	0,58	0,57	0,65	0,66	0,62	0,54	0,46	-0,12
ISRAEL	15,5						0,68	0,64	0,63	0,64	0,64	0,69	0,68	0,68	0,04
ITALY	20,0	0,46	0,43	0,40	0,40	0,39	0,40	0,45	0,41	0,41	0,43	0,43	0,41	0,37	-0,08
JAPAN	5,0					0,68	0,71	0,68	0,66	0,71	0,70	0,69	0,67	0,67	-0,01
KOREA	10,0					0,64	0,59	0,61	0,69	0,66	0,65	0,65	0,65	0,67	0,06
LUXEMBOURG	15,0	0,60	0,56	0,56	0,57	0,47	0,57	0,68	0,75	0,87	0,87	0,91	0,94	0,92	0,24
MEXICO	15,0		0,33	0,28	0,26	0,32	0,25	0,29	0,30	0,31	0,34	0,34	0,35	0,31	0,02
NETHERLANDS	19,0	0,49	0,54	0,51	0,56	0,59	0,57	0,60	0,57	0,61	0,60	0,62	0,60	0,55	-0,06
NEW ZEALAND	12,5				0,89	0,97	0,99	0,98	1,07	1,02	1,03	0,96	0,97	0,99	0,01
NORWAY	25,0	0,66	0,66	0,63	0,69	0,58	0,60	0,67	0,56	0,57	0,61	0,63	0,57	0,54	-0,13
POLAND	22,0						0,43	0,42	0,42	0,46	0,50	0,53	0,49	0,46	0,04
PORTUGAL	20,0				0,45	0,50	0,56	0,60	0,54	0,57	0,53	0,53	0,51	0,44	-0,16
SLOVAK REPUBLIC	19,0						0,48	0,43	0,53	0,61	0,57	0,53	0,54	0,48	0,04
SLOVENIA	20,0							0,68	0,65	0,66	0,67	0,69	0,67	0,62	-0,06
SPAIN	16,0				0,59	0,62	0,45	0,53	0,53	0,56	0,57	0,54	0,45	0,34	-0,19
SWEDEN	25,0	0,45	0,36	0,39	0,42	0,41	0,50	0,52	0,52	0,55	0,56	0,57	0,58	0,57	0,05
SWITZERLAND	7,6						0,68	0,75	0,73	0,73	0,75	0,74	0,74	0,71	-0,05
TURKEY	18,0				0,45	0,44	0,43	0,45	0,47	0,38	0,34	0,36	0,35	0,34	-0,11
UNITED KINGDOM	15,0	0,47	0,45	0,49	0,53	0,48	0,49	0,48	0,49	0,48	0,48	0,48	0,46	0,47	-0,02
Unweighted average		0,54	0,51	0,51	0,53	0,53	0,55	0,58	0,57	0,59	0,59	0,60	0,58	0,55	-0,02

Table 1–3. VRR estimation (OECD, 2012)

C. The HRMC estimation

The UK tax administration has actually developed a methodology to estimate the VAT gap (HMRC, 2011). It uses national accounts data to calculate the theoretical total VAT liability in the UK, which is defined as, "the amount, which would be collected in the absence of any fraud, avoidance, debt or other losses". The difference between actual cash receipts and this theoretical amount of VAT is the VAT gap. The gross VAT theoretical tax liability is built up from five expenditure components: household consumption; capital expenditure on housing; government expenditure; charities expenditure; and expenditure of partially exempt businesses. The measure takes into account the applicable VAT rates on that expenditure based on commodity breakdowns; the legitimate refunds (deductions) and exemptions occurring through schemes and reliefs. The VAT gap measure is close, in terms of methodology, to the way the VRR is calculated although the theoretical VAT liability reflects actual tax rates, exemptions and thresholds applied to a narrower base than total final consumption as in the national accounts.

Estimated VAT gap (£ billion) [1]					
	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**
Net VTTL	92.8	93.0	80.8	95.3	109.8
Net VAT receipts [2]	82.0	79.8	71.4	85.4	98.4
VAT gap (point estimate)	**10.8**	**13.2**	**9.4**	**9.9**	**11.4**
of which MTIC fraud	1.0-1.5	1.0-1.5	1.0-1.5	0.5-1.0	0.5-1.0
of which debt	0.9	2.4	1.8	0.9	1.8
VAT gap (per cent) [3]	**11.7%**	**14.2%**	**11.6%**	**10.4%**	**10.4%**

Table 1–4. Estimated VAT gap (£ billion) (HMRC, 2013)

1 The amounts are rounded to the nearest £0.1 billion.
2 Net VAT receipts are expressed net of payments and repayments.
3 The VAT gap as a percentage of VTTL has been rounded to the nearest 0,1 per cent.

1.2.2.3 Limits of the interpretation of VAT gap

The compliance gap is the estimation of the degree of compliance by taxpayers that, with the correct precautions and small adjustments, could at least be representative of, if not exactly similar to, the VAT evasion.

From this value, we can estimate the amount of tax evasion related to this VAT gap. However, it does not cover the definition of tax evasion given in the previous paragraph, but only the situation in which the evasion comes from a lower VAT than we had anticipated. This definition, does not take into account for example, tax evasion related to transfer pricing. The compliance VAT gap could be a consequence of different situations. Below are given four different behaviours that generate a VAT gap.

	Worked example 1: Evasion with complicity	**Worked example 2: Evasion without complicity**	**Worked example 3: MTIC carousel fraud**	**Worked example 4: Fraudulent consumer import**
V Applicable VAT rate	20%	20%	20%	20%
A VAT receipts	0	30	–24	0
B Final consumption (including VAT)	120	300	0	120
C = B*V/(1+V) Tax that ought to have been remitted	20	50	0	20
D = C – A Tax not remitted	**20**	**20**	**24**	**20**

Table 1–5. Example of different behaviours that generate a VAT gap (Reckon LLP, 2009)

As it is possible to see in the table an equal amount of tax evasion could be generated by different revenues.

1.2.3 The economic impact on the VAT gap

Taking into account the different approach of VAT gap estimation, its limits and observations, we report in the table below VAT gap calculated by The European

Commission (EC, 2014). For the given period of twelve years (2000-2012) we compare VAT gap on VTTL for the four most significant years.

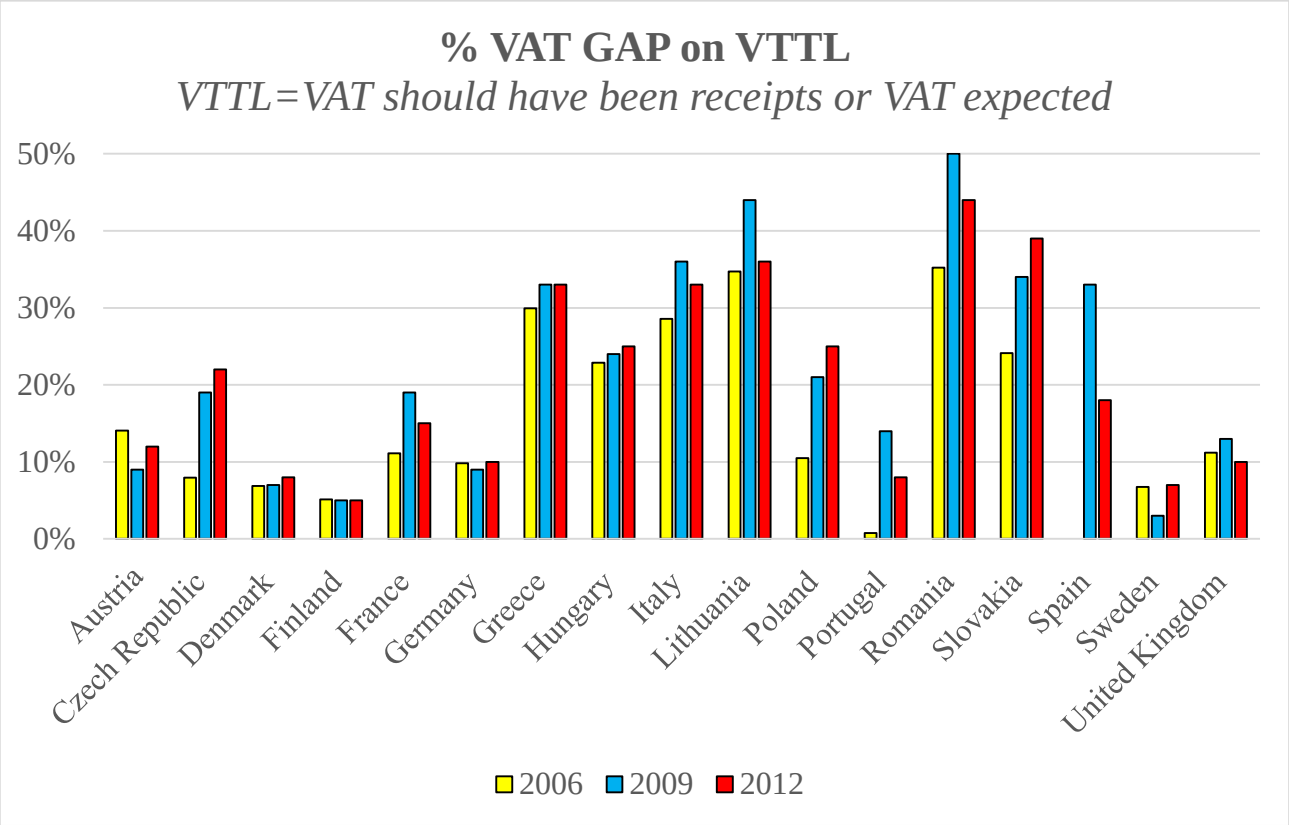


Figure 1–3. . Own calculation based on European Commission VAT gap (CASE, 2014)[13]

Different economy trends are characterized during the period from 2000 to 2011. In 2000, there was an energy crisis followed by several years of economic expansion and most of the European economy in particular Spain, Ireland and east countries had a flourishing period. This situation changed drastically with the crisis of 2007. The GDP of most countries had a recession during 2008 and 2009. Post those years, some European countries in particular Italy, Spain, Ireland and Greece have suffered more problems to come out of the recession. Moreover, in these countries the unemployment rate has been rising ever since then.

[13] CASE in the report of 2013 provided data from 2000 to 2011. In the report of 2014, it revised the value of VAT gap from 2009 to 2012. To better do a comparison all over the years we recalculate the data from 2000 to 2008 using the average of variation of the revised data of the next period.

As we know, the economy influences VAT and revenue in general. The economic trend could also have an effect on tax compliance and on other factors directly correlated with VAT gap.

The **VAT Gap** is defined as the difference between the expected VAT that could be collected and the actual VAT receipts by each member states. As we said, the VAT Gap is strictly related to the trend of the economy and to the tax compliance of the people. Due to the 2007-2008 financial crisis we could compare the previous period of the crisis characterized by growth with the next one.
This division is quite important because it shows the weight of the economy on VAT gap. During a period of crisis, the fall of tax compliance, the presence of bad debts and other factors contribute to increase VAT gap.

In 2007/2008 at the peak of the crisis, most countries recorded a huge hike in the VAT gap on VTTL. So, we can see how the crisis affected more the VAT collected than the VAT gap. Revenue are more elastic than VAT gap. In other words, a change in the trend of GDP affected the revenue more than the gap. So when the economy grows the revenue also grows and the gap has a less weight or effect on the economy, because its change is softer. Nevertheless, during the crisis starting in 2008/2009 the sharp contraction in the economy of many countries and the financial problems of entrepreneurs resulted in a strong increase of the gap in both absolute and relative terms. This explains why, that during the crisis, bad debts as well as tax evasion increased.

Taking this into account, there could be several methods to estimate the weight of the economy on VAT gap. Among others, we have divided the countries into three different groups depending on how the economy affected their VAT gap.
In the first group, we selected the countries whose economy has risen again, on average, after the crisis. We calculated the average of VAT gap from 2000 to 2007/2008, depending upon when the crisis began in that particular country. Then, we compared the result with the VAT gap of 2009 and 2010, taking the average of the two differences. This was the amount to rest from the 2012 VAT gap.

Group 1	Average growth of GDP 2000-2007	Growth GDP 2009	Average growth of GDP 2010-2013	Year of max GDP (2000-2012)	%VAT gap on VTTL Average from 2000-2007/2008	Average of change of %VAT gap on VTTL in the first two years of the crisis compare of period before crisis	2012 VAT gap without economic influence	2012 VAT gap
Belgium	4,16%	-1,65%	2,96%	2012	9%	-3,02%	6,98%	10%
Bulgaria	11,90%	-1,40%	3,43%	2012	19%	-4,14%	15,86%	20%
Czech Republic	11,04%	-7,83%	1,31%	2011	14%	-6,53%	15,47%	22%
Denmark	3,95%	-4,92%	2,74%	2012	8%	-0,21%	7,79%	8%
Estonia	14,72%	-13,95%	7,46%	2012	11,42%	-1,38%	12,62%	14%
Finland	4,52%	-7,19%	2,95%	2012	6%	-0,71%	4,29%	5%
France	3,94%	-2,45%	2,24%	2012	11%	-6,21%	8,79%	15%
Hungary	10,38%	-13,38%	1,77%	2008	22%	-2,41%	22,59%	25%
Ireland	8,73%	-9,97%	0,29%	2007	7%	-6,37%	4,63%	11%
Italy	3,79%	-3,52%	0,67%	2011	30%	-2,28%	30,72%	33%
Latvia	14,34%	-19,08%	6,14%	2008	17%	-22,33%	11,67%	34%
Lithuania	12,75%	-17,77%	6,80%	2012	36%	-5,28%	30,72%	36%
Luxembourg	7,96%	-4,81%	6,37%	2012	2%	-1,60%	4,40%	6%
Netherlands	4,59%	-3,57%	1,26%	2012	2%	-1,98%	3,02%	5%
Poland	8,05%	-14,45%	5,93%	2012	18%	-1,38%	23,62%	25%
Romania	17,69%	-15,43%	4,78%	2008	38%	-9,64%	34,36%	44%
Slovakia	13,99%	-2,51%	3,54%	2012	23%	-11,80%	27,20%	39%
United Kingdom	3,74%	-13,36%	4,61%	2007	11%	-1,71%	8,29%	10%

Table 1–6. Group 1 – Countries subdivision (Own calculation)

In the second group, we have the countries with a negative growth of GDP during the period after the crisis. For these countries, we calculated the 2012 VAT gap as the average of the period before and after the crisis. The periods, with opposite trends give a depurate value of gap.

Group 2	Average growth of GDP 2000-2007	Growth GDP 2009	Average growth of GDP 2010-2013	Year of max GDP (2000-2012)	%VAT gap on VTTL Average from 2000-2008	%VAT gap on VTTL Average from 2009-2012	2012 VAT gap without economic influence (average)	2012 VAT gap
Greece	7,13%	-0,91%	-5,78%	2008	26%	33%	29%	33%
Portugal	4,16%	-2,01%	-0,40%	2010	1%	11%	6%	8%
Slovenia	7,03%	-4,90%	-0,09%	2008	6%	11%	8%	9%
Spain	7,62%	-3,76%	-0,57%	2008	6%	21%	13%	18%

Table 1–7. Group 2 – Countries subdivision (Own calculation)

In the third group, we included the countries in which the trend of their economy has had no influence on VAT gap. In these countries, the financial crisis gave a contraction of the gap; however, we could not deduce whether the crisis had a positive effect on the VAT gap of these countries. In these countries there were probably other important factors with a stronger influence.

3° Group	Average growth of GDP 2000-2007	Growth GDP 2009	Average growth of GDP 2010-2013	Year of max GDP (2000-2012)	%VAT gap on VTTL Average from 2000-2007/2008	Average of change of %VAT gap on VTTL in the first two years of the crisis compare of period before crisis	2012 VAT gap without economic influence	2012
Austria	3,99%	-2,30%	3,19%	2012	11%	1,41%	13,41%	12%
Germany	2,48%	-4,03%	3,63%	2012	11%	1,36%	11,36%	10%
Sweden	3,43%	-12,24%	9,70%	2012	6%	3,34%	10,34%	7%

Table 1–8. Group 3 – Countries subdivision (Own calculation)

The graph below shows, starting from the left, the countries with VAT gap more sensible to economic trends.

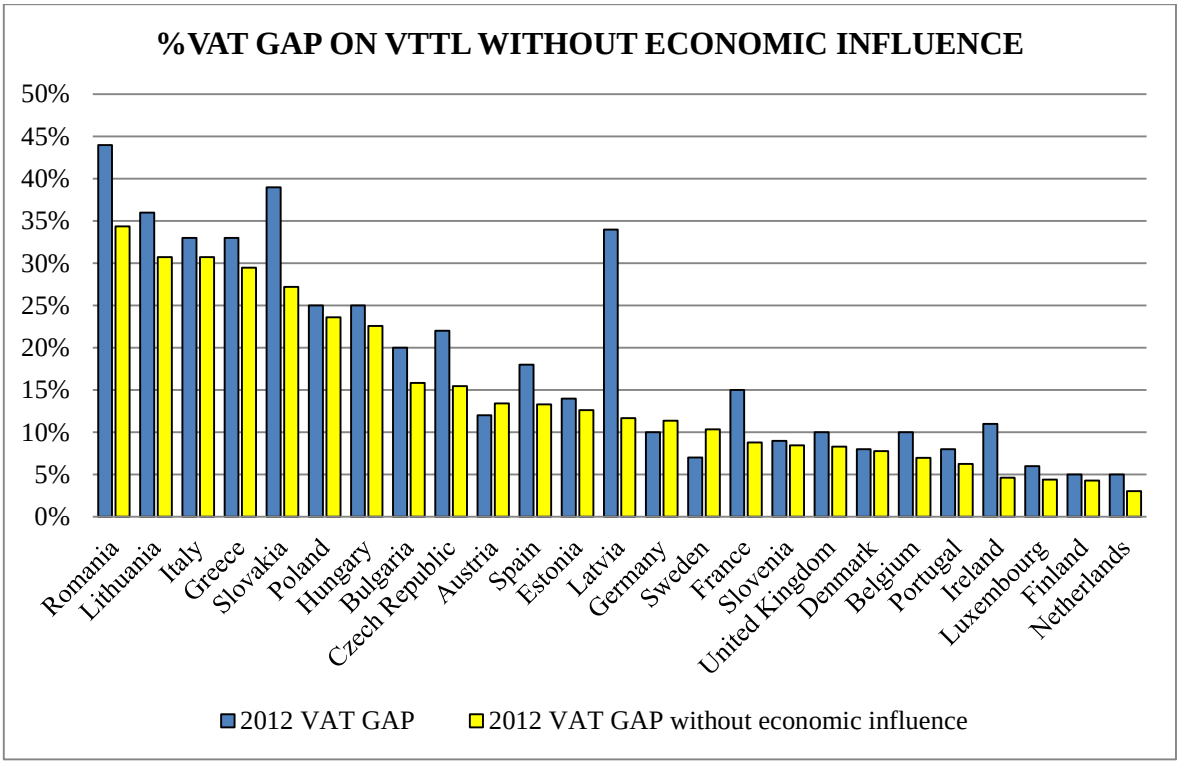


Figure 1–4. % VAT gap on VTTL without economic influence (Own calculation)

As it can be seen, Latvia (-22,33%) and Slovakia (-11,80%) have a high difference between 2012 VAT gap and the gap estimated. Romania also has a high score (9,64%) but like Slovakia maintains a high percentage of VAT gap. Furthermore, it may be seen that Hungary and Italy, despite a large gap, do not have a justification in this economic trend.

In terms of ratio of VAT gap to their own VTTL, Romania (34,36%), Lithuania (30.72%) Italy (30,72%), Greece (29,00%), Slovakia (27,20%), Poland (23,62%) Hungary (22,59%), were the countries with an important VAT Gap without economic distortion during 2012. On the other hand, with the same VTTL, in absolute value, the largest European economies recorded the highest score. In particular, Italy (€ 33,3 bn), Germany (€ 27.7 bn), France (€ 25 bn), and the UK (€ 18, 7 bn) contributed over half of the total VAT Gap.

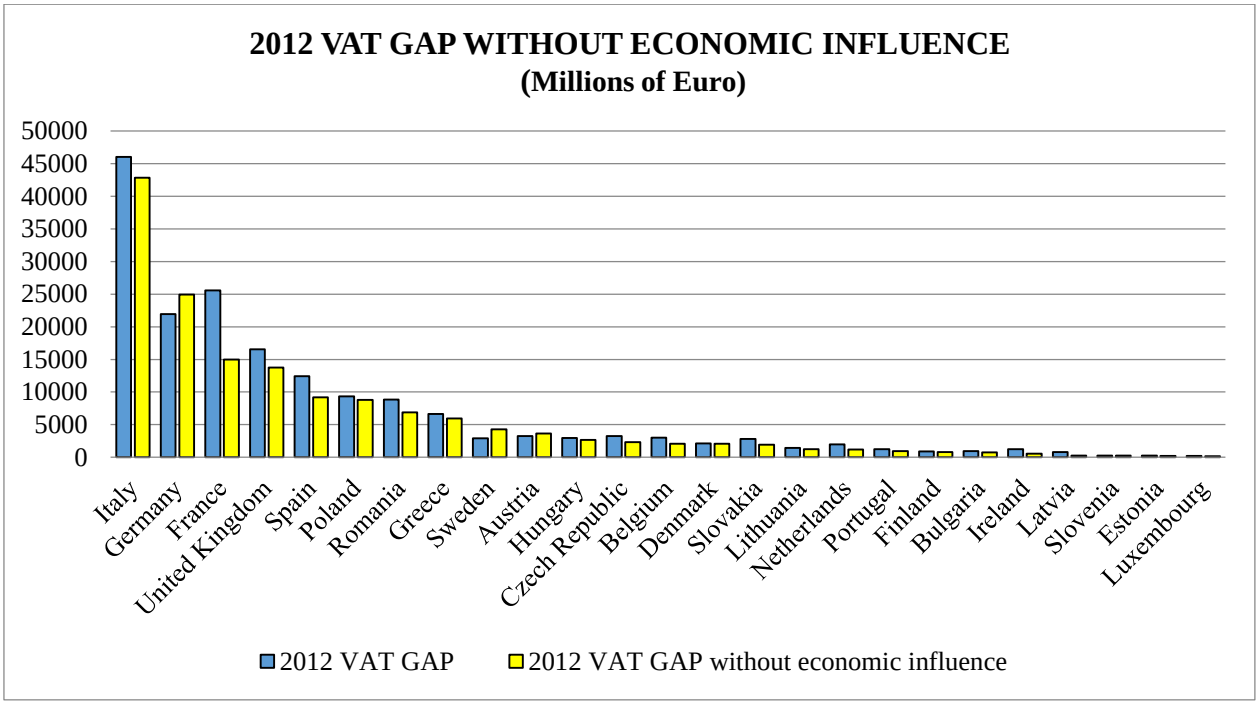


Figure 1–5. 2012 VAT gap without economic influence (Millions of Euro) (Own estimation)

The next graph shows the weight of the estimated VAT gap on GDP. This evaluation adds information about the magnitude of the VAT gap in each country. As may be seen, the first countries are, in other order, the same countries with higher estimated VAT gap on VTTL.

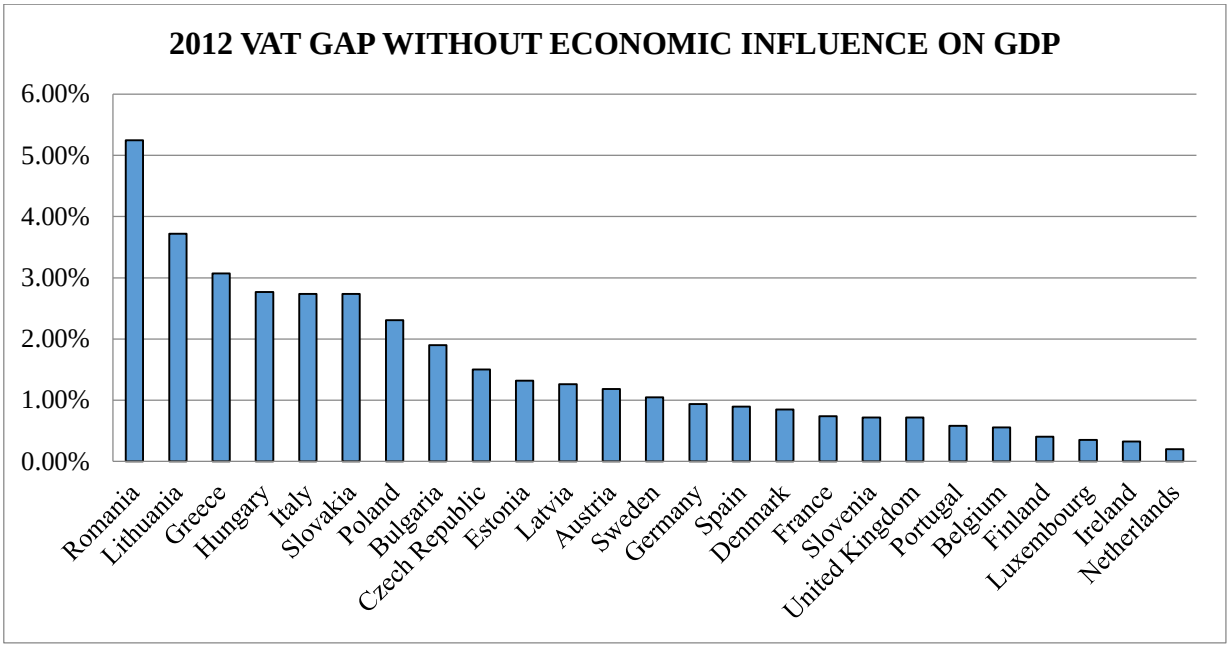


Figure 1–6. 2012 VAT gap without economic influence on GDP (Own estimation)

Observing the three graphs, it mau be seen that Romania has a difference between the VTTL and VAT gap out of average. This could be taken as evidence that the country has loopholes within the tax system. We recall the attention that VTTL is already depurated from the reduce VAT rate and exemption. So we could conclude that after the deduction of economic trends this may explain a part of VAT gap, we could associate the estimated VAT gap to undeclared sales or in other words, to tax evasion.

1.2.4 2013 Vat gap estimation

In this section, we give an estimation of VAT gap in 2013. For this calculation we adopted a top-down method with data taken from The European Commission, OECD and EUROSTAT. However, we did not have access to data used by The European Commission and OECD. We noticed that in late October 2014, The European Commission released an important update of their data on VAT gap, in this publication they did a more accurate estimation. Another limitation is that there are few publications concerning this, so this made it difficult to compare the data.

The following is an explanation of the method we used for calculation:

First, we took the VTTL divided by "Household Consumption", "Government & NPISH Consumption", "Intermediate Consumption by Industries", "Gross fixed capital formation" (EC, 2013).

Thus:

$$\textbf{Policy Gap} = \frac{(VRR\ GAP - VAT\ GAP)}{(1 - VAT\ GAP)}$$

We can calculate the "FULL theoretical VAT". With this value of VAT applying the standard rate we arrive at the "sales net VAT". At the sales net VAT, we sum up the VAT Liability (VTTL) to have the sales with the VTTL.

Next, we took the weight average of the proportion between sales with VTTL and Final consumption during the selected period from 2009 to 2012. We used this average to take the right proportion to final consumption of 2013. Thanks to this result and with a weighted VTTL rate average we were able to calculate the 2013 VAT gap.

The following is a simple scheme of the method.

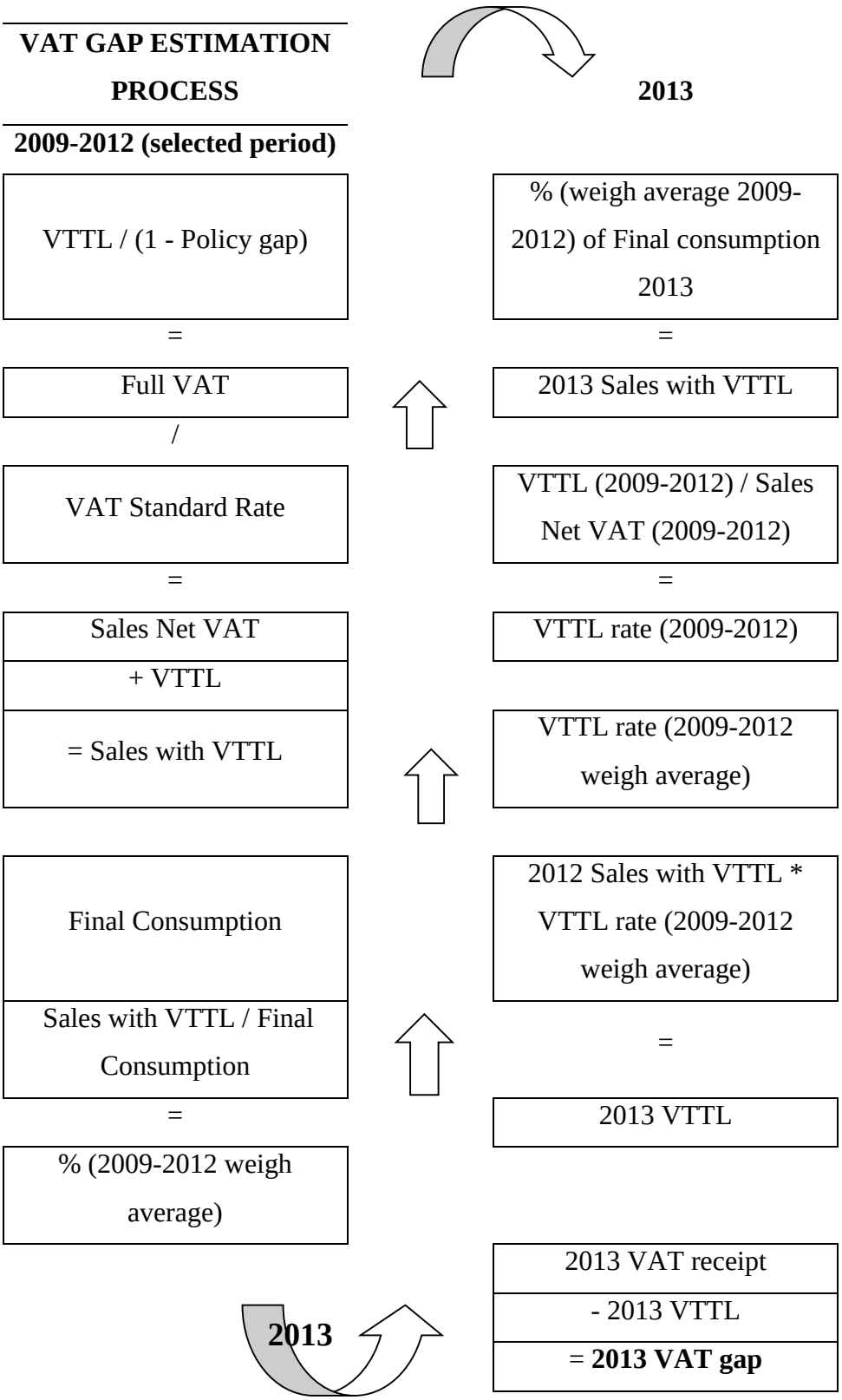


Table 1–9. VAT gap estimation process (Own calculation)

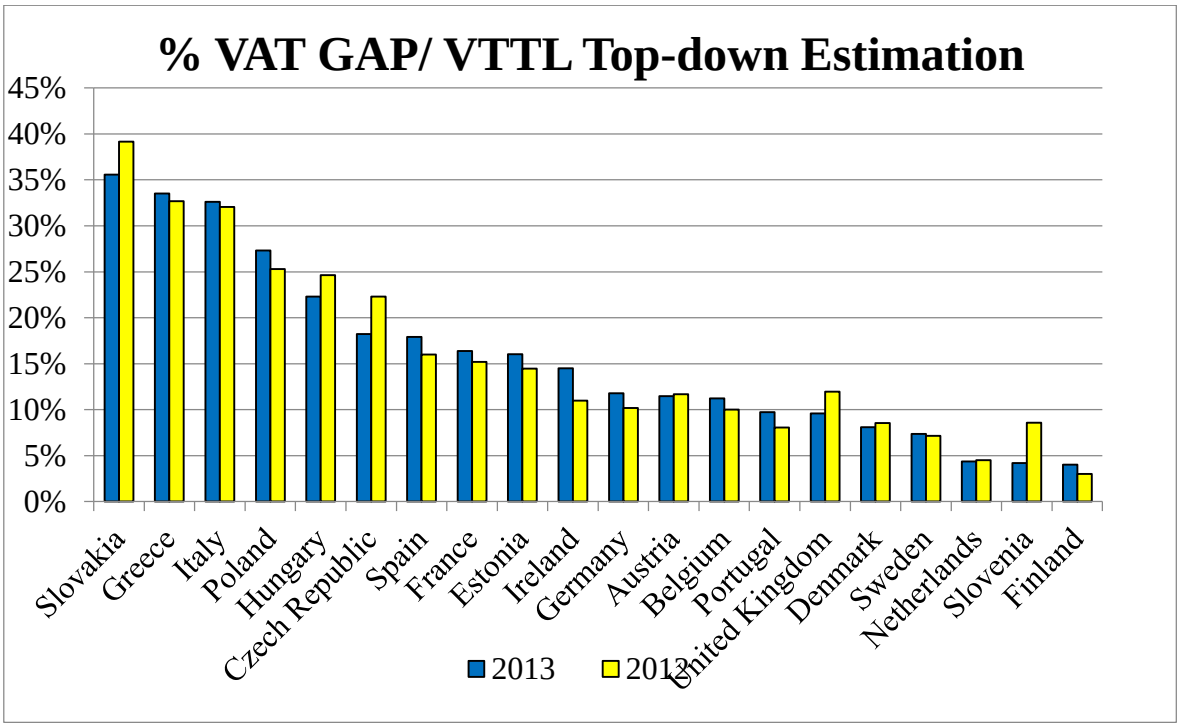


Figure 1–7. % VAT gap/ VTTL Top-down Estimation (Own estimation)

VAT gap ESTIMATION							
VAT	**2013**				**2012**		
GEO/TIME	**VTTL**	**VAT**	**VAT gap**	**% VAT gap / VTTL**	**VTTL 2012**	**% VAT gap/ VTTL Inderect method**	**% VAT gap / VTTL**
Slovakia	7.290	4.696	2.593	35,58%	5243	39,17%	39,00%
Greece	18.943	12.593	6.350	33,52%	15450	32,67%	33,00%
Italy	139.193	93.812	45.381	32,60%	100331	32,04%	33,00%
Poland	38.230	27.780	10.449	27,33%	25015	25,31%	25,00%
Hungary	11.676	9.073	2.603	22,29%	8180	24,64%	25,00%

Table 1–10. VAT gap estimation.

In terms of ratio to their own VTTL, Slovakia (35,58%), Greece (33,52%), Italy (32,60%) Poland (27,33%), Hungary (22,29%), Spain (23,91%) were the countries with the largest percentage of VAT gap on VTTL during 2013.

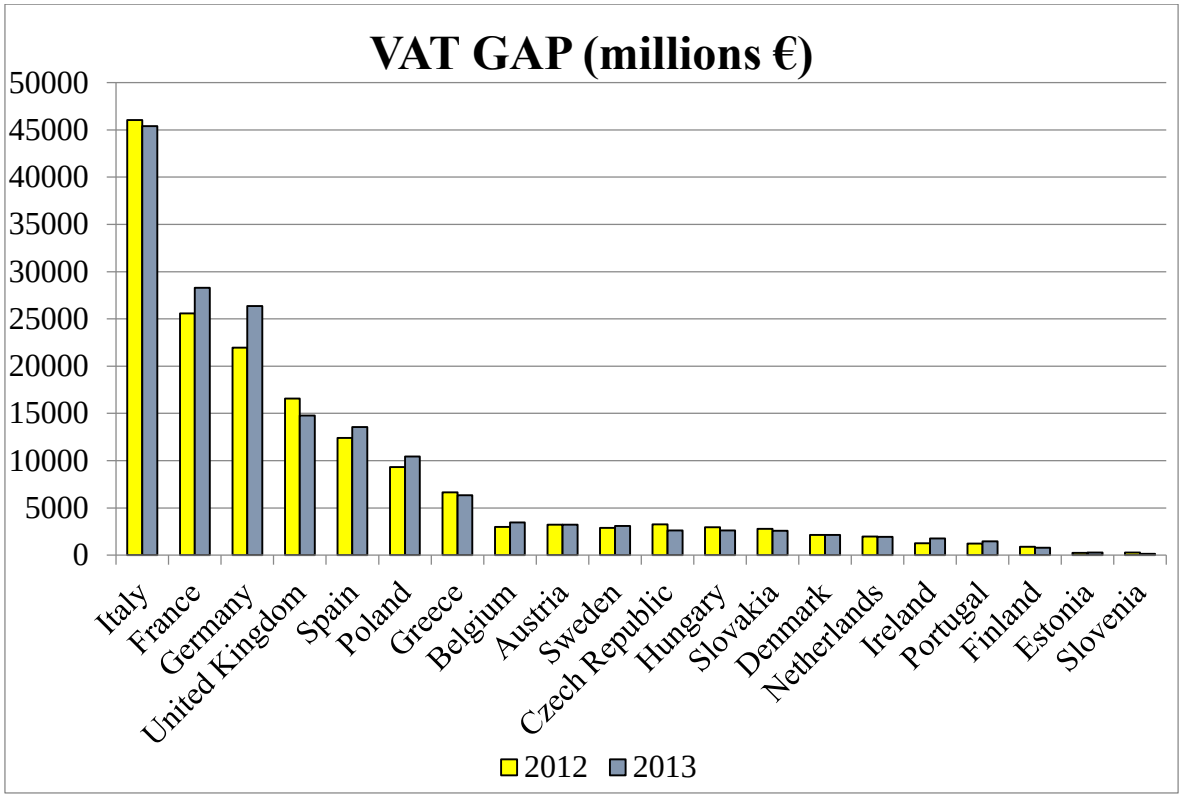


Figure 1–8. VAT gap (millions €) (Own estimation)

As in 2012, in the 2013 major European economies have a VAT gap higher than the other countries. Among these, Italy is in the first position with aa VAT gap of € 45.381,00 with a decrement from the 2012.

1.3 TAX EVASION ESTIMATION 2013

VAT gap can be explained by tax evasion. On this basis, we can calculate tax evasion through unrecorded sales. We presume that unreported sales were with the standard VAT rate[14]. The presumption of this estimation is that unreported VAT is on unreported sales. On these sales, we calculated the unreported tax due.

Once we take the amount of unreported sales, we can quantify tax evasion. There are several assumptions and hypotheses we should take into account to calculate the right amount of tax on these sales. To simplify and to make better comparisons among countries, we took average tax rate considering corporate and individual rates.

As in the VAT gap, the largest economies have a tax evasion larger than the others.

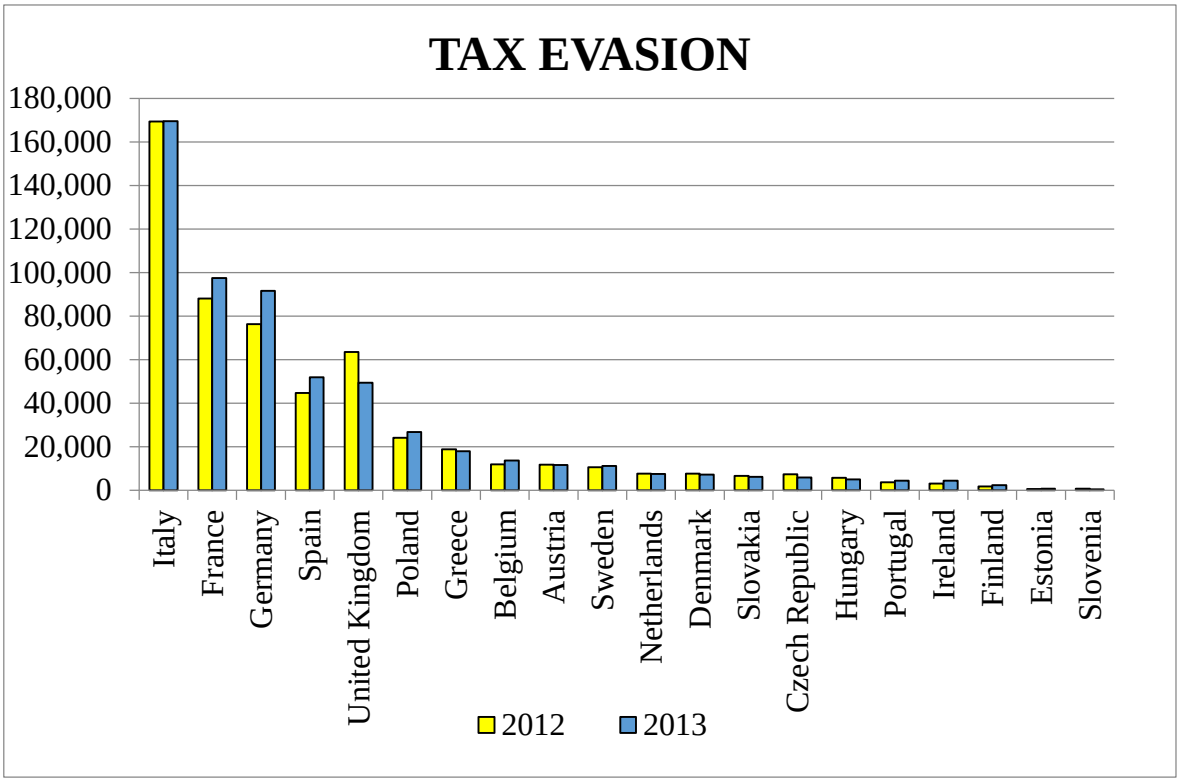


Figure 1–9. Tax evasion (Own estimation)

Italy, amongst the other countries, is in first place, both in the absolute and in the relative estimation. Spain and the United Kingdom also have a relevant size of informal economy. This means that tax evasion is an important problem for these countries. Conversely, there

[14] We use the standard rate because we already taken in account reduce rate and exemption in Policy Gap.

are countries such as Slovakia that suffered from a high rate of tax evasion but have small economies. In this case, the problem could be dealt with better and handled more easily.

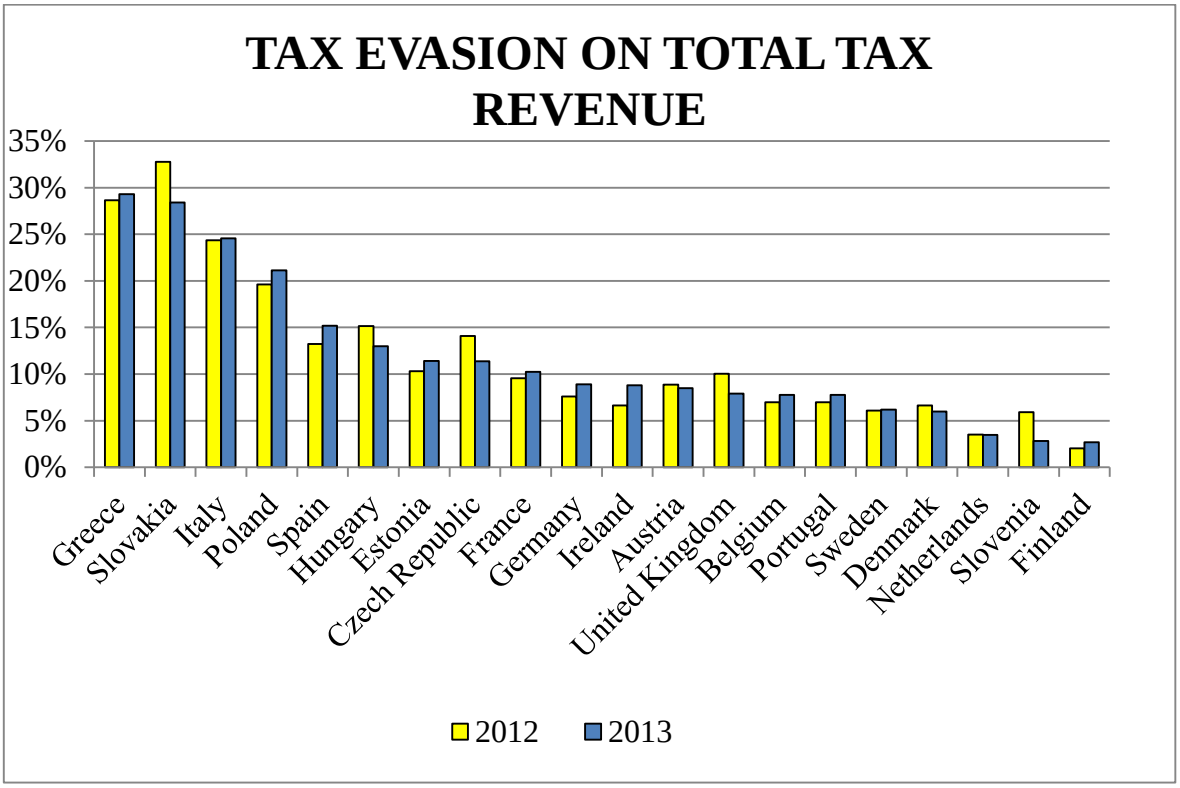


Figure 1–10. Tax evasion on total tax revenue (Own estimation)

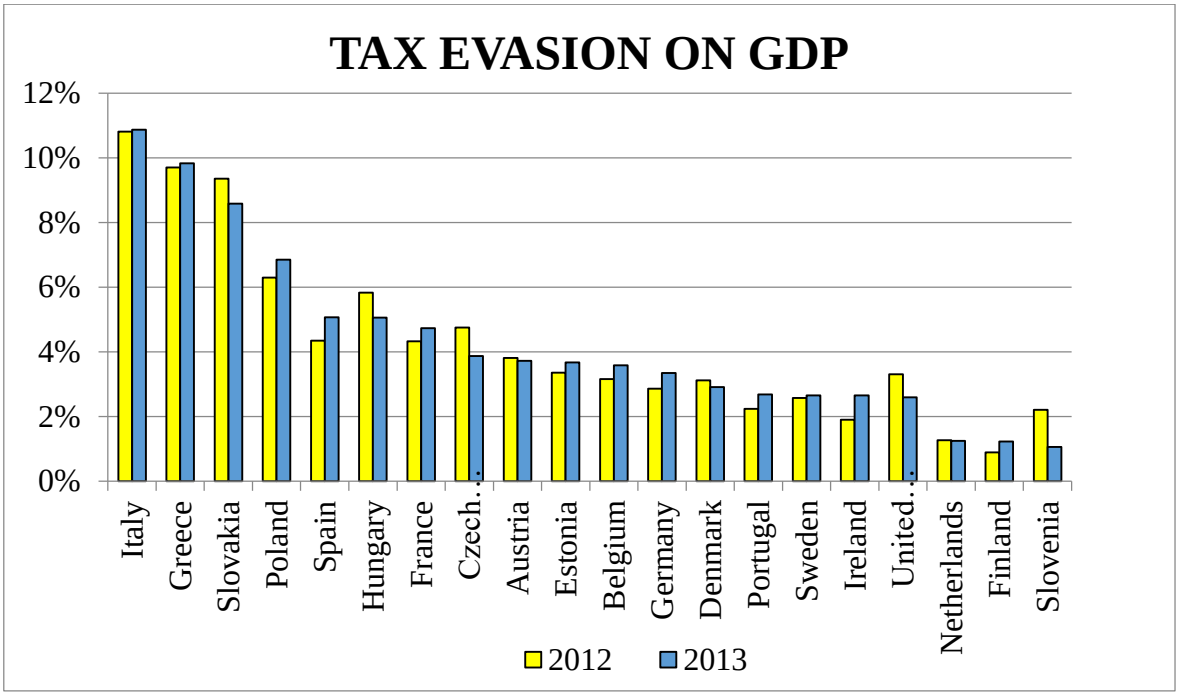


Figure 1–11. Tax evasion on GDP (Own estimation)

In conclusion, tax evasion is not a country problem but European ones. Tax evasion is both a sign of uneasiness and inefficiency of the system and gives a wrong base for socio-economic development.

1.4 CONCLUDING REMARKS

The VAT gap which we estimated without economic influence, give us the real magnitude of the problem especially for those countries that had experienced economic growth before the crisis. For these countries, the weight of the VAT gap rose sharply during the first years of the crisis showing the fragility of the revenue.

We are aware that in order to estimate VAT gap and tax evasion we have used several hypotheses that could limit the interpretation of the data. However, evidence coming from

other studies[15] show that the margin of error could be in a small percentage. A mayor preoccupation is that we do not take into account tax evasion from elusion operation. This type of tax evasion is more sophisticated and it could be the real problem of a country. However, the unreported sales we estimated, are divided among a multitude of activities, it could be representative of the economic composition of a society.

Another problem is that what it is legal in one country could promote tax evasion in another country inside The European Union or the European Free Trade Area (EFTA). In this way, countries like Luxemburg or Switzerland could have strong governance, institutions and low scores of corruption, but could give a legal base to hide profit. The Financial Secrecy Index tries to give a measure of the problem (Tax Justice Network, 2013).

To sum up, the tax gap calculated gives a glance of the problem of evasion among European countries with consequences in competitiveness area (OECD, 2010). As always, tax evasion gives a higher tax burden especially for middle lower class of the society that is the most vulnerable part of the society that could not evade tax obligations.

[15] See (Murphy, 2014)

2

COUNTRY BY COUNTRY REPORTING (CBCR) COMPARISON AND ANALYSIS

2.1 CBCR COMPARISON

2.1.1 Background

During the twentieth century, international taxation and accountability has changed to better handle trade between countries and prevent double taxation (Hugh, 2013). [16]

After War World II, in particular, growth in commercial relations produced a proliferation in tax treaties between European countries. This matter was important especially for multinational companies who faced double taxation. Moreover, tax treaties could integrate national tax legislation to build a formal net to better operate. At the same time, the lack of legislation both at national and international levels produced the perfect environment for, in the first place, the avoidance of double taxation and then the complete avoidance of taxation. In 1998 the OECD released a report on the harmful effects of tax competition. This report signalled an important change in perspective in international cooperation efforts. The report raised three main issues which related to double non-taxation or reduced taxation: 1. tax evasion, 2. tax avoidance and 3. harmful tax competition in general (OCDE, 1998).

[16] From the very outset, [the drafters of the model convention] realized the necessity of dealing with the questions of tax evasion and double taxation in co-ordination with each other. It is highly desirable that States should come to an agreement with a view to ensuring that a taxpayer shall not be taxed on the same income by a number of different countries, and it seems equally desirable that such international cooperation should prevent certain incomes from escaping taxation altogether. The most elementary and undisputed principles of fiscal justice, therefore, required that the experts should devise a scheme whereby all incomes would be taxed once and only once. (Report prepared by the Committee of Experts on Double Taxation and Tax Evasion -League of Nations Publications-, 1927, p. 23).

At the same time, it was recognised at the international level, that most of the "resource rich" countries did not realise any benefit from their natural resources, on the contrary these countries were in general associated with corruption, poverty, and conflicts.

Basically, revenues coming from natural resources required more transparency, better accountability and taxation. In this context, standards were set to monitor the revenues coming from natural resources. (Principles of Extractive Industries Transparency Initiative (EITI) was first launched in 2003)

Countries in the West, however, were not really interested in more transparency, or international accountability and taxation until the financial crisis started in 2008. At this point these countries had a sharp downturn in their revenues which provoked an increment in tax burden and thus a cutting in public services. Thus, citizens began to realise that they had been paying more taxes than many multinational companies had been. Governments began to worry about tax evasion and tax avoidance perpetrated not only by citizens but also by MNEs, as a result discussions around this took centre stage at both national and international levels.

From the early 2000s and with an increasing emphasis within the last few years, different initiatives have been introduced to improve transparency and accountability at the international level.

2.1.2 Introduction to the different CBCR proposals (included EITI)

2.1.2.1 OECD

Although it has only been in the last few years that the OECD has put more emphasis on taxation, it was always at the forefront of their plan to improve international tax co-operation between governments, in order to counter international tax avoidance and evasion.

In one of its most recent studies, the OECD tried to provide an international solution to the global problem of "Base Erosion and Profit Shifting" (BEPS). BEPS refers to tax planning strategies that exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations, where there is little or no economic activity, resulting in minimal corporate tax being paid. BEPS is of major significance for developing countries due to their heavy reliance on corporate income tax, particularly from multinational enterprises (MNEs).

In an increasingly interconnected world, national tax laws have not always kept pace with global corporations, fluid movement of capital, or the rise of the digital economy, thus leaving gaps that can be exploited to generate double non-taxation. This undermines the fairness and integrity of tax systems. Fifteen specific actions have been developed in the context of the OECD/G20 BEPS project, in order to equip governments with the domestic and international instruments needed to address this challenge. The first set of measures and reports were released in September 2014. These, along with studies carried out during 2015, give countries the tools they need to ensure that profits are taxed where economic activities generating profits are performed and where value is created, whilest at the same time, giving business greater stability by reducing disputes over the application of international tax rules, and standardising requirements. It should be noted that all countries, whether OECD/G20 or not, are involved in an equal footing.

Among the 15 Actions, we will analyse specifically Action 13: "Transfer Pricing Documentation" focusing in particular, on Country by Country Reporting. In this regard, the OECD provides guidelines to implement exchange of information between countries about specific data of MNEs, such as the number of employees, taxes paid and consolidated group revenue in the preceding fiscal year of those equal to €750 million or more.

2.1.2.2 USA

The Dodd-Frank Wall Street Reform and Consumer Protection Act, known as the 'Dodd-Frank Act', is a United States federal law which places regulations of the financial industry in the hands of the government. The legislation, enacted in July 2010, aims to prevent another significant financial crisis, by creating new financial regulatory processes that enforce transparency and accountability while implementing rules for consumer protection.

In August 2012, the Securities and Exchange Commission (SEC) adopted the amendments to its disclosure rules to implement Section 1504 -SEC Rule 13(q)- of the Dodd-Frank Act[17]. This compels every American oil, gas and mining companies, or foreign companies, to

[17] (U.S. - Securities and Exchange Commission, 2012)

publish their payments to governments, such as taxes, royalties and licence fees, in every country they carry out business in.

The U.S. law requires companies to report any payment of US $100,000 and above, made on every individual extraction project they operate. This means that for the first time, people living near mines or oil fields will be able to see in detail how much money is being generated by local projects, and hold their governments to account if they do not see the benefits.

On October 25, 2012, the American Petroleum Institute and the U.S. Chamber of Commerce, along with two other trade associations, sued the SEC, claiming that it had made a number of procedural errors in promulgating the rules. These groups also claimed that Section 1504 violates oil companies' First Amendment free speech rights.

On July 2, 2013, the D.C. District Court ruled that the SEC should have provided justifications for the following two requirements of the regulations:

1) requiring company reports to be made public and
2) allowing no exemptions to address the oil industry, claiming that some countries prohibit disclosure of the information required under this law.

The SEC is not appealing this decision and is, instead, working on Section 1504 rules that will take into consideration the court's decision. The SEC has not yet issued a new rule. On September 18, 2014, Oxfam filed a lawsuit in the U.S. District Court for the District of Massachusetts to force the SEC to issue a new resource extraction disclosure rule. The SEC has said that it cannot achieve Oxfam's timeframe demands for issuing a new rule.

At this time, the outcome concerning rules for Section 1504 of Dodd-Frank is unknown.

2.1.2.3 Canada

As in the US and the EU standards, the Canadian Division 28 -Extractive Sector Transparency Measures Act- applies to entities that are directly or indirectly engaged in the commercial development of oil, natural gas, or minerals that are subject to Canadian law.

Extractive entities are required to report annually on payments made to governments relating to the commercial development of oil, natural gas, or minerals, in Canada and abroad. Payments will be broken down in the report on a project by project basis.

2.1.2.4 The EITI standards[18]

The Extractive Industries Transparency Initiative (EITI) sets a global standard to promote openness and accountable management of natural resources in productive countries, where companies operate. The standard is implemented by governments, in collaboration with companies and civil society.

Countries implementing the EITI agree to disclose information on tax payments, licences, contracts, production and other key elements around resource extraction. The aim of EITI is to make public the data of the payments that a government receives from companies working on natural resources within that country. In the EITI, government, companies and civil society work together. The government and the companies report the data regarding taxes, royalties, bonuses received and paid etc. and the civil society organizations must supply the linkage between the information provided and the society. In order to adhere to the EITI standard, there are a number of procedures which must be followed. First, the country becomes a candidate, and if it upholds the standards and reports the necessary information, then it may receive 'compliant country' status. Conversely, if the country does not follow the standards over a period of years, it is first suspended and then removed entirely from the list of compliant countries.

2.1.2.5 EU – European Commission

In 2010 The European Commission (European Commission, 2010) started talking about "Country By Country Reporting". The first step was a public consultation where the Commission considered two types of disclosures:

a. General country-by-country reporting by multinational companies and

[18] **Multi-Donor Trust Fund for EITI Invalid source specified.**

In the context of the EITI, the World Bank manages a Multi-Donor Trust Fund (MDTF) that gives financial support to the World Bank's technical assistance, governments and civil society implementing EITI.

As of February 2012, the supporting donors that have contributed to the MDTF were as follows: Australia; Belgium; Canada; the European Commission; Denmark; Finland; France; Germany; Japan; the Netherlands; Norway; Spain; Switzerland; the United Kingdom, which was the launch donor; and the United States.

b. Specific transparency obligations for companies which are active in the extractive industry (minerals, oil, and gas) in third countries;

The first objective of The European Commission, was to increase transparency and accountability of multinational companies in general and those involved in the extractive sector in particular. The special attention given to natural resources was justified for the adoption on July of 2010 by USA of Section 1504 of the Dodd-Frank Act, which requires all extractive companies listed on the USA stock-exchanges (and among them some EU based companies), to publish payments made to governments on a country-by-country basis. Moreover, the International Accounting Standard Board (IASB) was also working on a possible country-by-country reporting requirement, which could be incorporated within a replacement Standard for IFRS 6 (International Financial Reporting Standard) for the extractive sector. Although, it was expected that the CBCR statement would soon become mandatory, the IASB has never revised the standard and the requirement has never been disclosed for accounting proposes.

The following year, on 25 October 2011, the Commission adopted a legislative proposal[19] requiring the disclosure of payments to governments on a country and project basis by listed and large non-listed companies with activities in the extractive industry (oil, gas and mining) and loggers of primary forests, the so-called "Country By Country Reporting" (CBCR).
The proposal established rules ensuring that these companies would disclosed payments to governments (e.g. taxes on profits, royalties, and licence fees) on a country basis. Reporting would also be carried out on a project basis, where payments have been attributed to specific projects.
This disclosure requirement would have revised the Accounting Directives[20] (78/660/EEC and 83/349/EEC) and the Transparency Directive (2004/109/EC). The Transparency Directive was interested by the requirement in order to include all companies which are listed on EU regulated markets even if they are not registered in the European Economic Area (EEA) and incorporated in a third country.

[19] see IP/11/1238 and MEMO/11/734

[20] The Accounting Directive regulates the information provided in the financial statements of all limited liability companies which are registered in the European Economic Area (EEA).

An EU mandatory disclosure requirement would complement the EITI efforts by legally requiring companies registered or listed in the EU to disclose payments to governments along the same lines as EITI. In doing so, the EU proposal is thus strengthening the EITI standards in those countries that have not implemented the EITI yet.
On 26th June 2013 the European Parliament adopted the proposal[21].

In 2013, the European Commission introduced the requirement to disclosure country-by-country reporting ("CBCR") by banks and investment firms, under Article 89 of Directive 2013/36/EU (CRD IV).[22] After a period of public consultation and a report to investigate whether the requirement could have possible negative consequences, it became effective on 1 January 2015.

On 17 June 2015, the European Commission launched a public consultation on corporate tax transparency in the EU. This consultation aims to find out whether requiring companies to disclose more information about the taxes they pay could help tackle tax avoidance and aggressive tax practices in the EU. For example, companies could be required to disclose the taxes they pay, in every country where they operate. This consultation is part of the broader Action Plan for Fair and Efficient Corporate Taxation. The Action Plan sets out to reform the corporate tax framework in the EU, in order to tackle tax abuse, ensure sustainable revenues and support a better business environment in the Single Market.
Below are listed the five key areas identified by the European Commission to improve fairness and efficiency in corporate taxation:

1. Re-launching the Common Consolidated Corporate Tax Base (CCCTB);
2. Ensuring fair taxation where profits are generated;

[21] Directive 2013/34/EU Of The European Parliament And Of The Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC

[22] Directive 2013/36/EU Of The European Parliament And Of The Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

3. Creating a better business environment;
4. Increasing transparency;
5. Improving EU coordination.

As recently as 08 July 2015, the European Parliament voted to insert a requirement for large companies to publish information country by country, on profits or losses before tax, taxes on profits or losses and public subsidies received. Public interest entities, including listed companies and insurance firms, as well as companies designated by member states as public-interest entities because of their significant public relevance, are also required to adhere to these regulations. The amendment is now on the Counsilium.

Finally, on 28 January 2016 the Commission launched the "Tax Avoidance Package" where contains among other things a proposal of amending Directive 2011/16/EU regarding CBCR of OECD version (further information in pf. 2.2.4.3) .

This is a further step in the general country-by-country reporting by multinational companies first introduced in 2010.

2.1.3 Comparison between the different proposals of CBCR: Side-by-side comparison

As has been highlighted, fiscal corporate transparency is becoming a relevant matter at international level. In the last few years, countries like USA, EU, and institutions such as OECD have adopted measures or drawn up proposals to better handle tax avoidance and tax evasion.

Countries accepting the draft proposal of CBCR are concerned with two objectives: firstly, they wish multinational enterprises to report the fair amount of taxes, conversely they are worried about foreign competitors who are less transparent and who could find out and take advantage of their transparency.

Due to these and other factors, these countries are looking for an international path to develop a common CBCR.

In the following tables, the relevant points of the different standards of transparency for multinational companies are compared. A further in-depth analysis can be found in the Annex.

The analysis is organised in five different key areas:

1. When? - Deadlines;
2. Who? - Active Actor, Filing obligations subject, Payee;
3. What? - Payments Categories and main characteristics;
4. Relevant points.

The legislation considered in order to do the comparison:

		Legislation on CBCR
1	**USA**	Securities and Exchange Commission, Disclosure of Payments by Resource Extraction Issuers. ACTION: Final rule. 17 CFR Parts 240 and 249 [Release No. 34-67717; File No. S7-42-10] RIN 3235-AK85
2	**CANADA**	Division 28 -Extractive Sector Transparency Measures Act
3	**OECD**	OECD/G20 Base Erosion and Profit Shifting Project, Action 13: Country-by-Country Reporting Implementation Package
4	**EITI**	The EITI Standard
5	**EU Extractive Industries**	Art. 10 Directive 34 /2013
	EU Bank	Art. 89 Directive 36/2013

Table 2–1. Legislation on CBCR

2.1.3.1 When: Deadlines;

WHEN:	**Time to file the report**	**Apply first time to the fiscal year started on or after**	**First deadline**
OECD	12 months to file the report and 18 (first year) 15 months to exchange the information both from the last day of the financial years.	01/01/2016	31/12/2017
USA	150 days	*No information is provided.*[23]	*No information is provided.*

[23] The final rules of 1504 Dodd Frank act was supposed to be implemented from the first time to the fiscal year started on or after 30/09/2013, however how the D.C. District Court on July 2, 2013 ruled that the SEC should have provided more justifications about the publicity of the report and the no exemption especially in the countries where it could be against the law public a report, the application of the final rules is unknowing.

Canada	150 days	*No information is provided.*	*No information is provided.*
EITI	No older than the second year (recommended one year)	*No information is provided.*	18 months after the country is admitted as candidate
EU Extractive Industries	Annually	*No information is provided.*	*No information is provided.*
EU Bank	Annually	01/01/2015	*No information is provided.*

Table 2–2. When: Deadlines (Own elaboration)

2.1.3.2 Who: Active Actor, Filing obligations subject, Payee

WHO:	Subjective requirement	Objective requirement	Filing Obligation	Payee
OECD	MNEs with consolidated group revenue in the preceding fiscal year of €750 million or more.	No sector restriction	The Reporting Entity may be the Ultimate Parent Entity, the Surrogate Parent Entity, or the Constituent Entity	Country Tax Administration
USA	All U.S. companies and foreign companies	Engaged in the commercial development of oil, natural gas, or minerals (Prevalence of substance over form)	Issuer, a subsidiary of the issuer, or an entity under the control of the issuer	Federal Government and foreign government
Canada	Listed, large or any other prescribed entities	Engaged in the commercial development of oil, gas or minerals or control (also indirectly) an entity engaged in it.	Parent companies, also on behalf of the wholly-owned subsidiary and reporting entities	Any government in Canada or in a foreign state, or a body established to exercise the power
EITI	Companies and government entities	Oil, gas and mining companies	Companies and Governments	Multi-stakeholder group

EU Extractive Industries	Large undertakings and all public-interest entities	Engaged in the exploration, prospection, discovery, development, and extraction of minerals, oil, natural gas deposits or other materials or in the logging of primary forests.	Parent or in alternative the subsidiary	Any national, regional or local authority of a Member State or of a third country. It includes a department, agency or undertaking controlled by that authority.
EU Bank	A credit institution or an investment firm	By the nature of the institution	*No information is provided.*	Member State and by third country in which it has an establishment

Table 2–3. Who: Active Actor, Filing obligations subject, Payee (Own elaboration)

With respect to the entities which must deal with the reports, note the following points:

a) The OECD does not cover any sector in particular. As with the OECD, the European Commission, in its first proposal, did not specify the sector. However, in its amendments of the Directives, the OECD has introduced the standards for transparency in natural resources and logging, and also for the banking system. Logging and banking are innovation in respect of the other provisions. Moreover, the EU is working to adopt a new provision in line with the OECD.

b) The Canadian definition of the subject field engaged in natural resource is broader than the others. Indeed, their definition includes not only entities working in or control companies working on natural resources, but also "companies controlled or deemed to be controlled by an entity deemed to be controlled" (Parliament of Canada, 2015). So, all entities should report payments, even if it just has an influence on a company that has an influence on another company, whose activity is related to natural resources. This open definition gives prominence of substance over form. In other words, it includes the real entity that have the control.

c) In the provision of the OECD, the subject obligated to file the report is the Ultimate Parent Entity. However, where there is not an exchange of information agreement convention in force, or when the same agreement or convention does not work properly, other companies of the same group should file the report with the information from the whole group. In this situation, the multinational company

provides the same report to various tax administrations. Under this proviso, the duty to send the report to other tax administrations shifts form the tax authority to the company. Thus, we could illustrate the two possible scenarios.

- In the first scenario, there is an exchange of information agreement or convention in force, the ultimate parent company files the report to the tax administration of the country where it resides for tax purposes. In this scenario, the tax administration of the other countries where the multinational company works, asks this tax administration authority for a copy of the report. There are two deadlines to be adhered to:
    - Up to 12 months from the end of the financial year for the multinational companies to file the report,
    - As soon as possible and no later than 18 months (first year) or 15 months (each subsequent year) from the end of the financial year for tax authorities to fulfil its exchange obligations.
- In the alternative scenario, there is not an exchange of information agreement or convention in force, so the multinational companies are required to file the same report to the tax administration in each country where they work. In this case, in order to save time and cost for the tax administration: the procedure is easier and faster, and multinational companies have the same workload since the report should be the same for each jurisdiction.

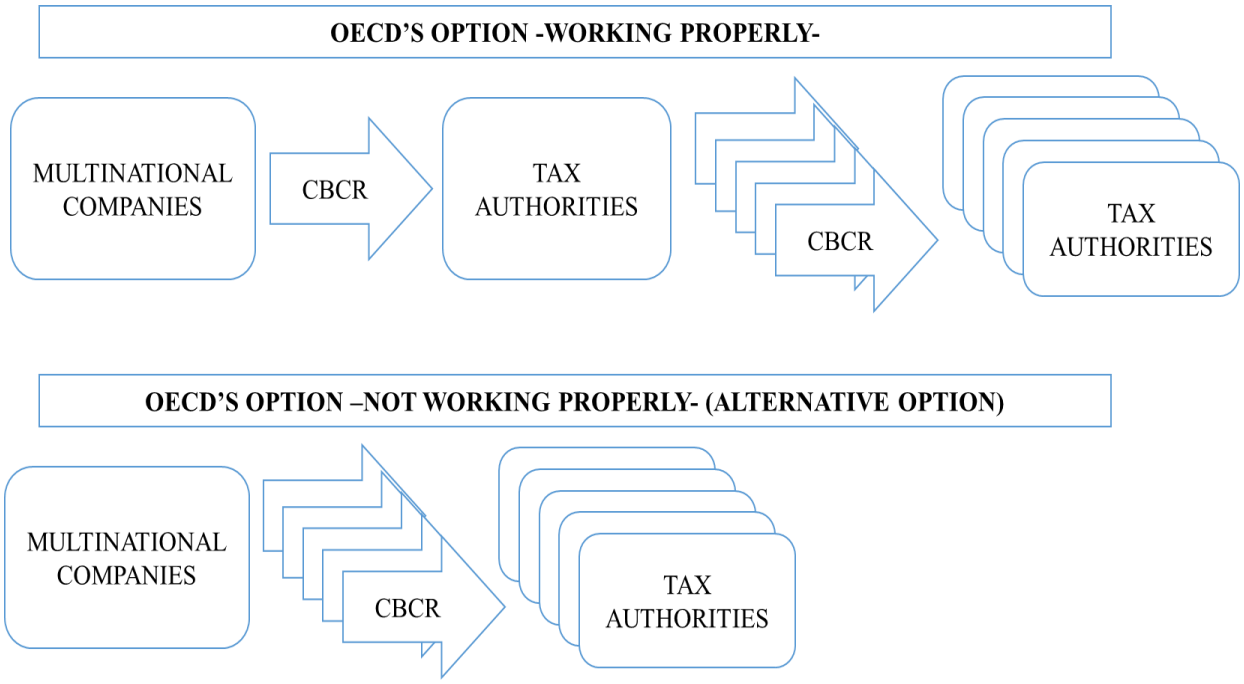


Figure 2–1. OECD Filing Obligation (Own elaboration)

The alternative option would also be a way to bypass the tax authorities in those countries where tax authorities have organizational problems. If working properly, the multinational companies need only file the report once since it should be the same for each jurisdiction.

2.1.3.3 What: Payments Categories and main characteristics

WHAT	**"Payment" categories**	**Type of payment**	**Limit**	**Broke down of the payments**	**Records**
OECD	1. revenue, 2. profit (loss) before income tax, 3. income tax paid, 4. income tax accrued, 5. stated capital, 6. accumulated earnings, 7. number of employees, and 8. tangible assets other than cash or cash equivalents with regard to each jurisdiction in which the MNE Group operates;	Material payments	*No information is provided.*	Country level	*No information is provided.*

	9. An identification of each Constituent Entity of the MNE Group setting out the jurisdiction and the business activities				
USA	1. taxes; 2. royalties; 3. fees; 4. production entitlements; 5. bonuses; 6. dividends; and 7. payments for infrastructure improvements 8. The final rules will require the disclosure that are part of a plan or scheme to evade the disclosure requirements (no social and community payments)	Material and in kind.	$100,000	Total amount of payments made for each project and to each government,	*No information is provided.*
Canada	(a) taxes; (b) royalties; (c) fees, including rental fees, entry fees and regulatory charges as well as fees or other consideration for licences, permits or concessions; (d) production entitlements; (e) bonuses, including signature, discovery and production bonuses; (f) dividends other than dividends paid as ordinary shareholders; (g) infrastructure improvement payments; or (h) any other prescribed category of payment.	Whether monetary or in kind	the amount prescribed by regulation for the category of payment, if no $ 100.000	Country and project basis	Prescribed period, or 7 years
EITI	The following revenue streams should be included: i. the host government's production entitlement (such as profit oil); ii. national state-owned company production entitlement;	Cash or in-kind	No mandatory. Countries often set materiality levels based	The multi-stakeholder group is required to agree the level of disaggregation for the publication of	*No information is provided.*

	iii. profits taxes; iv. royalties; v. dividends; vi. bonuses; vii. licence fees and viii. any other significant payments and material benefit to government.		on company or payment size.	data (by individual company, government entity, revenue stream and at project level)	
EU Extractive Industries	(a) production entitlements; (b) taxes; (c) royalties; (d) dividends; (e)bonuses; (f) licence fees and (g) payments for infrastructure improvements.	Whether in money or in kind	€ 100 000	Government and project for each category	*No information is provided.*
EU Bank	(a) name(s), nature of activities and geographical location; (b) turnover; (c) number of employees on a full time equivalent basis; (d) profit or loss before tax; (e) tax on profit or loss; (f) public subsidies received.	*No information is provided.*	*No information is provided.*	*No information is provided.*	*No information is provided.*

Table 2–4. What: Payments Categories and main characteristics (own elaboration)

With respect to payments there are the following differences:

a) There are two different forms of data requirement. The standard form requires that the different types of payments such as taxes, royalties, dividends, licences, etc. be displayed. However, the OECD and the EU Bank have provisions that require the inclusion of additional information regarding the number of employees, sources of revenues, etc. This additional information provides extra data needed to do a tax audit. The other type of data places emphasis on the accountability of governments towards civil society. The requirements thus shift the focus from how much the companies should have paid on taxes to how much the government would have earned by using of the natural resources. So, if the MNEs do not pay a fair amount on taxes, according to the requirements of the OECD, then the investigation should

start looking at the accounts of the MNEs, with a view to combating the "Base Erosion and Profit Shifting". In the second case, the small amount of taxes paid by MNEs is the government's responsibility as are its use of natural resources. Problems may be generated by both MNEs and by the government, so the focus will switch between governments and MNEs depending on the country.

b) The OECD does not require "Break down of payments" at a project level. The project level is however important to identify the data for each project in a country. This is especially so for civil society, which should require transparency and accountability from governments in every area where the natural resources are utilised. Since the OECD does not specify the sector it may be difficult to identify the project each time, however in the area of natural resources it may be easier identify the project. USA legislation explicitly requires that the payments must be reported for every category not just at the project level, but also at each level of government or public agency that it is entitled to receive payments. This provides more transparency and also tracks where the money goes.

2.1.3.4 Relevant points on CBCR (1/2)

	Reports accessible to the public	**Reports of another jurisdiction / with other legislation**	**Enforce compliance and fine**	**Audit**	**Exemption**
OECD	Only for tax authorities on request	No applicable	Purpose to extend their existing transfer pricing documentation penalty regime.	No audit requirement	No exemption
USA	Accessible	No permitted	No specific measures	No audit requirement	No exemption
Canada	Accessible	Possible if it satisfies the reporting requirements	Authorities could inspect records relating to payments, and other general compliance enforcement measures. An offence is punishable on summary conviction and liable	Attestation made by a director or officer of the entity, or an independent auditor or accountant, that the information in the	No exemption

			to a fine of not more than $250,000	report is true, accurate and complete.	
EITI	Accessible	No applicable	Suspension and cancellation	An independent auditor, who reconciles the information provided by the companies and the government	*No information is provided.*
EU Extractive Industries	Accessible	Possible if it satisfies the reporting requirements	No specific measures	No audit requirement	Companies are exempt from reporting payments in countries where such public disclosure is clearly prohibited by the criminal legislation of that country. In such cases the company should identify in the report the government concerned
EU Bank	Accessible	No prevision	No specific measures	The information shall be audited	*No information is provided.*

Table 2–5. 2.1.3.4 Relevant points on CBCR (1/2) (Own elaboration)

Please Note:

a) "Report accessible to the public" - only the OECD requires confidentiality of the information. In this case, the information is available only to the tax administration and it is not open to the public. This is because the OECD provision is included in the BEPS guidelines, to fight tax evasion and avoidance, thus the information is available only to tax authorities for auditing purposes. One of the weaknesses of limiting access to the data could be for the tax administration, which needs to send the report to other administrations within 15 months. In other cases, the responsibility

of reporting is on companies and there is less time (less than 15 months) and money (public officials in the tax administration could be employed to do other tasks). The OECD made this limitation to protect the companies from competitors who do not have the duty to report the data. Publishing the information could mean more accountability and more transparency in managing natural resource. It is expected that the companies who do this reporting, could easily sign a contract with the government for their standards of transparency and accountability. However, we believe that a country takes into consideration many other factors when contracting a company or giving it a licence. Thus, a company not publishing their information could have an advantage over a company which does. Conversely a company that makes the information accessible to the public, permits civil society to be aware of how the government is managing the natural resources of the country. This is important because in many countries the revenue from natural resources are relevant and public accountability on this could improve and strengthen institutions through, for example, a democratic process.

Relevant points on CBCR (2/2)

	Accrual or cash basis	**Formal and active participation of the civil society**	**Formal and active participation of the Government or its representatives**	**Finance resource**	**Government obligation on reporting**	**Review**
OECD	*No information is provided.*	No formal participation	No formal and active participation	No specify	None	No prevision
USA	Cash basis	No formal participation	No formal and active participation	No specify	None	No prevision
Canada	*No information is provided.*	No formal participation	No formal and active participation	No specify	None	No prevision

EITI	Cash basis	Multi-stakeholder group that involves the government, companies and the full, independent, active and effective participation of civil society	Government are part of multi-stakeholder group	The Secretariat is funded by supporting governments companies. Multi-Donor Trust Fund to support implementation. Governments pay for the implementation of the standards	Reporting template that outlines the revenues received from the extractive industry	No prevision
EU Extractive Industries	*No information is provided.*	No formal participation	No formal and active participation	no specify	none	by 21 July 2018
EU Bank	*No information is provided.*	No formal participation	No formal and active participation	no specify	none	No prevision

Table 2–6. Relevant points on CBCR (2/2) (Own elaboration)

For the implementation of the report, the EITI engages, in addition to the companies, both governments and civil societies. This is quite important because it gives them an active role in the process. However, very little participation has been achieved thus far. For example, in the EITI standard, the government has to reproduce the data it receives form companies. If the government cannot reproduce this, then it is a problem for the tax administration. We believe that it could be useful to track the money, not only from the companies to the government but also via the government, and from the government to the civil society. With no transparency in government, there is a paradox: high standard of transparency for companies working in natural resource but high levels of corruption.

2.2 CBCR ANALYSIS

2.2.1 Background

The objective of "Country by Country Reporting" (CBCR) is to foster sustainable development. It was first formulated in the context of the Extractive Industries Transparency Initiative (EITI), which was in response to problems with natural resources. It was believed that more transparency in natural resources management could translate into a real opportunity to boost the development process in natural resource rich countries. This measure of transparency consists in the publication of the revenues paid for the use of natural resources, from both multinational companies and governments. For civil society, this publication has a double function: it is possible to see how much money companies pay in taxes, bonuses, licenses, etc. and how the government uses this revenue.

This happened in the early 2000s, however it was only after the financial crisis, that the subject of how much the multinational companies were paying in taxes, reached public attention, as well as, the accountability of the governments. During the crisis, rich economies experienced a lowering of their revenues. The reaction of the respective governments was to put an increase in taxes and public debt and, at the same time introduce heavy austerity measures. This situation has raised questions about the fairness of the tax burden: companies were paying much less than employee: some multinationals were paying very little in taxes. During this period, the European Commission (2010[24]) and United States (2010[25]) began to speak about Country By Country Reporting. However, in their proposals, they confined this reporting to companies of the extractive sector. Conversely, the OECD (2014) in the "Actions of Base Erosion and Profit Shifting" (BEPS) provided a draft of CBCR valid for all sectors, although applicable only to large corporations (entities with more than € 750m on revenue).

In conclusion, it is likely that in the short term, CBCR could increase tax revenues and make a good impression on the electorate, however the real question is whether, in the long term, CBCR can promote sustainable development.

[24] We refer mainly to: The Commission Communication on Tax and Development (COM(2010)163 final) of 21 April 2010; Public consultation on Country-By-Country Reporting by multinational companies (Deadline: 22 December 2010) European Commission - Internal Market and Services DG.

[25] We refer to the Section 1504 of the US Dodd-Frank Act which was adopted on 21 July 2010.

2.2.2 Country By Country Reporting: Definition and characteristics

2.2.2.1 Definition

What do we mean when we talk about CBCR? Is it just a matter of taxes paid around the world by multinational companies?

In 2010 the **European Commission** launched a public consultation on CBCR. In that consultation, it talked about two types of disclosure: "General CBCR by multinational companies" and "Specific transparency obligations for companies which are active in the extractive industry (minerals, oil, and gas) in third countries". The scope of the consultation was on how to design CBCR to improve tax governance at a global level. In the consultation of 2015, the basic question is whether or not the CBCR option proposed by the OECD is the correct one?

OECD includes the CBCR in the "Action 13 – Transfer Pricing" which is part of the Base Erosion and Profit Shifting (BEPS) - a study to contrast tax evasion and avoidance. So, in this matter, the CBCR is seen as extra documentation which companies have to produce in order to justify their inter-group operations. With this extra data, the OECD believes that tax authorities can better uncover cases of tax avoidance and evasion. Moreover, the OECD maintains that it is not a problem of all multinational companies, but just of very large multinational companies (with revenues more than € 750m).

On this basis, it appears that CBCR is interested in resolving problems related only to international taxation.

However, civil society, through "**The Publish What You Pay (PWYP)**" and the "**Tax Justice Network (TJN)**" in one of their publications (Murphy, 2009), identifies the following ten reasons where CBCR could make a positive contribution: 1. Corporate social responsibility (CSR); 2. Accountability; 3. Trade; 4. People; 5. Tax; 6. Corruption; 7. Development; 8. Governance; 9. Where you are; 10. Transparency.

In our opinion, CBCR gives information which could be used, not only for taxation purposes, but also for many others things such as money laundering, labour rights, etc. This is because the CBCR information should not be seen as an easy way to raise extra revenue from those

who have earned so much and paid so little in tax; obviously it should integrate their tax duty, but CBCR c ould contribute to creating a better business environment to support the developing economy of a country.

Based on this consideration, CBCR should produce accounting and non-accounting information which may be used for other related matters, for example to fight tax evasion, tax avoidance, money laundering, corruption, etc. and so to contribute, to sustainable development.

This information should be provided:

- by the EU's multinational companies for all entities of the group in each country where it has a business and
- by the companies involved in the production chain[26] of the product/s or service/s sold in the EU and for all their subsidiaries and related entities.

CBCR should not be a stand-alone initiative. Transparency from multinational companies or companies in general, could contribute to the development process, but only if it is backed up by the same transparency in public institutions. In other words, non-accountable governments generate an opaque business environment and unfair competition. These problems may be found whether companies have to use "aggressive policies" in taxation, labour rights, environments, etc. to compete at international level, otherwise they could fall behind in the market.

2.2.2.2 Information provided

As stated, CBCR should provide data in order to better supervise or investigate the following areas:

a) Governance of the multinational company;
b) Corruption;
c) Labour rights;
d) Environment impact;
e) Money Laundering and Terrorist Financing;
f) Fair trade;
g) Taxation;

[26] For "production chain" we refer to all the activities necessary to product the product or service.

h) Public institutions

Some data should be produced by the companies, others by labour unions. The labour unions could provide more reliable information concerning workers´ conditions. Moreover, the data should give information about the same company, companies taking part in the production chain and about public institutions. Each company within the group or of the production chain should provide the following information (a source of data should be provided):

1. About the subject:
    a. Name of each company of the group and organizational chart of the group;
    b. Nature of business (For example using the Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE);
    c. Countries where the multinational company has businesses;
    d. Stockholders and ultimate beneficial ownership of the company.
2. Accounting:
    a. Revenue split between related and unrelated parties;
    b. Revenues from different areas or projects;
    c. Profit or loss before tax;
    d. Stated Capital;
    e. Accumulated earnings;
    f. Turnover.
3. Tax:
    a. Income tax (paid and accrued);
    b. Payment to governments;
    c. Royalties;
    d. Dividends;
    e. Bonuses;
    f. Licence fees;
    g. Public subsidies received;
    h. Tax rulings;
    i. Pecuniary tax-related penalties;

j. List of customer and providers (with the specification of the total amount of the transactions of the fiscal year);

4. Bank accounts:
    a. The bank accounts not only of each member of the group and of each company involved in the production chain, but also of the beneficial ownership. The specification of all transactions should be available to the public authorities. This information is already available for EU tax authorities for the EU countries;
5. Environment:
    a. Information about waste air and water pollution (where applicable sorted by type);
6. Employment:
    a. Number of employees;
    b. Employees working through subcontractors;
    c. Absence from work;
    d. Injured or killed workers;
    e. Security at work;
    f. Leaves (like maternity leave, etc.);
    g. Mobbing;
    h. Whistleblowing:
7. Money laundering and terrorist financing:
    a. Relation on risk (See European Directive 849/2015)
8. Tangible assets:
    a. Assets which have a relevant importance;
    b. Assets where a related activity is carried out.
9. Intangibles assets:
    a. Assets which have a relevant importance;
    b. Intra-group operations involving intangible assets;
10. Production Chain:
    a. Name of the companies of the production chain and their subsidiaries;
11. Transparency/corruption

a. The scope is to check the problem that the company faces due to bad institutions.

12. Information about public institutions (similar to the "Doing Business" published by the World Bank).

Most of this information is already required in the proposal of CBCR draft by the OECD and by the European Commission. We think that all this information should be supplied once via the same software for all applicable countries.

2.2.2.3 CBCR's publication and format

Multinational companies should submit the information via online software provided by governments. It should be the same in each country. In this way, companies would already know what information to provide and the public administration would have the information in a homogeneous fashion and in a workable format. Governments should decide at international level what information to publish and how (as in the USA proposal of CBCR. You can find more about this in the Annex). This decision should be based on the different needs of the potential recipients of that information. Moreover, countries with poor institutions would be easier to involve in the process. They would not need to invest resources to ask each multinational for the CBCR, as it is proposed by the requirements drafted by the OECD. They could use that resource to facilitate and coordinate controls at international level.

2.2.2.4 Subject receiving the information

Governments and public administration like tax administration: they need to have direct access to the information produced by CBCR in order to monitor and prevent tax avoidance and tax evasion, money laundering, corruption, unfair competition, etc.

Investors: they should have access to some information to help lower their risk. Thus, it could help companies to have more investors, since more transparency and information contributes to lowering the risk and to increasing investments.

Customers and Civil Society: they could know more about the social responsibility of the company and the products or services they are buying. At the same time, they could have an

objective opinion about the public institutions, and their policy for sustainable business in their country. This could be important for a democratic state in order to better understand how institutions are improving.

2.2.2.5 Audit and control of the report

The data should not be subject to any external prior check. However, public administration, like tax revenue agencies, should provide an ongoing control, such as a cross check. In the case of tax control taken at the international level, countries should reach an agreement to give tax authorities, the possibility to accomplish the inspection with the information coming from another country. Working together, public administrations, like the tax agencies, could fill their gaps in international control measures

2.2.3 Consequences: possible scenarios

2.2.3.1 Adverse scenario

The CBCR, should influence a positive effect on taxation, worker rights, the environment, and public institutions, since the companies need to pay more attention in these areas. For example, with the implementation of the CBCR we hope multinational companies will pay a fair amount in taxes. In this fashion, they will earn less money, but they will contribute to a more stable economy, which ultimately will generate more profit. This could mean that at the international level there may be for example two companies doing the same business, but the first one (a multinational company) has to follow the CBCR and the other one, (a domestic company) operating only in a country which does not apply the CBCR, could cut cost for example: avoiding paying tax, exploiting workers, destroying the environment, etc. Over the years, the domestic company could buy out the multinational company. In a nut shell, if the CBCR will not apply at the international level it could produce a good impact on development until a foreign owners taking control over national companies and with strong influence in the economy, could press for a change in the legislation to increase profit in a speculation way.

2.2.3.2 OECD scenario

The different options of CBCR provided by EU, USA, CANADA and especially by OECD focus only on taxation. So, for governments, the problem is whether or not large multinational companies are paying a fair amount of taxes. However, what is the fair amount of taxes that a multinational company should pay? An initial answer is that multinational companies should pay taxes in the country where they sell products and provide the services. In addition to that, tax administrations should detect tax avoidance practices. We understand that tax administrations will do an *ad hoc* and ongoing control on the tax policies of large multinational companies. So, if all these things work in a proper way, in the future some large multinational companies will pay more taxes. The CBCR will provide additional information to that. This information is already available to each tax administration, but only for the national level and sometimes only at European level. Therefore, it appears to be a problem only for exchange of information between tax authorities. For this reason, OECD proposal of CBCR is that they summarize some transfer pricing related information in a statement, for ease of sharing.

However, we believe there are some unresolved problems:

a) This version of CBCR does not support a better business environment, because it is for *ad hoc* controls;
b) A control of a multinational company, based on tax avoidance, always ends in court. So, the court decision could take many years and it may differ from country to country depending on the legislation and the courts of that country.
c) CBCR could give governments information to contest others things such as money laundering, environmental abuses, etc. but, will it be possible to use that information for other related matters?

2.2.3.3 Positive scenario

The introduction of the CBCR could provide investors the information they need to lower volatility; thus, it is likely that the economy could have more stability. A stable economy could help the company to better plan their business. In contrast, a transparent production

chain would give information about clients and suppliers to the company in order to minimize unfair surprises and thus better control the production costs.

CBCR could contribute to a holistic approach in various matters such as fraud, corruption, environment, workers' conditions, etc. which would contribute to reducing the bureaucracy that a company faces and, at the same time, could contribute to the accountability of the governments.

Developing and poor economies could receive help in the implementation of the CBCR.

This would promote more sustainable development around the world.

2.2.4 Next steps

2.2.4.1 Implementing CBCR

CBCR should be introduced gradually, mainly for two reasons: it needs a better coordination at the international level and, it should be better understood by the public institutions and companies. Steps for implementing the CBCR:

- Obtain coordination at international level. European Union, United States and Canada are each going to implement in a different way to the CBCR. Some countries from Africa and South America have been following the EITI standards. The OECD has published a proposal of CBCR. It would be useful to find a common process at international level in order to implement the same provisions of CBCR and put pressure in this regard on other countries such as: Russia, China, India and others. We should ensure the introduction of CBCR is a requirement in future trade agreement. In order to give stability to the process, undertake the following:
- Set a minimum level of transparency and accountability for governments and public institutions at national and at local level in each country joining the agreement;
- Divide companies into different areas (large, medium and small multinational companies, domestic companies and autonomous). Each area should provide some information about the company and about the other companies involved in the production chain of a product or of a service.
- Make sure to have a holistic approach where you specify all the information you require from a company. That means that the company should provide all the

information once via a single software designed for this purpose. The software will reduce bureaucracy and will provide the data in a workable format.

- Take into account the opinions of: companies, labour unions, shareholders, civil society, etc. It is important to specify which information should be provided and which should be published;

2.2.4.2 The OECD option

In the Base Erosion and Profit Shifting (BEPS), the OECD is working on an "Action Plan" to provide tax administrations with more transparency and the information to assess high-level transfer pricing and other related risks. In the "Transfer Pricing-Action 13" the OECD gives a proposal of CBCR. It has a provision of three models that could be used to facilitate the exchange of CBCR, respectively based on the 1) Multilateral Convention on Administrative Assistance in Tax Matters; 2) Bilateral tax conventions; and 3) Tax Information Exchange Agreements (TIEAs).

This could be a base for international coordination, but we should be aware of its limits:

- The proposal of the OECD covers all sectors, however it applies only for multinational companies having more than € 750m in revenues. This could generate unfair competition among large multinational companies. The solution may be to use different versions of CBCR for different types of companies, and require some information from each of them;

The ultimate parent company of a group should provide the CBCR of all the companies of the group on request to the national tax administration where it has its fiscal residence. Thus, if a tax administration of another country wants the CBCR of that multinational company, it should request it from the tax administration of that country. However, in cases where countries have not adopted the CBCR provided by the OECD, or when countries do not have an agreement of automatic exchange of information, or when that agreement does not work, the multinational company will provide the CBCR to each tax administration. In summary, if a tax administration wants to control a multinational group, in which the parent company has the fiscal residence abroad, they should contact the tax administration of that country, spending a lot of time and resources. So, if the government is likely to adopt the version of the CBCR produced by the OECD, it may be better not to have any agreement of automatic

exchange concerning CBCR with other jurisdictions, in order that the multinational companies provide directly all the required information.

2.2.4.3 The new EU's proposal of CBCR in the Tax Avoidance Package[27]

After the public consultation of September, the European Union took several actions in the direction of fight corporate tax avoidance. The project come at the end of January 2016 and is composed by 4 action:

1. Anti-tax avoidance directive: The European commission would like to establish a common legal framework among European countries;
2. Recommendation in tax treaties: In this aspect especial attention is given from European Commission to tax treaties due to the fact in the past decade it was an abuse as they can modify some aspect of the law.
3. Revised administrative cooperation Directive: introduction of CBCR
4. Communication on external strategy: in this area the European Commission should continue to promote tax good governance at international level as for example supporting EITI project or financing reform in tax administration in developing countries.

So about improving administrative cooperation in taxation, the European Commission had made a proposal of introducing the CBCR proposed by the OECD. However, the commission is likely not to go behind the limit of OECD's version except about the possibility to make public some information.

2.2.4.4 2016 Fiscal reform in Spain

Spain anticipated the European Commission changing the documentation requirement in its last fiscal reform "Real Decreto" n. 634 emanated in July 2015 where at the art. 14 introduced the CBCR ("Información País por País") for the fiscal year starting on 2016. The

[27] (European Commission, 2016) and (European Commission, 2016)

version the Spanish legislation adopted was the one proposed by the OECD concerning only the multinational companies with more of € 750 millions of turnover. While the reform increases documentation for that companies, reduce it for other companies especially for the small one.

3 ACCESS TO FINANCE DURING THE CRISIS AND ITS EFFECTS ON THE GOVERNMENT'S REVENUE: THE CASE OF MICRO-COMPANIES

3.1 INTRODUCTION

In this section we will analyse how the financial system reacted during the financial crisis and what were the consequences for companies. This is divided into two parts, in the first part we describe the financial system and how companies perceived it changing during the financial crisis. In the second part we analyse a database of microenterprises from Spain, France and Italy before and after the financial crisis.

In the first part we investigate firstly how access to finances have changed during the financial crisis. This analysis was completed using a questionnaire carried out jointly by the European Central Bank and by the European Commission. In addition, we compared the rate of start-up or "birth" and termination or "death" of companies before and after the financial crisis to better understand the stresses that the real economy received during these years. The data was compiled by Eurostat. The "access to finance" questionnaires and the census of companies are both analyses for European companies.

In the second part, we will focus on finance intermediaries. Here we pay attention to shadow banking, in order to explore the intermediary institutions outside the regular banking system. After exposing the problem of how the access to finance is affecting enterprises and briefly considering subjects other than banks, we relook at the questionnaire to observe the recorded trend of funds European companies.

We conclude this descriptive section by giving an introduction to loan sharks. After describing problems connected with these illegal practices we will compare the legislation of Spain and Italy. These two countries experimented with different legislation and had different evidence of loan sharks. Whilst in Spain the problem is connected with individuals having difficulties with their mortgage, in Italy the problem is more pertaining to small enterprises that cannot get access to the legal finance market.

In the second part of the chapter, we consider how taxes paid and the mark-up applied by micro enterprises has changed in three selected years: 2008, 2011 and 2014. For each of these years we investigated the differences in taxes and mark-up due to difference sources

of finance. Moreover, a regression analysis is calculated to see the strengthens of the financial crisis and the sources of finance to influence the taxed paid and the margin applied.

3.2 HOW THE FINANCIAL CRISIS INFLUENCED THE ACCESS TO FINANCE?

It is very important for companies access to finance especially during a recession time where funding are directing towards less risky activities. Companies that recorded losses could not have more funds and could close down producing a downturn in the economy and this could become a dangerous spiral. So a financial problem for companies becomes a revenue trouble for governments. This is because for each company closing down there is a multiplicative contraction in collected taxes. So preserve good enterprises, during financial crisis, could limit the effect of it.

During the past decade the financial system experienced important changes in particular during the financial crisis of 2008 - the banks changed their risk approach in lending money. At this time the economy had a lack of liquidity, due subprime debts. In some Western countries the liquidity for banks was provided by governments, however for citizens and companies it was a different matter and the acquirement of loans was more difficult. In that context, banks changed their attitude from a quite aggressive policy obtaining new clients to a prudent one, where money was lent to more stable activities or only under guarantees to lower the risk. The European Commission jointly with the European Central Bank, paid attention to that problem and launched a questionnaire about the finance access for small to medium entrepreneurs (SMEs).

As it is shown in the following tables, companies experimented difficulties in obtaining finance. Few people had a positive perception of the change in the bank´s attitude. Especially in Greece, Spain and Ireland, people had a very negative perception about the banks unwillingness to provide finance.

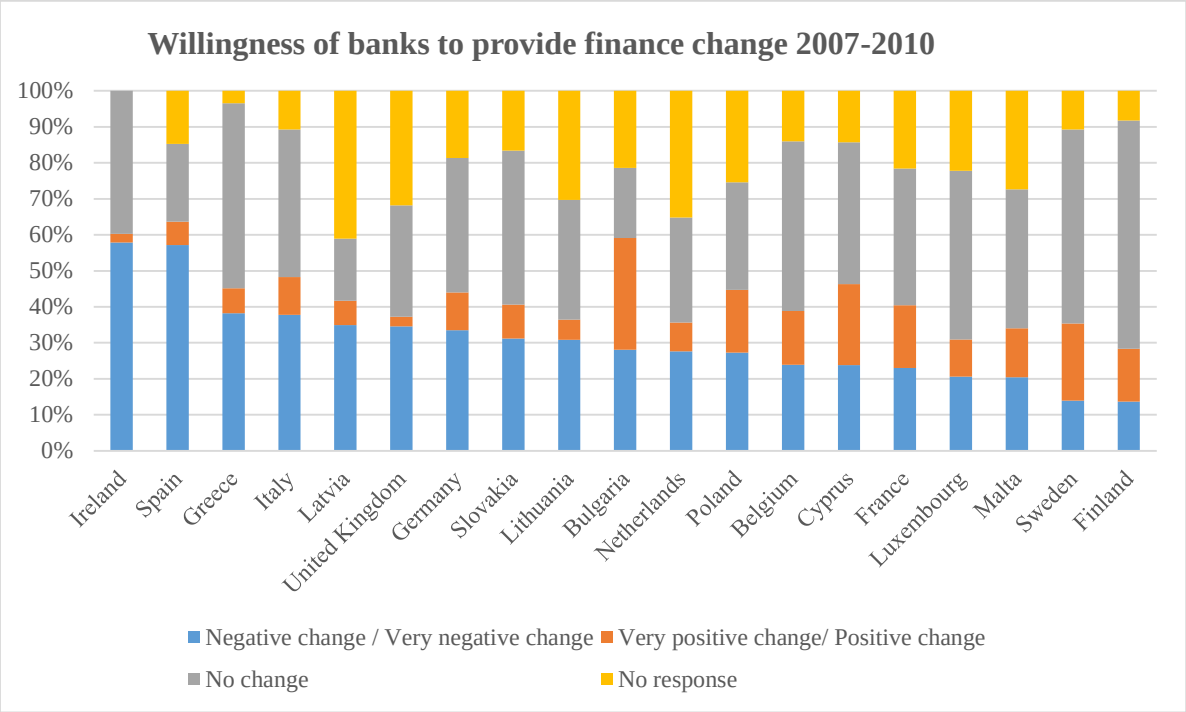


Figure 3–1. Willingness of banks to provide finance. (2010) Total NACE_R2: Industry (except construction)

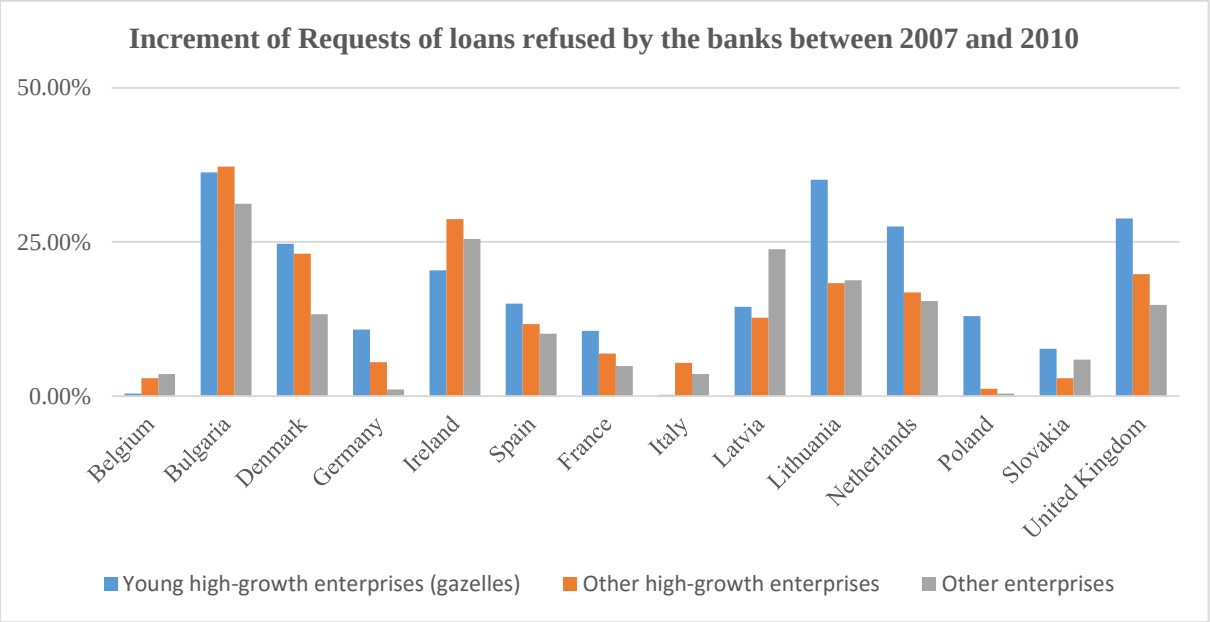


Figure 3–2: Increment of Requests of loans refused by the banks between 2007 and 2010. Data source: Eurostat[28]

In the graph above we can see the increment of loans refused after the financial crisis.

It is easy to observe how young high-growth and high-growth enterprises were the most affected by the crises. For young high growth enterprises, it may be reasonable because they could be characterized by higher risk; it is significant that banks preferred to fund a growth "normal" company than one with a high-growth historic trend. We could say that those companies with good growth profiles may have an intrinsic risk factor, so the bank decided not to take any risks. In other words, "good" companies suffered more elasticity in receiving a loan.

It was in this context, that SMEs often found problems in getting a loan and it is likely they were also looking outside the formal financial intermediaries at a higher price.

[28] The questionnaire recollected only the enterprises in the non-financial market sectors that employed between 10 and 249 persons in the year 2005 and which continued to employ at least 10 persons at the time of the survey.

3.2.1 A demographic analysis of European enterprises during the crisis

The number of companies in a country is another index which can give us a view about the stability of the economy. With this census we also scrutinised the number of enterprises which closed and opened during the same year. During "turbulent times", a country may experience a wide change in these numbers. For this reason, an increase or decrease could be a good or bad sign, depending on the country and the background. However, generally speaking, in a growing economic period we are expecting an increase in the number of companies.

In this analysis, we would like to identify the height of the financial crisis that started in 2008. We selected the most significant European countries and, among these, we took only the countries for which we have all data available (for Germany the birth number for 2008 is missing).

We decided to divide the data into two macro areas: first, we look at the whole population of companies (NACE Rev. 2: Industry, construction and services except insurance activities of holding companies) and then we focus only on companies with fewer than 10 employees. This detail was motivated by the fact that microenterprises may suffer more economic stress during the selected period and thus could better present the real economic performance over the number of enterprises[29]

In this first graph we compare the active enterprises over a period of three years (2008, 2010 and 2012). To better appreciate the variation in the selected years we equated 2008 at 100 and we calculated the proportions for the following years. The red line is the constant value of 100 we have chosen for 2008.

[29] A microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million. (EC, 2003)

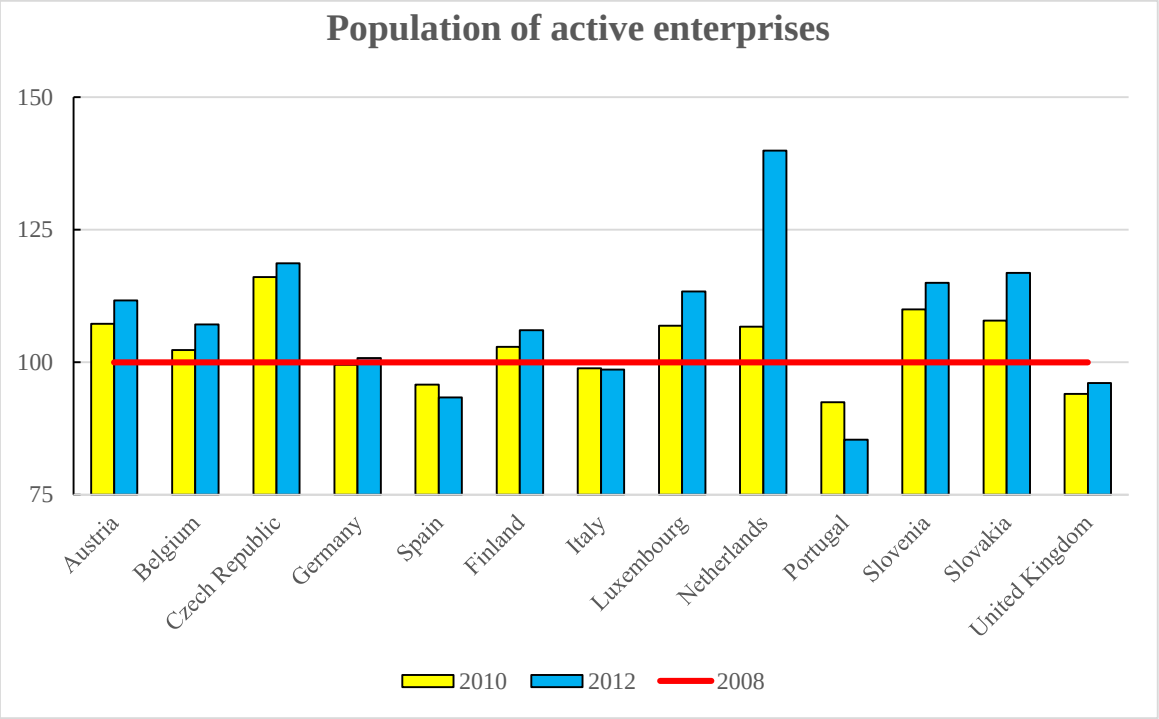


Figure 3–3: Population of active enterprises. Source data: Eurostat

In the above graph, it is possible to see different trends. Eastern countries (Czech Republic, Slovenia and Slovakia) and Central and Northern countries (Austria, Luxemburg, Finland and Netherlands), registered a good performance, growing up every other year. Southern countries (Spain, Italy and Portugal) and the United Kingdom had a contraction during this period. Germany does not have any significant variation.

In the next figure, we took the same information, but applied it only for microenterprises.

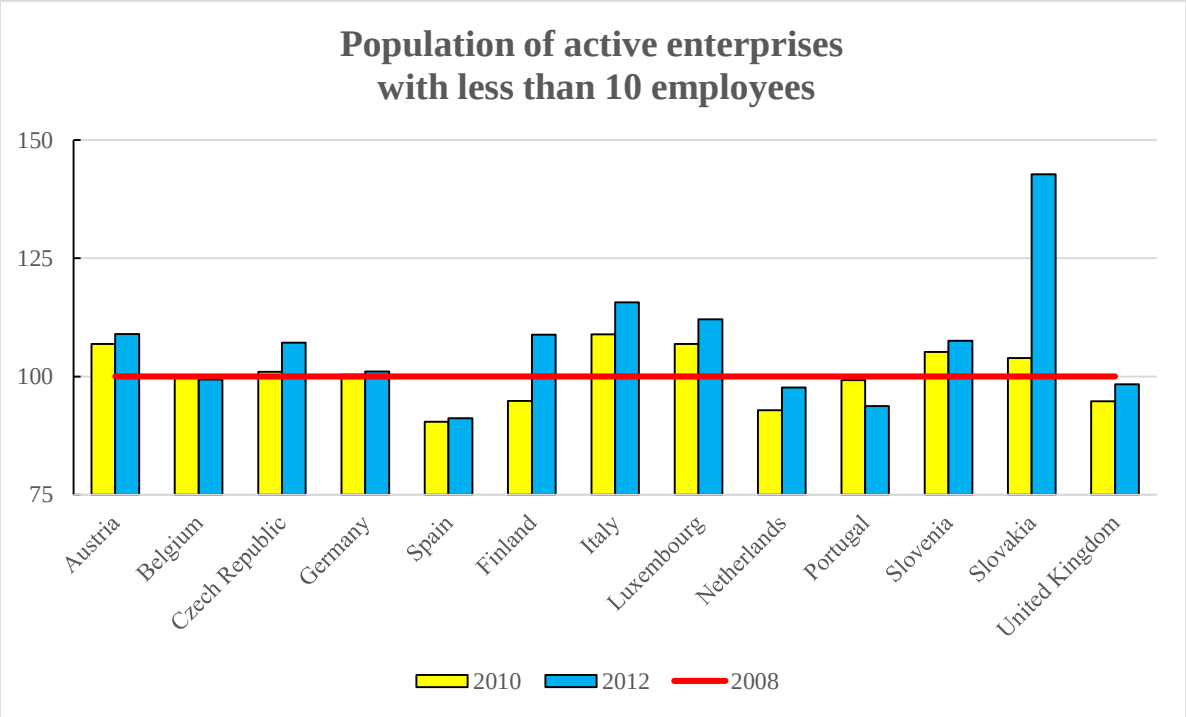


Figure 3–4: Population of active enterprises with less than 10 employees. Source data: Eurostat

Austria, Czech Republic, Luxemburg, the United Kingdom and Germany recorded the same trend. Netherlands changed from a positive to a negative value, especially in 2012. Belgium reduced to zero from its positive trend. Spain accentuated the decrement. The opposite were Italy and Portugal which showed an improvement. In particular, the Italian increment of microenterprises was not big enough to contrast the shutting down of larger enterprises.

In the next figure we calculated the rate of birth of companies over death of companies. With a value higher than 1 the country registered more companies opening than closing.

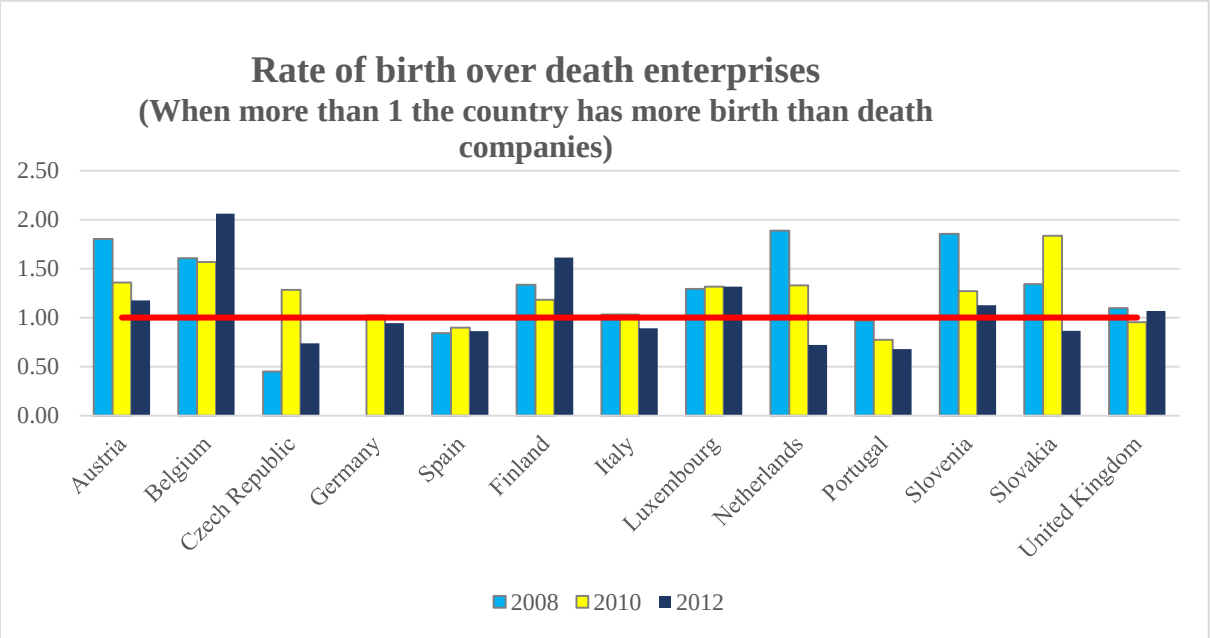


Figure 3–5: Rate of birth over death enterprises. Source data: Eurostat

As is possible to see, except for Belgium, Finland and Luxemburg, the other countries registered a negative value and/or downturn trend. The explanation of this data can be found in the period of time it takes for a company to shut down. It is likely that when the financial crisis started in 2008, companies resisted better for the first couple of years and then they started to close their activities.

In the next figure, we present the same information, but this time only for selected enterprises employing less than 10 persons.

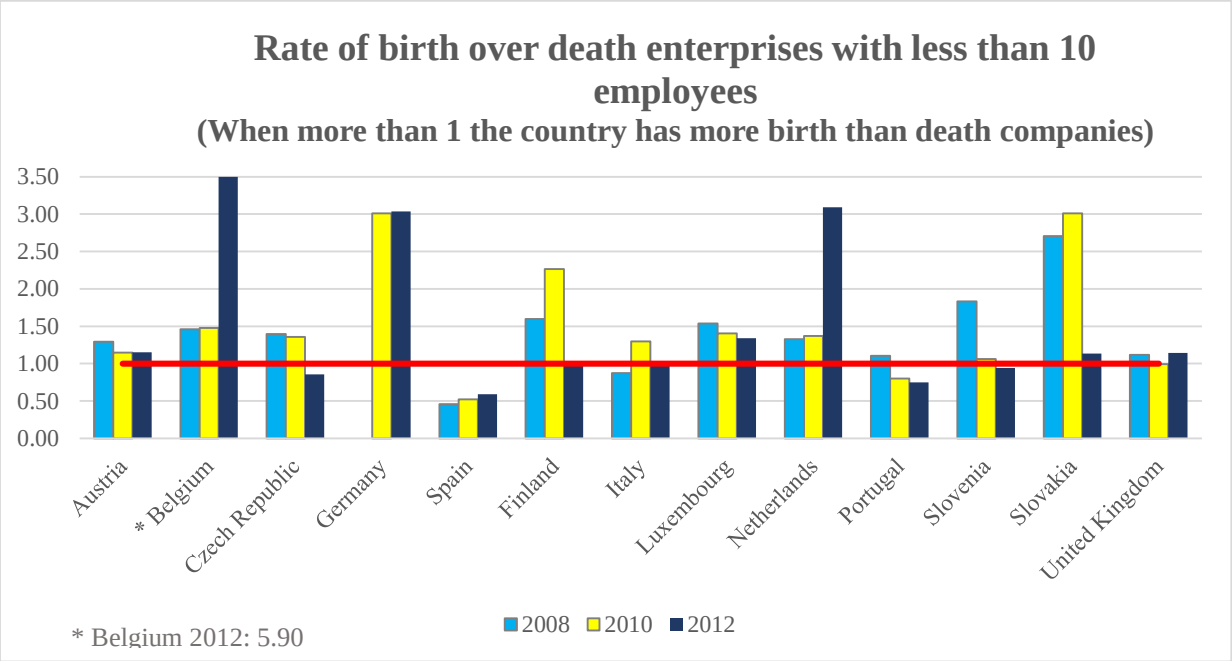


Figure 3–6: Rate of birth over death enterprises with less than 10 employees. Source data: Eurostat.

At first glance, it may be appreciated that some countries score better, especially Germany, Belgium and the Netherlands. Only Spain and Portugal registered a worst score, probably due to the fact that more microenterprises were affected in these countries.

Finally, in the next graph, we show the percentage of companies which survived after 2 years (2010-2013) and 5 (2008-2013) of their constitution. Also in this case we discriminated about the size of the companies showing in the first graph all the companies and in the second one only microenterprises.

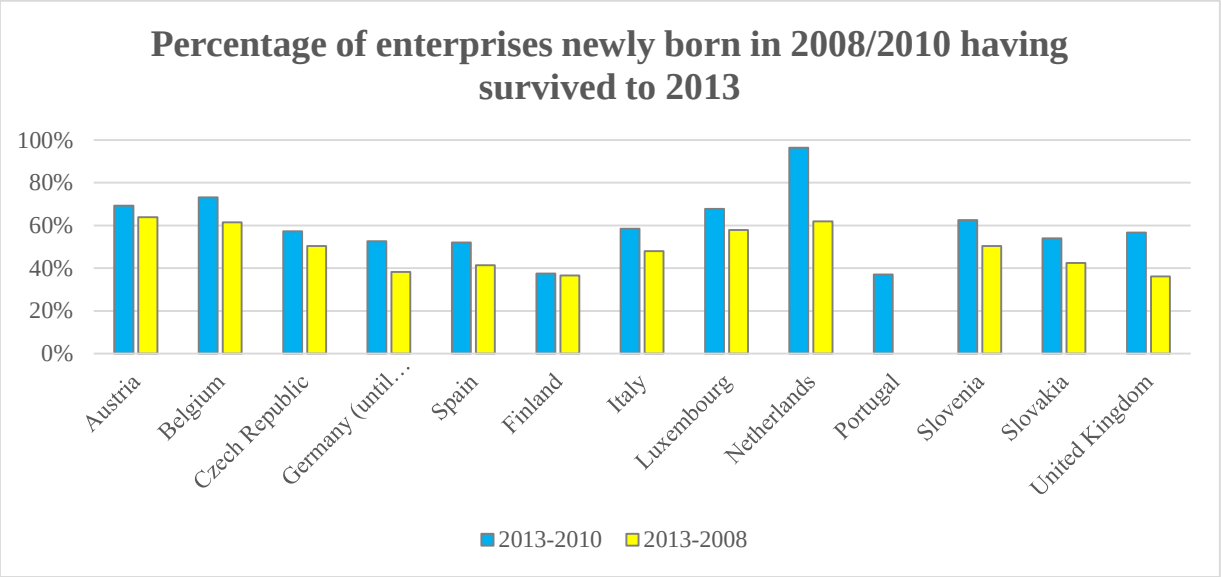


Figure 3–7. Percentage of enterprises newly born in 2008/2010 having survived to 2013. Data source: Eurotat

The average of survived companies through European countries newly born in 2010 is 60% while the percentage low to 49% for the one started on 2008. Microenterprises resist better scoring on average 65% for the first two years and 53% for the period long five years.

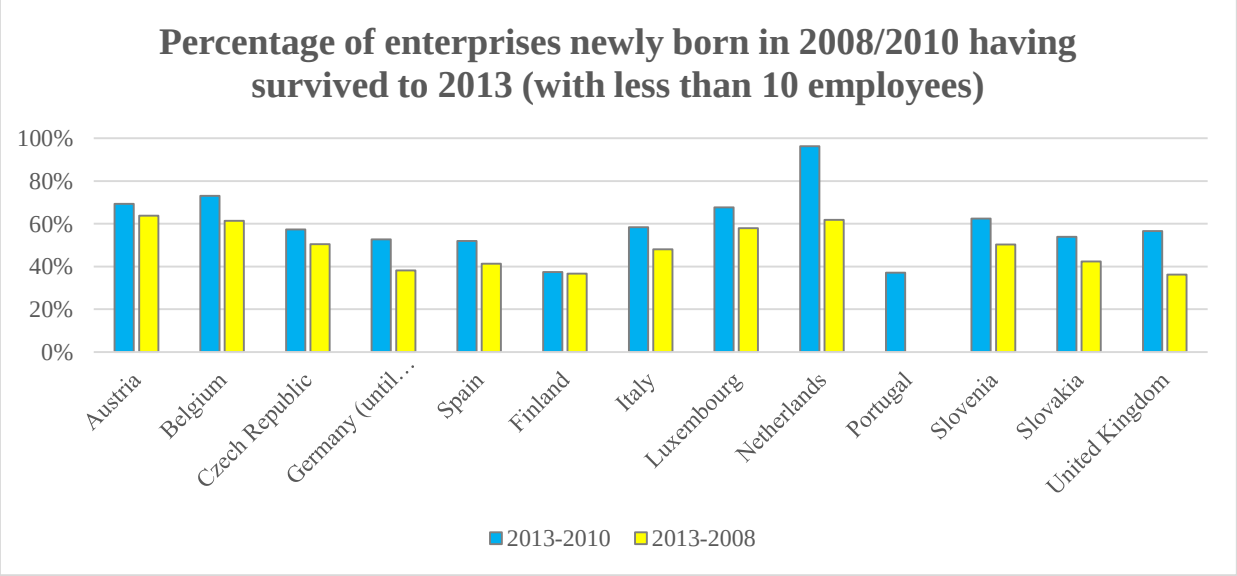


Figure 3–8. Percentage of enterprises newly born in 2008/2010 having survived to 2013 (with less than 10 employees) Data source: Eurostat

All these figure could give some explication of the stability of the enterprises and especially the microenterprises during the last five years. An in depth comparison between countries may be misleading due to very different economic history and demographic characteristics

of European countries. A longer period could provide a better view of the impact of the crisis on the enterprises demographic, however until 2007 the European Commission worked with another classification of the companies, so a direct comparison may be ambiguous in this case.

However, the trend and some characteristic of the demographic of the enterprises we analysed gives a standalone synopsis of enterprises especially the micro-ones which suffered the most consequences of the financial crisis.

3.2.2 Shadow bank

Firstly we analyse how the literature defined it. In a nut shell, our scope is to describe the shadow bank as a legitimate alternative both to the traditional bank system and to the so called "shark loans". In the next paraphrase, we will describe how the "shark loans" work.

To be more precise, "shadow banking" should be better called "market-based financing". This is because shadow could evocate something illegal and "market-based" could better represent the area of study. As it could be seen in the following table produced by the IMF (International Monetary Fund, 2014) there are different definitions of shadow banking. As the IMF reported there are definitions focus more on the type of entities or activities or both.

DIFFERENT DEFINITION OF SHADOW BANKING		
Activities	**Entities**	**Activities and Entities**
Claessens and Ratnovski (2014): All financial activities, except traditional banking, requiring private or public backstop to operate	**McCulley (2007):** Levered-up financial intermediaries with liabilities perceived akin to bank deposits ("the whole alphabet soup")	**FSB (2013):** Credit intermediation involving entities and activities outside the regular banking system
FCIC (2010): Unregulated or lightly regulated bank-like intermediation	**Ricks (2010):** Maturity transformation outside banking social contract	**Schwarcz (2012):** Provision of financial products and services by shadow entities and financial markets
Mehrling and others (2013): Money market funding of capital market lending	**Acharya, Khandwala, and Öncü (2013)**: Nonbank financial institutions that behave like banks, borrow short, leverage, and lend and invest long in illiquid assets, but less regulated	**Gorton and Metrick (2012):** Institutions, old contracts (repo), and more esoteric instruments (ABCP, ABS, CDO, and the like[30])
Deloitte (2012): Market funded, credit intermediation system involving maturity or liquidity	**Pozsar and others (2013):** Entities that conduct maturity, credit, and liquidity transformation without	**Kane (2014):** Entities with liabilities supposedly redeemable at par but without a government guarantee, and instruments that

[30] ABCP = asset-backed commercial paper; ABS = asset-backed security; CDO = collateralized debt obligation; repo = repurchase agreement.

transformation through securitization and secured-funding mechanisms	government guarantee or access to central bank liquidity	trade as if they have a zero performance risk
Harutyunyan and others (forthcoming): Noncore liabilities. capturing non-traditional funding		

Table 3–1. Source (International Monetary Fund, 2014, p. 91)

To better analyses what the shadow bank is about we will focus on the definition given by the Financial Stability Board (FSB) "Credit intermediation involving entities and activities outside of the regular banking system" (Financial Stability Board, 2015).
This definition is important to monitoring the trend of non-bank financial intermediation; however the subjects acting outside the banking sector are very different.

So the FSB goes a step forward and classifies the subjects of the shadow bank by the activities they offer:

Classification by Economic Functions		
Economic Function	**Definition**	**Typical entity types**
EF1	Management of collective investment vehicles with features that make them susceptible to runs	Fixed income funds, mixed funds, credit hedge funds, real estate funds
EF2	Loan Provision that is dependent on short-term funding	Finance companies, leasing companies, factoring companies, consumer credit companies
EF3	Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets	broker-dealers
EF4	facilitation of credit creation	Credit insurance companies, financial guarantors, mono-lines
EF5	Securitisation-based credit intermediation and funding of financial entities	Securitisation vehicles

Table 3–2. The FSB identifies 6 different financing services provided form different actors in the shadow economy for a sample of 26 countries that represent the majority actors of the financial market.

For these reasons the FSB narrows down the definition, removing the financial institutions which have good regulations or who depend mainly on banks and focusing more on those that do not have clear regulations or regulations equivalent to bank regulation. In this situation the risk of credit intermediation may arise.
With respect to the narrow definition of the shadow bank we reproduced a specification directly from the FSB report (see the annex).

To better clarify the subject of the shadow economy, we will look at the different types of institutions in the financial market. Since the focus of this thesis is on how financial sources have been changed due the financial crisis and how this could have some relation to paying taxes, it will not be an exhaustive classification of this financial subject. We propose a possible division of types of intermediaries into four main groups: 1) Deposit-type institutions; 2) Contractual Savings Institutions; 3) Investment Funds; 4) Other Types of Financial Intermediaries (more specification in the annex).

3.2.3 Lending composition

In the first part, we saw how the financial crisis has changed the trend of lending money. Banks perceived an increase in the risk of lending money and entrepreneurs had to find alternative ways to obtain credit.
Eurostat collated these changes in **finance composition** through their analysis of "proposed of finance", "accepted", "partially accepted" and "refused" for **equity**, **loan**, or **other** types of finance source such as leasing, factoring, and advanced payments.
Below we present comparability tables of five selected European countries: Germany, Spain, France, Italy and the United Kingdom.

3.2.3.1 Success rate in obtaining equity finance in 2007 and 2010

According to the following tables, it is possible to see how the request for equity changed before and after the financial crisis. For equity finance we refer to the process of raising capital through the sale of shares of an enterprise. In the first table, Spain, France and the

United Kingdom reduced the percentage of requests accepted. On the other hand, the requests of German and Italian companies that were not an option before the crisis, have been widely accepted by the banks after the crisis.

	Banks				**Existing shareholders**				**Business angels**			
%	**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	8.8	35	91.2	65	90.2	94	9.8	6	0.9	0	99.1	100
Spain	98.5	75.4	1.5	24.6	88.6	72.5	11.4	27.5	2.3	0.5	97.7	99.5
France	74.7	46.2	25.3	53.8	98.2	94.8	1.7	5.3	29.4	50	70.6	50
Italy	0	49.1	100	51	65.1	83.1	34.9	16.9	0	0	100	100
UK	93.7	79.8	6.3	20.2	100	93.7	0	6.4	43.6	21.9	56.4	78.1

Table 3–3. Success rate in obtaining equity finance, by sources 1/2 (Eurostat source)

Analysing the increase of equity through existing shareholders it is possible to see how there has been a high degree of requests accepted or partially accepted in both years.

Business angels, sometimes used for new small enterprises, is a marginal way of finance but it is used in the United Kingdom and, especially, in France where they have recorded quite good scores of requests accepted.

As it is showed in the next table, family, friends, or other individual may be a way to raise finance in small contests. Excluding France, the other countries have a major increment in the requests refused, especially Italy that went from 14,5% to 97,8%.

	Family, friends or other individuals, not any of the above				Initial public offering or other stock market offerings				Other financial institutions				Other businesses			
%	Requests accepted / partially accepted		Requests refused		Requests accepted / partially accepted		Requests refused		Requests accepted / partially accepted		Requests refused		Requests accepted / partially accepted		Requests refused	
	2007	2010	2007	2010	2007	2010	2007	2010	2007	2010	2007	2010	2007	2010	2007	2010
Germany	100	58	0	42	66.7	26.5	33.3	73.5	0	93.6	100	6.4	86.5	33.9	13.5	66.1
Spain	68.2	44.5	31.8	55.5	46.9	0	53.1	100	74.3	45.6	25.7	54.4	78.4	33.3	21.6	66.7
France	41.7	69.6	58.3	30.5	37	23.2	63	76.8	45.3	51.2	54.8	48.7	73.5	58.3	26.5	41.7
Italy	85.5	2.2	14.5	97.8	26.9	82.3	73.1	17.7	0	58.9	100	41.1	28.2	8.4	71.8	91.6
UK	84.3	54	15.7	46	23.1	0	76.9	100	80.2	95.3	19.8	4.7	42.6	38.5	57.4	61.5

Table 3–4. Success rate in obtaining equity finance, by sources 2/2 (Eurostat source)

The Initial Public Offering (IPO) is the way for fast expanding good companies to raise quite large quantities of money. IPOs may be issued by smaller, younger companies seeking capital for growth, but it is also done by large companies looking to become publicly traded. Except for Italy, the other countries reduced this means of finance.

Financing the equity through other financial institution recorded different trends among the countries. The most impressive is the change of Germany moving from 0% in 2007 to 93,6% in 2010.

Rising capital selling shares to other business have found low success during and after the financial crisis among the selected countries, probably due to the high risk involved.

3.2.3.2 Success rate in obtaining loan finance in 2007 and 2010

Loans are money supplied to use for all types of corporate activities. Banks play an important role in this field, accounting for approximately half among the subjects providing them (Financial Stability Board, 2015). However, a company may borrow money from other sources such as, the owner, employees, family, friends, other business and so on. Unlike equity a loan does not give any rights over the company. Due to the financial crisis banks decreased lending money to companies. In this area, in the UK and in Spain the rate fell respectively by 15% and 10%. The request for loans to owner and directors remained stable

and positive as we expected; whilst requests to other employees remained stable except in Italy where it collapsed from 91,9% to 8,1%.

	Banks				**Owner(s)/director(s) of the business**				**Other employees of the business**			
%	**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	93.3	91.8	6.7	8.2	98.6	97.8	1.4	2.2	17.7	36.6	82.3	63.4
Spain	97	86.9	3	13.2	85.4	71.8	14.6	28.2	47.7	39	52.2	61
France	98.1	93	2	7	90.1	84.6	9.9	15.4	52.6	49.6	47.4	50.5
Italy	98.8	95.1	1.2	4.9	96.5	91.6	3.5	8.4	91.9	4.5	8.1	95.5
UK	94.5	79.3	5.6	20.8	98.4	91.6	1.6	8.4	37.4	55.1	62.6	44.9

Table 3–5. Success rate in obtaining loan finance, by sources 1/2 (Eurostat source)

Family, friends and other individuals remain another source of loans. They increased by 10% in the UK and in Germany and lowered by a 5% in Spain and France. In Italy, it sank from 93,9% to 73,4%. With respect to the loans lent by other businesses, the contractions were bigger in countries like Italy and Spain were the crisis hit harder. Finally, other sources of loans dropped in Spain.

	Family, friends or other individuals outside the business				**Other businesses**				**Other loan sources**			
%	**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	53.2	67.6	46.8	32.5	33.5	23.3	66.5	76.7	58.2	38.1	41.8	62
Spain	52.4	41.8	47.6	58.2	70	53.8	30.1	46.2	80.7	42.3	19.3	57.7
France	67.9	62.8	32.1	37.2	67.3	50.2	32.7	49.8	84.1	74.3	15.8	25.7
Italy	93.9	73.4	6.1	26.6	95	62.8	5	37.2	73.5	81.4	26.6	18.6
UK	78.8	90.2	21.2	9.8	46.8	61	53.2	39	96.8	87.8	3.1	12.2

Table 3–6. Success rate in obtaining loan finance, by sources 2/2 (Eurostat source)

3.2.3.3 Success rate in obtaining other source of finance in 2007 and 2010

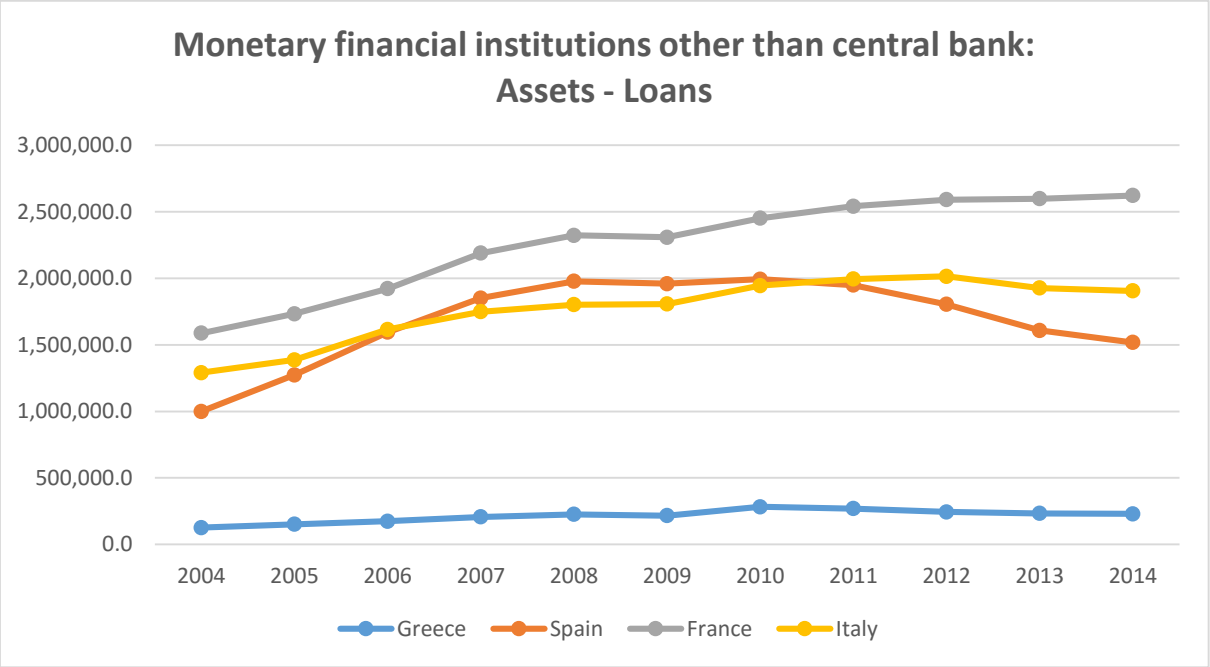
Finally, we report other ways of financing, including leasing, factoring, bank overdrafts and so on. With respect to leasing, almost all the requests were accepted amongst the countries in both the selected years, only Italy and Spain recorded an inflection of the rate. Factoring is another source of finance widely used when the time for payment are long. It is quite expensive in relation to the other ways of financing but assures the income of credit, which become important especially during a financial crisis. Its rate is quite stable among countries. Bank overdrafts or credit lines is another expensive way of financing especially for short periods, however for this this type of source the rate is quite stable.

We report other sources of finance in the annex.

	Leasing				**Factoring**				**Bank overdraft or credit line**			
%	**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**		**Requests accepted / partially accepted**		**Requests refused**	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	97.7	99.9	2.3	0.1	51.5	60.5	48.5	39.5	95.6	97.8	4.4	2.2
Spain	95.1	83.8	0.4	6.5	95.1	83.8	4.5	9.7	95.1	83.8	4.5	9.7
France	96.6	92.2	1.1	2.6	96.6	92.2	2.3	5.2	96.6	92.2	2.3	5.2
Italy	84.4	78.4	1.2	6.7	84.4	78.4	14.4	14.9	84.4	78.4	14.4	14.9
UK	99.7	92.7	0.1	5.3	99.7	92.7	0.1	1.9	99.7	92.7	0.1	1.9

Table 3–7. Success rate in obtaining other source of finance, by sources (Eurostat source)

In the following graph it is possible to see the level of loans that financial institutions have. It represents the loans that financial institutions have given in the last ten years in Spain, France, Italy and Greece. France is the country with a more loans given due probably to its economy. The economy of Spain before the crisis was growing and so its debts; however with after the crisis it is possible to see the fall in loans. Italy has a trend similar to Italy but with a light fall after the crisis. And finally Greece, where the level of loans remain very low over all the period.



3.2.4 Shark loan: a risk based approach

Usury was condemned over the past centuries in different cultures and especially in the main religions because of its nature. Whilst usury has always been condemned, its concept has changed over the centuries. Nowadays, the debate about usury, today under the name of shark loans, shifted the focus from the vulnerability of the borrower to the regulation or not of the market of loan.

The question is how to increase both the offer of different types of loan and the protection of customers. To answer this question, it is found whether the governments should regulate the market like imposing a rate cap or they should leave the market works by itself.

In a perfect, unregulated market, the supply matches the demand in an equilibrium situation, so we could hypothetically suggest that shark loans could not exist because the interest rate (or in general the cost of the credit) is commensurate to the risk.

Moreover, a higher interest rate could be justified for a higher risk of insolvency of borrowers. In this situation, the higher interest rate could even generate low profits for lenders. That could happen in a perfect market with no distortion. For example, a borrower

should choose the lender among others offering the lowest interest rate. Speaking more in general, the customers should buy the better deal between quality/quantity and price.

Another point in favour to a non-regulated market could be the fact that, lenders could prefer to remain in the formal market rather than in the informal one. This could facilitate the control by the governments and prevent the cases where the lenders use violence or extortionate methods to have the loan or the interest paid (Baker & Breitenstein, 2010). For the authors, the use of restrictions, for example an interest rate cap, are likely to produce an increase of shark lenders.

On the contrary, Mayer (Mayer, 2012) found there are not significant differences between a country with no interest cap rate and another applying it, when the interest is not too low.

Many other factors influence the loan's market. An important role plays the borrowers' profile. In this view, loans with a high interest rate apply especially to a specific target of customer. The borrower could have difficulties to find a loan with a low interest rate and probably have financial problems or they have bad historic record. Moreover, they could be under pressure because of the critical economic outline and with no enough time to compare and evaluate the lender: in summary, they could be in a vulnerable situation.

On the side of the lender, we will not focus in primary financial intermediary like banks but in those who operate with the client we describe before.

The lender will include in the price of the loan not only the risk of the client but also their vulnerability. This vulnerability could be used by lenders in case the borrowers could have problem in pay the loan back. This could determinate a big different in the profit of the lender. There are different techniques to make pressure legally and illegally. For lenders the profit could depend more on the vulnerability than on the interest, the more pressure the lenders could exercise the more profit could generate.

In this context, we find also microcredit. It could be seen as a revolutionary practice of high interest rate loan to support informal business not receiving other form of credit. Poor people could improve their business to have a more stable and better income. We recalled it to better explain the narrow line that could divide good practices of loans with a high interest rate to what we could define as "shark loan".

Microcredit works lowering the risk to pay back because it is guaranteed by a peer group instead of collateral. Also, it is characterized to be a small amount of money. If one person defaults, no one in his/her lending circle will receive another loan.

However, the microcredit that brought with no doubt benefit to many people was more than once accuse of extortion, threating the client to have the loans pay back. That come not only because of bad practices of the lenders but also because the microcredit often finances an informal business, even with the presence of a contract, that could facilitate the attempt for the borrower not to pay back the loan and for the lender to extort to obtain more and punctually what it was agreed.

More generally speaking, in the shark loan we are analysing whether there is another factor to add to the vulnerability of the borrower and to the intrinsic risk of the business. This loan could be characterised by an informal factor from the borrower, as we have seen in the microcredit or from the lender or both.

Lenders, we are talking about, stay at the margin of the legal market and in some case in the informal one. However, these lenders could represent a last hope for a person or company to receive a loan, and thus to same economic activities.

In these situations, the lender has to discover ways to minimize the lost and maximize the profit. In some cases that could bring the lender to use the loan as an excuse to reach other objectives like not to the end of lending money but with another purposes like to launder money or to offer an unpayable loan to take the goods or asset granted or endless loan to charge interests as long as they can.

To sum up, this type of loans are high risk, the borrower is in pressure vulnerability situation, the lender could be "aggressive" and be looking only for "one shoot" profit not daring customer loyalty, like in a scam situation.

On the contrary, it could be the lender the illegal one. They work only with a trust client and they lend small amount of money at a normal interest rate, in some cases lower than bank overdraft interest. The scope of the lender is to clean dirty money, so it could support even lost, but instead to declare it they could declare a profit or a higher profit.

3.2.4.1 Legislation in Italy

Deccreto Legge (DL)300-2006 - Riapertura Termini Mutui Antiusura

Decreto Ministeriale (DM) 132-2010 - Regolamento Attuazione Fondo Solidarietà Mutui Prima Casa

DM 220-2007 - Iscrizione Fondazioni Elenco Provinciale UTG

DM 239-2002 - Finanziamento Fondo Solidarieta' vittime usura e racket

DM Tesoro 6 agosto 1996 - Requisiti patrimoniali fondazioni - onorabilita' e professionalita' esponenti

Decreto del Presidente della Repubblica (DPR) 287-2000 - Regolamento di attuazione art. 16 L. 108-96 (mediazione creditizia)

DPR 315-1997 - Regolamento di attuazione art. 15 L. 108-1996 (Fondo di prevenzione)

DPR 455-1999 - Regolamento Fondo di solidarieta' vittime racket e usura art. 21 L. 44-1999

Legge 44-1999 - Fondo di solidarieta' vittime racket e usura

Legge 108-1996 - Disposizioni in materia di usura

Legge 244-2007 (Finanziaria 2008) art. 2 commi 475-480 - Fondo Solidarieta' Mutui Prima Casa

Legge 266-2005 (Finanziaria 2006) - Finanziamento Fondo Prevenzione

Legge 448-2001 (Finanziaria 2002) - Unificazione Fondo Solidarieta' vittime racket art. 18 L. 44-99 al Fondo Solidarieta' vittime usura art. 14 L. 108-96

Legge Regione Puglia n. 7-2006

The first mention of usury in the legislation of Italy appeared in 1930 in the art. 644 of the Penal Code. This article punished those who generically apply too high an interest in lending money. However, the law was quite generic and indefinite, so it was only with the reform of 1996 Law 108 that usury was better defined. Moreover, at the art. 2 of law 108/1996 it was defined as the limit of the interest rate which lenders could apply. In particularly, it was the average interest rate plus the 50% of the same.

In 2011, the calculation was modified: at the average interest rate is added a quarter and then a 4% and the difference between the interest rate and the limit rate cannot be more than 8%. This calculation should include not only the interest rate but all the costs the borrower has to pay relating to the loan excluding taxes and fines.

The advantages of this law is that it is based upon an objective calculation and does not take into account the nature of the lenders, so it may happen that a bank could, at some level, apply an interest rate higher than the limit.
Moreover, the Italian legislation makes a provision regarding the institution of a special fund to lend money without interest to victims of usury. In addition to this, it is permitted that formally recognized foundations and ONGs could represent the victims during the process.

Although there are numerous benefits to this legislation, the reality is quite different from the legislation. The judicial times are very long because the calculation is a bit too complicated (the Bank of Italy published a "circular" with a mistaken formula) and the borrower who is in a critical financial necessity could be expected to pay more for the process and may be waiting months or even years before the sentence and the repayment is complete.

3.2.4.2 Legislation in Spain

Legislation:

- Law 16/2011 of 24 June on consumer credit contracts.
- Law 22/2007, of 11 July, on the distance marketing of financial services.
- Royal Decree 1/2007 of 16 November, approving the revised text of the General Law for the Protection of Consumers and Users and other complementary laws.
- Law 34/2002, of 11 July, services of the information society and electronic commerce.
- Law 15/1999 of 13 December on the Protection of Personal Data Order EHA / 1718/2010, of June 11, regulation and control of advertising of banking services and products.
- Circular 6/2010 of 28 September, the Bank of Spain, credit institutions and payment institutions on advertising of banking services and products. (Dictates the precise rules for the development and implementation of the provisions of the Order)

- Law 2/2009 of 31 March, by which regulates the contracting with consumers of loans or mortgages and brokerage services for the conclusion of contracts of loan or credit.

The law about usury in Spain, called *"Ley Azcárate"*, dates back to 1908. That law, reformed several times, states that a contract of lending will be null on three occasions:

1) if the interest rate is evidently too high;
2) if there was a *"leonine"* contract, when all benefits are for the lenders;
3) when the amount of money lent is lower than the one written in the contract.

As it is possible to appreciate, in Spanish legislation the judge has the power to declare a contract null for usury. The rate taken in some process as an average was the limit for overdraft that is 2,5 times the legal interest rate[31]. However, judges could base their findings on the evidence of a specific case and evaluate whether or not to declare the contract null.
If in one hand this legislation gives a degree of flexibility for the judge, on the other hand, it does not proportionate any protection to the borrower. With this scenario, the borrower will go to the court just in limited cases, due to the uncertainty of the law and the associated costs. Furthermore, as is reported in the "Reclamation Report of 2014" published by the Bank of Spain[32] the cases arisen was for more than 95% from citizens, with respect to mortgages (Banco de España, 2015); It is possible to say that in Spain there is not a formal register of cases of usury for self-employed and SMEs. In addition to this, the application of a very high interest rate is not prosecutable[33]., when the Bank of Spain reckons that the financial institution is charging an interest rate which is too high, its recommendation is not binding. In this case, if the borrower wants the execution of the recommendation, they should go to a trial.

[31] According to art. 19.4 of the Law on consumer credit.

[32] The report does not take into account the *Azcarate* law or anything about usury instead it talk about customer protection.

[33] In Spain usury was decriminalized by the Penal Code of 1995, breaking the penalty criterion set by the Criminal Code of 1928.

Special attention should be taken of the analysis carried out by ADICAE[34] on micro-lending and payday lenders (ADICAE, 2014). ADICAE analysed some of the online companies offering short-term loans or microcredits. In their report, the association verified whether the companies were respecting the standards of transparency and details of the information to the public established by the law.

The conclusion of the study shows how the companies lack transparency and try to speed up the finalization of the contract. It highlights the fast way in which the company could lend the money, which may be seen as a "quality indicator", when actually the customer does not have enough time to read and evaluate the real cost of borrowing. Spanish legislation (art. 8 L. 16/2011) states that the possibility for the customer to ask the pre-contractual information is valid for 15 days. Moreover, all companies lack in some measure to explicitly communicate the real conditions of the costs. In some cases, the companies have the right to change the conditions in a unilateral form. This behaviour goes against the disposition of the art 16.1 L. 16/2011 which states that the conditions of the contract should be provided in written form. Another unjustified penalty charged to clients is for exceeding the limit. This penalty has been already eliminated by the Bank of Spain. Furthermore, the ADICAE declares that these companies are not subjected to any control.

[34] ADICAE (Asociación de usuarios de bancos, cajas y seguros de España) is an association for customers' protection in the financial sector.

3.3 DIFFERENCES IN TAXES PAID AND MARK-UP APPLY BY SPANISH, FRENCH AND ITALIAN MICRO ENTERPRISES IN THREE SELECTED YEARS: 2008, 2011 AND 2014.

3.3.1 Introduction

In this part we analyse the impact of the economic downturn in three selected countries: Spain, France and Italy. Thanks to our data we were able to compare companies before and after the financial crisis. To better see what changes the financial crisis has produced we selected three years: 2008, 2011 and 2014. 2008 offers a view of the companies' performance before the crisis; 2011 gives us information about the impact of the crisis in the short term and 2014 provides evidence of the consequences of the crisis in the medium term and, at the same time, gives us information about where we are currently.

The companies selected for this analysis are the so-called "micro companies", which, according to the European Union definition, are characterized by a turnover of less than 2 million euros, and employ fewer than 10 people. We preferred to focus on the sector of *"Wholesale and retail trade"*[35], in order to develop a deeper analysis. Finally, we only selected companies that were active in the selected period.

3.3.2 A first analysis

3.3.2.1 Background data

Firstly, we need to consider the economic and legislative context of each country. To summarize the variables that could affect the performance of companies we have extrapolated information from the *"Doing Business"* study (World Bank, 2016), from national records and from the European Commission.

The first of these indicators is the corporate tax rate. It is important information mainly because it generates a cost for the companies that, depending on the rate, could encourage or discourage economic activity. In the following table, the corresponding corporate tax rates for the selected countries are shown.

[35] NACE classification.

Corporate Tax Rate									
	Spain			**France**			**Italy**		
	2008	**2011**	**2014**	**2008**	**2011**	**2014**	**2008**	**2011**	**2014**
Nominal corporate income tax rate	30%	30%	30%	33,33%	33,33%	33,33%	31,40%	31,40%	31,40%
Special tax rate for SMEs (Small-medium enterprises)	25%	25%	25%	15%	15%	15%			
ESD (Enterprises of Small Dimension)		20%	20%						

Table 3–8. Corporate tax rate national government source

With reference to Spain, as it is possible to see in the table, from 2011 there are three different types of rate. The nominal tax rate is 30%, which applies to all companies. In 2008, small-medium incorporated businesses adopted a reduced rate of 25% up to a taxable income of € 120.202,41. From 2011, to benefit from the reduced rate, companies needed to meet two requirements: have a turnover not exceeding € 10 million and a taxable income of € 300.000,00 or less. Furthermore, an additional reduced rate of 20% was applied to the companies with a turnover of less than € 5 million and with no more than 25 employees. In our study, as mentioned previously, we were working with microenterprises so the minimum rate, eligible for each year, is used.

Regarding France, we found the standard tax rate to be 33,33%, with a special corporate tax rate of 15% on the first taxable income of € 38.120,00 for the entire selected period.

Finally, Italy does not have any reduction in corporate tax rate. The standard tax rate is 27,5% to which a 3,9% Regional value added tax is added. Although, the taxable income is not the same we have added it to the standard rate taking it as a unique corporate tax rate of 31,40% (OECD, 2014).

In the following table, we report the *"Paying tax"* indicators from *"Doing business"* edited by the World Bank for the respective years.

		France			Italy			Spain		
		2008	**2009**	**2010**	**2008**	**2009**	**2010**	**2008**	**2009**	**2010**
Paying taxes	**Payments (number per year)**	8	8	8	14	14	13	9	9	9
	Time (hours per year)	132	132	137	314	285	269	234	187	167
	Total tax rate (% of profit)	66,1	65,7	68,9	72,5	67,6	65,2	58,8	37,9	58,2

Table 3–9. Paying taxes (Doing Business – World Bank, source)

As can be seen, France has a better and more stable score for the number of payments; with just 8 payments against the 14 of Italy and the 9 of Spain, and fewer hours each year dedicated to filing the tax statement. In this, Italy recorded a very large number of hours, while Spain decisively improved over the period concerned, going from 234 to 167 hours per year. Making the business of paying taxes easier is a factor that could have affected compliance. In short, more complicated procedures for paying tax could cause more cost and difficulty in both paying taxes, and paying the right amount.

In the following tables we report the reforms in relevant aspects for business. We have reproduced the summary of reforms reported by the World Bank in the *"Doing Business"* project.

In the case of Spain, we can see how important changes have been applied in the area of "Paying tax". Over the last decade tax reforms have been addressed in two directions. On one side, the government lowered both the nominal standard rate and the reduced corporate tax rate, as stated previously, and at the same time the administration of tax switched to an online system. Other reforms streamlined the process of starting a business and reorganised the process for resolving insolvency. Finally, the labour market was made more flexible – or fragile, depending on your point of view – incentivizing fixed term contracts for employees over permanent ones.

Spain[36]		
Protecting Minority Investors	2016	Spain strengthened minority investor protections by requiring that major sales of company assets be subject to shareholder approval.
Paying Taxes	2008	Spain made paying taxes less costly for companies by reducing the corporate income tax rate.
	2010	Spain made paying taxes easier and less costly for companies by improving efficiency in the electronic filing and payment system and reducing the corporate income tax rate.
	2015	Spain made paying taxes less costly for companies by reducing the statutory corporate income tax rate.
	2016	Spain made paying taxes less costly for companies by reducing rates for corporate income, capital gains and environment taxes—and made it easier by introducing the online Cl@ve system for filing VAT returns. At the same time, Spain reduced the amount allowable for depreciation of fixed assets and raised the ceiling for social security contributions.
Starting a Business	2012	Spain eased the process of starting a business by reducing the cost to start a business and decreasing the minimum capital requirement.
	2014	Spain made starting a business easier by eliminating the requirement to obtain a municipal license before starting operations and by improving the efficiency of the commercial registry.
	2015	Spain made starting a business easier by introducing an electronic system linking several public agencies and thereby simplifying business registration.
Registering Property	2015	Spain made transferring property easier by reducing the property transfer tax rate.
Resolving Insolvency	2011	Spain amended its regulations governing insolvency proceedings with the aim of reducing the cost and time. The new regulations also introduced out-of-court workouts.
	2013	Spain strengthened its insolvency process by making workouts easier, offering more protections for refinancing agreements, allowing conversion from reorganization into liquidation at any time, allowing reliefs of the stay under certain circumstances and permitting the judge to determine whether an asset of the insolvent company is necessary for its continued operation.

[36] The following table reproduce the information provided by the World Bank in the following web page: http://www.doingbusiness.org/reforms (World Bank, 2016).

	2015	Spain made resolving insolvency easier by introducing new rules for out-of-court restructuring, introducing provisions applicable to pre-packaged reorganizations and making insolvency proceedings more public.
Trading Across Borders	2011	Spain streamlined the documentation for imports by including tax-related information on its single administrative document.
	2013	Spain reduced the time to import by further expanding the use of electronic submission of customs declarations and improving the sharing of information among customs and other agencies.
Labor Market Regulation	2011	Spain reduced the notice period applicable in case of redundancy dismissals.
	2013	Spain temporarily allowed unlimited duration of fixed-term contracts.
	2014	Spain reduced the maximum cumulative duration of fixed-term contracts and increased the minimum wage.

Table 3–10. Reform in Spain (2008-2014) (World Bank, 2016)

In France, as in Spain, most reforms saw the introduction new electronic systems designed to facilitate compliance. At the same time, important improvements were made in the area of "Getting credit" by centralizing collateral registries and eliminating the public estimation of the debtor's assets.

France[37]		
Paying Taxes	2009	France made paying taxes easier for companies by changing the effective rates for Social Security and payroll taxes and by making electronic filing mandatory for Social Security contributions by companies liable for more than €800,000 in such contributions.
	2016	France made paying taxes less costly for companies by introducing a credit against corporate income tax and reducing labor tax rates paid by employers.
Starting a Business	2015	France made starting a business easier by reducing the time it takes to register a company at the one-stop shop (Centre de Formalités des Entreprises).
Labor Market Regulation	2015	France substantially amended its labor market regulations, including the provisions dealing with large-scale collective redundancy processes.
Registering Property	2008	France reduced the time required to register property by implementing a new system (Télé@ctes) allowing notaries to access the land registry electronically.

[37] The following table reproduce the information provided by the World Bank in the following web page: http://www.doingbusiness.org/reforms (World Bank, 2016).

	2010	France made transferring property easier and less time consuming by more fully implementing an online system that enables notaries to obtain encumbrance and ownership documents from the land registry electronically.
	2014	France made transferring property easier by speeding up the registration of the deed of sale at the land registry.
Trading across borders	2009	France speeded up and simplified customs clearance procedures by introducing an electronic customs declaration and eliminating the need to submit certain documents.
Getting Credits	2008	France strengthened its secured transactions system by launching a unified and geographically centralized collateral registry.
	2010	France enhanced its insolvency process by encouraging preinsolvency workouts and eliminating the requirement that a public auctioneer provide the estimation of the debtor's assets.
Resolving Insolvency	2012	France passed a law that enables debtors to implement a restructuring plan with financial creditors only, without affecting trade creditors.

Table 3–11. Reform in France (2008-2014) (World Bank, 2016)

Like the other two countries, Italy has also reduced red tape by introducing obligatory electronic filing and by consolidating procedures. As in Spain, labour regulation has facilitated fixed term contracts and the corporate tax rate has been reduced. The reduction of the corporate tax rate could be seen as a means of lightening the tax burden on corporations in the middle of the financial crisis.

Italy[38]		
Labour Market Regulation	2009	Italy increased the notice period for redundancy dismissals.
	2010	Italy allowed the use of fixed-term contracts for permanent tasks.
	2015	Italy relaxed the conditions for using fixed-term contracts but reduced their maximum duration to 36 months.
	2016	Italy adopted the Jobs Act, which simplifies redundancy rules and encourages out-of-court reconciliation, reducing the time and cost for resolving labor disputes. The new legislation also broadens the coverage of unemployment insurance.
Enforcing Contracts	2014	Italy made enforcing contracts easier by regulating attorneys' fees and streamlining some court proceedings.

[38] The following table reproduce the information provided by the World Bank in the following web page: http://www.doingbusiness.org/reforms (World Bank, 2016).

	2016	Italy made enforcing contracts easier by introducing a mandatory electronic filing system for court users, simplifying the rules for electronic service of process and automating the enforcement process.
Starting a Business	2009	Italy made starting a business easier by making it possible to carry out all required procedures through a single notice.
	2011	Italy made starting a business easier by enhancing an online registration system.
	2015	Italy made starting a business easier by reducing both the minimum capital requirement and the paid-in minimum capital requirement and by streamlining registration procedures.
Registering Property	2013	Italy made transferring property easier by digitizing cadastral maps of properties and making the maps available to notaries online.
	2014	Italy made transferring property easier by eliminating the requirement for an energy performance certificate for commercial buildings with no heating system.
Resolving Insolvency	2008	Italy enhanced its insolvency process through new legislation that gives trustees greater discretion in liquidating assets and grants creditors the right to propose arrangements for other creditors to take over distressed assets, which may shorten the liquidation procedure.
	2012	Italy introduced debt restructuring and reorganization procedures as alternatives to bankruptcy proceedings and extended further rights to secured creditors during insolvency proceedings.
	2014	Italy made resolving insolvency easier through an amendment to its bankruptcy code that introduces a stay period for enforcement actions while the debtor is preparing a restructuring plan, makes it easier to convert from one type of restructuring proceeding to another, facilitates continued operation by the debtor during restructuring and imposes stricter requirements on auditors evaluating a restructuring plan.
Getting Electricity	2013	Italy made getting electricity easier and less costly by improving the efficiency of the utility Acea Distribuzione and reducing connection fees.
Paying Taxes	2009	Italy made paying taxes less costly for companies by reducing the corporate income tax (IRES) rate and the regional tax on productive activities (IRAP) rate.

Table 3–12. Reform in Italy (2008-2014) (World Bank, 2016)

The reform aspect is an essential part in our analysis because it gives us an idea of direction the country is going in.

3.3.2.2 The effective corporate tax rate for micro-enterprises

In our investigation we focused on two different indicators: first of all, how the performance of companies has changed since the crisis and how this has affected the revenue of the government; and secondly, how companies' mark-ups and costs have changed as a result of the financial crisis. The aim of the analysis is to identify different behaviour in paying tax between homogeneous companies. In other words, how similar companies have reacted to the crisis in these three different countries and how the countries themselves have played a crucial role in the matter.

Our database is composed of the balance sheets of a sample of 8928 companies from Spain and Italy and 8377 from France.

Firstly, in our investigation, we calculated the effective corporate tax rate. We calculated the tax rate starting with the tax paid and divided the profit before taxation. On this occasion we only selected the companies that reported a profit in the chosen year. The following tables, divided by countries, give us the average corporate tax rate and its distribution among companies[39].

As stated above, the companies' statements come from the same standardized database (ORBIS), so all the data is treatment in the same way. The tax invoices include all taxes related to the accounting period (paid, accrued or deferred).

[39] The name of variable is TR_INDIRECT_TAX_RATE where TR is for Trimmed 5% mean.

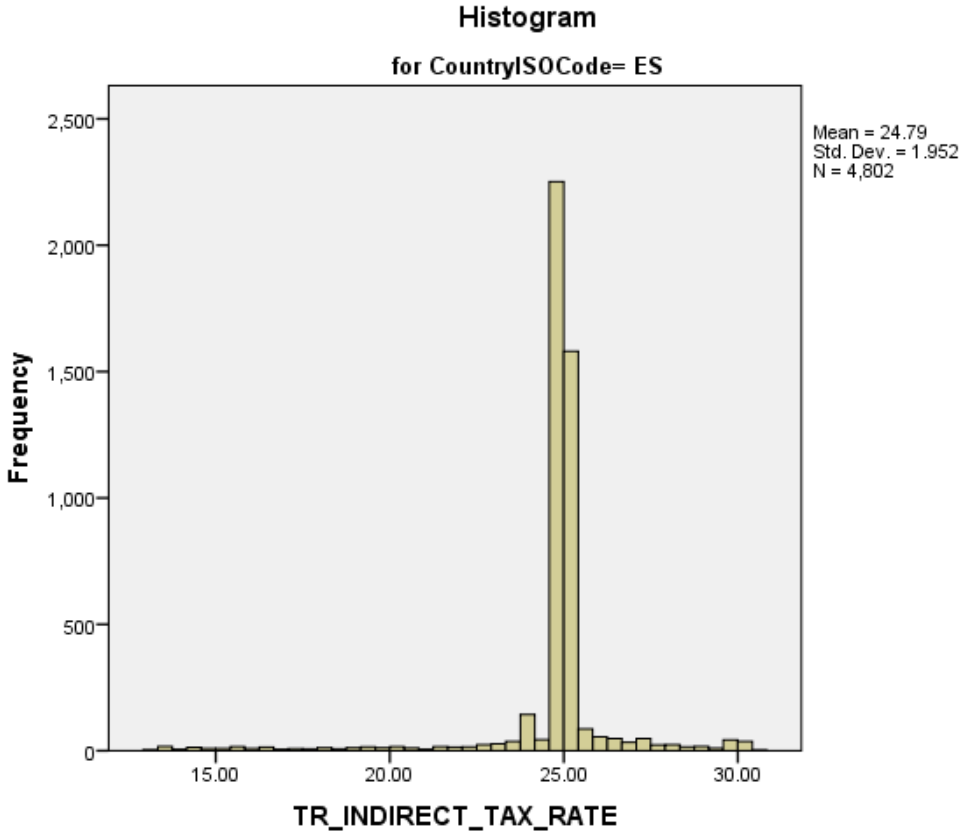


Figure 3–9. Spain corporate tax rate (Own calculation)

As it is possible to see, in Spain and France the effective corporate tax rate matches the nominal tax rate. In Spain, in particular, the variance is minimum, showing that most of the companies classified in this segment – the micro ones – are exposed to an equal rate of 25% (the mean is 24,79%). In France, on the other hand, as the reduced rate works just for the first € 38.120,00 of taxable income and additional income is taxed at the standard rate of 33,33%, the variance is somewhat larger, and the mean is 17,59% as a result. However, from the graph it is clear that the median is 15%, which is the reduced rate, meaning that most companies are taxed at that rate.

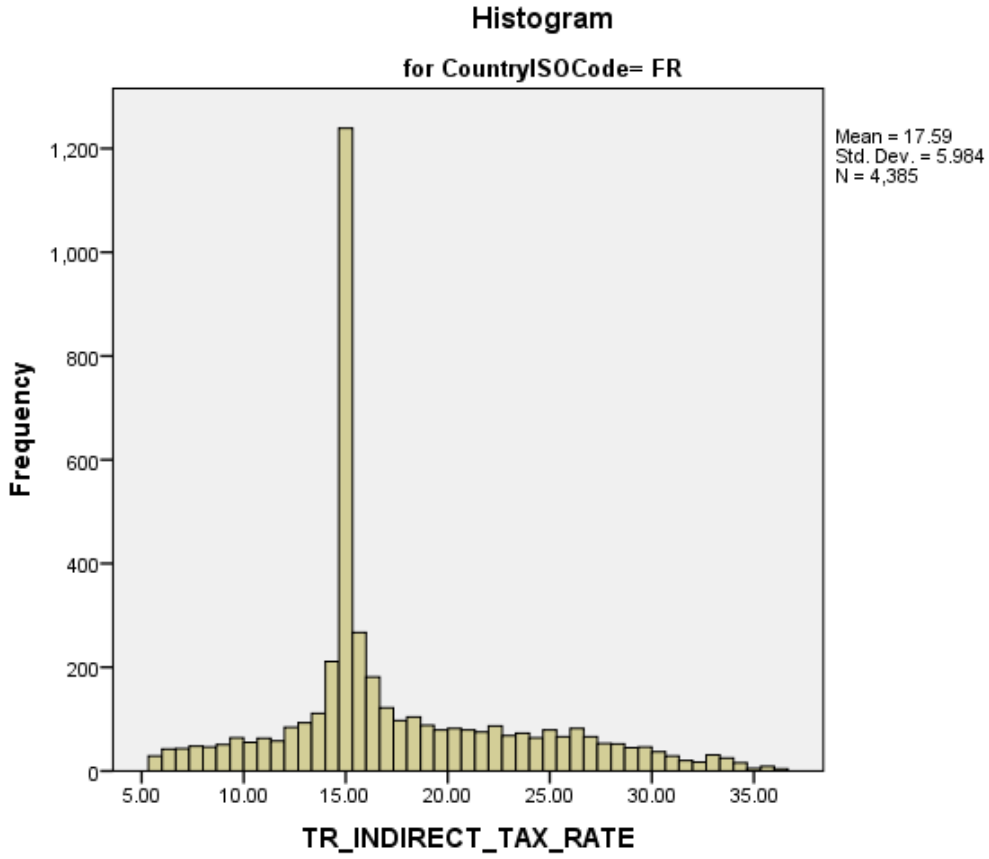


Figure 3–10. France corporate tax rate (Own calculation)

Finally, the Italian micro companies are subjected to a standard rate equal to 31,40%. The peculiarity of the Italian case is that the mean is quite high (54,86%) and for some companies the rate exceeds 100%, most likely due to the fact that the tax includes other types of tax, including fixed rates applied to companies that do not relate to their profit or loss for the year. In this last case, the variance is larger than in Spain and France, meaning that taxes are influenced by other components that are not present in the other countries.

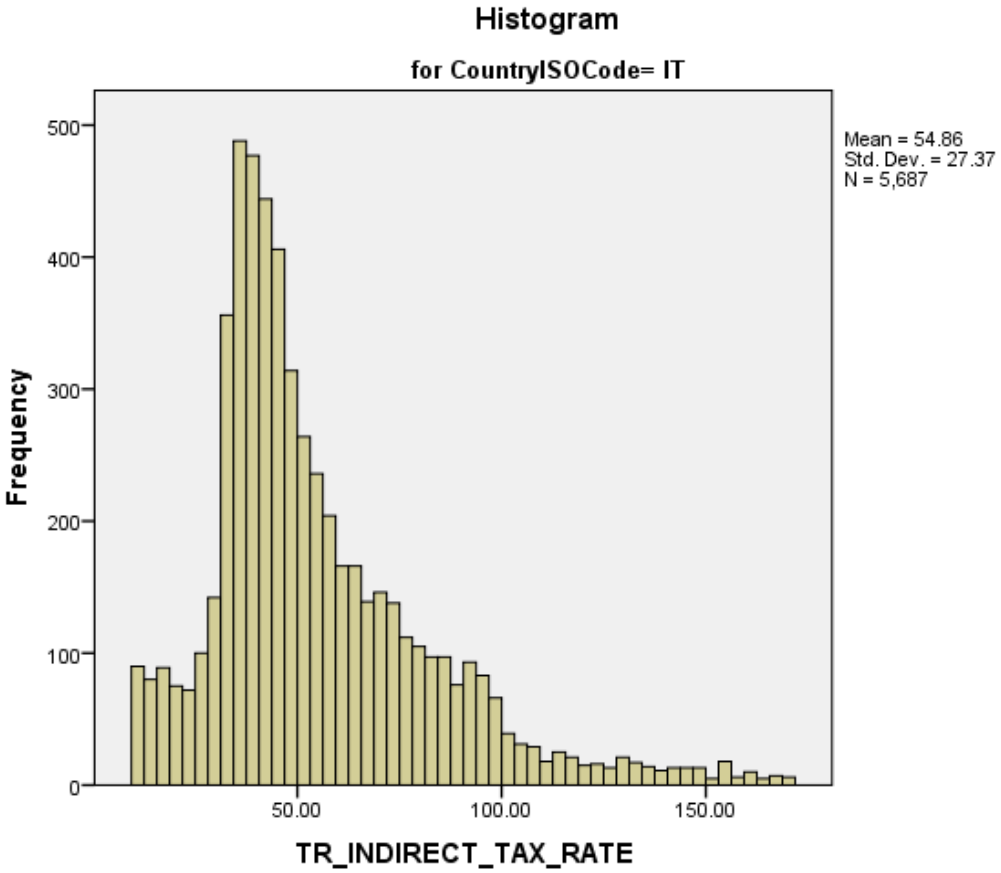


Figure 3–11. Italy corporate tax rate (Own calculation)

In the table below it is possible to see how the effective tax rate changed during the selected years. As we observed before, these figures represent the actual tax paid. It is possible to see how in Spain during 2011 the rate decreased slightly, probably due to a combination of the financial crisis and a reduced tax rate. France shows contraction in 2014, meaning that the crisis could have caused more problems in that year. Finally, stated above, Italy has a high tax rate with a no clear trend.

	Effective tax rate[40]		
Country	**2008**	**2011**	**2014**
ES	24.79%	23.95%	24.49%
FR	17.60%	17.08%	14.75%
IT	54.86%	58.44%	53.78%

Table 3–13. Effective tax rate (Own calculation)

3.3.2.3 Tax paid for € 1.000,00 of sales

In the next graph we will see the amount of taxes paid for every € 1.000,00 of sales, excluding the companies in the top 5%. In this case we selected only the companies paying taxes and with a range of sales from € 1.000,00 to 2 million.

Our hypothesis is that a higher corporate tax rate corresponds to more taxes collected. However, we would like to find out the optimum balance, where the tax rate maximizes revenue. We recalled the concept of Laffer's curve; so we assume that Spain, France and Italy have similar institutions and economies. Furthermore, we assume that the companies are comparable, as we selected only "wholesale and retail trade" companies. Therefore, the differences will be found in the tax law and in particular in the tax rate.

At a glance, it is possible to see in the graph below, that the amount of tax paid on every € 1.000,00 of sales is higher in Italy (€ 13,86) than in Spain (€ 6,72) and France (€ 9,42). However, to better appreciate the differences, we have to compare the tax paid with the tax rate. In other words, we will see how the level of the tax rate can generate different amounts of revenue. For this analysis we have chosen the effective tax rate rather than the nominal one. So, speaking for 2008, Spain has a rate of 24,79%, France of 17,59% and Italy of 54,86%.

Firstly, we could argue that between Spain and Italy the difference in the amount of tax paid is due to the difference in the tax rate, as they are in the same ratio (more or less 1 : 2; Spain 24,79%/€ 6,72; Italy 54,86%/€ 13,86). However, if we compare Spain or Italy with France we have to look for a different conclusion. French companies pay € 9,42 on every € 1.000 of sales with an effective tax rate of 17,59%. So, with the lowest tax rate companies are

[40] The corresponding graph with the distribution are showed in the annex.

paying more than Spain and in proportion more than Italy. That result is closer to the Italian one, because more companies contribute tax at the official rate. It means that the "Profit before tax" invoice is higher in France than in the other two countries.

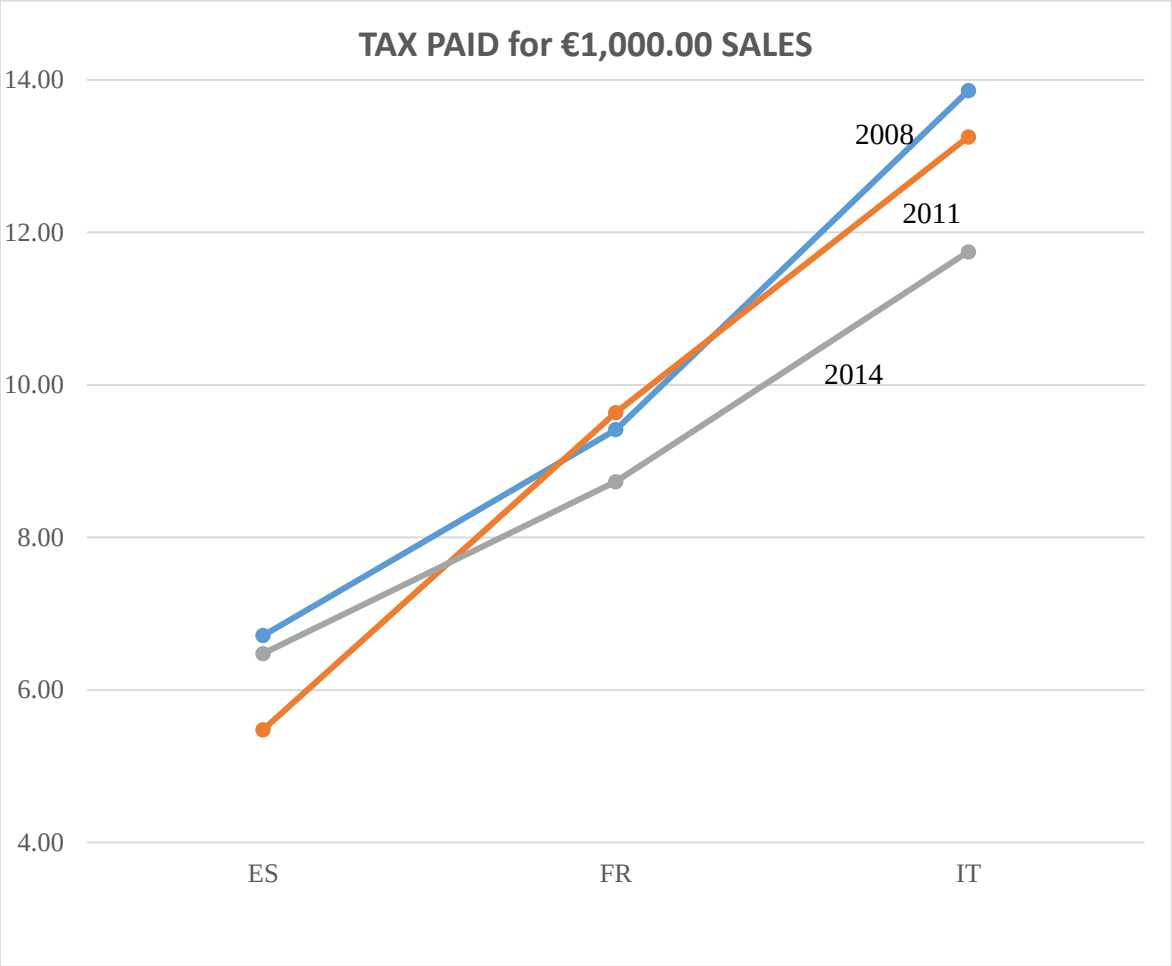


Figure 3–12. Own source (ORBIS database)

As it is possible see in the graph, the countries do not converge to the same value, though Spain does better in 2014 compared to French and Italy, which see a reduction in the amount of tax paid.

So, the logical question is: why do French companies declare more than their Spanish and Italian counterparts? Or, in other words, why do they earn more? And widening the analysis,

the questions we ask ourselves are: is the level of GDP influencing that result? Is tax evasion distorting our value? Or are different sources of finance affecting the company's performance? And finally, how do the different combinations of these factors react to the financial crisis?

With regard to GDP, we asked whether different levels could influence the willingness of people to declare more or less income.

The fact that enterprises in equal conditions declare more profit in a wealthier region could be due to the fact that their profits contributes to the GDP of that region. Another reason could be that wealthier regions are also more expensive, so a company may need to make higher margins in order to operate. Below is the same graph shown before, but weighted according to the GDP of each country. The result represents an amount of tax taking into consideration the GDP of the region. For this, we are not able to compare the value of the preceding graph, but we can see how the countries compare to each other.

Country	**Number of companies for corresponding years**		
	2008	**2011**	**2014**
ES	5165	4071	3955
FR	4916	4592	3872
IT	7520	7301	6986

Table 3–14. Number of companies for the corresponding years divided by countries (own source, ORBIS database)

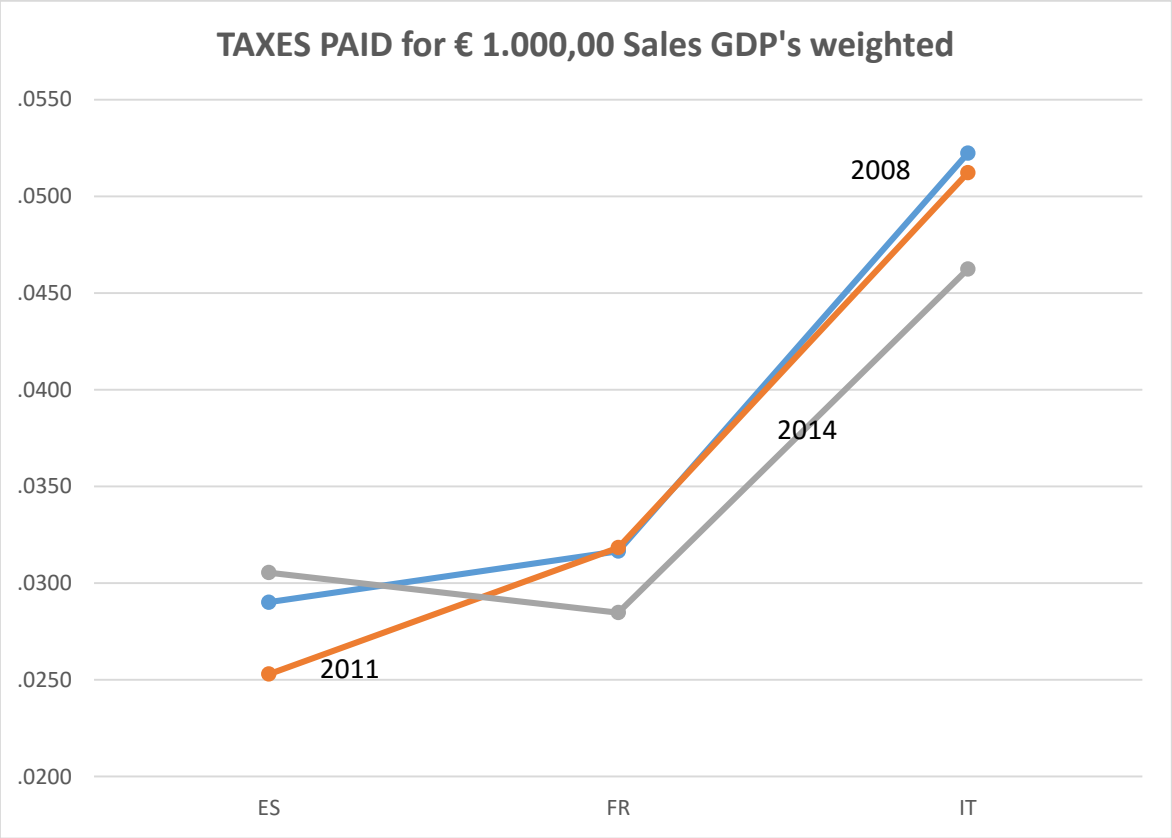


Figure 3–13. Taxes paid for € 1.000,00 Sales GDP's weighted (Own source, ORBIS database)

3.3.2.4 Tax paid and tax evasion

As we said before, difference in tax paid in different countries could be produced by the amount of tax evasion calculated in the first chapter.

The tax evasion was calculated from the VAT gap. From this we calculated the value of undeclared sales. Than we applied the average tax rate for households and corporations, and finally we estimated the value of tax evasion and its bearing on total tax revenues and GDP. Here we have collated the percentage of tax evasion on total tax for the countries we are working with. We are aware that it is an approximation, but we would like to find a possible explanation for the gap in taxes paid by the companies in Spain, France and Italy. That difference should be proportionate to the corporate tax rate applied in these countries. However, the three economies recorded different levels of efficiency so we would like to know if that gap could be accounted for by tax evasion.

	TAX PAID for €1,000.00 SALES			TAXES PAID for € 1.000,00 Sales GDP's weighted			Tax Evasion		
Country	**Mean 2008**	**Mean 2011**	**Mean 2014**	**Mean 2008**	**Mean 2011**	**Mean 2014**	**2012**	**2013**	**average**
ES	6.71	5.48	6.48	.0290	.0253	.0305	13%	15%	14.21%
FR	9.42	9.64	8.73	.0317	.0318	.0285	10%	10%	9.91%
IT	13.86	13.25	11.75	.0522	.0512	.0462	24%	25%	24.45%

Table 3–15. Tax paid and tax evasion data (Own calculation)

Country	**TAX PAID (included taxes evaded) for €1,000.00 SALES**		**TAXES PAID (included taxes evaded) for € 1.000,00 Sales GDP's weighted**		**Effective tax rate**	
	2011	**2014**	**2011**	**2014**	**2011**	**2014**
ES	6.26	7.40	0.0289	0.0349	23.95%	24.49%
FR	10.59	9.60	0.0350	0.0313	17.08%	14.75%
IT	16.50	14.62	0.0637	0.0575	58.44%	53.78%

Table 3–16. Tax paid included tax evaded and effective tax rate

2011	**differences in tax rate**	**no tax evasion adjustment**		**with tax evasion adjustment**	
Country		**differences in tax paid**	**differences in tax paid (GDP weight)**	**differences in tax paid**	**differences in tax paid (GDP weight)**
ES/IT	144%	142%	102%	164%	121%
ES/FR	-29%	76%	26%	69%	21%
FR/IT	242%	38%	61%	56%	82%
2014	**differences in tax rate**	**no tax evasion adjustment**		**with tax evasion adjustment**	
Country		**differences in tax paid**	**differences in tax paid (GDP weight)**	**differences in tax paid**	**differences in tax paid (GDP weight)**
ES/IT	120%	81%	102%	98%	65%
ES/FR	-40%	35%	26%	30%	-10%
FR/IT	265%	35%	61%	52%	84%

Table 3–17. Difference in taxation. (own calculation)

3.3.2.5 Correlation between tax paid and source of finance

In this section we analyse how different sources of finance could affect the payment of taxes. To do this, we divided the companies into six different groups depending on the type of funding they used. So, we assigned the number 1 to companies predominantly financed by commercial credit; 10 for companies using their own financial resources like the previous year's profit or their own capital; 20 for using outsource lending; 11 and 21 to companies using a combination of the above, and 100 to companies not adopting any source of finance in particular.

Group	**Classification of source of finance**	
1	= Commercial credit - commercial debts ***IF > 45 days***	Commercial credit as a way of finance
10	= Gearing = ((Non-current liabilities + Loans) / Shareholders funds) * 100. ***IF < 50***	Own financial resources
11	= 10 + 1	Combining both own financial resource and commercial credit
20	= Gearing ***IF> 200***	Outsource lending
21	= 20 + 1	Combining both outsource lending and commercial credit
100	= All others companies	Residual group

Table 3–18. Classification of source of finance (Own classification)

As, it is possible to see in the graph below, for 2008, each country presents the same trend. Companies whose commercial credit terms are more than 45 days longer than the terms on their commercial debts are paying on average less tax than companies using their own resources. The trend comes down when the companies use a combination their own resources and commercial credit, except in Italy where it remains at the same level as the companies using only their own resources. Companies using loans or a combination of loans and commercial credit score quite low, as do companies in the residual group.

The explanation for this could be that companies paying more taxes are both those reporting profits instead of losses and those using a percentage of the remaining profit as a financial resource[41].

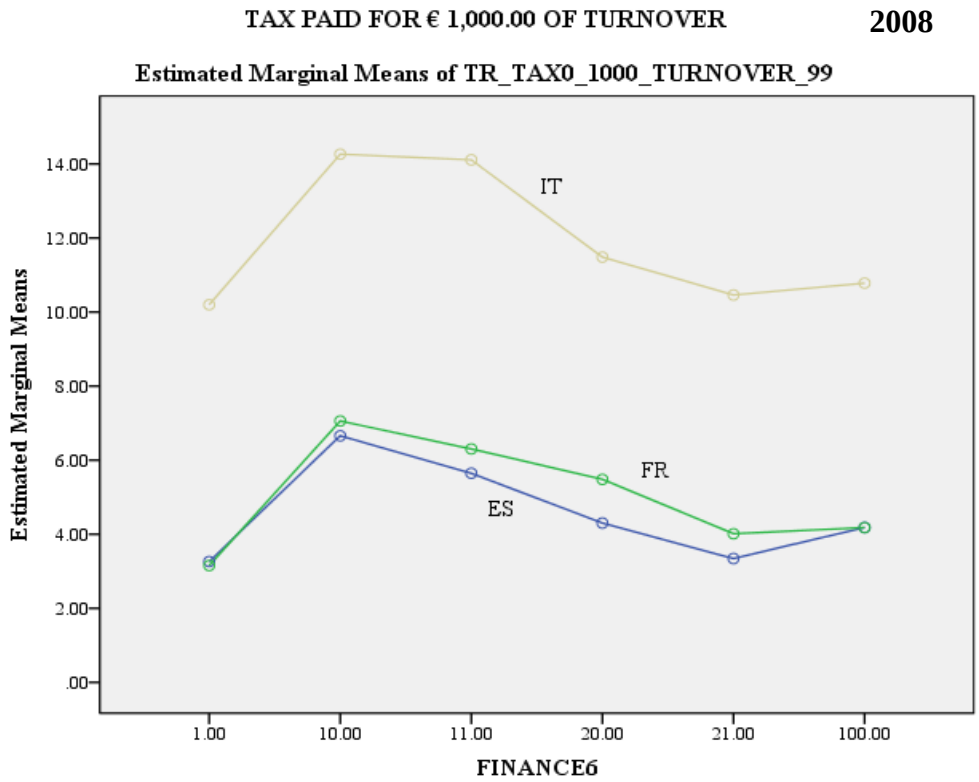


Figure 3–14. Tax Paid for € 1,000.00 of turnover in 2008 (Own calculation, ORBIS database)

The following graph shows the same variables, but for the year 2011. This year is important as it can give us relevant information about the impact of the financial crisis on companies a few years after it started.

[41] We reported in the Annex the table of descriptive statistic of companies divided by Countries, Type of Finance and Performance; however, we did not do any calculations on it because the such subdivision produces unbalanced and too small sample (the performance is calculated as "1" if reported a profit for, at least, 2 fiscal periods in the last three years including the object of analysis; in the other cases "-1").

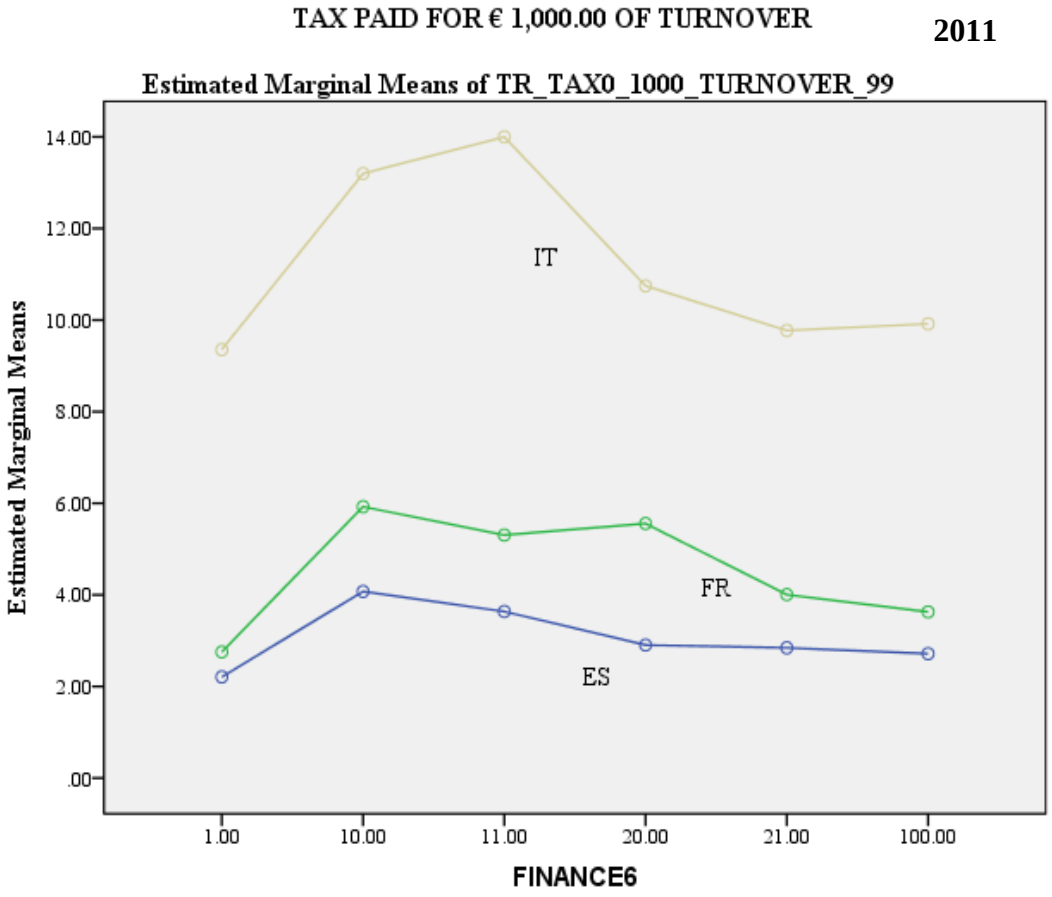


Figure 3–15. Tax Paid for € 1,000.00 of turnover in 2011 (Own calculation, ORBIS database)

As the graph shows, generally speaking the countries maintain the same trend, however Italy and Spain register a lower score in each group. While Italy has a slight decrease, Spain shows a strong one, meaning that the first years of the crisis were more difficult for Spanish companies. Another explanation could be the fact that in 2011 Spain adopted a fiscal reform. As we saw before, in 2011 an additional reduced rate was applied to the companies we selected for our study, so the effective rate could have lowered the level of taxes collected.

	Taxes paid every € 1.000,00 of turnover			TR_ TURNOVER (as a turnover mean of the two groups)	Difference in taxation
	1 = Commercial finance	**10 = Own Finance**	**Difference**		
ES	3.26 €	6.66 €	3.39 €	454,081.75 €	**1,541.51 €**
FR	3.16 €	7.06 €	3.90 €	468,385.50 €	**1,828.56 €**
IT	10.20 €	14.27 €	4.07 €	487,394.35 €	**1,982.70 €**

Table 3–19. Difference in taxation (Own calculation)

2014, as shown in the next graph, shows the same trend for Italy, especially where companies using their own resources score better than the others. However, this time, Frnce and Italy appear to have been feeling the effects of the crisis more than Spain. As it is possible to see in the graph, while France and Italy registered a decrease in each group, Spain was able to gain some points. This could be explained in different way: after the first years of the crisis and after having reduced its tax rate, Spain could have been experiencing a more stable economy. Italy and France, in contrast, show a downward trend, at least relating to micro-enterprises in the retail sector. There could be several reasons for this, one of which is that consumption in these two countries was still going down, something that could be indicative of an unstable economy.

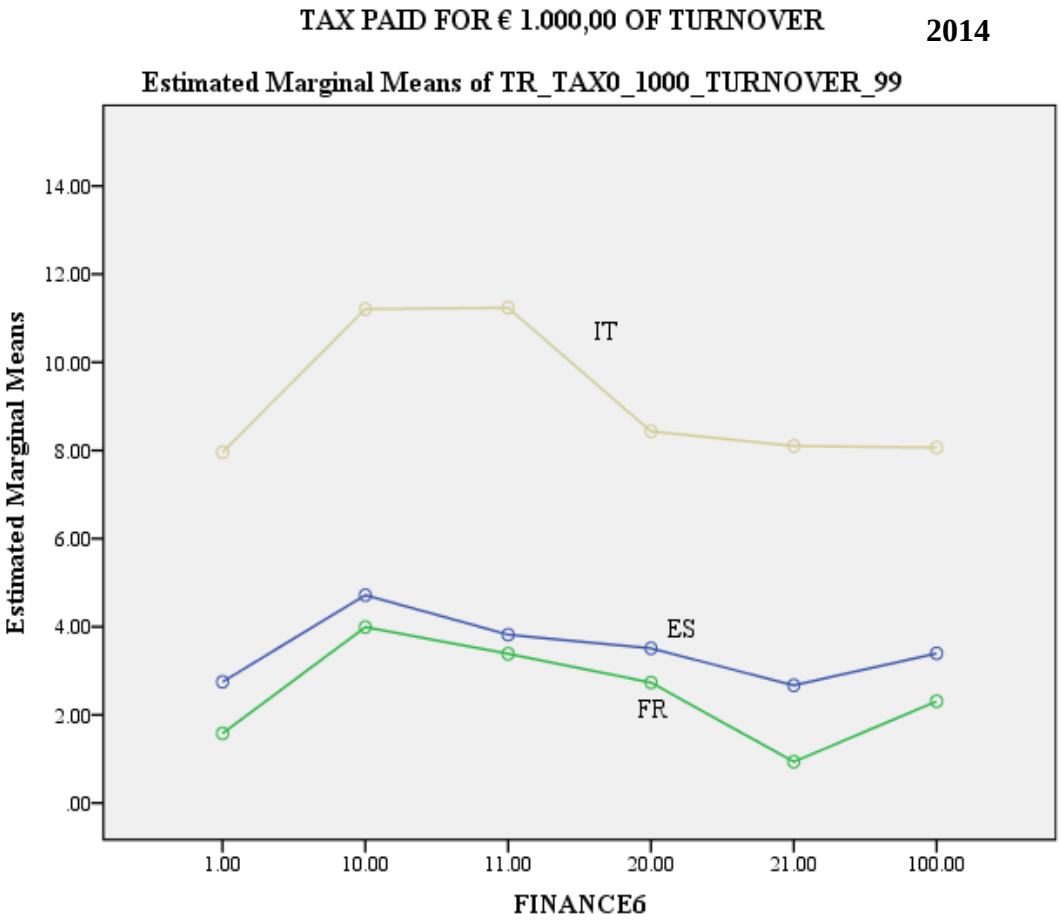


Figure 3–16. Tax Paid for € 1,000.00 of turnover in 2014 (Own calculation, ORBIS database)

3.3.3 A studio of mark-up

3.3.3.1 Methodology

In this section we analyse mark-ups, dividing the companies by their fiscal residency and the different ways in which they finance their activity, and looking at the mark-up between the material cost and the turnover[42]. As we are analysing only one sector, "wholesale and retail trade", the material cost is a good indicator of the mark-up that companies apply. Furthermore, for a better comparison, we excluded both the top and bottom 5% of both material cost and turnover[43].

We carried out our analysis with a two-way ANOVA. We used factorial ANOVA with two independent variables and one dependent variable. Our dependent variable is the mark-up between material cost and turnover. The independent variables are the countries: Spain, France and Italy, and the main source of finance the companies used: commercial credit, their own resources, external resources, a combination of the three, or no source in particular. As we did our analysis for the years 2008, 2011 and 2014, we will begin with our hypothesis and then display the data for each year.

Independent variable 1: Countries

- Group 1: Spain
- Group 2: France
- Group 3: Italy

Independent variable 2: Source of Finance

- Group 1: 1 = Commercial credit - commercial debts IF > 45 days;
- Group 10 = Gearing = ((Non-current liabilities + Loans) / Shareholders funds) * 100 IF < 50;

[42] Total operating revenues (Net sales + Other operating revenues+ Stock variations).

[43] The alternative would be calculating the mark-up with the all data and then proceeding to exclude that 5%. We preferred the first method because we believe that it provided better comparable data. However it brings a problem of variance that we better analyse in the section "Limitations of the study".

- Group 20 = 10 + 1;
- Group 11 = Gearing IF> 200;
- Group 21 = 20 + 1;
- Group 100 = All others companies

Dependent variable: Mark-up (trimmed 5% turnover over trimmed 5% material cost) = (tr. Turnover – tr. Material cost) / tr. Material cost

We will use the Two –way ANOVA (Factorial ANOVA) to determine if there are significant differences or interactions between the means of our groups.

There are three Null hypotheses and there are three Alternative hypotheses:

- **Ho1**: there is no difference in the **mean mark-up** between the three **countries**;
- **Ho2**: there is no difference in the **mean mark-up** between the six **source of finance** groups;
- **Ho3**: there is **no interaction** between the two independent variable of **countries and source of finance**.

- **Ha1**: there is a difference in **mean mark-up** between the **countries**;
- **Ha2**: there is a difference in **mean mark-up** between the **source of finance**;
- **Ha3**: there is an **interaction** between the two independent variable of **countries and source of finance.**

Table 3–20. ANOVA Hypotheses (Own elaboration)

3.3.3.2 Analysis of the mark-up for 2008

By calculating the mark-up between material cost and turnover we are able to have a better view of the different pricing policies that companies used, depending on their location and source of finance.

At the end of 2008 the global economy suffered a shock. The crisis, first concentrated only in the financial sector, quickly spread in the real economy, bringing all the problems that we all know about. So, this year should reflect the stability that the economy had been experiencing up to that point. We know that the three countries we are focusing on, despite

having similar economies, were growing at different speeds. Spain was the one with a better GDP performance, while France had a higher GDP value.

First we will show the statistical results of our test and then we will use the graphs to analyse each of our hypotheses.

The critical value is 95%; meaning that the comparison with the mean should be true for 95% of the sample compared. As can be seen in the table below, the significant value of our three hypotheses is less than 5%, meaning our null hypotheses must be rejected in favour our alternative hypothesis. Thus we can conclude that there is a significant difference of less than 5% in the mark-up that micro-companies apply to material costs between the countries, the type of finance and the interaction of these two variables.

Tests of Between-Subjects Effects					**2008**
Dependent Variable: MARKUP_trTURNOVER_trMATCOST					
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Corrected Model	5410390.615[a]	17	318258.271	64.347	.000
Intercept	60098354.382	1	60098354.382	12150.912	.000
CountryISOCode	1666519.023	2	833259.511	168.472	.000
FINANCE6	677728.630	5	135545.726	27.405	.000
CountryISOCode * FINANCE6	196727.799	10	19672.780	3.978	.000
Error	108307403.757	21898	4945.995		
Total	247738004.979	21916			
Corrected Total	113717794.372	21915			
a. R Squared = .048 (Adjusted R Squared = .047)					

Table 3–21. Test of two-way ANOVA of mark-up for 2008

As the P-value is less than 5% we reject the null hypothesis and accept the alternative ones for each of three hypotheses. Our alternative hypotheses are:

- **Ha1**: There is a difference in **mean mark-up** between the **countries**;
- **Ha2**: There is a difference in **mean mark-up** between the **source of finance**;

- **Ha3**: There is an **interaction** between the two independent variable of **countries and source of finance.**

We must now examine each of the hypotheses. In the first comparison we divide the companies according to their nationality and display the mean mark-up value. As it is possible to see in the annex, large samples are used for each country: 7290 companies for Spain, 6943 for France and 7583 for Italy. This, and the fact that we took just one sector, makes the result more reliable.

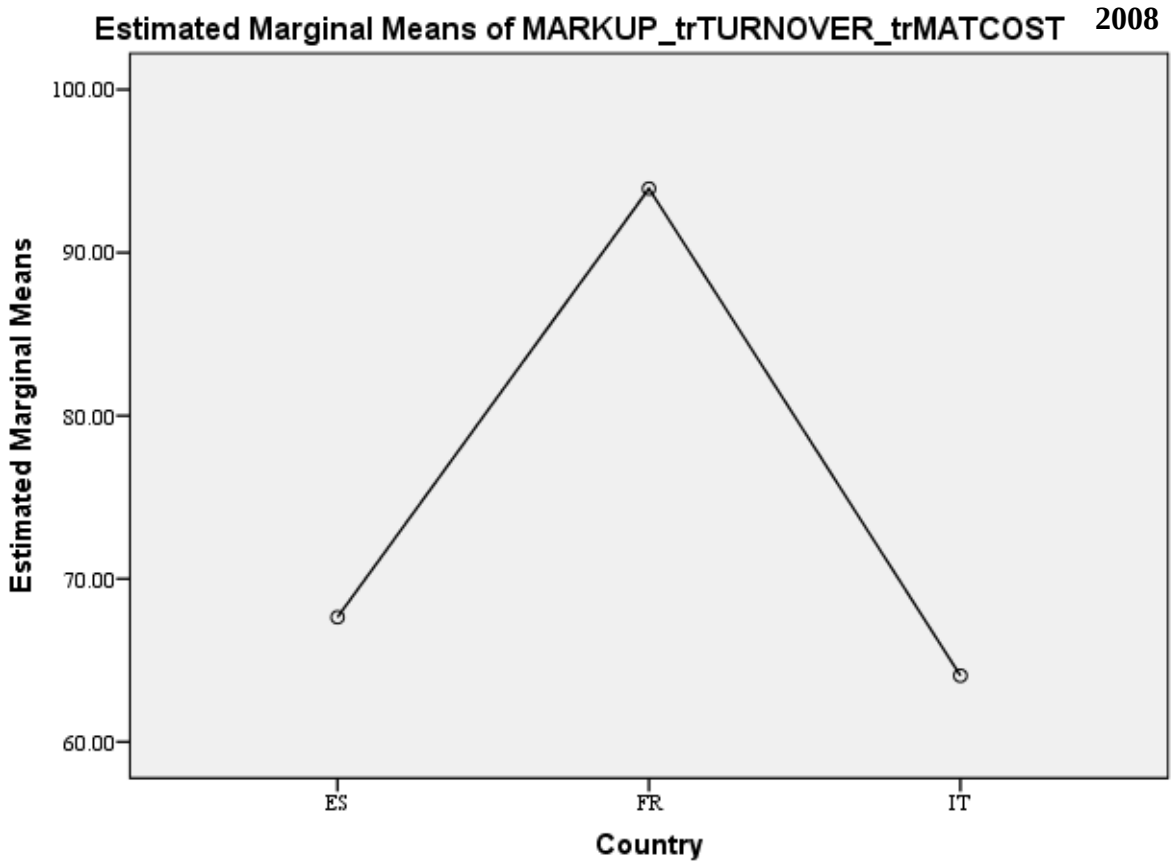


Figure 3–17. Mark-up means comparison between countries 2008 (Own calculation, ORBIS database)

According to the graph, Spain and Italy have a similar mean, although Spain (72,64%) somewhat higher than Italy (64,98%), whereas France recorded a very high score (98,56%). This result is impressive because material costs for companies in all three countries are thought to have been quite similar. In simple terms, not taking into account other costs, it

effectively says that what would have been sold for € 100,00 in France would have been sold for € 74,00 in Spain, and for € 66,00 in Italy. On the other hand, comparing the result with our previous analysis of how much tax companies were paying, this result is not surprising, considering that in 2008 France was the country that had the highest corporate tax rate, and collected the most tax. So, we can conclude that during the 2008 location was an influencing factor on the level of mark-up micro-companies applied[44].

The next null hypothesis to be rejected concerned whether the source of finance influenced the mark-up the companies applied. As it possible to see in the following graph the difference is still significant, but it is lower than the previous one.

[44] We controlled our analysis by also taking in account the GDP in the different regions across the countries. The result was that regions with equal GDP but of different nationality score differently. In other words, if in one area inside a country more GDP is associated to a higher turnover (also because a higher turnover generates a higher GDP) the comparison of only the GDP irrespective of nationality does not give an explanation of the mark-up.

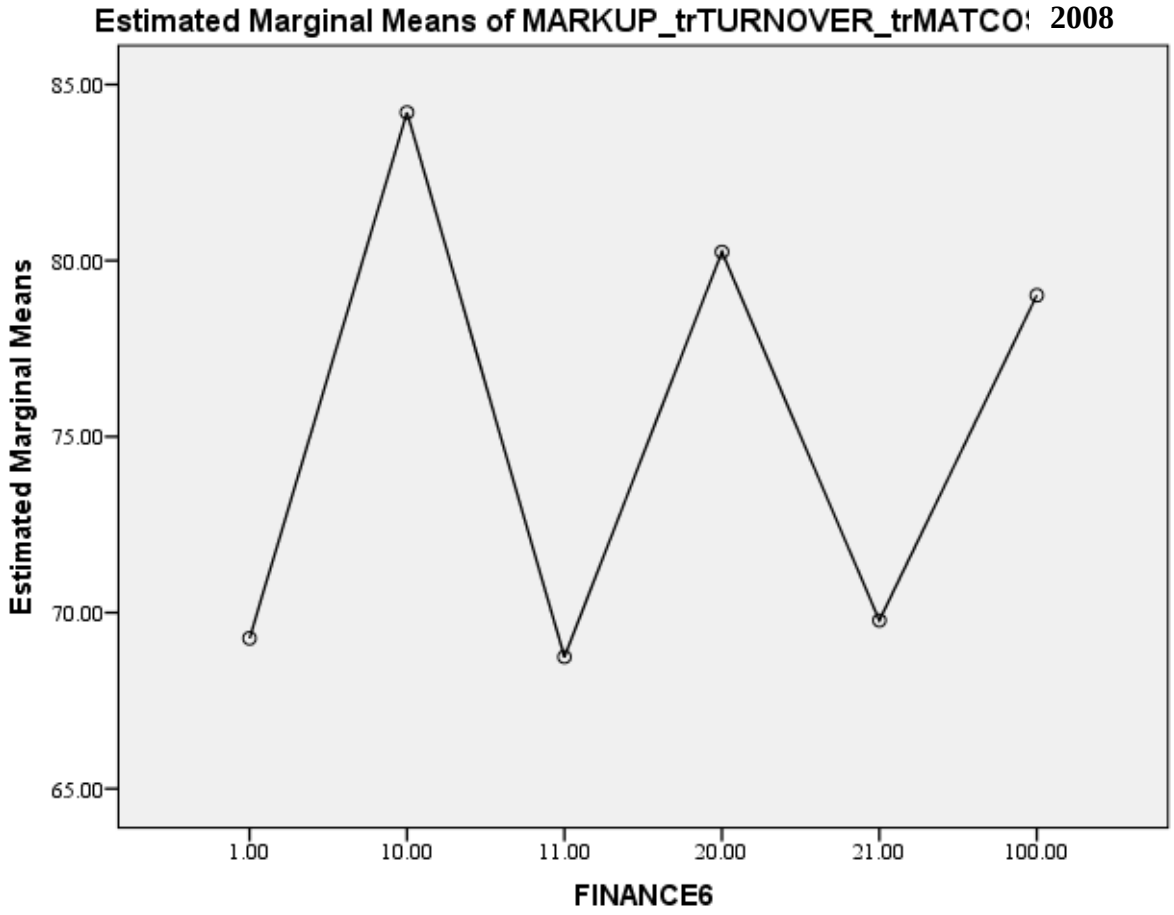


Figure 3–18. Mark-up means comparison between sources of finance 2008 (Own calculation, ORBIS database)

The next graph, in contrast, shows how different combinations of location and source of financing affect the mark-up applied by companies.

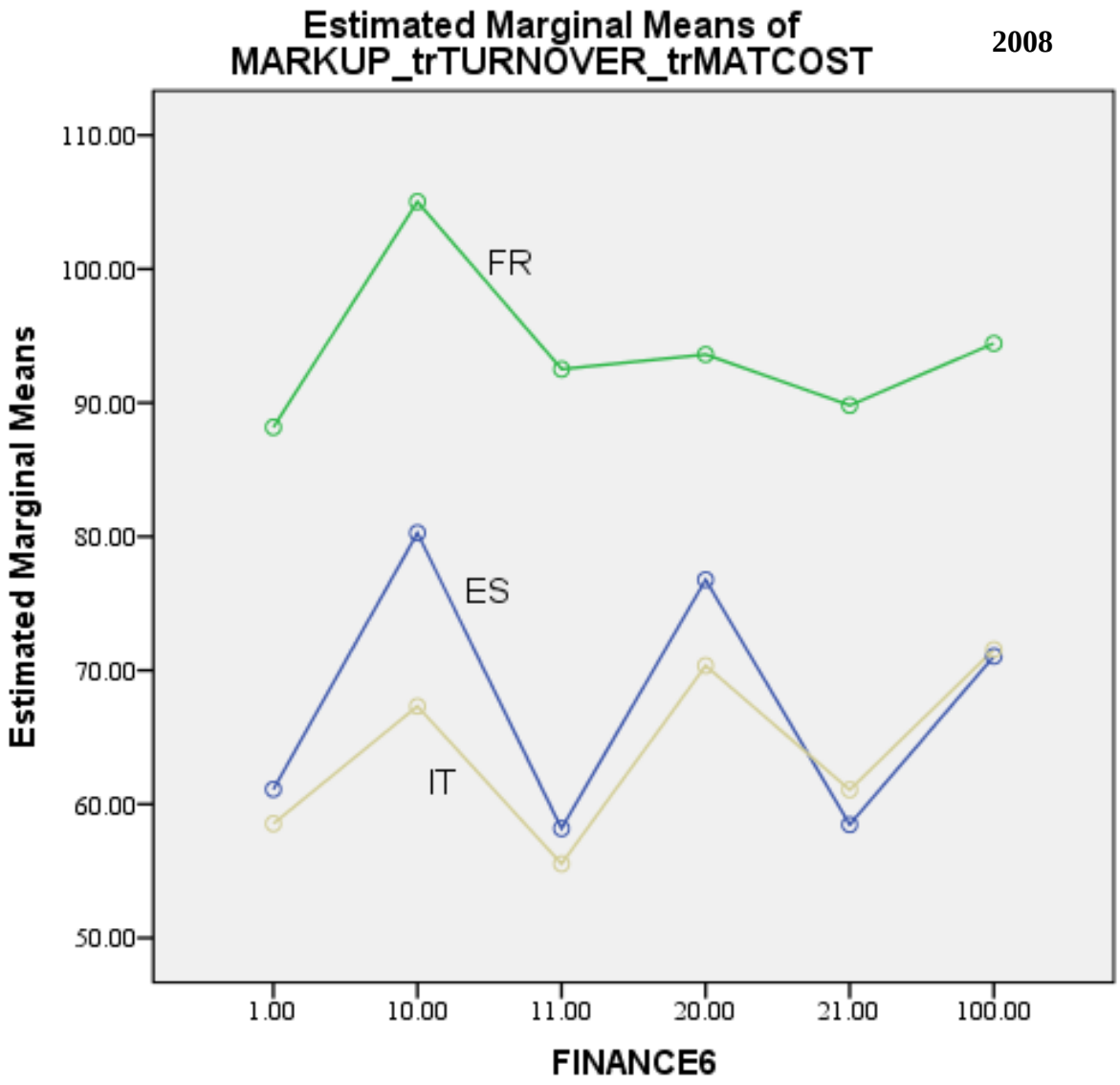


Figure 3–19. Mark-up means comparison between sources of finance divided by countries 2008 (Own calculation, ORBIS database)

As the above graph demonstrates, companies that finance their activity predominantly by commercial credit (group 1) apply a lower mark-up than companies using other sources of finance. However, Italy and Spain a low score is also registered when different combinations of commercial credit apply. For example, the group "11" (companies using commercial credit and their own resources) have a very low mark-up, as do companies in the "21" group (the use of commercial credit with external sources). On the other side, a higher mark-up

used by companies in group "10" (companies financing with their own resources). Apart from in this case, France does not have such a wide difference between the groups. Spain and Italy, though, show a larger variation between groups. Hence, we can conclude that the level of mark-up applied is influenced both by country and source of finance, so we must reject the null hypothesis of equal mean.

In the previous table we analysed the comparison of mean by different sources of finance in each country. Unlike the previous analysis, this time the countries are not included with the source of finance, but the data has been split by country. On this occasion the hypothesis is an equal mark-up according to source of finance. As the P-value is less than 5% in each country, we can conclude that source of finance could have an association with the mark-up applied. The graphic representation is the same as before, but this time, countries are listed separately.

Tests of Between-Subjects Effects						**2008**
Dependent Variable: MARKUP_trTURNOVER_trMATCOST						
Country ISO Code	**Source**	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
ES	Corrected Model	441274.771[a]	5	88254.954	16.668	.000
	Intercept	15593812.843	1	15593812.843	2945.050	.000
	FINANCE6	441274.771	5	88254.954	16.668	.000
	Error	39097715.719	7384	5294.924		
	Total	78528285.706	7390			
	Corrected Total	39538990.490	7389			
FR	Corrected Model	270167.760[b]	5	54033.552	10.220	.000
	Intercept	22083917.270	1	22083917.270	4176.972	.000
	FINANCE6	270167.760	5	54033.552	10.220	.000
	Error	36676358.502	6937	5287.063		
	Total	104385355.025	6943			
	Corrected Total	36946526.262	6942			
IT	Corrected Model	268802.927[c]	5	53760.585	12.521	.000
	Intercept	26615451.914	1	26615451.914	6198.729	.000
	FINANCE6	268802.927	5	53760.585	12.521	.000

	Error	32533329.537	7577	4293.695		
	Total	64824364.248	7583			
	Corrected Total	32802132.463	7582			
a. R Squared = .011 (Adjusted R Squared = .010)						
b. R Squared = .007 (Adjusted R Squared = .007)						
c. R Squared = .008 (Adjusted R Squared = .008)						

Table 3–22. 2008 - Test one-way ANOVA. Mark-up divided by source of finance in each country taken disjointedly.

3.3.3.3 Analysis of the mark-up for 2011

The same analysis was carried out for 2011. For this reason, we will show only the results relating to the variables and hypotheses outlined previously.

As it is possible to see in the table, we reject the null hypothesis of equal mean among countries as well as according to source of finance. Moreover, we see that there are not significant differences in means, nor in relation to the interaction of the two variables.

Tests of Between-Subjects Effects			**2011**		
Dependent Variable: MARKUP_trTURNOVER_trMATCOST					
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Corrected Model	5812117.025[a]	17	341889.237	44.631	.000
Intercept	53314866.392	1	53314866.392	6959.839	.000
CountryISOCode	1197692.881	2	598846.441	78.175	.000
FINANCE6	920207.218	5	184041.444	24.025	.000
CountryISOCode * FINANCE6	196786.550	10	19678.655	2.569	.004
Error	168949224.318	22055	7660.359		
Total	341287107.139	22073			
Corrected Total	174761341.344	22072			

Table 3–23. Test of two-way ANOVA of mark-up for 2011

As the P-value is less than 5% we reject the null hypothesis and accept the alternative ones for each of three hypotheses. Our alternative hypotheses are:

- **Ha1**: There is a difference in **mean mark-up** between the **countries**;

- **Ha2**: There is a difference in **mean mark-up** between the **source of finance**;
- **Ha3**: There is an **interaction** between the two independent variable of **countries and source of finance.**

As it is possible to see in the next graph, there is an increase the mean in each country when compared to 2008. The companies in the sample are mostly the same in each of the years compared[45]. This has both a positive and a negative aspect. The advantage is that comparisons are more reliable; the disadvantage is that we lose some information about companies that went out of business in the intervening years. This type of sample was chosen for two main reasons: the first being that a company in its last year of existence would record abnormal data that would be more suited to a case study. The second reason is that the sample better characterizes how businesses reacted in order to survive to the crisis.

[45] The turnover and the material cost are filtered for each year excluding the top and bttom 5% so a small number of different companies could be in this exclusion as we did the operation for each year separately.

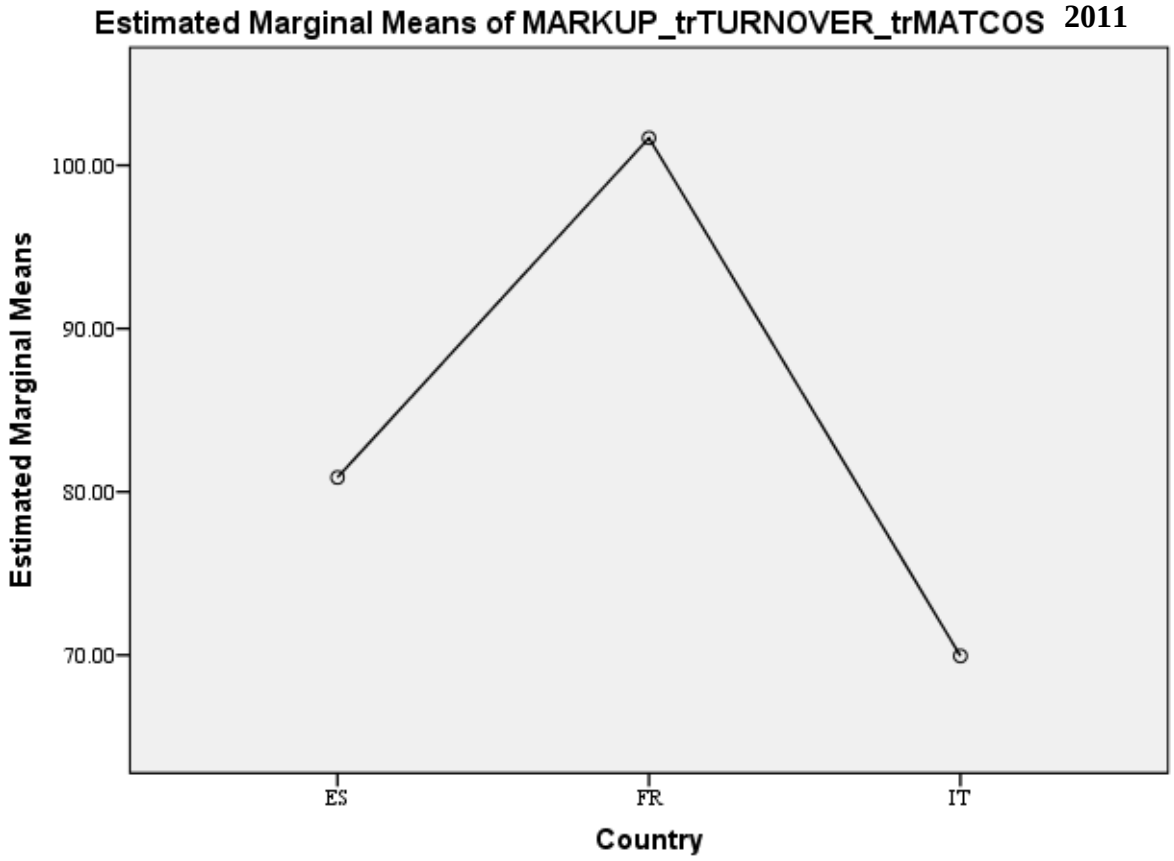


Figure 3–20. Mark-up means comparison between countries 2011 (Own calculation, ORBIS database)

The increased mark-ups across the countries could be explained by differing variations in material cost and turnover. As shown in the table below, the financial crisis lowered material costs more than turnover.

Variation		
	Material cost	**Turnover**
	2008-2011	**2008-2011**
ES	-24.19%	-21.28%
FR	0.33%	2.20%
IT	-7.12%	-5.00%

In the next graph, it can be seen how the mark-up applied varies according to source of finance. In this case, the figures are not broken down by country. We can conclude that

during 2011 different sources of finance influenced the level of mark-up companies applied. Comparing this year to 2008, we see how the range is wider and the mean is higher for each source of finance. In the corresponding graph for 2008, the minimum mark-up mean was about 70% and the highest was 85%. In the 2011, the minimum is 75% and the highest level is applied by companies mostly funded by external sources of finance (group 20), at 95%, a difference of 20 percentage points. That difference is important and it could be explained in several ways. However, for this study we are simply interested in identifying that a difference exists and that it is connected with the source of finance.

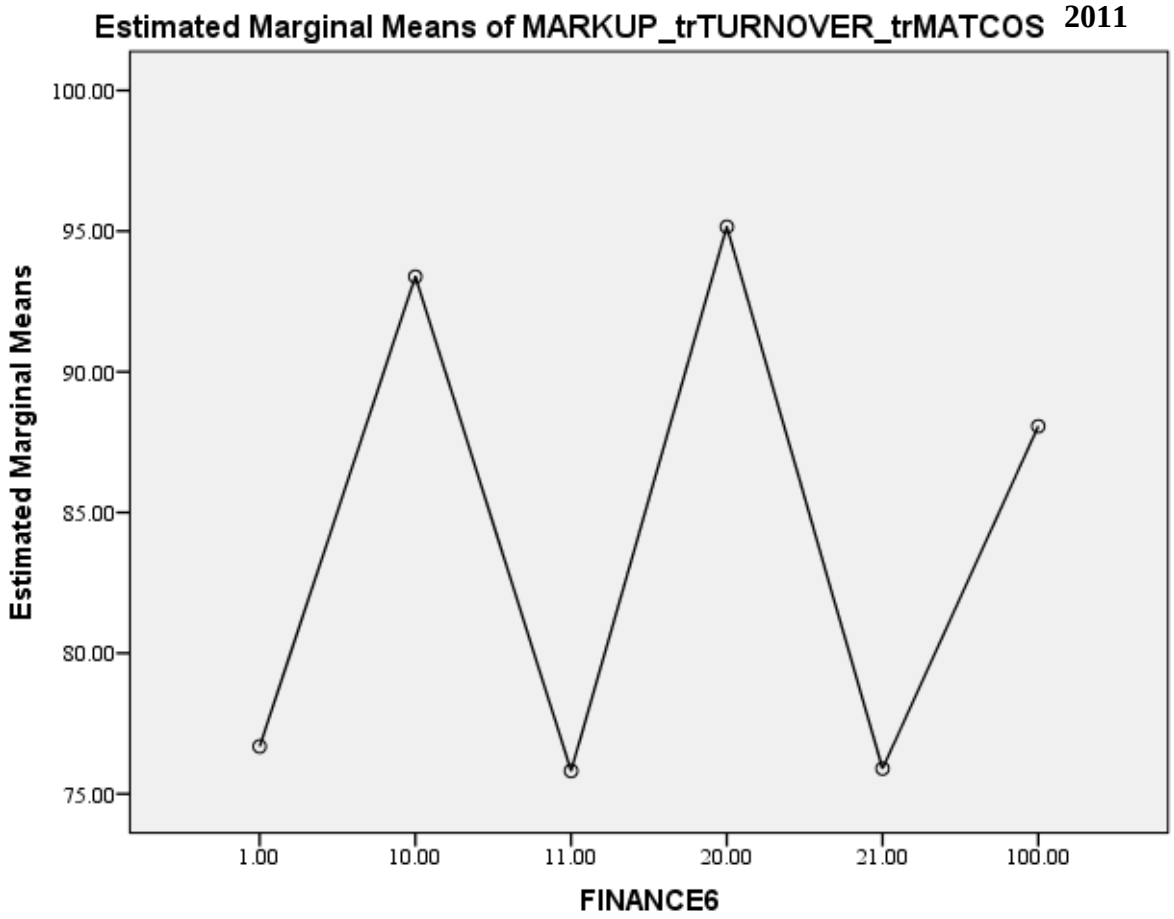


Figure 3–21. Mark-up means comparison between sources of finance 2011 (Own calculation, ORBIS database)

An in-depth view of what could be affecting the mean mark-up, can be found in the next graph, where the figures are now broken down by country. The result gives us more information about the differing performance of companies in the three countries depending on their finance model.

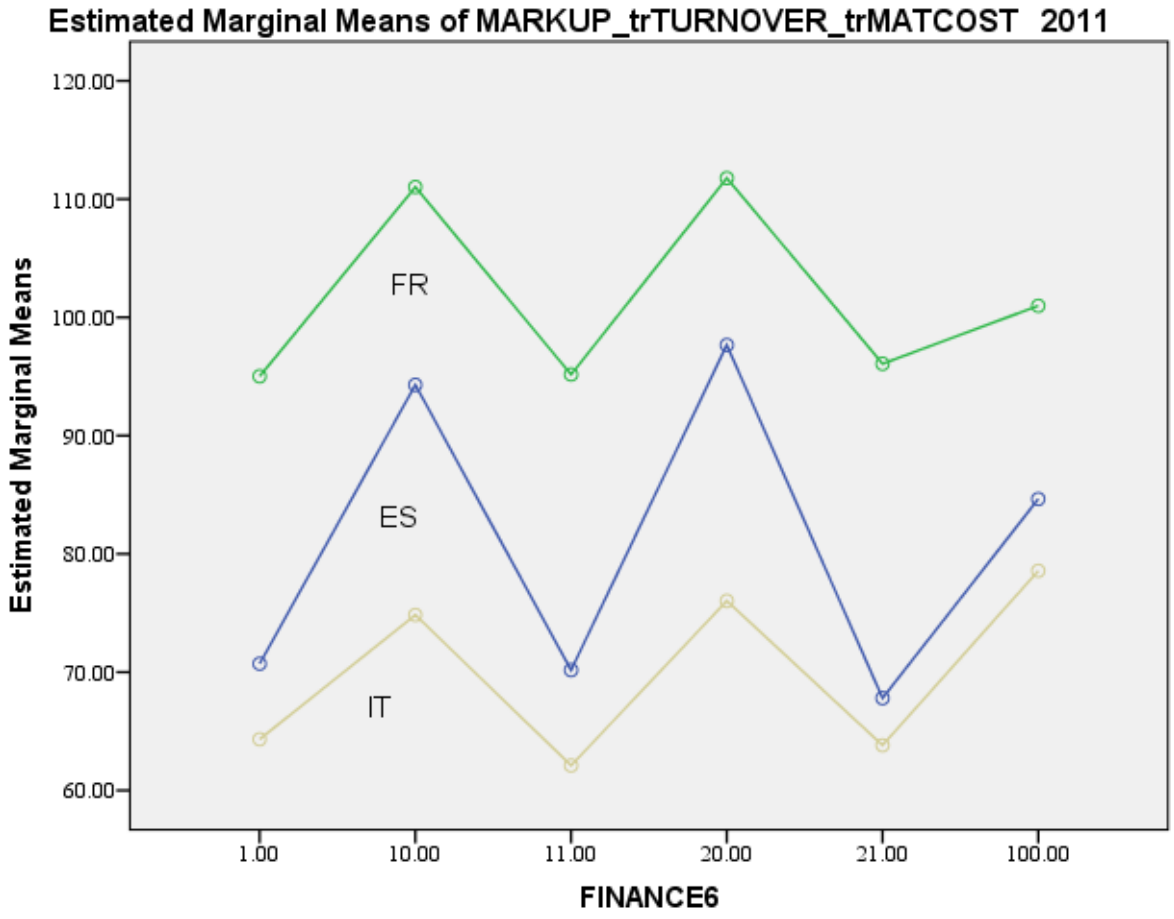


Figure 3–22. Mark-up means comparison between sources of finance divided by countries 2011 (Own calculation, ORBIS database)

Generally speaking, and similarly to previous graphs, lower scores are associated with the groups primarily financed by commercial credit (group 1) or a mixture (groups 11 and 21). Moreover, some differences can be seen when looking at each country individually. Spain, for example, is the one that has a wide variation between the different types of finance, in particular between companies mostly funded by external financial resources (group 20) and those funded by both external and commercial credit (group 21). France and Italy also follow the same trend, however with a narrower difference between groups. One of the conclusions that can be drawn from comparing this graph with the previous about paying taxes, is that companies asking for external lending (group 20) generally apply higher mark-ups, but then have a lower score in paying taxes, meaning that they need a high mark-up to pay their debts. Companies in group 1 have low scores both in paying taxes and in mark-up. Finally, the

companies with a better performance are those ones using their own resources (group 10), which is a logical assumption. As their own financial resources are composed of the capital given by the stakeholders and the profit of the previous years, this is the likely reason for their good performance. In other words, most of these companies are consistently profitable, meaning that they do not need external finance or commercial credit, as they produce enough profit to pay their stakeholders and finance their activities.

As for 2008, we calculated the comparison of mean mark-ups according to source of finance for each country. Our null hypothesis this time is that the mean mark-up is equal in each group of companies divided by source of finance. As before, the analysis is broken down by country. This graph shows the distribution of means in each country.

Tests of Between-Subjects Effects						**2011**
Dependent Variable: MARKUP_trTURNOVER_trMATCOST						
Country ISO Code	**Source**	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
ES	Corrected Model	703191.555[a]	5	140638.311	14.216	.000
	Intercept	21973376.036	1	21973376.036	2221.039	.000
	FINANCE6	703191.555	5	140638.311	14.216	.000
	Error	73883054.905	7468	9893.285		
	Total	129477771.120	7474			
	Corrected Total	74586246.460	7473			
FR	Corrected Model	274800.613[b]	5	54960.123	7.485	.000
	Intercept	13785069.164	1	13785069.164	1877.485	.000
	FINANCE6	274800.613	5	54960.123	7.485	.000
	Error	50816096.128	6921	7342.305		
	Total	128750038.116	6927			
	Corrected Total	51090896.741	6926			
IT	Corrected Model	341221.103[c]	5	68244.221	11.823	.000
	Intercept	33003916.723	1	33003916.723	5717.686	.000
	FINANCE6	341221.103	5	68244.221	11.823	.000
	Error	44250073.285	7666	5772.251		
	Total	83059297.903	7672			
	Corrected Total	44591294.389	7671			
a. R Squared = .009 (Adjusted R Squared = .009) b. R Squared = .005 (Adjusted R Squared = .005)						

c. R Squared = .008 (Adjusted R Squared = .007)

Table 3–24. 2011 - Test one-way ANOVA. Mark-up divided by source of finance in each country taken disjointedly.

3.3.3.4 Analysis of the mark-up for 2014

2014 was analysed in the same way as the previous years. As before, we studied whether the nationality of companies, their source of finance, or the interaction of both factors influenced the mark-up the companies applied. As before, the mark-up is calculated from turnover and material cost. In the table below, we can appreciate how the difference is significant when we focus only on countries or on the source of finance. However taking the two variables together the mean result in mark-up policies shows little change.

Tests of Between-Subjects Effects			**2014**		
Dependent Variable: MARKUP_trTURNOVER_trMATCOST					
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Corrected Model	6125943.198	17	360349.60	36.95	.000
Intercept	24130847.54	1	24130847.54	2474.57	.000
CountryISOCode	355296.01	2	177648.00	18.22	.000
FINANCE6	1166622.63	5	233324.53	23.93	.000
CountryISOCode * FINANCE6	172745.31	10	17274.53	1.77	.060
Error	220833173.55	22646	9751.53		
Total	411767731.24	22664			
Corrected Total	226959116.75	22663			

Table 3–25. Test of two-way ANOVA of mark-up for 2014

As the P-value is less than 5% we reject the null hypothesis and accept the alternative ones for each of three hypotheses. Our alternative hypotheses are:

- **Ha1**: There is a difference in **mean mark-up** between the **countries**;
- **Ha2**: There is a difference in **mean mark-up** between the **source of finance**;

- **Ho3**: There is **no interaction** between the two independent variable of **countries and source of finance**.

Looking at all the graphs, we can deduce that companies have to apply a different mark-up depending on where they are situated or depending how they finance their activity. That said, for 2014, when we compare both variables jointly, the result is that the mean mark-ups are not very different.

As can be seen in the graph below, the difference in mean between countries stays constant compared to 2011. However, the three countries experience a slight increase due to a

significant decrease in costs compared to turnover.

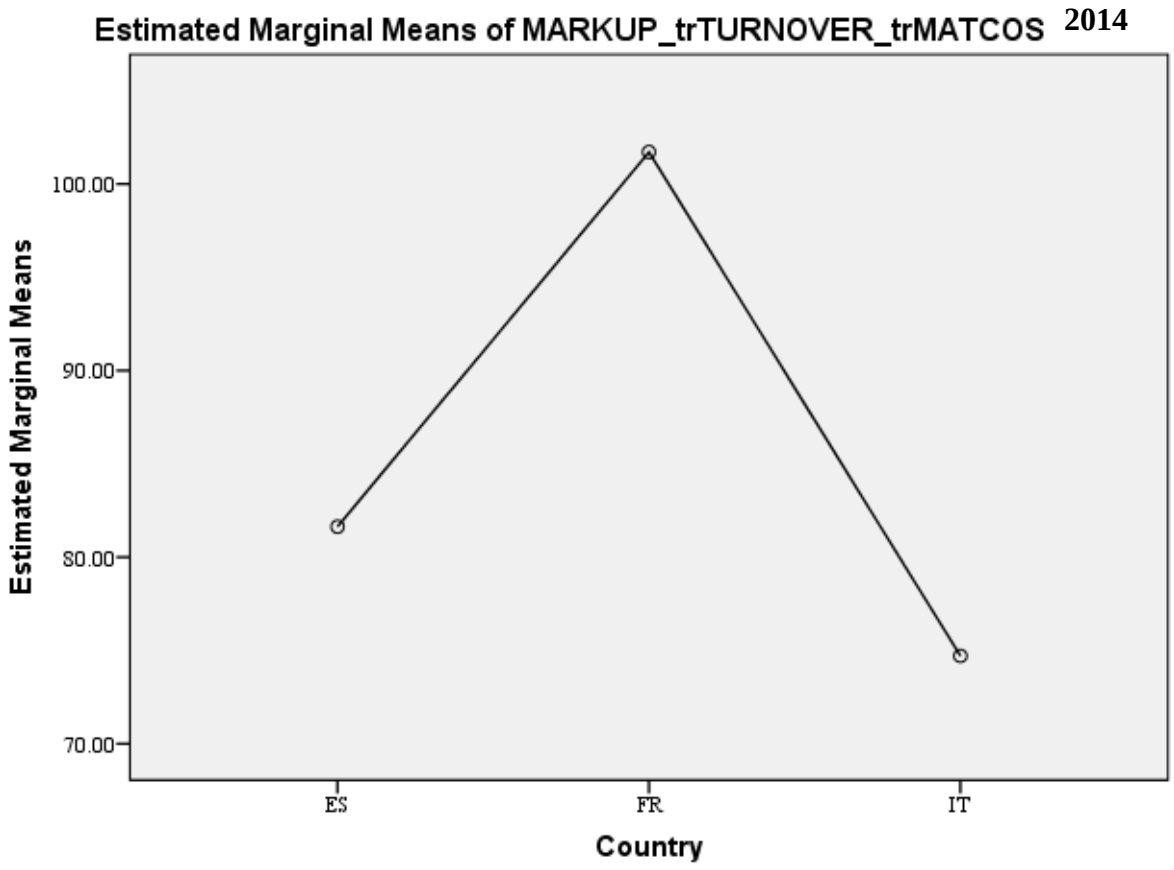


Figure 3–23. Mark-up means comparison between countries 2014 (Own calculation, ORBIS database)

Variation		
Country	**Material cost**	**Turnover**
	2011-2014	**2011-2014**
ES	-11.76%	-12.51%
FR	-2.68%	-1.94%
IT	-14.81%	-13.22%

Table 3–26. Variation of material cost and Turnover (Own calculation)

As in the previous years, the trend in mark-up across the different sources of finance shows a high degree of variation. Companies funded mainly by commercial credit (group 1) were able to apply a lower mark-up, as were companies using this method of finance combined with others. Additionally, companies using their own resources (group 10) scored better, as did companies borrowing money (group 20).

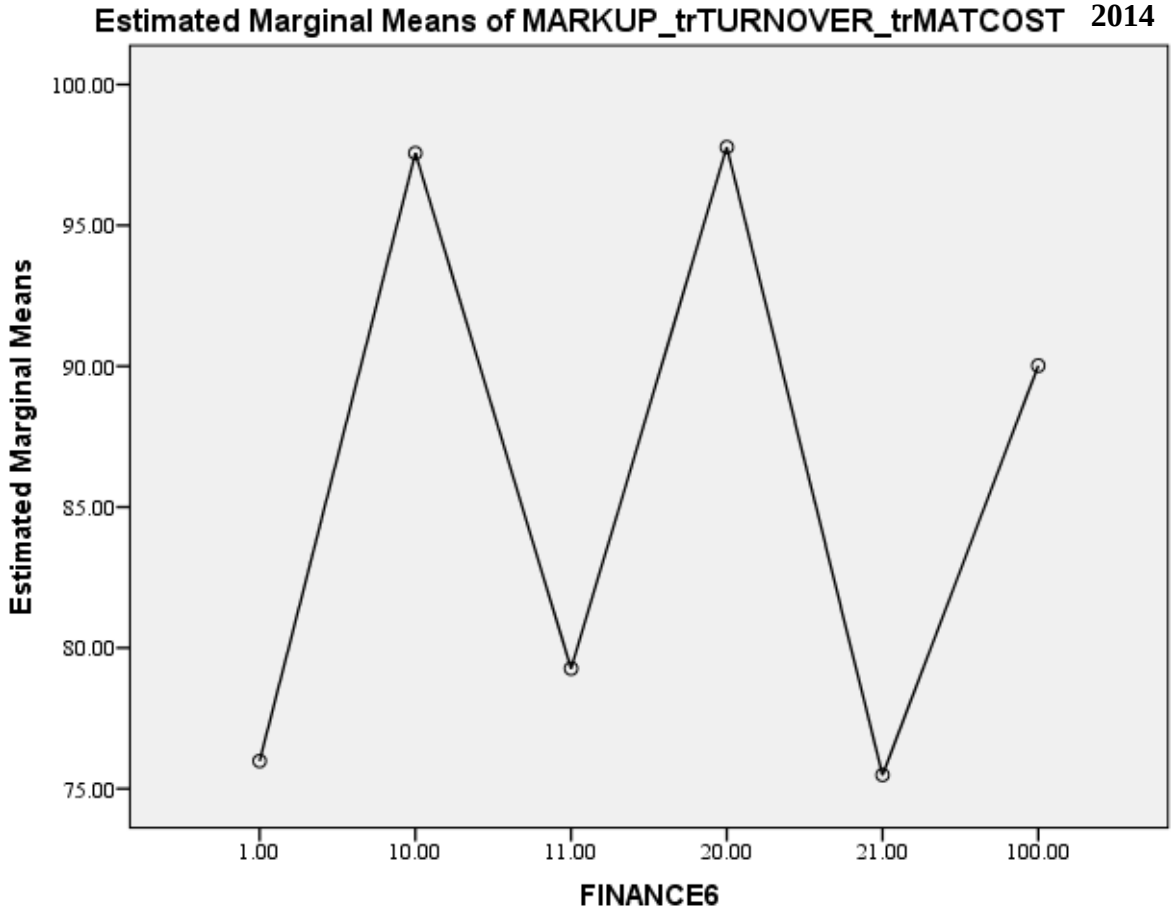
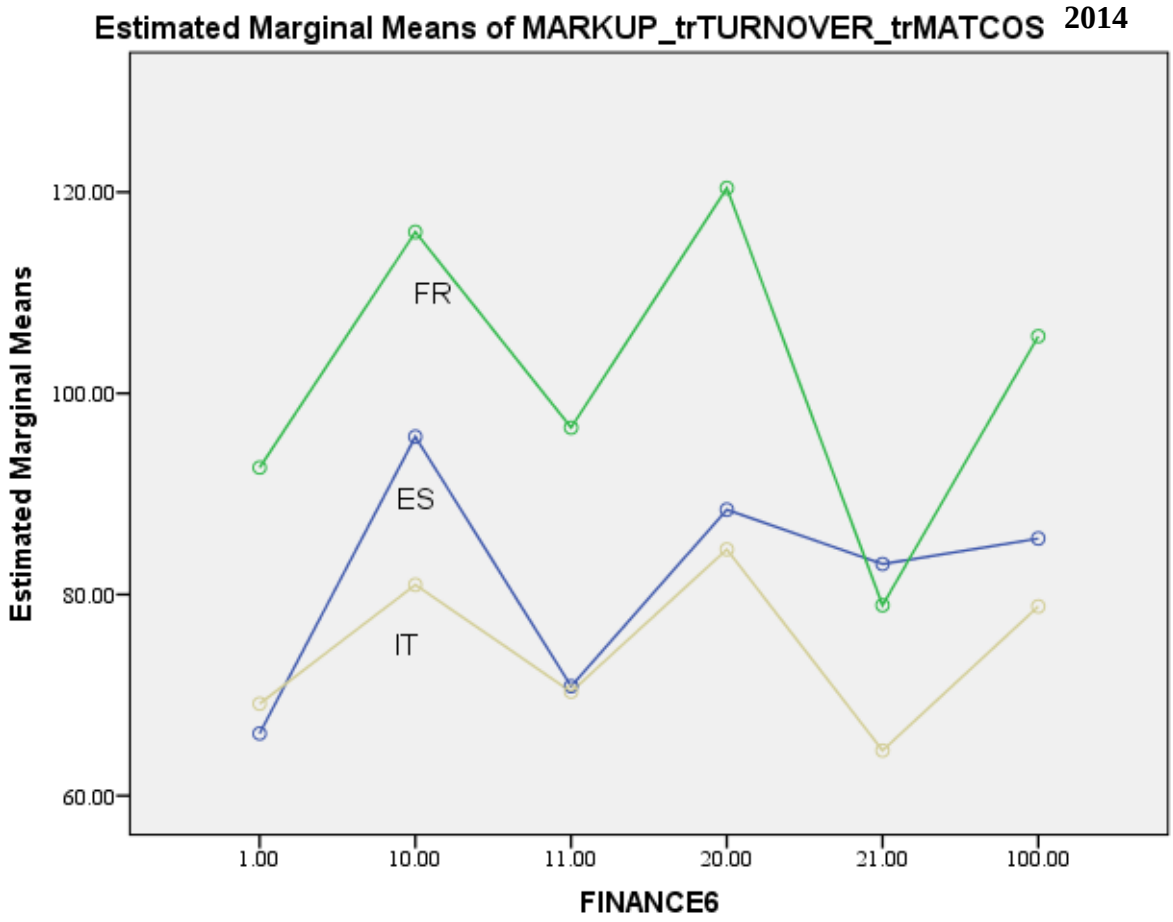


Figure 3–24. Mark-up means comparison between sources of finance 2014 (Own calculation, ORBIS database)

In this last graph, we can see some differences with respect to the previous years. As the statistical results suggest, there are no significant differences between means when taking into account location and source of finance jointly. However, it is possible to see that the significant difference of 6% is near to 5%, so it is possible to say that we should reject our null hypothesis. With a level of 10%, which can be seen in the graph, the levels of mark-up in France and Spain come closer, especially among the companies using a combination of external finance resources and commercial credit (Group 21). In this group, Spanish companies apply a higher mark-up than their French counterparts. Another improved trend in Spain during 2014 is regarding the amount of tax paid. During this year Spain registered a higher score.



For 2014 we also compared the different means of mark-up depending on different source of finance in each country. As before our null hypothesis is equal mean between groups, but due to the fact that P-value is less than 5% we reject the null hypothesis and we can say that source of finance is a relevant variable when dividing the companies by their mark-up.

Tests of Between-Subjects Effects[46]				**2014**		
Dependent Variable: MARKUP_trTURNOVER_trMATCOST						
Country ISO Code	**Source**	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
ES	Corrected Model	837179.899[a]	5	167435.980	15.347	.000
	Intercept	18704485.088	1	18704485.088	1714.392	.000
	FINANCE6	837179.899	5	167435.980	15.347	.000

[46] France is omitted due to poor sample size in the group 20 and 21 (see the descriptive table in the annex)

	Error	84358228.760	7732	10910.273		
	Total	142037621.810	7738			
	Corrected Total	85195408.659	7737			
IT	Corrected Model	305162.149[c]	5	61032.430	7.132	.000
	Intercept	34821066.020	1	34821066.020	4069.028	.000
	FINANCE6	305162.149	5	61032.430	7.132	.000
	Error	66175830.254	7733	8557.588		
	Total	111620592.389	7739			
	Corrected Total	66480992.403	7738			
	a. R Squared = .010 (Adjusted R Squared = .009) b. R Squared = .007 (Adjusted R Squared = .006) c. R Squared = .005 (Adjusted R Squared = .004)					

Table 3–27. 2014 - Test one-way ANOVA. Mark-up divided by source of finance in each country taken disjointedly.

3.3.3.5 Limitations of the study

As stated at the beginning of this chapter, the data is limited to companies conforming to the definition of "micro-enterprises" – less than 10 employees and a turnover lower than € 2.000.000,00 for each of the three selected years. On one hand, comparison across the three years is more reliable. On the other hand, we lose some information that could inform us about trends in the years after the crisis in particular, as during the crisis a lot of businesses closed. A different sample could show the different stages of companies' lifecycles. However, the financial accounts of the surviving enterprises give us an idea of the stresses they encountered during and after the crisis.

Another limitation is the number of countries we analysed. This is because we preferred to work with a small sample of countries but a large sample of businesses, rather than more countries but fewer companies from each.

With regard to the data, the analysis of the mark-up has two limitations. The first one is that when we divided the sample by country and then by source of finance, the distribution of companies in each group changed each time, and on three occasion the sample result came out to be less than 100 – France in 2011: group 21 (57 companies), and in 2014: group 20 (58) and 21 (17).

We experienced another problem with variance. A better mean comparison is the result of group of individuals with small amount of variance, so that one group does not invade the sphere of distribution of another. In other words, the perfect situation happens when the highest value in one group is lower than the lowest value in the next group. A high level of variance could mean that some individuals in two or more groups occupy the same area.
The problem of the variance, as we had already anticipated in the analysis, comes from data we opted to use: we excluded the top and bottom 5% of companies for both turnover and material cost. The mark-up resulting from those two variables could have had a distribution with some values that were either too high or too low. We preferred to do this this because we believed it would give a higher figure for mark-up. The alternative would have been excluding the top and bottom 5% or 10% of the mark-up figures to cut out the data that increased the variance. The result of this process is that the means are rounded down. This is not surprising because the nature of mark-up is that it has a lower limit of profitability and an upper limit established by the market. So, if we redo the previous analysis lowering the variance, the result is that there is no difference in the mark-up when location and source of finance are considered at the same time.
Although the data might have a problem with variance, it is limited by the fact that when variance is high the sample is large, meaning that means are not affected by one anomalous value, as a subgroup can take the high values.

3.3.3.6 Behind the limitation

As stated in the previous section, we cleaned our data – in particular the mark-up to lower the variance of the groups resulting from dividing the sample by country and then by source of finance. The result is that the groups with higher values lower the mean until it meets the others. In other words, the best companies score far more than the average ones.
So, regarding the question of whether the top 5% or top 10% companies with the highest mark-ups are associated with a particular source of finance, the answer is that companies with no commercial credit and, in particular, using their own resources, or in some cases borrowing money, are the companies that not only survived to the crisis, but also applied very high mark-ups.

3.3.3.7 Conclusion

In this section we have compared Spain, France and Italy at different times before, during and after the financial crisis. First we calculated the corporate tax rate. Thanks to that measure we have been able to see the effective fiscal policy in each year for the selected countries. We then analysed the tax paid in each country by companies. Here we saw that France was the country with a more efficient system. Finally, we saw how different sources of finance could have been related to the amount of mark-up that companies applied. In this section we saw that in France higher mark-ups were often applied. The companies that applied the lowest mark-ups were those that primarily funded by commercial credit.

3.4 REGRESSION MODEL ON TAXATION AND MARK-UP

3.4.1 Introduction

In this section we would like to investigate the causal connection between taxation, mark-up, and source of finance over the last 9 years (2006-2014) in Spain, France and Italy. In the previous analysis, differences in means due to different sources of finance and nationality of micro-enterprises were shown. Although the information was valuable because it showed different levels of means for different groups of companies, that analysis does not give explain the effect of one variable over another. Because of this, it is also necessary to see if the variable considered in the previous analysis can explain the level of tax paid by the companies and the mark-up they apply.

3.4.2 Methodology

For this analysis the data of 1.000 of micro-companies from Spain, France and Italy from 2006 to 2014 has been used. We used panel data, and built a regression analysis to understand how variables such as regional GDP (Gross Domestic Product) and the source of finance could influence the taxed paid by a company and the margin it applied.
After the test of Hausman fixed model is chosen[47].

The regression model for taxation is:

TAXATION = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014

The regression model for margin is:

MARGIN = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014

[47] More on fixed effect could be found in (Arellano, 2003), (Mátyás & Sevestre, 2008) and (Pesaran, 2015)

The dependent variables are taxation and margin, where margin results from operating revenue and material costs.

The independent variables are:

a) Regional GDP;
b) Interest paid[48];
c) Mcreditors: the mean between the balance of commercial credits and debts at the beginning and at the end of each year. Credits are the commercial credits companies have to pay and debts are the credits that the customers have to pay to the company;
d) Mnoncurrent: the mean of sum of the external source of finance at the beginning and at the end of the fiscal year.
e) Mshareholder: the mean between equity at the beginning and the end of the fiscal year;
f) D2008 D2009 D2010 D2011 D2012 D2013 D2014 are dummy variables measuring the effect of each year on taxation or margin taking 2007 as a base

The tests of the model are reported in the annex.

3.4.3 Regression model

3.4.3.1 Spain

We will start our regression analysis with Spain. The Hausman test informs us that a fixed effects model was the most appropriate one[49].

[48] The variable was introduced into the database with a positive sign, thought it represents a cost for the company.

[49] The test is reported in the annex.

Test outcome (fixed effect)

Dependent Variable: TAXATION
Method: Panel Least Squares
Date: 06/02/16 Time: 15:03
Sample: 2006 2014 IF COUNTRYISOCODE_A=1
Periods included: 8
Cross-sections included: 842
Total panel (unbalanced) observations: 4555
White cross-section standard errors & covariance (no d.f. correction)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	26629.91	12727.36	2.092337	0.0365
GDP(-1)	-1.027862	0.582330	-1.765085	0.0776
INTERESTPAID	-0.424011	0.092655	-4.576228	0.0000
MCREDITORS	-0.016140	0.004527	-3.564990	0.0004
MNONCURRENT	-0.013767	0.004866	-2.829267	0.0047
MSHAREHOLDER	0.034036	0.011851	2.872053	0.0041
D2008	1177.004	888.3957	1.324864	0.1853
D2009	-588.2063	1328.046	-0.442911	0.6579
D2010	-3344.690	906.8448	-3.688272	0.0002
D2011	-3301.046	964.6617	-3.421973	0.0006
D2012	-5193.859	867.8983	-5.984410	0.0000
D2013	-5661.204	724.6961	-7.811832	0.0000
D2014	-4576.742	453.2982	-10.09654	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.531492	Mean dependent var	1446.419
Adjusted R-squared	0.423511	S.D. dependent var	18894.22
S.E. of regression	14345.79	Akaike info criterion	22.14765
Sum squared resid	7.62E+11	Schwarz criterion	23.35206
Log likelihood	-49587.28	Hannan-Quinn criter.	22.57178
F-statistic	4.922085	Durbin-Watson stat	2.063895
Prob(F-statistic)	0.000000		

Table 3–28. Spain: Regression model of taxation (Own Calculation)

Estimation Equation:
==========
TAXATION = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014 + [CX=F,ESTSMPL="2006 2014 IF COUNTRYISOCODE_A=1"]

Firstly, we focused on R-squared, which is 53,15%, meaning that the independent variables, when considered jointly, could explain more than half of the tax amount. Moreover, the GDP of the previous year is not significant at 5%, but it is at 10%, meaning the difference in GDP when it is significant influences the taxed paid in a negative way. The variable concerning interest paid is significant in a negative way. It means that for an increase of passive financial interest there is a decrease in taxation of 0,42. An explanation could be that part of the margin is used to pay the interest on loans. Talking about the different sources of finance, we can see that each one is significant and negative, meaning that the source of finance influences the taxes paid by a company. The creditors/debtors variable is negative and significant, indicating that the balance between the debts the companies have with providers lower the payment of taxes when their amount is larger than the credit the company has with the client. The explanation for this could be that the companies are having problems with sales. Non-current liabilities indicate that long term debts are inversely correlated to taxed paid. This could be explained by the fact that a company exposed to external sources of finance would record a worse performance. Shareholder funds mainly contain two types of invoice: the first one is a stock-one and is given by capital and by the capital reserve, and the second one is a flow-one that has both the profit and loss of the current and the previous period. In the analysis we are aware that social capital should be positive and quite constant; capital reserves change over time but not always with a positive correlation with the recorded profit. Finally, the previous and current profit or loss has a direct impact on the payment of taxes. For this variable we expect a significant and positive correlation between shareholder funds

and taxation, however in a period of crisis the correlation could be inverse because companies could have recorded a profit one year and a loss the next.
Regarding the dummy variables that represent financial crisis, we chose to measure the effect of each year on taxation. It is possible to see that the 2008 and 2009 are not significant in the taxation model, but from 2010 each year has a strong negative impact.

The following table shows the regression analysis for the other dependent variable: margin. In this case we selected the margin as the result between turnover (operating revenue) and material cost.

Test outcome (fixed effect)

Dependent Variable: MARGIN
Method: Panel Least Squares
Date: 06/02/16 Time: 15:57
Sample: 2006 2014 IF COUNTRYISOCODE_A=1
Periods included: 8
Cross-sections included: 940
Total panel (unbalanced) observations: 5630
White cross-section standard errors & covariance (no d.f. correction)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	34179.17	45392.15	0.752975	0.4515
GDP(-1)	4.925628	1.985012	2.481410	0.0131
INTERESTPAID	0.714855	0.609965	1.171961	0.2413
MCREDITORS	0.027087	0.029564	0.916209	0.3596
MNONCURRENT	-0.064336	0.017256	-3.728366	0.0002
MSHAREHOLDER	0.073844	0.031879	2.316391	0.0206
D2008	314.2142	4199.875	0.074815	0.9404
D2009	-6516.272	4386.667	-1.485472	0.1375
D2010	-3542.757	2879.097	-1.230510	0.2186
D2011	-9451.083	2843.245	-3.324048	0.0009
D2012	-19111.32	2581.966	-7.401851	0.0000
D2013	-25184.08	2710.071	-9.292774	0.0000
D2014	-22324.16	3144.789	-7.098778	0.0000

Effects Specification

Cross-section fixed (dummy variables)			
R-squared	0.830234	Mean dependent var	142206.3
Adjusted R-squared	0.795722	S.D. dependent var	122062.1
S.E. of regression	55168.50	Akaike info criterion	24.82712
Sum squared resid	1.42E+13	Schwarz criterion	25.94921
Log likelihood	-68936.35	Hannan-Quinn criter.	25.21804
F-statistic	24.05641	Durbin-Watson stat	1.383603
Prob(F-statistic)	0.000000		

Table 3–29. Spain: Regression model of margin (Own Calculation)

Estimation Equation:
==========
MARGIN = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014 + [CX=F,ESTSMPL="2006 2014 IF COUNTRYISOCODE_A=1"]

The model gives good results thanks to a high R-squared figure (83,02%) and a significant F-statistic. In the analysis, it is possible to see how the GDP and shareholder funds variables produce a positive effect on margin, which as expected. Non-current liabilities are negative and also significant in this case, meaning that long-term external finance is directly associated with less margin and therefore worse performance. The dummy variable is significant from 2011 onwards, meaning that the companies applied a lower margin starting from 2011 in a significant way.

Coming back to the regression analysis, it is possible to see that the source of finance has a more relevant influence on the tax paid than on the margin applied.

To sum up, it is possible to see that the source of money directly influences the tax paid and the margin applied. However, some variables are more important to others in this respect.

3.4.3.2 France

Test outcome (fixed effect)

Dependent Variable: TAXATION
Method: Panel Least Squares
Date: 06/02/16 Time: 15:06
Sample: 2006 2014 IF COUNTRYISOCODE_A=2
Periods included: 8
Cross-sections included: 474
Total panel (unbalanced) observations: 2771
White cross-section standard errors & covariance (no d.f. correction)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3520.373	3144.499	1.119534	0.2630
GDP(-1)	0.114083	0.087379	1.305617	0.1918
INTERESTPAID	-0.034769	0.039588	-0.878275	0.3799
MCREDITORS	0.006418	0.001492	4.302900	0.0000
MNONCURRENT	-0.002853	0.001117	-2.555403	0.0107
MSHAREHOLDER	0.005589	0.001832	3.050224	0.0023
D2008	-1125.820	134.3369	-8.380568	0.0000
D2009	-1781.916	205.3864	-8.675919	0.0000
D2010	-389.5959	145.1899	-2.683354	0.0073
D2011	-571.8855	204.3825	-2.798114	0.0052
D2012	-1807.856	277.2566	-6.520514	0.0000
D2013	-2445.596	328.7390	-7.439324	0.0000
D2014	-3063.461	257.6650	-11.88932	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.751746	Mean dependent var	6673.449
Adjusted R-squared	0.699053	S.D. dependent var	14162.87
S.E. of regression	7769.558	Akaike info criterion	20.91175
Sum squared resid	1.38E+11	Schwarz criterion	21.95127
Log likelihood	-28487.23	Hannan-Quinn criter.	21.28717
F-statistic	14.26656	Durbin-Watson stat	1.534102
Prob(F-statistic)	0.000000		

Table 3–30. France: Regression model of taxation (Own Calculation)

Estimation Equation:

==========

TAXATION = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014 + [CX=F,ESTSMPL="2006 2014 IF COUNTRYISOCODE_A=2"]

In France the same model used for Spanish firms offers significant results (F-statistic=14.16993; Prob(F-statistic) =0.000000) with quite a high R-squared (75,17%). With taxation as a dependent variable, GDP is significant. On the other hand, in France the amount paid in interest does not affect the taxes. As in the case of Spain, the source of finance is also an important variable in order to check the level of taxes paid. In France the crisis had an immediate impact on taxes, even though the largest decrease was recorded in the last three years. This is the decrease discussed in the previous section of this chapter.

Below is the same analysis for Margin, done previously for Spain.

Test outcome (fixed effect)

Dependent Variable: MARGIN

Method: Panel Least Squares

Date: 06/02/16 Time: 15:17

Sample: 2006 2014 IF COUNTRYISOCODE_A=2

Periods included: 8

Cross-sections included: 474

Total panel (unbalanced) observations: 2762

White cross-section standard errors & covariance (no d.f. correction)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	318664.2	53422.73	5.964955	0.0000
GDP(-1)	-0.764294	1.452020	-0.526366	0.5987
INTERESTPAID	0.514214	0.347028	1.481765	0.1385
MCREDITORS	0.093560	0.058919	1.587955	0.1124
MNONCURRENT	0.040748	0.024827	1.641259	0.1009

MSHAREHOLDER	0.115608	0.029891	3.867661	0.0001
D2008	-1098.580	1555.398	-0.706301	0.4801
D2009	-5247.794	2363.141	-2.220686	0.0265
D2010	2016.474	1658.407	1.215910	0.2241
D2011	10801.22	2244.548	4.812200	0.0000
D2012	11041.36	2982.545	3.701993	0.0002
D2013	4760.547	3688.010	1.290817	0.1969
D2014	10017.06	2244.023	4.463887	0.0000

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.895903	Mean dependent var	335366.1
Adjusted R-squared	0.873721	S.D. dependent var	194912.1
S.E. of regression	69263.50	Akaike info criterion	25.28761
Sum squared resid	1.09E+13	Schwarz criterion	26.32994
Log likelihood	-34436.19	Hannan-Quinn criter.	25.66411
F-statistic	40.38822	Durbin-Watson stat	1.088383
Prob(F-statistic)	0.000000		

Table 3–31. France: Regression model of margin (Own Calculation)

Estimation Equation:

==========

MARGIN = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014 + [CX=F,ESTSMPL="2006 2014 IF COUNTRYISOCODE_A=2"]

It is possible to see in the table above how the model results are good (R-squared = 89,59%) and significant. Unlike the model for taxation, margin does not change according to source of finance, meaning that companies adopt different pricing policies depending on the source of finance they use. The influence of economic trend that it is possible to check with the

dummy variables shows how the first years of the crisis eroded the margin companies applied while in the later years margins increased compared to 2007.

3.4.3.3 Italy

In Italy, like in Spain, the R-squared is quite good (51,90%); the independent variables, which influence the amount of tax paid in separate ways, are the creditors/debtors, the shareholder funds and the dummy. The three variables follow the patterns we expected in the real economy, meaning that when companies have larger debts with providers than credits with clients the profit of the company suffers. In Italy the effect of the crisis was significant and affected the amount of tax paid negatively.

Test outcome (fixed effect)

Dependent Variable: TAXATION
Method: Panel Least Squares
Date: 06/02/16 Time: 15:08
Sample: 2006 2014 IF COUNTRYISOCODE_A=3
Periods included: 8
Cross-sections included: 1000
Total panel (unbalanced) observations: 7636
White cross-section standard errors & covariance (no d.f. correction)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6082.161	5725.426	1.062307	0.2881
GDP(-1)	0.083402	0.186319	0.447628	0.6544
INTERESTPAID	0.008216	0.025352	0.324072	0.7459
MCREDITORS	0.003224	0.001348	2.392490	0.0168
MNONCURRENT	-0.001270	0.001119	-1.135211	0.2563
MSHAREHOLDER	0.019972	0.007183	2.780543	0.0054
D2008	-2550.545	402.7626	-6.332626	0.0000
D2009	-3545.115	447.6828	-7.918810	0.0000
D2010	-3427.866	200.2782	-17.11552	0.0000
D2011	-3755.512	318.9443	-11.77482	0.0000
D2012	-5457.892	401.9983	-13.57690	0.0000
D2013	-4515.510	374.4538	-12.05893	0.0000

D2014	-4498.545	49.79135	-90.34792	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.519040	Mean dependent var		8509.600
Adjusted R-squared	0.445632	S.D. dependent var		14748.95
S.E. of regression	10981.46	Akaike info criterion		21.56869
Sum squared resid	7.99E+11	Schwarz criterion		22.48853
Log likelihood	-81337.26	Hannan-Quinn criter.		21.88427
F-statistic	7.070666	Durbin-Watson stat		1.697435
Prob(F-statistic)	0.000000			

Table 3–32. Italy: Regression model of taxation (Own Calculation)

Estimation Equation:

==========

TAXATION = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014 + [CX=F,ESTSMPL="2006 2014 IF COUNTRYISOCODE_A=3"]

In the margin model like for France and Spain, the R-squared is higher (83,66%) meaning that the model is quite good for the analysis. In Italy, the margin, in contrast to taxes, is sensitive to the source of finance. More passive interest, external financial sources and more creditors in need of payment required greater margins. It can be accepted that during the financial crisis, the cost of external finance rose and it required more margin, but that margin did not translate into more profit. The dummy variable shows that until 2013 the margin rose, and since then it has been falling. That could represent a more stable economic situation or a stagnation in consumption that provoked a lowering of prices.

Test outcome (fixed effect)

Dependent Variable: MARGIN

Method: Panel Least Squares

Date: 06/02/16 Time: 15:18

Sample: 2006 2014 IF COUNTRYISOCODE_A=3
Periods included: 8
Cross-sections included: 1000
Total panel (unbalanced) observations: 7604
White cross-section standard errors & covariance (no d.f. correction)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	187198.2	27658.47	6.768203	0.0000
GDP(-1)	-0.529213	1.221236	-0.433342	0.6648
INTERESTPAID	1.291587	0.339271	3.806952	0.0001
MCREDITORS	0.094610	0.019477	4.857510	0.0000
MNONCURRENT	0.032740	0.014854	2.204130	0.0275
MSHAREHOLDER	0.158187	0.022017	7.184909	0.0000
D2008	10284.98	1207.140	8.520119	0.0000
D2009	7848.867	1493.417	5.255642	0.0000
D2010	14624.74	1387.046	10.54380	0.0000
D2011	9897.698	872.9595	11.33810	0.0000
D2012	2855.797	863.1379	3.308622	0.0009
D2013	-2091.959	1020.764	-2.049405	0.0405
D2014	-9312.742	772.9474	-12.04835	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.836647	Mean dependent var	233211.0
Adjusted R-squared	0.811594	S.D. dependent var	190172.0
S.E. of regression	82545.59	Akaike info criterion	25.60345
Sum squared resid	4.49E+13	Schwarz criterion	26.52660
Log likelihood	-96332.31	Hannan-Quinn criter.	25.92023
F-statistic	33.39499	Durbin-Watson stat	1.278902
Prob(F-statistic)	0.000000		

Table 3–33. Italy: Regression model of margin (Own Calculation)

Estimation Equation:
==========
MARGIN = C(1) + C(2)*GDP(-1) + C(3)*INTERESTPAID + C(4)*MCREDITORS + C(5)*MNONCURRENT + C(6)*MSHAREHOLDER + C(7)*D2008 + C(8)*D2009 + C(9)*D2010 + C(10)*D2011 + C(11)*D2012 + C(12)*D2013 + C(13)*D2014 + [CX=F,ESTSMPL="2006 2014 IF COUNTRYISOCODE_A=3"]

3.4.4 Regression model conclusion

The regression models carried out for Spain, France and Italy allows us to draw different conclusions as to the main causes of stress on the system, based on the effect of the economy and the finance model used by companies.

- Regarding taxation, the source of finance is important, especially in Spain and France. In Spain the interest paid also affected the amount of taxed paid. The effect of the economic crisis gave reduced revenue from taxation.
- The regression model for margin showed more differences: the regional GDP affected the level of margin only in Spain, while the source of finance is a significant factor in Italy, where the economic crisis played a role throughout the selected period. In Spain there were only significant differences between internal and external sources. In contrast, the margin in France was not sensitive to the type of finance used.

3.5 CONCLUSION

This chapter has demonstrated how access to finance, and the type of finance, could have consequences for the economy that during a financial crisis translate into problems and inefficiencies that could produce a growth in the informal economy and a reduction of government revenue.

The first part of the chapter gives the justification for the study. As stated, from the start of the financial crisis, access to finance has represented a major problem for micro-enterprises. So reagarding the question of whether or not sources of finance are important, the data reported in this chapter, such as the change in lending composition, shows that the matter has been among the main worries for businesses. This means that obtaining funds, especially during a recession, if not properly monitored, could bring about a stressful financial situation that could produce unfair behaviour and generate growth in the informal economy, as defined in the first chapter.

The comparison between levels of taxation and the mark-up applied in Spain, France and Italy brought a different conclusion. For governments it is important to know the status of companies in order to identify policy improvements that may help the situation. The regression model shows the relevance of the problem in each country and how the source of finance could influence the taxes paid and the margin applied. In this respect they could have an effect on the revenue of the government and could promote the informal economy.

So for example, as shown in the chapter, if different sources of finance affect the tax paid or the margin applied, and at the same time the government is collecting less tax in the knowledge of this scenario, different actions could be taken. In this situation the quick application of the correct policy could make the difference. So the analysis of this chapter gives a part of the answer to the question of where a country is and how much margin the government has in its fiscal policy.

During a recession, companies encounter a multitude of problems and, as in the case of access to finance, they can incur greater costs. These costs represent an inefficiency of the

economic system that could have different consequences: companies might go out of business, or record losses waiting for the situation to improve. In either case, the risk of growth in the informal economy increases.

In summary, a reduction in revenue from taxation during a financial crisis could be generated in part by inefficiencies in the economic system. The solution to this problem could lie in the elimination of these inefficiencies. In our case, this could take the form of easier access to finance for businesses, rather than an increase in taxes.

CONCLUSION

The issue of the thesis was to investigate the relation between the informal economy and the development of a country. The focus is on how the informal economy affects the revenue of a country and this is partially quantified. It is observed how international standards could improve transparency in transfer pricing operations. Finally, it is demonstrated how the source of finance could affect the taxed paid or the margin applied. Below is a summary of the findings.

1. Definition of Informal economy: what should be formal according to the law of a state, but it is not. The analysis is limited to activities that affect public revenue and expenditure and, at the same time, cause a distortion in the market.

2. With respect to tax burden, a positive correlation between Corruption Perception Index (CPI) rank 2013 (Transparency International, 2013) and Paying Taxes rank 2013 (World Bank, 2013) among 158 jurisdictions, was detected.

3. Focus only on European countries and some others a negative correlation between informal economy 2012 (Schneider, 2012) and Corporate tax rate 2013 (KPMG, 2014) was established. It means that high corporate tax rate is often synonymous of good governance.

4. With respect to VAT gap it is possible to estimate its evolution over the last decade among European countries. The size of the VAT gap weight for the economy is bigger in Italy and Greece, and in eastern Europe countries. The weight of the crisis on VAT gap was calculated; in this regard it was found that the economies which were most impacted were Latvia, Romania, Slovakia, Ireland, France and Spain. Finally, an estimation of the VAT GAT for 2013 using a top-down approach is given. Here the countries recorded small variations, in particular Greece, Italy, Poland, Spain, Germany were some of the economies with a small increment of VAT gap.

5. VAT gap could be a partial explanation for tax evasion, assuming that unreported VAT means, at the same time, unreported sales. On this basis, tax evasion was estimated. In order to have better comparisons among countries, the average corporate and household tax rate was applied.

6. With respect to Country By Country Reporting (CBCR), the different versions proposed by OECD, USA, EU, EITI, Canada were compared, and recommendations given to better implement CBCR:

7. Coordination at international level should be achieved. The European Union, United States and Canada will implement CBCR in a different way. Some countries from the African and South American continents have been following the EITI standards. The OECD has published a proposal of CBCR. It could be useful to find a common

path at international level to implement the same prevision of CBCR and put pressure in this regard on other countries such as Russia, China or India. The requirement of CBCR should be introduced into future agreements;

8. With the introduction of CBCR a minimum level of transparency and accountability should be set and achieved for governments and public institutions at national and at local level;

9. Companies should be divided into different groups according to size, juridical form and activities (large, medium and small multinational companies, domestic companies and autonomous, …). Each group should provide with some information about the activity and the companies involved in the production chain of a product or of a service. In other words, it could be useful to set a specific CBCR for each group.

10. Companies should submit all information once, and in a single software designed for all the companies belonging to the same group and for all the countries where they operate. This software would reduce bureaucracy and provide the data in a workable format.

11. Opinions from different stakeholders such as companies, labour unions, shareholders, and civil society, should be taken into account. It is important to specify which information should be given, and which should be published;

12. CBCR gives information which could be used not only for taxation, but for many other purposes such as: governance of the multinational company, corruption, labour

rights, environmental impact, money laundering and terrorist financing, fair trade, taxation and public institutions.

-

13. Most of this information is already required in the proposal of CBCR draft by the OECD and by the European Commission. It is recommended that all that information should be provided once and via the same software for all the countries and contain information about the subject, accounting, tax, bank accounts, environment, employment, money laundering and terrorist financing, tangible assets, intangibles assets, production chain, transparency/corruption, information about public institutions (similar to "Doing Business" by the World Bank).

14. A depth analysis of the various proposals of CBCR is given and the limitations of the OECD proposal are summarized below: Although the proposal of the OECD covers all the sectors, it applies only for multinational companies having more than € 750m in revenues. This could generate unfair competition among large multinational companies. The solution may be to use different versions of CBCR for different types of companies, and requiring specific information from each of them;

15. The OECD proposal has another limitation the ultimate parent company of a group should submit the CBCR of all the companies of the group on request to the national tax administration where it has the fiscal residence. So, if a tax administration of another country has the CBCR of that multinational company, it should enquire of the tax administration of that country. However, in cases where: a) countries have not adopted the CBCR given by the OECD, or b) when countries do not have an agreement for the automatic exchange of information, or c) when that agreement does not work, the multinational company should provide the CBCR to each tax administration. In summary, if a tax administration wants to control a multinational group, in which the parent company has fiscal residence abroad, then they should contact the tax administration of that country. So, for example, if the government is likely to adopt the version of the CBCR produced by the OECD, it could be better

not to have any agreement of automatic exchange regarding CBCR with other jurisdictions, therefore the multinational companies should directly provide all the information required.

16. With respect to access to finance during the financial crisis, it may be seen how it changed over time during the financial crisis. There was a negative change observed especially in Ireland, Spain, Greece and Italy. In this regard the impact that the crisis had on new companies was investigated. It was found that active population decreased from 2008 in Portugal, United Kingdom, Spain and Italy especially in enterprises with less than 10 employees. Other data was used to demonstrate this was the percentage of enterprises newly established in 2008/2010 having survived to 2013. It was shown that the average of newly established companies in 2010 throughout European countries which had survived was 60%, whilst the percentage dropped to 49% for those established in 2008. Microenterprises were more resilient, scoring on average 65% for the first two years and 53% from 2008.

17. The change from 2007 and 2010 in financial composition in Germany, Spain, France, Italy and United Kingdom was analysed. With respect to equity it was proved that after the crisis banks reduced financing equity in Spain, France and United Kingdom, where it was widely used before. Existing shareholders continued to financing in all country except in Spain where the requests refused shrank by 15%. With regard to loans the requests refused by the bank rose in each country especially in United Kingdom and Spain. Owners in all the countries were still the ones financing also after the crisis, however in Italy the requests for loans by the employees of the business fall abruptly.

18. To complete the view on the economic context on finance access a comparison between the Spanish and Italian legislation in shark loans, demonstrates different

approach to the problem. Spain adopts a more liberal solution like United Kingdom, Italy try to regulate the area but, experiments difficulties in the implementation.

19. In an analysis of more than 8,000 micro-companies in Spain, France and Italy in the retail sector for three selected years: 2008, 2011, 2014 it is possible to see that the effective corporate tax rate was on average during that period, 24,41% for Spain, 16,47% for France and 55,69% for Italy.

20. The tax paid for every € 1,000 of sales were on average for this period: € 6,22 for Spain, € 9,26 for France and € 12,95 for Italy. By statistical weighting with the GDP, Spain shows an improved value in taxed paid in the most recent year (2014), whereas France and Italy show the reverse during this time;

21. A comparison of means of mark-up between the operating revenue and the material cost was done: among countries the means were always different, on average the mark-up was 81,35% for Spain, 100,37% for France and 70,72% for Italy; and, also, different source of finance recorded differences among countries and in each country.

22. Two regression models were built to better explain the effect of taxes paid and in the margin applied, by micro-companies from 2007 to 2014, separately in Spain, France and Italy, with respect to: the financial crisis, the sources of finance.

23. The regression models for taxes paid, in Spain, France and Italy, were well explicated and the variables weighted in different ways among the countries as well as with respect to the economic trend.

24. The regression models for margin were even more accurate, and also in this case it was possible to see how the different source of finance and the economic trend, influenced the margin applied.

Informal economy and tax evasion are the result of government policies and a litmus test of development of a country. As it showed in the thesis, more should be done especially at international level where more transparency is required. On the other hand, informal economy and tax evasion could be the consequence of other problems like the availability of finance for micro-companies.

CONCLUSIONES

Este trabajo de tesis investiga la relación entre la economía informal y el desarrollo de un país, centrándose en como la economía informal afecta a los ingresos públicos de un país. En primer lugar, se define el concepto de economía informal y se ofrece evidencia relativa a la relación existente entre la percepción de la corrupción y el pago de impuesto. Además, también se estima el alcance de la evasión fiscal para los países de la Unión Europea. En segundo lugar, como un aspecto de la economía informal, se analiza la transparencia en la normativa tributaria internacional a partir del estudio de cómo los nuevos estándares internacionales para la documentación relacionada con los precios de transferencia podrían mejorar la transparencia en la tributación de las compañías multinacionales. Por último, se analiza si las fuentes de financiación afectan al pago de impuestos y al margen aplicado por parte de las microempresas y como esto podría generar ineficiencias, que a su vez favorecerían la economía informal.

A continuación, se exponen las principales conclusiones:

1. Se define la economía informal como la parte de la economía que debería ser formal de acuerdo con la legislación de un país, pero no lo es. El análisis se limita a las actividades que afectan a los ingresos y a los gastos públicos y que, al mismo tiempo, provocan una distorsión en el mercado.

2. Con respecto a la carga fiscal, se ha hallado una relación positiva entre el Índice de Percepción de la Corrupción (IPC) (Transparency International, 2013) y el Índice de pago de los impuestos (World Bank, 2013). A mayor percepción de corrupción corresponde una mayor dificultad administrativa para el pago de los impuestos.

3. Se observa, también, que existe una relación negativa entre la economía informal (Schneider, 2012) y el tipo impositivo para las empresas (KPMG, 2014). Esto implicaría que un tipo de Impuestos de Sociedades alto es sinónimo de buen gobierno.

4. Con respecto a la diferencia entre los ingresos estimados y los ingresos efectivamente recaudados en el IVA, llamada también como déficit recaudatorio del IVA o brecha del IVA (*VAT gap*), se estudia su evolución en la última década en los países europeos. La brecha del IVA resulta ser más alta, con respecto al PIB, en Italia, en Grecia, y en los países del este de Europa. Se ha calculado también el peso de la crisis sobre la brecha del IVA; en este sentido se encuentra que las economías más afectadas son Letonia, Rumania, Eslovaquia, Irlanda, Francia y España. Por último, se proporciona una estimación del déficit recaudatorio del IVA para el ejercicio 2013, donde los países registran pequeñas variaciones.

5. La brecha del IVA podría ser en parte una explicación de la evasión de impuestos. Considerando que una parte de este déficit se refiere a IVA no declarado y que, a su vez, éste es una expresión de ventas no declaradas, se aplica sobre estas últimas una tasa de impuesto medio. El resultado es la estimación de la evasión de impuestos en los países de la Unión Europea, donde se encuentra que Grecia, Eslovaquia e Italia son los países con una tasa de evasión más alta sobre el total de impuestos.

6. Con respecto a la transparencia internacional, se comparan las diferentes propuestas de lo que se conoce como "Información país por país" (*Country By Country Reporting*, CBCR). Las propuestas han sido realizadas por la OCDE, EE.UU., la Comisión Europea, el Extractive Industries Transparency Initiative (EITI) y Canadá.

7. En la Información país por país se percibe cómo la cooperación en materia tributaria a nivel internacional será un aspecto estratégico. La Comisión Europea, EE.UU. y Canadá están trabajando actualmente en diferentes versiones y propuestas sobre el tema. Por su parte, algunos países de África y de América del Sur ya han implementado las normas del EITI. Para tener una base común a nivel internacional sobre este asunto, todos estos agentes están revisando sus propuestas a la luz de la versión de la OCDE. Se sugiere que la "Información País Por País" debería ser introducida como requisito en los acuerdos comerciales.

8. La introducción de la Información país por país por parte de las empresas multinacionales facilitaría que los gobiernos y las instituciones públicas cumplan unos determinados estándares de transparencia y rendición de cuentas.

9. Sería necesario establecer un modelo especifico de Información país por país por tipo de empresas en función de su tamaño, forma jurídica, etc. Cada modelo debería proporcionar información acerca de la actividad, así como sobre las empresas que participan en la cadena de producción.

10. Se propone la utilización de un software común para reducir los costes administrativos y la burocracia y proporcionar los datos en un formato viable y disponible para las administraciones tributarias en una base de datos.

11. Se sugiere considerar las aportaciones de las diferentes partes interesadas, incluyendo así las opiniones de sindicatos, accionistas, instituciones y de la sociedad civil. Sería importante especificar, además del tipo de información, su grado de publicidad.

12. La Información país por país podría ser utilizada no sólo para los controles sobre los precios de transferencia, sino para la investigación con otros propósitos, tales como: los controles de corrupción, el respeto de los derechos laborales, el control del impacto ambiental, la prevención del blanqueo de capitales y la financiación del terrorismo, la sostenibilidad del comercio, y el grado de transparencia de las instituciones públicas.

13. La Información país por país, tendría que proporcionar datos sobre: contabilidad, impuestos, cuentas bancarias, impacto ambiental, beneficiario último, empleo, prevención de blanqueo de capitales y financiación del terrorismo, activos materiales, activos intangibles, cadena de producción, etc.. Parte de esta información ya es requerida en las propuestas recientemente elaboradas en la esfera internacional, especialmente en las propuestas de la OCDE y de la Comisión Europea.

14. Se analizan algunos de los aspectos críticos de la Información país por país propuesta por la OCDE, ya que podría ser utilizada a nivel internacional. A pesar de que cubre todos los sectores, se aplicaría sólo a empresas multinacionales con un volumen de facturación superior a 750 millones de euros, lo que podría generar una competencia desleal. La solución podría ser utilizar diferentes versiones de Información país por país según el tipo de empresas, como se ha argumentado anteriormente.

15. Otra limitación de la propuesta de la OCDE es que la sociedad matriz de un grupo deberá presentar el informe de todas las empresas del grupo, a petición de la administración tributaria del país donde tiene la residencia fiscal. Por lo tanto, si una administración tributaria quisiese controlar un grupo multinacional en el que la matriz tenga la residencia fiscal en el extranjero, debería ponerse en contacto con la administración tributaria de ese país y, tras una petición formal, esperar el envío del informe. Sin embargo, en determinados casos (si el país no ha adoptado este modelo de informe, si no tiene el acuerdo para el intercambio automático de información, o dicho acuerdo no funciona) la multinacional tendría que proporcionar directamente el informe. Esto, junto a una utilización de una base de datos común como se ha propuesto anteriormente, supondría un ahorro de tiempo y de recursos.

16. Se investiga la medida en que la crisis financiera afecta al acceso al crédito por parte de las empresas en los países europeos, registrándose un cambio negativo sobre todo en Irlanda, España, Grecia e Italia. Desde 2008 disminuye el número de empresas activas en Portugal, Reino Unido, España e Italia, sobre todo las de menos de 10 empleados. Se observa que en 2013 se mantenían activas el 60% de las empresas constituidas en 2010 y el 49% de las constituidas en 2008. Las microempresas resultan ser más resistentes: en 2013 sobrevivían el 65% de empresas creadas en 2010 y el 53% de las de 2008.

17. Se analizan también los cambios en la composición financiera en Alemania, España, Francia, Italia y Reino Unido entre 2007 y 2010. Después de la crisis, la financiación de capital por parte de los bancos se reduce en España, Francia y Reino Unido, donde antes era ampliamente utilizada. Por otro lado, los accionistas continúan aportando

financiación en todos los países excepto en España, que registra una reducción en torno a un 15%. Respecto a los préstamos financieros, las solicitudes rechazadas por los bancos suben, especialmente en el Reino Unido y España, mientras que los dueños de las empresas siguen concediendo préstamos.

18. Para completar el contexto económico en el acceso al crédito, se describen los principales intermediarios financieros con especial atención a la "banca en la sombra" (*shadow banking*). Además, se proporciona una comparación entre la legislación española e italiana en materia de préstamos con una alta tasa de interés (*shark loan*). España adopta una legislación más liberal, en línea con el Reino Unido, no poniendo ningún límite y dejando al juez decidir si la tasa de interés es demasiado alta. Italia, por su parte, regula el sector, poniendo, entre otras restricciones: una tasa tope y fondos públicos por personas que han sido estafadas por prestamistas; sin embargo, la normativa italiana encuentra dificultades en su aplicación.

19. Se realiza un análisis de más de 8.000 microempresas en España, Francia e Italia en el sector minorista en tres años: 2008, 2011, 2014. Se observa que la tasa efectiva del Impuesto sobre Sociedades es, en promedio durante ese período, del 24,41% para España, 16,47% para Francia y 55,69% para Italia.

20. Además, se calcula que la media de impuestos pagados por cada 1.000 euros de ventas para este período es: 6,22 euros para España, 9,26 euros para Francia y 12,95 euros para Italia. Ponderando tal resultado con el PIB, España muestra un mayor promedio de impuestos pagados en 2014 respecto a los años precedentes, mientras que Francia e Italia registran una tendencia inversa durante el mismo periodo.

21. La comparación de medias de los recargos entre el precio de venta y el coste de adquisición muestra una diferencia importante entre países, que resulta ser de 81,35% para España, 100,37% para Francia y 70,72% para Italia. Tal diferencia se aprecia también desagregando las empresas según la fuente de financiación que utilizan.

22. Se elaboran dos modelos de regresión para evaluar el efecto de la crisis financiera y de las fuentes de financiación sobre los impuestos pagados y en el margen entre ventas y coste de adquisición aplicado por las microempresas durante el periodo 2007-2014, en España, Francia e Italia.

23. En el modelo de regresión para los impuestos pagados las variables pesan de manera diferente en los países. En España, la crisis afecta a los impuestos de manera significativa a partir de 2010, en cambio en Francia y en Italia la contracción se registra ya desde el 2008. En España y Francia las diferentes fuentes de financiación influyen significativamente sobre el impuesto pagado.

24. En el modelo de regresión para el margen las fuentes de financiación y la tendencia económica explican bien la variable dependiente. En España, se puede ver cómo la financiación con medios propios afecta positivamente al margen aplicado por las empresas, mientras que la financiación externa a largo plazo disminuye el mismo. También en este modelo, como en el de los impuestos pagados, los primeros años no tienen un efecto significativo sobre el margen. En Francia, a diferencia de España, las diferentes fuentes de financiación no afectan al margen adoptado, a excepción de los medios propios que tienen un efecto positivo. En Italia, las diferentes fuentes de financiación tienen una influencia positiva sobre el margen, así como la misma tendencia económica.

Como se muestra en la tesis, los países con mejores instituciones tienen sistemas fiscales más eficientes. Los gobiernos y la comunidad internacional han propuesto estándares para favorecer la cooperación a nivel internacional en materia de transparencia, los cuales tienen un alto potencial, pero deben ser consensuados e implementados de la manera más eficiente para crear no sólo un sistema fiscal más equitativo, sino una economía sostenible. Finalmente, se ha visto cómo existen situaciones en las que la economía informal y la evasión de impuestos pueden relacionarse con otros problemas como la disponibilidad de financiación para las microempresas cuyo conocimiento puede permitir abordarlos. En estos casos, un aumento de recaudación podría derivar de la solución de estos problemas más que por una subida de impuestos.

Finalmente, se defiende que la economía informal y la evasión de impuestos son, en gran parte, un resultado de las políticas fiscales más que una elección particular, al tiempo que reflejan el nivel de desarrollo de un país.

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ANNEX

1. VAT gap and Tax evasion estimation

1.1. 2012 VAT gap

Countries	2012 VAT gap	2012 VAT gap without economic influence	Difference
Austria	12%	13,41%	-1,41%
Belgium	10%	6,98%	3,02%
Bulgaria	20%	15,86%	4,14%
Czech Republic	22%	15,47%	6,53%
Denmark	8%	7,79%	0,21%
Estonia	14%	12,62%	1,38%
Finland	5%	4,29%	0,71%
France	15%	8,79%	6,21%
Germany	10%	11,36%	-1,36%
Greece	33%	29%	3,52%
Hungary	25%	22,59%	2,41%
Ireland	11%	4,63%	6,37%
Italy	33%	30,72%	2,28%
Latvia	34%	11,67%	22,33%
Lithuania	36%	30,72%	5,28%
Luxembourg	6%	4,40%	1,60%
Netherlands	5%	3,02%	1,98%
Poland	25%	23,62%	1,38%
Portugal	8%	6%	1,76%
Romania	44%	34,36%	9,64%
Slovakia	39%	27,20%	11,80%
Slovenia	9%	8%	0,56%
Spain	18%	13%	4,68%
Sweden	7%	10,34%	-3,34%
United Kingdom	10%	8,29%	1,71%

Own estimation. Percent of VAT gap on VTTL without economic influence

Countries	2012 VAT gap	2012 VAT gap without economic influence
Austria	3244	3625,91
Belgium	2991	2087,87
Bulgaria	957	758,80
Czech Republic	3267	2297,33
Denmark	2141	2083,89
Estonia	255	229,88
Finland	905	776,26
France	25583	14984,71
Germany	21957	24942,53
Greece	6651	5942,51
Hungary	2971	2684,57
Ireland	1262	530,81
Italy	46034	42850,25
Latvia	818	280,73
Lithuania	1436	1225,51
Luxembourg	204	149,55
Netherlands	1966	1186,85
Poland	9317	8802,72
Portugal	1228	957,79
Romania	8841	6904,30
Slovakia	2787	1943,81
Slovenia	270	253,29
Spain	12412	9184,41
Sweden	2886	4265,00
United Kingdom	16557	13730,96

Table 11. (figure 5) *Own estimation.* 2012 VAT gap without economic influence.

Proyection

2013							2012			
GEO/TIME	**SALES**	**sales net VTTL**	**VTTL**	**VAT**	**VAT gap**	**% VAT gap / VTTL**	**VTTL 2012**	**% VAT gap/ VTTL Inderect method**	**% VAT gap / VTTL**	**VAT gap**
Italy	1.322.133	1.182.940	139.193	93.812	45.381	32,60%	100331	32,04%	33,00%	46034
France	1.665.939	1.493.229	172.711	144.414	28.297	16,38%	107190	15,20%	15,00%	25583
Germany	2.095.517	1.872.156	223.361	197.005	26.356	11,80%	135841	10,17%	10,00%	21957
United Kingdom	1.580.267	1.426.197	154.070	139.293	14.777	9,59%	103683	11,94%	10,00%	16557
Spain	702.272	626.532	75.741	62.179	13.562	17,91%	49751	15,98%	18,00%	12412
Poland	350.914	312.684	38.230	27.780	10.449	27,33%	25015	25,31%	25,00%	9317
Greece	137.811	118.868	18.943	12.593	6.350	33,52%	15450	32,67%	33,00%	6651
Belgium	286.180	255.506	30.674	27.226	3.448	11,24%	17278	10,01%	10,00%	2991
Austria	243.560	215.376	28.184	24.953	3.231	11,47%	18524	11,67%	12,00%	3244
Sweden	358.299	316.153	42.146	39.048	3.098	7,35%	21778	7,15%	7,00%	2886
Czech Republic	117.477	103.179	14.298	11.695	2.604	18,21%	9037	22,31%	22,00%	3267
Hungary	71.967	60.292	11.676	9.073	2.603	22,29%	8180	24,64%	25,00%	2971
Slovakia	52.276	44.986	7.290	4.696	2.593	35,58%	5243	39,17%	39,00%	2787
Denmark	191.557	165.051	26.506	24.360	2.146	8,10%	14961	8,54%	8,00%	2141
Netherlands	414.914	370.548	44.365	42.424	1.941	4,38%	23719	4,50%	5,00%	1966
Ireland	95.246	83.115	12.131	10.371	1.760	14,51%	7243	10,99%	11,00%	1262
Portugal	123.617	108.429	15.188	13.710	1.479	9,74%	10738	8,07%	8,00%	1228
Finland	146.027	126.391	19.636	18.848	788	4,01%	10261	3,01%	5,00%	905
Estonia	13.367	11.512	1.855	1.558	297	16,02%	1180	14,46%	14,00%	255
Slovenia	26.235	23.057	3.178	3.045	133	4,18%	2241	8,57%	9,00%	270

2013 VAT gap ESTIMATION. *Own estimation.*

1.2 Tax evasion estimation

GEO/TIME 2012	SALES	sales net VTTL	VTTL	vat 2012	VAT gap	rate	Undeclared sales	Average rate (corporate, income)	Profit tax estimated evasion	vat + profit evasion	GDP 2012	Total tax Revenue	TAX EVASION ON GDP	TAX EVASION ON TOTAL TAX REVENUE
Austria	240.299	212.492	27.807	24.563	3.244	13,09%	24790	34%	8459	11703	307.004	132.200,0	3,81%	8,85%
Belgium	278.836	248.949	29.887	26.896	2.991	12,01%	24915	36%	8906	11897	375.852	170.700,0	3,17%	6,97%
Czech Republic	120.319	105.675	14.644	11.377	3.267	13,86%	23577	17%	4008	7275	152.926	51.688,9	4,76%	14,08%
Denmark	191.968	165.405	26.563	24.296	2.267	16,06%	14118	38%	5400	7667	245.252	115.758,9	3,13%	6,62%
Estonia	12.703	10.940	1.763	1.508	255	16,12%	1582	21%	332	587	17.460	5.700,0	3,36%	10,30%
Finland	141.885	123.340	18.545	17.987	558	15,04%	3711	32%	1171	1729	192.350	85.300,0	0,90%	2,03%
France	1.621.292	1.453.210	168.082	142.526	25.556	11,57%	220953	28%	62508	88064	2.032.297	920.100,0	4,33%	9,57%
Germany	2.026.431	1.810.434	215.997	194.034	21.963	11,93%	184089	30%	54352	76315	2.666.400	1.002.300,0	2,86%	7,61%
Greece	148.150	127.786	20.364	13.712	6.652	15,94%	41742	29%	12105	18757	193.347	65.500,0	9,70%	28,64%
Hungary	74.305	62.250	12.055	9.084	2.971	19,37%	15341	18%	2685	5656	96.968	37.332,8	5,83%	15,15%
Ireland	90.145	78.664	11.481	10.219	1.262	14,59%	8645	22%	1859	3120	163.939	47.100,0	1,90%	6,62%
Italy	1.344.114	1.202.607	141.507	96.170	45.337	11,77%	385300	32%	124066	169403	1.566.912	695.900,0	10,81%	24,34%
Netherlands	408.364	364.699	43.665	41.699	1.966	11,97%	16420	35%	5675	7641	599.338	217.559,7	1,27%	3,51%
Poland	341.445	304.247	37.198	27.783	9.415	12,23%	77003	19%	14631	24045	381.480	122.455,0	6,30%	19,64%
Portugal	123.900	108.677	15.223	13.995	1.228	14,01%	8767	28%	2466	3694	165.107	52.900,0	2,24%	6,98%
Slovakia	51.017	43.903	7.114	4.328	2.786	16,20%	17195	23%	3869	6655	71.096	20.300,0	9,36%	32,78%
Slovenia	26.950	23.790	3.160	2.889	271	13,28%	2039	25%	510	780	35.319	13.200,0	2,21%	5,91%
Spain	686.607	618.070	68.537	57.584	10.953	11,09%	98775	34%	33769	44722	1.029.002	338.200,0	4,35%	13,22%
Sweden	346.413	305.665	40.748	37.834	2.914	13,33%	21859	35%	7596	10510	407.820	172.508,0	2,58%	6,09%

United Kingdom	1.635.975	1.476.474	159.501	140.457	19.045	10,80%	176292	25%	44514	63558	1.921.905	634228,617	3,31%	10,02%

GEO/TIME 2013	**SALES**	**sales net VTTL**	**VTTL**	**vat 2013**	**VAT gap**	**rate**	**Undeclared sales**	**Average rate (corporate, income)**	**Profit tax estimated evasion**	**vat + profit evasion**	**GDP 2013**	**2013 Total tax Revenue**	**TAX EVASION ON GDP**	**TAX EVASION ON TOTAL TAX REVENUE**
Italy	1.322.133	1.182.940	139.193	93.812	45.381	11,77%	385672	32%	124186	169567	1.560.024	690.300	10,87%	24,56%
France	1.665.939	1.493.229	172.711	144.414	28.297	11,57%	244649	28%	69211	97508	2.059.852	952.000	4,73%	10,24%
Germany	2.095.517	1.872.156	223.361	197.005	26.356	11,93%	220908	30%	65223	91579	2.737.600	1.030.400	3,35%	8,89%
Spain	702.272	626.532	75.741	62.179	13.562	12,09%	112183	34%	38352	51914	1.022.988	341.800	5,07%	15,19%
United Kingdom	1.580.267	1.426.197	154.070	139.293	14.777	10,80%	136786	25%	34538	49315	1.899.098	624.803	2,60%	7,89%
Poland	350.914	312.684	38.230	27.780	10.449	12,23%	85468	19%	16239	26688	389.695	126.261	6,85%	21,14%
Greece	137.811	118.868	18.943	12.593	6.350	15,94%	39846	29%	11555	17905	182.054	61.100	9,84%	29,31%
Belgium	286.180	255.506	30.674	27.226	3.448	12,01%	28723	36%	10267	13715	382.692	176.400	3,58%	7,78%
Austria	243.560	215.376	28.184	24.953	3.231	13,09%	24694	34%	8427	11658	313.067	137.200	3,72%	8,50%
Sweden	358.299	316.153	42.146	39.048	3.098	13,33%	23241	35%	8076	11175	420.849	180.123	2,66%	6,20%
Netherlands	414.914	370.548	44.365	42.424	1.941	11,97%	16215	35%	5604	7546	602.658	217.560	1,25%	3,47%
Denmark	191.557	165.051	26.506	24.360	2.146	16,06%	13362	38%	5111	7257	248.975	121.002	2,91%	6,00%
Slovakia	52.276	44.986	7.290	4.696	2.593	16,20%	16005	23%	3601	6195	72.134	21.800	8,59%	28,42%
Czech Republic	117.477	103.179	14.298	11.695	2.604	13,86%	18788	17%	3194	5798	149.491	50.976	3,88%	11,37%
Hungary	71.967	60.292	11.676	9.073	2.603	19,37%	13439	18%	2352	4954	97.948	38.102	5,06%	13,00%
Portugal	123.617	108.429	15.188	13.710	1.479	14,01%	10556	28%	2969	4447	165.690	57.300	2,68%	7,76%
Ireland	95.246	83.115	12.131	10.371	1.760	14,59%	12056	22%	2592	4352	164.050	49.400	2,65%	8,81%
Finland	146.027	126.391	19.636	18.848	788	15,54%	5070	32%	1600	2388	193.443	88.600	1,23%	2,70%
Estonia	13.367	11.512	1.855	1.558	297	16,12%	1845	21%	387	685	18.613	6.000	3,68%	11,41%
Slovenia	26.235	23.057	3.178	3.045	133	13,78%	963	25%	241	373	35.275	13.300	1,06%	2,81%

2013 TAX EVASION ESTIMATION. *Own estimation*

2. Comparison between the CBCR proposed by Canada, USA, OECD, EITI and EU: Step-by-step comparison

In this part, we are giving a comparison of the CBCR proposed by Canada, USA, OECD, EITI and EU. We try to identify main areas to better evidence differences between the proposals. As before, we based our analysis on the legislation provided by the countries or the institutions. As a result, we have resumed or reported in italics the legislation.

A. WHO 1. Subjective requirement 2. Objective requirement 3. Filing obligation 4. Payee	**B. WHAT** 1. Payments categories: 2. Type of payment 3. Limit: 4. Broke down of the payments 5. Records:
C. RELEVANT POINT 1. Reports accessible to the public 2. reports of another jurisdiction / with other legislation 3. Enforce compliance and fine 4. Audit 5. Accrual or cash basis 6. Formal and active participation of the civil society 7. Formal and active participation of the Government or its representatives 8. Finance resource 9. Government obligation on reporting 10. Review 11. Declared scope	

	Legislation
USA	Securities and Exchange Commission, Disclosure of Payments by Resource Extraction Issuers. ACTION: Final rule. 17 CFR Parts 240 and 249 [Release No. 34-67717; File No. S7-42-10] RIN 3235-AK85
CANADA	Division 28 -Extractive Sector Transparency Measures Act
OECD	OECD/G20 Base Erosion and Profit Shifting Project, Action 13: Country-by-Country Reporting Implementation Package
EITI	The EITI Standard
EU Extractive Industries	Art. 10 Directive 34 /2013
EU Bank	Art. 89 Directive 36/2013

A. WHO

OECD

MNEs:

1. Subjective requirement

MNEs with consolidated group revenue in the preceding fiscal year of €750 million or more.

2. Objective requirement

No sector restriction

3. Filing obligation

The Reporting Entity may be the Ultimate Parent Entity, the Surrogate Parent Entity, or the Constituent Entity.

(a) Ultimate Parent Entity of an MNE Group

(b) Surrogate Parent Entity. A company of a MNe group that report on behalf of the other companies of the group when:

  a) the jurisdiction of tax residence of the Surrogate Parent Entity requires filing of country-by-country reports;

  b) the jurisdiction of tax residence of the Surrogate Parent Entity has a Qualifying Competent Authority Agreement in effect;

  c) the jurisdiction of tax residence of the Surrogate Parent Entity has not notified the Systemic Failure;

(a) Constituent Entity substitutes the Ultimate Parent Entity when one or more of the following conditions apply:

  a) the Ultimate Parent Entity of the MNE Group is not obligated to file a country-by-country report in its jurisdiction of tax residence; or,

  b) there is not an agreement of the automatic exchange of CBCR between the jurisdiction in which the Ultimate Parent Entity is resident and the other one.

  c) there is an agreement of the automatic exchange of CBCR but the jurisdiction in which the Ultimate Parent Entity is resident has suspended it or persistently failed to provided it.

4. Payee

Country Tax Administration

USA

Resource extraction issuers:

1. Subjective requirement

All U.S. companies and foreign companies should submit the report regardless of

- the size of the company;
- the extent of business operations;
- owner (government owned or);
- any situations in which foreign law may prohibit the required disclosure. (currently no foreign law prohibits the disclosure)
- confidentiality or sensitive information (the instances when an issuer has a confidentiality provision in a relevant contract or commercially or competitively sensitive information, regardless of the existence of a confidentiality provision in a contract)
- the safety and security of its employees and operations

The issuer, a subsidiary of the issuer or an entity under the control of the issuer.

The final rules do not extend the disclosure requirements to foreign private issuers that are exempt from Exchange Act registration pursuant to Rule 12g3-2(b).

2. Objective requirement

Definition: "The commercial development of oil, natural gas, or minerals" include:

a) the activities of exploration, extraction, processing, and export, or the acquisition of a license for any such activity.
b) "Commercial development" the definition leaves discretionary authority to include other significant activities directly relating to oil, natural gas, or minerals. Except:
    - Marketing;
    - Transportation in the list of covered activities, unless those activities are directly related to the export of the oil, natural gas, or minerals;
    - Activities that are ancillary or preparatory to such commercial development (A manufacturer of a product used in the commercial

development of oil, natural gas, or minerals is not considered to be engaged in the commercial development of the resource).

Other relevant aspects:

- Prevalence of substance over form: Whether an issuer is a resource extraction issuer will depend on its specific facts and circumstances;
- Activity or payment that, although not in form or characterization of one of the categories specified under the final rules, is part of a plan or scheme to evade the disclosure required under Section.

3. Filing obligation

The final rules require a resource extraction issuer to provide disclosure of payments made by the issuer, a subsidiary of the issuer, or an entity under the control of the issuer to a foreign government or the U.S. Federal Government for the purpose of the commercial development of oil, natural gas, or minerals.

A facts-and-circumstances determination of control consistent with the federal securities laws is preferable to a bright-line rule limiting disclosure to payments made only by consolidated entities.

4. Payee

(a) In the United States the requiring disclosure of payments will made to the Federal Government and not to state and local governments ;

(b) A "foreign government" includes a foreign national government as well as a foreign subnational government, such as the government of a state, province, county, district, municipality, or territory under a foreign national government

CANADA

Entities:

1. Subjective requirement

"Entity" means a corporation or a trust, partnership or other unincorporated organization:

(a) an entity that is listed on a stock exchange in Canada;

(b) an entity that has a place of business in Canada, does business in Canada or has assets in Canada and that, based on its consolidated financial statements, meets at least two of the following conditions for at least one of its two most recent financial years:

i. it has at least $20 million in assets,
ii. it has generated at least $40 million in revenue,
iii. it employs an average of at least 250 employees; and

(c) any other prescribed entity.

2. Objective requirement

An entity:

(b) that is engaged in the commercial development of oil, gas or minerals in Canada or elsewhere; or

(c) that controls a corporation or a trust, partnership or other unincorporated organization that is engaged in the commercial development of oil, gas or minerals in Canada or elsewhere.

Commercial development of oil, gas or minerals" means

(a) the exploration or extraction of oil, gas or minerals;

(b) the acquisition or holding of a permit, licence, lease or any other authorization to carry out any of the activities referred to in paragraph (a); or

(c) any other prescribed activities in relation to oil, gas or minerals.

Control means:

(a) companies directly or indirectly controlled in any manner;

(b) companies deemed to be controlled and

(c) companies controlled or deemed to be controlled by an entity deemed to be controlled

3. Filing obligation

1. Parent companies
2. parent companies may report on behalf of the wholly-owned subsidiary
3. Reporting entities will also have to report on payments made by non-reporting entities that they control and that are engaged in the commercial development of oil, gas, or minerals

4. Payee

(a) any government in Canada or in a foreign state;

(b) a body that is established by two or more governments;

(c) any trust, board, commission, corporation or body or authority that is established to exercise or perform, or that exercises or performs, a power, duty or function of government for a government referred to in paragraph (a) or a body referred to in paragraph (b); or

(d) any other prescribed payee.

(e) Deemed payee

EITI

Companies, Government

1. Subjective requirement

Companies and government entities, including state-owned enterprises

(a) All companies making material payments to the government. An entity should only be exempted if its payments and revenues are not material.

(b) All government entities receiving material revenues and all the benefit stream in the scope of the EITI report in aggregate form. If the government could not report, an Independent Administrator should draw on any relevant data and estimates from other sources in order to provide a comprehensive account of the total government revenues

2. Objective requirement

Oil, gas and mining companies

3. Filing obligation

Companies and Governments

4. Payee

Multi-stakeholder group (The government, companies and civil society must be fully, actively and effectively engaged in the EITI process.)

EU Extractive Industries

Undertaking active in the extractive and logging industry

1. Subjective requirement

That obligation shall not apply to any undertaking governed by the law of a Member State which is a subsidiary or parent undertaking, where both of the following conditions are fulfilled:

(a) the parent undertaking is subject to the laws of a Member State; and

(b) the payments to governments made by the undertaking are included in the consolidated report on payments to governments drawn up by that parent undertaking in accordance with Article 44.

An undertaking, including a public-interest entity, need not be included in a consolidated report on payments to governments when:

(a) severe long-term restrictions substantially hinder the parent undertaking in the exercise of its rights over the assets or management of that undertaking or

(b) extremely rare cases where the information necessary for the preparation of the consolidated report on payments to governments in accordance with this Directive cannot be obtained without disproportionate expense or undue delay or

(c) the shares of that undertaking are held exclusively with a view to their subsequent resale.

2. Objective requirement

Exploration, prospection, discovery, development, and extraction of minerals, oil, natural gas deposits or other materials, within the economic activities listed in Section B, Divisions 05 to 08 of Annex I to Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2

SECTION B — MINING AND QUARRYING
05 Mining of coal and lignite
05.1 Mining of hard coal
05.10 Mining of hard coal 0510
05.2 Mining of lignite
05.20 Mining of lignite 0520
06 Extraction of crude petroleum and natural gas
06.1 Extraction of crude petroleum
06.10 Extraction of crude petroleum 0610

06.2 Extraction of natural gas

06.20 Extraction of natural gas 0620

07 Mining of metal ores

07.1 Mining of iron ores

07.10 Mining of iron ores 0710

07.2 Mining of non-ferrous metal ores

07.21 Mining of uranium and thorium ores 0721

07.29 Mining of other non-ferrous metal ores 0729

08 Other mining and quarrying

08.1 Quarrying of stone, sand and clay

08.11 Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate 0810*

08.12 Operation of gravel and sand pits; mining of clays and kaolin 0810*

08.9 Mining and quarrying n.e.c.

08.91 Mining of chemical and fertiliser minerals 0891

08.92 Extraction of peat 0892

08.93 Extraction of salt 0893

08.99 Other mining and quarrying n.e.c. 0899

Exclusion

09 Mining support service activities

09.1 Support activities for petroleum and natural gas extraction

09.10 Support activities for petroleum and natural gas extraction 0910

09.9 Support activities for other mining and quarrying

09.90 Support activities for other mining and quarrying 0990

Undertaking active in the logging of primary forests. Undertaking with activities as referred to in Section A, Division 02, Group 02.2 of Annex I to Regulation (EC) No 1893/2006, in primary forests.

02 Forestry and logging
02.1 Silviculture and other forestry activities
02.10 Silviculture and other forestry activities 0210
02.2 Logging
02.20 Logging 0220
02.3 Gathering of wild growing non-wood products
02.30 Gathering of wild growing non-wood products 0230
02.4 Support services to forestry
02.40 Support services to forestry 0240
Division / Group / Class/ ISIC Rev. 4

3. Filing requirement

Any large undertaking or any public-interest entity active in the extractive industry or the logging of primary forests

4. Payee

'Government' means

any national, regional or local authority of a Member State or of a third country. It includes a department, agency or undertaking controlled by that authority as laid down in Article 22(1) to (6) of this Directive;

EU BANK

WHO: institution

1. Subjective requirement

'Institution' means: a credit institution or an investment firm. (point (3) of Article 4(1) of Regulation (EU) No 575/2013)

2. Objective requirement

By the nature of the institution.

3. Filing requirement

There is not specification about filing requirement, so we suppose by the same institution.

4. Payee:

Member State and by third country in which it has an establishment.

B. WHAT

OCDE

1. Payments categories:

Aggregate information relating to

1. revenue,
2. profit (loss) before income tax,
3. income tax paid,
4. income tax accrued,
5. stated capital,
6. accumulated earnings,
7. number of employees, and
8. tangible assets other than cash or cash equivalents with regard to each jurisdiction in which the MNE Group operates;
9. An identification of each Constituent Entity of the MNE Group setting out
    a. the jurisdiction of tax residence of such Constituent Entity, and where different,
    b. the jurisdiction under the laws of which such Constituent Entity is organised, and
    c. the nature of the main business activity or activities

2. Type of payment

Companies must disclose all **material payments** in accordance with the agreed reporting templates and in line with the company's audited figures.

3. **Limit:** No information is provided.

4. Brokedown and organization of the payments

Country level (each jurisdiction in which the MNE Group operates)

5. Records: No information is provided.

USA

1. Payments categories:

1. taxes (taxes levied on corporate profits, corporate income, and production, but will not be required to disclose payments for taxes levied on consumption, such as value added taxes, personal income taxes, or sales taxes);

2. royalties;
3. fees (rental fees, entry fees, and concession fees,);
4. production entitlements;
5. bonuses (signature, discovery, and production bonuses);
6. dividends; and
7. payments for infrastructure improvements
8. The final rules will require disclosure with respect to activities or payments that, although not in form or characterization of one of the categories specified under the final rules, are part of a plan or scheme to evade the disclosure requirements under Section 13(q)

The final rules do not require a resource extraction issuer to disclose social or community payments, such as payments to build a hospital or school, because it is not clear that these types of payments are part of the commonly recognized revenue stream this treatment of social or community payments is consistent with the EITI, which encourages, but does not require

2. Type of payment

Material and in kind. for each project and to each government, issuers will need to determine the monetary value of in-kind payments. the final rules specify that issuers may report in-kind payments at cost, or if cost is not determinable, fair market value, and provide a brief description of how the monetary value was calculated

3. Limit

The final rules define "not de minimis" to mean any payment, whether made as a single payment or series of related payments, that equals or exceeds $100,000 during the most recent fiscal year.

4. Brokedown and organization of the payments

Total amount of payments made for each project and to each government, issuers will need to determine the monetary value of in-kind payments.

"Thus, if an issuer has more than one project in a host country, and that country's government levies corporate income taxes on the issuer with respect to the issuer's income in the country as a whole, and not with respect to a particular project or operation within the country, the issuer would be permitted to disclose the resulting income tax

payment or payments without specifying a particular project associated with the payment".

5. Records: No information is provided.

CANADA

1. Payments categories:

Payment means a payment that is made to a payee in relation to the commercial development of oil, gas or minerals and that falls within any of the following categories of payment:

(a) taxes, other than consumption taxes and personal income taxes;

(b) royalties;

(c) fees, including rental fees, entry fees and regulatory charges as well as fees or other consideration for licences, permits or concessions;

(d) production entitlements;

(e) bonuses, including signature, discovery and production bonuses;

(f) dividends other than dividends paid as ordinary shareholders;

(g) infrastructure improvement payments; or

(h) any other prescribed category of payment.

2. Type of payment

Whether monetary or in kind

3. Limit

An entity must disclose any payments within a category of payment that are made to the same payee, if the total amount of all those payments during the financial year is at least:

(a) the amount prescribed by regulation for the category of payment; or

(b) if no amount is prescribed for the category, $100,000.

4. Brokedown of the payments

The Minister may specify, in writing, the way in which payments are to be organized or broken down in the report — including on a project basis — and the form and manner in which a report is to be provided.

5. Records:

An entity must keep records of its payments made in a financial year for a prescribed period or, if no period is prescribed, for a seven-year period that begins on the day on which the entity provides the report.

EITI

1. Payments categories

The multi-stakeholder group should agree on who prepares the **contextual information** for the EITI Report (3.1).

- information about the extractive industries. This information should include a summary description of the legal framework and fiscal regime (3.2);
- together with an overview of: the extractive industries (3.3);
- the extractive industries' contribution to the economy (3.4);
- production data (3.5);
- state participation in the extractive industries (3.6);
- revenue allocations and the sustainability of revenues (3.7 -3.8),
- license registers and license allocations (3.9- 3.10) and
- any applicable provisions related to beneficial ownership (3.11) and contracts (3.12).

The following *revenue* streams should be included:

i. the host government's production entitlement (such as profit oil);
ii. national state-owned company production entitlement;
iii. profits taxes;
iv. royalties;
v. dividends;
vi. bonuses, such as signature, discovery and production bonuses;
vii. licence fees, rental fees, entry fees and other considerations for licences and/or concessions; and
viii. any other significant payments and material benefit to government.

2. Type of payment

Revenues, whether **cash or in-kind**, are recorded in the national budget.

Where revenues are not recorded in the national budget, the allocation of these revenues must be explained, with links provided to relevant financial reports as applicable, e.g.

sovereign wealth and development funds, sub-national governments, state-owned companies, and other extra-budgetary entities.

3. Limit:

A threshold amount or percentage to determine if a company or a payment is significant to an outcome. EITI implementing countries often set materiality levels based on company or payment size.

4. Brokedown and organization of the payments:

The multi-stakeholder group is required to agree the level of disaggregation for the publication of data. It is required that EITI data is presented by individual company, government entity, and revenue stream. Reporting at project level is required.

5. Records: No information is provided.

EU Extractive Industries

1. Payments categories

(a) production entitlements;

(b) taxes levied on the income, production or profits of companies, excluding taxes levied on consumption such as value added taxes, personal income taxes or sales taxes;

(c) royalties;

(d) dividends;

(e) signature, discovery and production bonuses;

(f) licence fees, rental fees, entry fees and other considerations for licences and/or concessions; and

(g) payments for infrastructure improvements.

2. Type of payment

Payment means an amount paid, whether in money or in kind, for activities. Where payments in kind are made to a government, they shall be reported in value and, where applicable, in volume. Supporting notes shall be provided to explain how their value has been determined.

3. Limit

Any payment, whether made as a single payment or as a series of related payments, need not be taken into account in the report if it is below EUR 100 000 within a financial year.

4. Broke down and organization of the payments

(a) the total amount of payments made to each government;

(b) the total amount per type of payment as specified in points (5)(a) to (g) of Article 41 made to each government;

(c) where those payments have been attributed to a specific project, the total amount per type of payment as specified in point (5)(a) to (g) of Article 41, made for each such project and the total amount of payments for each such project.

'Project' means the operational activities that are governed by a single contract, license, lease, concession or similar legal agreements and form the basis for payment liabilities with a government. None the less, if multiple such agreements are substantially interconnected, this shall be considered a project;

Where those payments have been attributed to a specific project, the total amount per type of payment made for each such project and the total amount of payments for each such project has been reported. Payments made by the undertaking in respect of obligations imposed at entity level may be disclosed at the entity level rather than at project level.

5. **Records:** No information is provided.

EU BANK

1. **Payments categories:**

(a) name(s), nature of activities and geographical location;

(b) turnover;

(c) number of employees on a full time equivalent basis;

(d) profit or loss before tax;

(e) tax on profit or loss;

(f) public subsidies received.

2. **Type of payment:** No information is provided.
3. **Limit:** No information is provided.
4. **Broke down and organization of the payments:** No information is provided.
5. **Records:** No information is provided.

C. RELEVANT POINT

1. **Reports accessible to the public**

OECD: The report should be confidential. It should be available only for tax authorities on request.

USA: Section 13(q), of section 1504 of the Dodd-Frank Act, requires resource extraction issuers to provide the payment disclosure publicly. In addition, Section 13(q) requires a resource extraction issuer to provide information regarding those payments in an interactive data format. To the extent public disclosure of this information could result in costs related to competitive concerns. So, issuers could provide the information confidentially to the government and then the government could publish a compilation of the information, interested parties might still be able to obtain the information pursuant to the Freedom of Information Act (FOIA).)

CANADA: The Division 28 of the Extractive Sector Transparency Initiative Measures Act says that the report should be accessible to the public for example, posting the reports on their corporate websites. If an entity not have a website, the Minister will specify an alternative approach to making the report accessible to the public.

EITI: Widely available to the public, for example published on the national EITI website and/or other relevant ministry and agency websites, in print media or in places that are easily accessible to the public;

EU Extractive Industries: Undertakings that prepare and make public a report complying with third- country reporting requirements assessed, could be exempted to do the report but they should publish it.

EU BANK: The information shall be published, where possible, as an annex to the annual financial statements or, where applicable, to the consolidated financial statements of the institution concerned.

2. **Reports of another jurisdiction / with other legislation (e.g. provinces, territories or foreign countries)**

OECD: No applicable

USA: The final rules also do not permit resource extraction issuers to satisfy the disclosure requirements adopted under Section 13(q) by providing disclosures required under other extractive transparency reporting requirements, such as under home country

laws, listing rules, or an EITI program. There is not an exemption for any situations in which foreign law may prohibit the required disclosure.

CANADA: Reports of another jurisdiction or with other legislation (e.g. provinces, territories or foreign countries) can be submitted to satisfy the reporting requirements under the Act. It is subjected to any conditions the Minister may impose.

EITI: No applicable

EU Extractive Industries: "Undertakings that prepare and make public a report complying with third-country reporting requirements assessed as equivalent to the requirements of the EU are exempt from the requirements to do the report except for the obligation to publish that report. The criteria identified by the Commission to consider the requirement from third-country as equivalent to that include the following:

i. target undertakings,
ii. target recipients of payments,
iii. payments captured,
iv. attribution of payments captured,
v. breakdown of payments captured,
vi. triggers for reporting on a consolidated basis,
vii. reporting medium,
viii. frequency of reporting, and
ix. anti-evasion measures;"

EU Bank: No information is provided.

3. Enforce compliance and fine

OECD: Purpose to extend their existing transfer pricing documentation penalty regime.

USA: No specific measures.

CANADA: Authorities for the Minister to enforce compliance with the Act, including requesting an audit from a reporting entity or further information related to payments made to governments. It also provides for authorities to inspect records relating to payments, and other general compliance enforcement measures.

Every person or entity that fails to comply with or that contravenes the regulations or give a false or misleading information is guilty of an offence punishable on summary conviction and liable to a fine of not more than $250,000.

EITI: Suspension and cancellation.

EU Extractive Industries: General provision of administrative penalties in the Directive.

EU Bank: General provision of administrative penalties in the Directive.

4. Audit

OECD: No specification.

USA: The final rules do not require the resource extraction payment information to be audited.

CANADA: The report is to include an attestation made by a director or officer of the entity, or an independent auditor or accountant, that the information in the report is true, accurate and complete.

EITI: Companies and the host country's government generally each submit payment information confidentially to an independent administrator selected by the country's multi-stakeholder group, frequently an independent auditor, who reconciles the information provided by the companies and the government, and then the administrator produces a report.

EU Extractive Industries: General provision of administrative penalties in the Directive.

EU Bank: The information provided shall be audited in accordance with Directive 2006/43/EC

5. Accrual or cash basis

OECD: No information is provided.

USA: The final rules do not require the resource extraction payment information to be provided on an accrual basis, but on cash basis.

CANADA: No information is provided.

EITI: Since company accounts typically are prepared on an accrual basis, company auditors might provide a reconciliation statement to explain the difference between reported cash payments and financial statements.

EU extractive industries: No information is provided.

EU Bank: No information is provided.

6. Formal and active participation of the civil society

OECD: No participation at all.

USA: No formal participation

CANADA: No formal participation

EITI: Multi-stakeholder oversight including a functioning multi-stakeholder group that involves the government, companies and the full, independent, active and effective participation of civil society.

EU Extractive Industries: No formal participation.

EU Bank: No formal participation.

7. Formal and active participation of the Government or its representatives

OECD: No formal and active participation of tax authorities.

USA: No formal and active participation.

CANADA: No formal and active participation.

EITI: "multi-stakeholder oversight including a functioning multi-stakeholder group that involves the government, companies and the full, independent, active and effective participation of civil society"

EU Extractive Industries: No formal and active participation

EU Bank: No formal and active participation.

8. Finance resource

OECD: No information is provided.

USA: No information is provided.

CANADA: No information is provided.

EITI: The international community provides support of EITI implementation both bilaterally and through the EITI Multi-Donor Trust Fund managed by the World Bank. The Secretariat is funded by supporting governments and supporting companies. Implementing country governments, pay for the implementation and Validation of their EITI process[50].

EU Extractive Industries: No information is provided.

EU Bank: No information is provided.

[50] For more details see "Governance Structure" on the EITI web-page. https://eiti.org/about/governance

9. Government obligation on reporting

OECD: None.

USA: None

CANADA: None.

EITI: The government also completes a reporting template that outlines the revenues received from the extractive industry. The government sends the completed reporting template to the Independent Administrator at the same time as the companies submit their information.

EU Extractive Industries: None.

EU Bank: None.

10. Review

OECD: The OECD will review the CBCR in 2020.

USA: No information is provided.

CANADA: No information is provided.

EITI: No information is provided.

EU Extractive Industries: The review shall take into account international developments, in particular with regard to enhancing transparency of payments to governments, assess the impacts of other international regimes and consider the effects on competitiveness and security of energy supply. It shall be completed by 21 July 2018. The report shall be submitted to the European Parliament and to the Council, together with a legislative proposal. That review shall consider:

- the extension of the reporting requirements to additional industry sectors;
- whether the report on payments to governments should be audited;
- the disclosure of additional information on the average number of employees, the use of subcontractors and any pecuniary penalties administered by a country and
- the feasibility of the introduction of an obligation for all Union issuers to carry out due diligence when sourcing minerals to ensure that supply chains have no connection to conflict parties and respect the EITI and OECD recommendations on responsible supply chain management.

EU Bank: No information is provided.

3. Lending composition selected countries

Success rate in obtaining <u>equity finance</u>

Banks						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	8,8	0,0	0,0	35,0	91,2	65,0
Spain	86,0	60,8	12,5	14,6	1,5	24,6
France	74,7	43,1	0,0	3,1	25,3	53,8
Italy	0,0	28,4	0,0	20,7	100,0	51,0
UK	93,7	79,0	0,0	0,8	6,3	20,2

Existing shareholders						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	65,1	93,1	25,1	0,9	9,8	6,0
Spain	76,8	55,4	11,8	17,1	11,4	27,5
France	96,1	89,6	2,1	5,2	1,7	5,3
Italy	40,7	70,1	24,4	13,0	34,9	16,9
UK	96,0	88,2	4,0	5,5	0,0	6,4

Business angels						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	0,9	0,0	0,0	0,0	99,1	100,0
Spain	2,3	0,5	0,0	0,0	97,7	99,5
France	29,4	44,7	0,0	5,3	70,6	50,0
Italy	0,0	0,0	0,0	0,0	100,0	100,0
UK	35,9	17,8	7,7	4,1	56,4	78,1

Family, friends or other individuals, not any of the above						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	4,9	58,0	95,1	0,0	0,0	42,0
Spain	7,4	15,8	60,8	28,7	31,8	55,5
France	41,7	58,5	0,0	11,1	58,3	30,5
Italy	76,1	0,0	9,4	2,2	14,5	97,8
UK	68,6	30,0	15,7	24,0	15,7	46,0

Initial public offering or other stock market offerings						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	66,7	26,5	0,0	0,0	33,3	73,5
Spain	46,9	0,0	0,0	0,0	53,1	100,0
France	34,8	20,2	2,2	3,0	63,0	76,8
Italy	26,9	58,9	0,0	23,4	73,1	17,7
UK	23,1	0,0	0,0	0,0	76,9	100,0

Other financial institutions						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	0,0	93,6	0,0	0,0	100,0	6,4
Spain	74,3	2,2	0,0	43,4	25,7	54,4
France	42,9	50,6	2,4	0,6	54,8	48,7
Italy	0,0	17,3	0,0	41,6	100,0	41,1
UK	80,2	93,5	0,0	1,8	19,8	4,7

	Other businesses					
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	84,6	8,9	1,9	25,0	13,5	66,1
Spain	73,5	17,2	4,9	16,1	21,6	66,7
France	73,5	57,5	0,0	0,8	26,5	41,7
Italy	28,2	8,4	0,0	0,0	71,8	91,6
UK	42,6	38,5	0,0	0,0	57,4	61,5

Success rate in obtaining <u>loan finance</u>

	Banks					
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	85.30	75.90	8.00	15.90	6.70	8.20
Spain	87.30	59.10	9.70	27.80	3.00	13.20
France	94.50	83.30	3.60	9.70	2.00	7.00
Italy	86.60	78.40	12.20	16.70	1.20	4.90
UK	88.40	64.60	6.10	14.70	5.60	20.80

	Owner(s)/director(s) of the business					
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	93.20	82.90	5.40	14.90	1.40	2.20
Spain	72.60	54.30	12.80	17.50	14.60	28.20
France	85.50	72.80	4.60	11.80	9.90	15.40
Italy	76.10	72.50	20.40	19.10	3.50	8.40
UK	86.10	83.80	12.30	7.80	1.60	8.40

Other employees of the business						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	17.70	34.90	0.00	1.70	82.30	63.40
Spain	38.80	16.70	8.90	22.30	52.20	61.00
France	49.50	40.00	3.10	9.60	47.40	50.50
Italy	52.40	3.30	39.50	1.20	8.10	95.50
UK	11.40	31.00	26.00	24.10	62.60	44.90

Family, friends or other individuals outside the business						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	40.60	59.50	12.60	8.10	46.80	32.50
Spain	42.80	15.40	9.60	26.40	47.60	58.20
France	57.00	44.70	10.90	18.10	32.10	37.20
Italy	53.40	61.60	40.50	11.80	6.10	26.60
UK	57.20	68.60	21.60	21.60	21.20	9.80

Other businesses						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	33.00	21.70	0.50	1.60	66.50	76.70
Spain	58.00	36.80	12.00	17.00	30.10	46.20
France	67.30	46.20	0.00	4.00	32.70	49.80
Italy	82.60	50.90	12.40	11.90	5.00	37.20
UK	28.60	46.20	18.20	14.80	53.20	39.00

Other loan sources						
	Requests accepted		Requests partially accepted		Requests refused	
	2007	**2010**	**2007**	**2010**	**2007**	**2010**
Germany	42.30	33.00	15.90	5.10	41.80	62.00
Spain	73.60	35.80	7.10	6.50	19.30	57.70
France	77.90	55.40	6.20	18.90	15.80	25.70
Italy	38.50	74.90	35.00	6.50	26.60	18.60
UK	95.10	80.70	1.70	7.10	3.10	12.20

Success rate in obtaining <u>other source of finance</u>

Leasing						
	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	95.1	98.0	2.6	1.9	2.3	0.1
Spain	95.1	83.8	4.5	9.7	0.4	6.5
France	96.6	92.2	2.3	5.2	1.1	2.6
Italy	84.4	78.4	14.4	14.9	1.2	6.7
United Kingdom	99.7	92.7	0.1	1.9	0.1	5.3
Factoring						
	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	41.6	33.3	9.9	27.2	48.5	39.5
Spain	80.2	62.3	13.7	19.9	6.2	17.8
France	88.9	72.3	6.7	23.4	4.4	4.3
Italy	83.9	69.1	12.7	19.5	3.5	11.3
United Kingdom	98.3	86.9	0.1	6.7	1.5	6.4
Bank overdraft or credit line						

	Requests accepted		Requests partially accepted		Requests refused	
	2007	2010	2007	2010	2007	2010
Germany	89.9	85.3	5.7	12.5	4.4	2.2
Spain	83.1	67.0	15.4	20.6	1.5	12.4
France	86.5	71.3	7.6	15.4	6.0	13.3
Italy	85.3	80.3	9.3	11.3	5.4	8.4
United Kingdom	94.3	83.0	4.3	9.4	1.4	7.6

Subsidised loans

	Requests accepted		Requests partially accepted		Requests refused	
	2007	2010	2007	2010	2007	2010
Germany	46.2	58.8	22.2	0.6	31.6	40.6
Spain	69.6	58.5	14.8	16.8	15.6	24.7
France	86.8	72.7	2.1	8.0	11.0	19.3
Italy	93.5	90.3	2.1	4.9	4.4	4.8
United Kingdom	0.0	50.0	0.0	0.0	100.0	50.0

Subsidies by [your country's] government

	Requests accepted		Requests partially accepted		Requests refused	
	2007	2010	2007	2010	2007	2010
Germany	27.4	75.8	10.7	9.1	61.8	15.1
Spain	62.2	49.2	22.4	25.7	15.4	25.1
France	86.0	73.1	6.3	13.8	7.7	13.1
Italy	45.5	45.4	11.9	9.3	42.6	45.4
United Kingdom	93.8	92.1	0.0	2.1	6.2	5.8

Foreign government bodies or international organisations						
	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	0.5	12.1	17.6	15.5	81.9	72.4
Spain	41.3	5.2	10.9	18.2	47.8	76.6
France	57.0	45.7	0.7	22.1	42.3	32.1
Italy	67.6	64.2	7.3	12.0	25.1	23.8
United Kingdom	0.0	0.0	0.0	0.0	0.0	100.0
Trade credit (by suppliers)						
	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	85.1	81.4	8.9	13.2	6.0	5.4
Spain	77.5	58.5	18.9	28.5	3.6	13.0
France	76.3	53.8	19.3	33.8	4.4	12.5
Italy	39.8	34.7	10.2	9.0	49.9	56.3
United Kingdom	87.9	86.5	5.5	12.4	6.6	1.1
Advanced payments (by customers)						
	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	75.4	72.4	8.0	17.6	16.6	9.9
Spain	69.6	48.0	20.8	28.2	9.6	23.8
France	59.7	46.3	27.1	35.9	13.2	17.8
Italy	0.0	0.0	1.7	0.6	98.3	99.4
United Kingdom	79.7	88.1	1.3	8.2	19.0	3.7
International trade or export finance facilities						

	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	13.3	38.2	0.0	0.0	86.7	61.8
Spain	51.9	43.0	22.2	32.6	26.0	24.4
France	76.9	71.9	7.7	18.6	15.4	9.5
Italy	29.2	28.1	0.0	3.7	70.8	68.3
United Kingdom	100.0	99.5	0.0	0.0	0.0	0.5
Mezzanine or hybrid financing						
	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	4.6	3.5	16.9	0.0	78.5	96.5
Spain	1.2	7.9	5.5	0.7	93.3	91.4
France	0.0	35.1	0.0	1.8	100.0	63.2
Italy	13.1	5.3	0.0	0.0	86.9	94.7
United Kingdom	23.9	79.4	76.1	0.0	0.0	20.6
Other finance types and sources						
	Requests accepted		**Requests partially accepted**		**Requests refused**	
	2007	2010	2007	2010	2007	2010
Germany	59.0	68.8	0.0	15.7	41.0	15.5
Spain	71.2	66.8	8.0	15.4	20.8	17.8
France	83.6	85.2	10.0	4.5	6.4	10.3
Italy	52.2	56.9	13.7	6.6	34.1	36.5
United Kingdom	97.9	93.3	2.1	0.5	0.0	6.3

EUROSTAT: Success rate in obtaining other types of finance, by sources, type of enterprise and NACE Rev. 2

4. Assets of Financial Institutions

Assets of Financial Institutions

USD trillion; 26 jurisdictions (*26-group*)

	Financial Institutions	Central Banks	Banks			Insurance Companies	Pension Funds	Public Financial Institutions	Other Financial Intermediaries (OFIs)											Financial Auxiliaries
				Banks' assets to OFIs	Banks' liabilities to OFIs					Money Market Funds	Finance Companies	Structured Finance Vehicles	Hedge Funds	Other Investment Funds	Brokers Dealers	Real Estate Intestment Trusts and	Trust Companies	Others (identified)	Others (unidentified)	
2002	116.5	4.4	51.0	1.2	1.4	13.2	12.6	11.4	23.3	3.0	2.6	2.6	0.0	6.4	3.3	0.2	0.1	1.4	3.8	0.5
2003	140.7	5.2	63.2	1.6	1.7	15.9	14.7	12.2	28.9	3.1	3.0	3.0	0.0	8.7	3.9	0.5	0.1	1.8	4.7	0.6
2004	161.1	6.1	74.0	2.1	2.1	17.8	16.4	12.4	33.8	3.1	3.2	3.7	0.0	10.4	4.7	0.7	0.1	2.1	5.8	0.7
2005	168.2	6.6	75.3	2.2	2.4	18.0	17.6	11.9	38.1	3.2	3.3	4.6	0.0	12.4	5.2	0.8	0.1	2.1	6.4	0.6
2006	193.3	7.4	87.7	2.6	3.1	20.2	19.7	11.8	45.7	3.7	3.5	5.7	0.0	15.2	5.9	0.9	0.1	2.9	7.6	0.8
2007	228.5	9.5	106.9	4.1	4.7	22.2	21.4	13.1	54.5	4.7	3.8	7.4	0.1	17.8	6.8	1.0	0.2	4.0	8.9	1.0
2008	234.9	13.1	115.4	6.7	6.8	20.6	18.8	14.2	51.9	5.4	4.3	7.4	0.1	13.2	9.2	0.9	0.1	4.6	6.6	0.8
2009	243.9	13.7	115.9	5.7	6.5	22.6	21.5	14.4	54.3	5.0	4.2	8.2	0.1	17.0	7.9	1.0	0.2	4.9	5.8	1.6
2010	258.7	15.1	121.2	5.8	6.7	24.1	23.9	14.5	58.2	4.3	4.3	6.9	0.2	19.3	8.7	1.5	0.7	5.1	7.3	1.5
2011	273.2	18.0	131.0	6.6	6.9	24.7	24.6	14.5	58.7	4.0	4.2	6.4	0.2	18.9	9.1	1.7	1.0	5.4	7.7	1.7
2012	287.9	19.8	136.5	6.4	6.7	26.2	26.7	14.2	62.8	4.1	4.0	6.0	0.2	22.0	9.4	1.9	1.5	6.0	7.9	1.7
2013	294.9	21.0	136.7	5.7	6.2	27.1	28.2	13.7	66.7	4.1	3.7	5.5	0.2	25.7	9.3	2.0	2.2	6.4	7.6	1.6
2014	295.5	21.6	135.1	5.1	5.8	27.0	29.0	13.4	68.1	4.3	3.6	4.9	0.4	27.4	9.6	2.1	2.7	6.0	7.2	1.4

26-group: Argentina, Australia, Brazil, Canada, Switzerland, Chile, China, Germany, Spain, France, the United Kingdom, Hong Kong, Indonesia, India, Ireland, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, Turkey, United States, South Africa. Note: Banks refer to the broader category of Deposit-taking Institutions. Financial assets when available, otherwise total assets. Converted to USD using the end of the period market exchange rates. Aggregated across jurisdictions. In case of missing data in a time series, values were not inter- or extrapolated. Some aggregated series have breaks and an increase in an aggregated series may be the result of improvements in reporting of a sub-sector over time rather than an increase in the volume of financial assets. The Banks' assets to OFIs and Banks' liabilities to OFIs figures are not adjusted for banks' assets and liabilities to OFIs that are prudentially consolidated into banking groups. The size of the Hedge Fund sector is significantly underestimated primarily due to two factors. First, off-shore financial centres, where most Hedge Funds are domiciled, are not included in the current scope of the exercise. Second, the Flow of Funds statistics are not granular enough in many jurisdictions to allow a separation between Hedge Funds and other sectors.

Financial stability Board Calculation (Financial Stability Board, 2015)

5. Type of Financial Institutions

Following the detailed description of the type of financial institutions is reported[51]. The list is taken from the U.S. market and represents the main actors of it. Other intermediaries could be find in classifications done by other authors (for example (Neave, 2009, pp. see -Part.6 - Chapter 17)). Moreover, the technological innovation let the intermediaries to manage the risk in different way and it bring the constitution of new subjects.

1) Deposit-type institutions

Depository-type institutions are the most commonly used types of financial intermediaries because people use their services on a daily basis. Depository institutions offer different types of checking or savings accounts and time deposits. Depository Institutions use the deposits to make loans such as mortgages, consumer loans and business loans. The deposits and interest paid on deposit accounts are insured by federally sponsored insurance agencies and therefore are considered risk-free. These deposits are also highly liquid and can usually be withdrawn on demand. Types of depository institutions are listed and briefly explained below.

a) ***Commercial Banks****: Commercial Banks are the largest among all financial intermediaries and are also the most diversified due to the large range of assets and liabilities they hold. Their liabilities are in the form of checking and savings deposits, and various types of time deposits. The assets that commercial banks hold are securities of various forms and denominations such as mortgage loans, consumer loans, business loans and loans to state and local governments. Commercial banks are among the most regulated forms of business due to their vital role in the well-being of the economy.*

b) ***Savings and loan association (S&L), and mutual savings banks*** *are often called thrift institutions, are financial institutions that specializes in accepting savings deposits and making mortgage and other loans. The terms "S&L" or "thrift" are mainly used in the United States; similar institutions in the United Kingdom, Ireland and some Commonwealth countries include building societies and*

[51] (Workman, 2011)

trustee savings banks. Thrift institutions offer checking and savings accounts and other various types of time-deposits and use these funds to purchase long-term mortgages. Savings and loans are the largest residential mortgage lenders. Thrift Institutions specialize in maturity intermediation since they take liquid deposits and lend the out in the form of long-term collateralized loans.

c) ***Credit Unions*** *or Savings and Credit Cooperative. Credit Unions are small non-profit depository institutions that are owned by their members who are also their customers. Members of credit unions all have a common bond such as military service, occupation etc... Credit unions primary liabilities are checking deposits (share drafts) and savings accounts (share accounts) and credit unions usually make their investments in the form of short-term instalment consumer loans. The most significant difference between credit unions and commercial banks are the restrictions that most loans are made to consumers only, the common bond requirement for members, the non-profit nature and the tax exemptions due to their cooperative nature.*

2) Contractual Savings Institutions:

These are savings institutions that obtain their funds through long-term contractual arrangements and invest these funds on the capital markets. Insurance companies and pension funds are contractual savings institutions. They usually have a steady inflow of funds from their contractual arrangements therefore they usually do not experience difficulties with liquidity and can make long-term investments in securities such as bonds and sometimes common stock.

a) ***Life Insurance Companies:*** *Life insurance companies issues securities which are claims meant to protect individuals and families from events such as premature death or early retirement. In the event of early death or retirement the beneficiaries receive benefits that were promised in the contract. Many life insurance companies also offer some savings to their policy holders. Since their cash-flows are predictable they are able to invest in long-term securities that provide higher yields. Life Insurance companies are regulated by the states they operate in unlike depository institution which are regulated by they federal government.*

b) ***Casualty Insurance Companies:*** *These types of insurance companies sell policies that protect individuals or businesses against loss of property from fire, theft,*

accidents or other causes that can be predicted through statistical models. Casualty insurance companies' primary source of funds come from premiums charged to the policyholders. Unlike life insurance companies, the cash outflows of casualty insurance companies are not as predictable; therefore they invest their funds in short-term, highly marketable securities. Since short-term securities usually offer lower returns, casualty insurance companies invest in higher risk securities such as stocks to earn higher returns. To reduce taxes, casualty insurance companies often also invest in municipal bonds.

c) ***Pension Funds:*** *Pension funds generally acquire funds from employer and employee contributions while the employee is still working and provide the employee with payments during retirement. Pension funds usually invest funds in corporate bonds and equities. Pension funds are beneficial to individuals because they help employees plan and save for retirement. Because of the long-term investment nature, pension funds generally invest in long-term, higher yield securities.*

3) Investment Funds

a) Mutual Funds: *Mutual funds pool together funds from investors and then build a portfolio consisting of equities and bonds. The investors own shares which represent a portion of the mutual fund pie. The amount of shares an investor owns is dependent on the amount of money he or she contributed. Mutual funds are beneficial to small investors because they offer diversification, economies of scale for transaction costs, and professional portfolio management. The value of a mutual funds share is not fixed; it fluctuates with the change in value of the mutual fund's portfolio. Different mutual funds specialize in different sectors. Some mutual funds specialize in high-risk growth stocks which are good for young and risk tolerant investors while others specialize in income type securities which are better for older retired individuals who need income to pay for their living expenses.*

b) Money Market Mutual Funds: *A money market mutual fund (MMMF) is simply a mutual fund that strictly invests its pool of funds in money market securities which are short-term securities with low default-risk. These securities are usually sold in denominations starting at $1-million therefore most investors do not have enough money to purchase them directly. MMMFs offer small investors the opportunity to*

invest in these short-term securities without taking on huge financial risks. MMMFs generally allow investors to write checks and make withdraws making them competitive with checking and savings accounts. However, there are usually limits on how many withdraws can be made and the accounts are not insured.

4) Other Types of Financial Intermediaries

a) Finance Companies: *Finance companies obtain most of their money by issuing commercial paper (short-term IOUs) to investors, and the rest is obtained from the sale of equity capital and long-term debt obligations. Finance companies then take this money and make loans to consumers and businesses. There are three basic types of finance companies: (1) consumer finance companies which specialize in loans made to households, (2) business finance companies which make loans and leases to businesses, and (3) sales finance companies which finance the items that are sold by retail stores. Finance companies are regulated by the states they operate in but are also subject to regulation by the federal government.*

b) Federal Agencies: *The U.S. government acts as a financial intermediary through its agencies which take part in financial intermediary type transactions. The goal of federal agencies is to reduce the costs of borrowing funds in order to increase the flow of funds in certain sectors of the economy. Government agencies achieve this by selling debt securities called agency securities and then lending the funds from the sale to the economic sectors they serve. These agencies usually serve the housing sector and agriculture sector because many argue that these sectors would not be able to obtain credit at a reasonable cost if the government did not take direct intervention.*

6. Narrowing down towards an activity-based measure of shadow banking

The narrowing down methodology then involves the following steps:

1. Pension funds and insurance companies that are not part of shadow banking.

All pension fund assets, amounting to $29.0 trillion are deducted in a first step. In addition, $26.9 trillion of insurance company assets that are not classified into Economic Function 4 (facilitation of credit creation) are also excluded from the shadow banking measure.

2. OFIs reported as not shadow banking.

Assets of OFIs that jurisdictions identified as not being involved in any of the shadow banking activities described by the five economic functions are also excluded from shadow banking. $23.6 trillion are subtracted in this narrowing down step. It comprises mainly entities that tend not to directly engage in credit intermediation or to exhibit shadow banking risks. Examples include equity investment funds, closed-end funds without leverage and/or significant liquidity/maturity transformation, and equity real estate investment trust/funds.

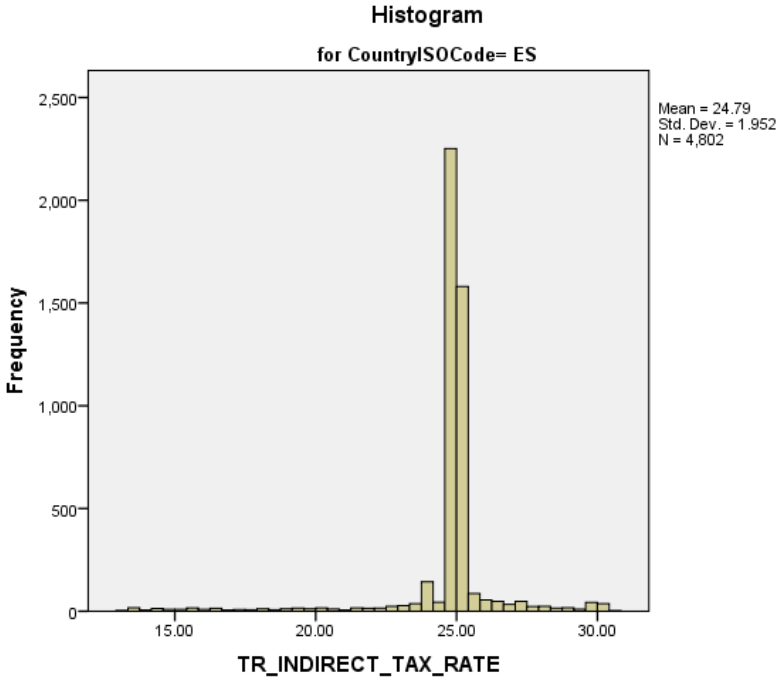
3. Prudential consolidation into banking group.

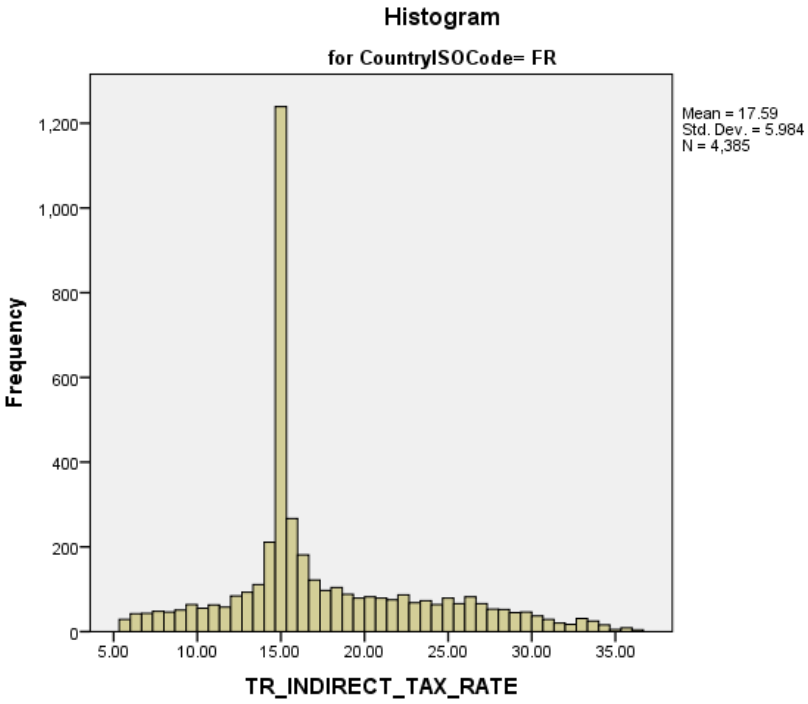
Entities that are consolidated into a banking group for prudential purposes are already subject to appropriate regulation/supervision of shadow banking risks (i.e. maturity/liquidity transformation, imperfect credit risk transfer, and/or leverage) and therefore excluded from the shadow banking estimate.36 These entities typically include broker-dealers, finance companies and structured finance vehicles. The amount of prudentially consolidated assets in this year's report was $9.3 trillion.

7. Effective corporate tax rate

	Effective tax rate		
%	**2008**	**2011**	**2014**
ES	24.7874	23.9453	24.4925
FR	17.5924	17.0761	14.7525
IT	54.8585	58.4408	53.7840

Effective tax rate: 2008

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for CountryISOCode= FR
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Std. Dev. = 5.984
N = 4,385
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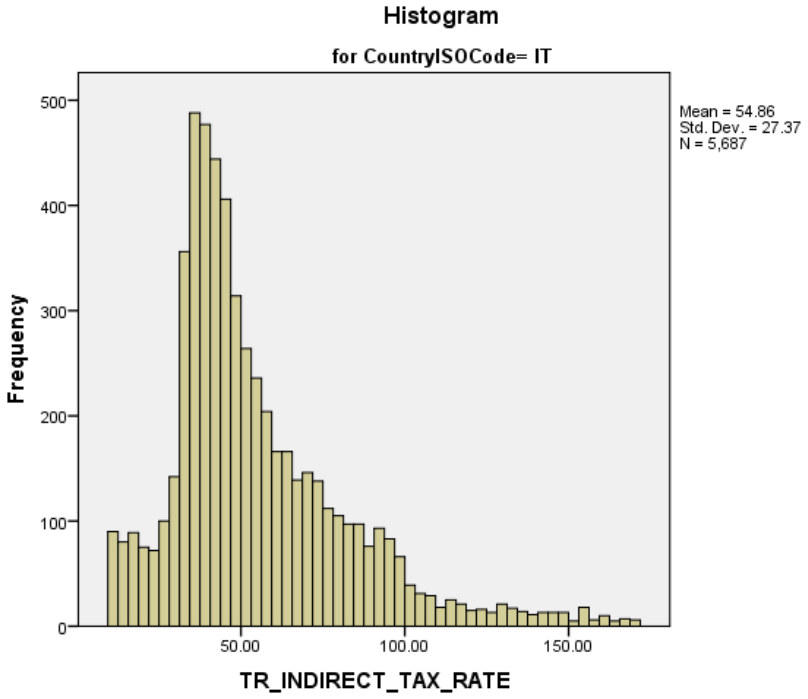
1,000
800
600
400
200
0
5.00
10.00
15.00
20.00
25.00
30.00
35.00
TR_INDIRECT_TAX_RATE


Histogram
for CountryISOCode= IT
Mean = 54.86
Std. Dev. = 27.37
N = 5,687
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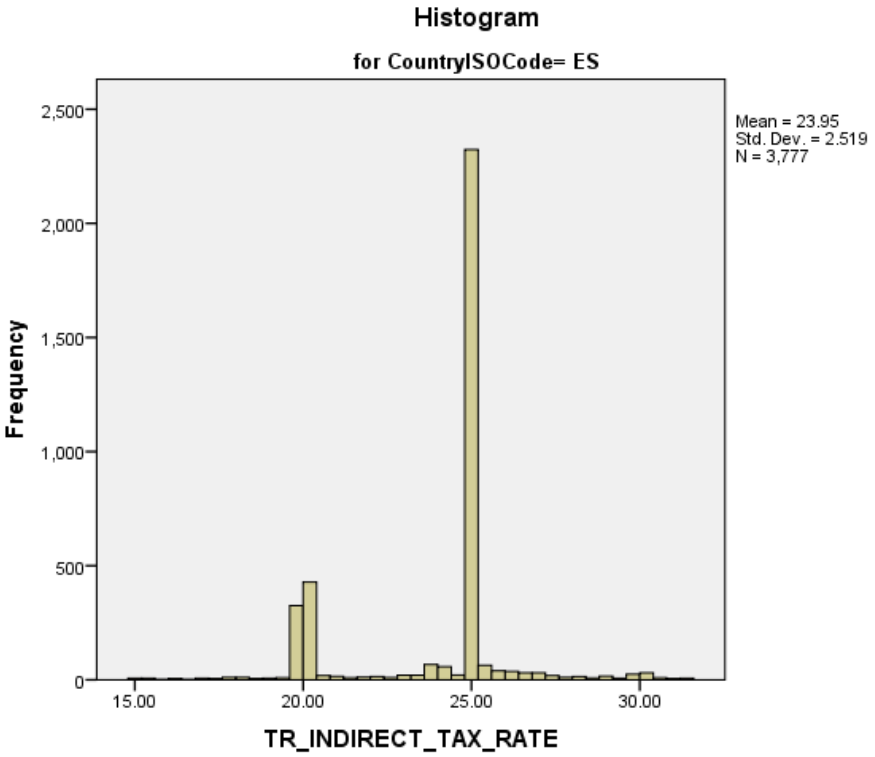
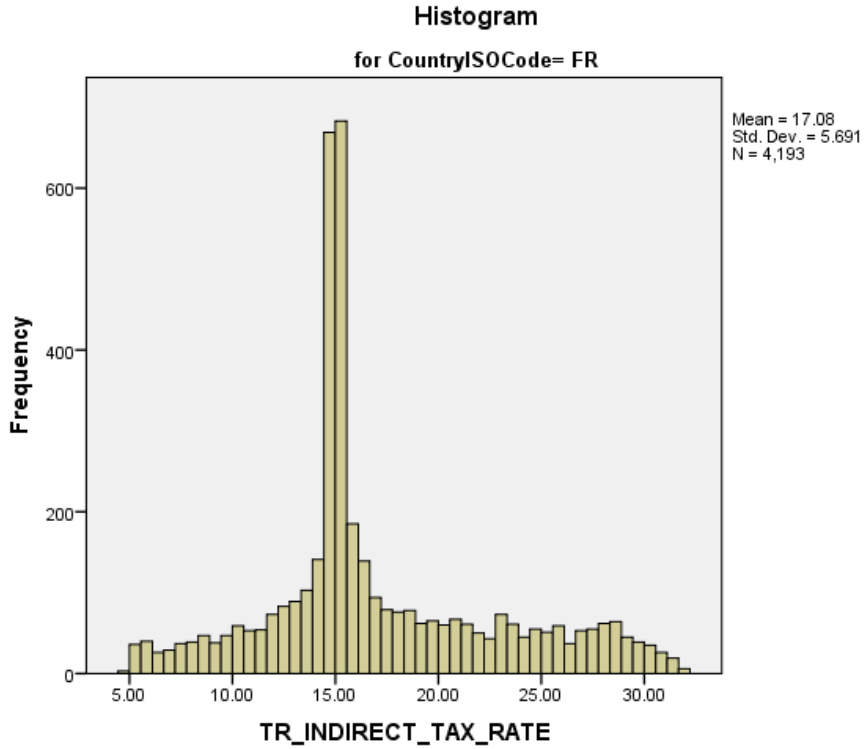
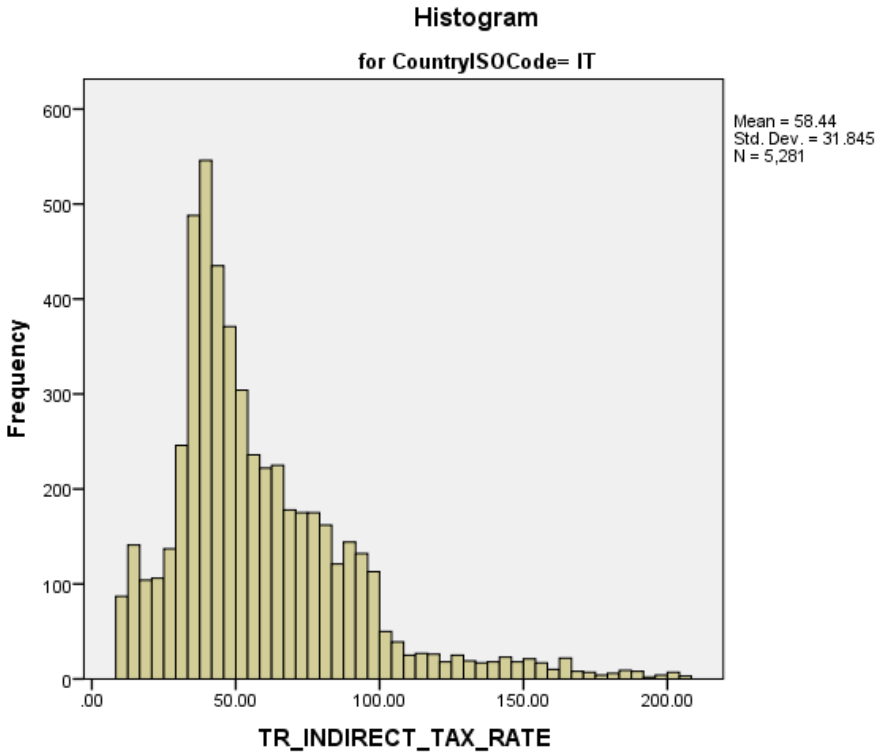
300
200
100
0
50.00
100.00
150.00
TR_INDIRECT_TAX_RATE

Effective tax rate: 2011



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Std. Dev. = 31.845
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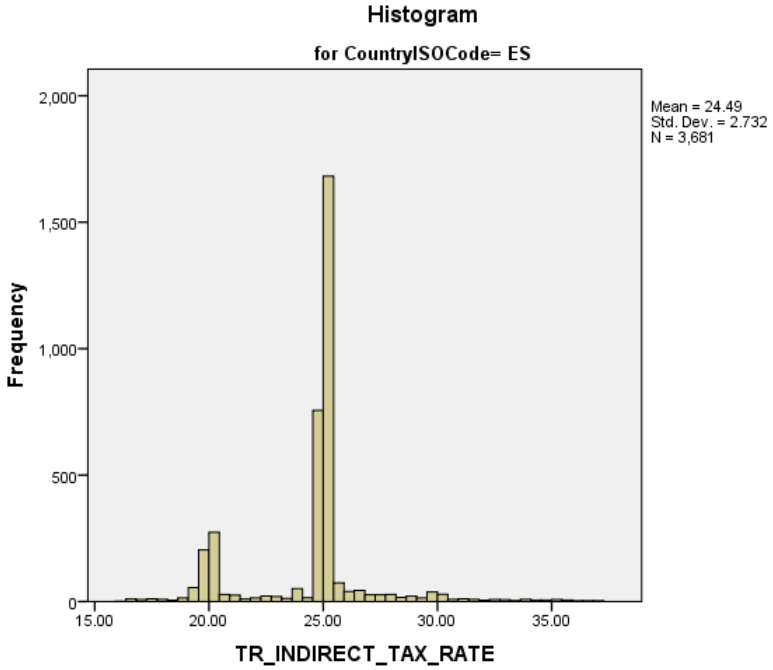
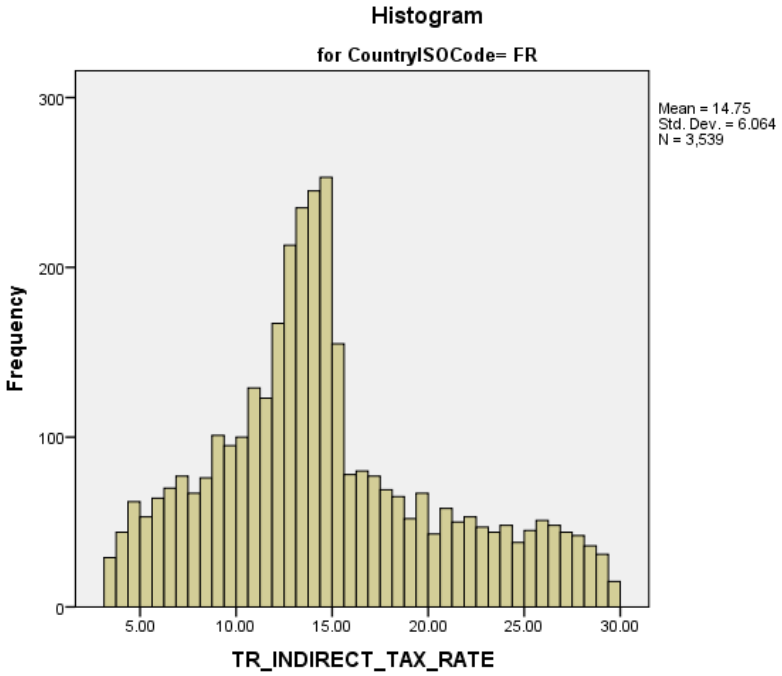
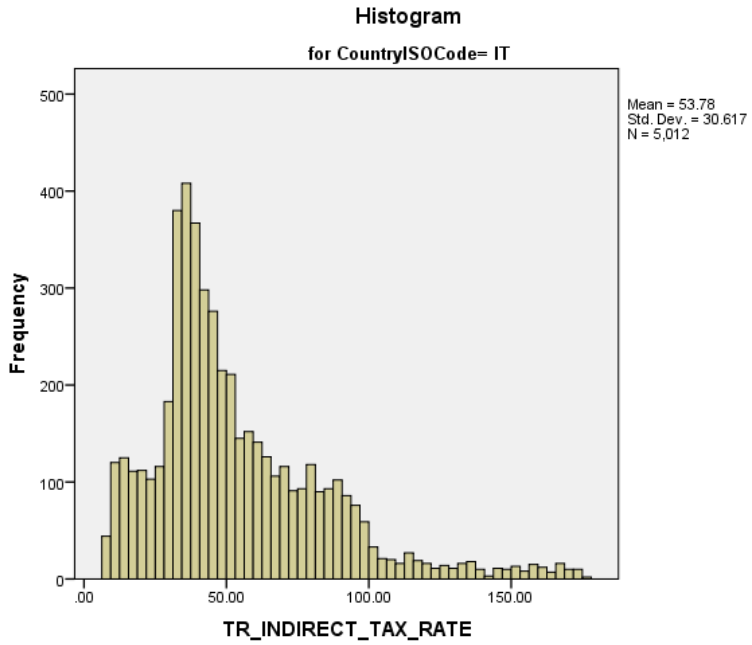
300
200
100
0
.00
50.00
100.00
150.00
200.00
TR_INDIRECT_TAX_RATE

Effective tax rate: 2014






Histogram
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Std. Dev. = 30.617
N = 5,012
Frequency
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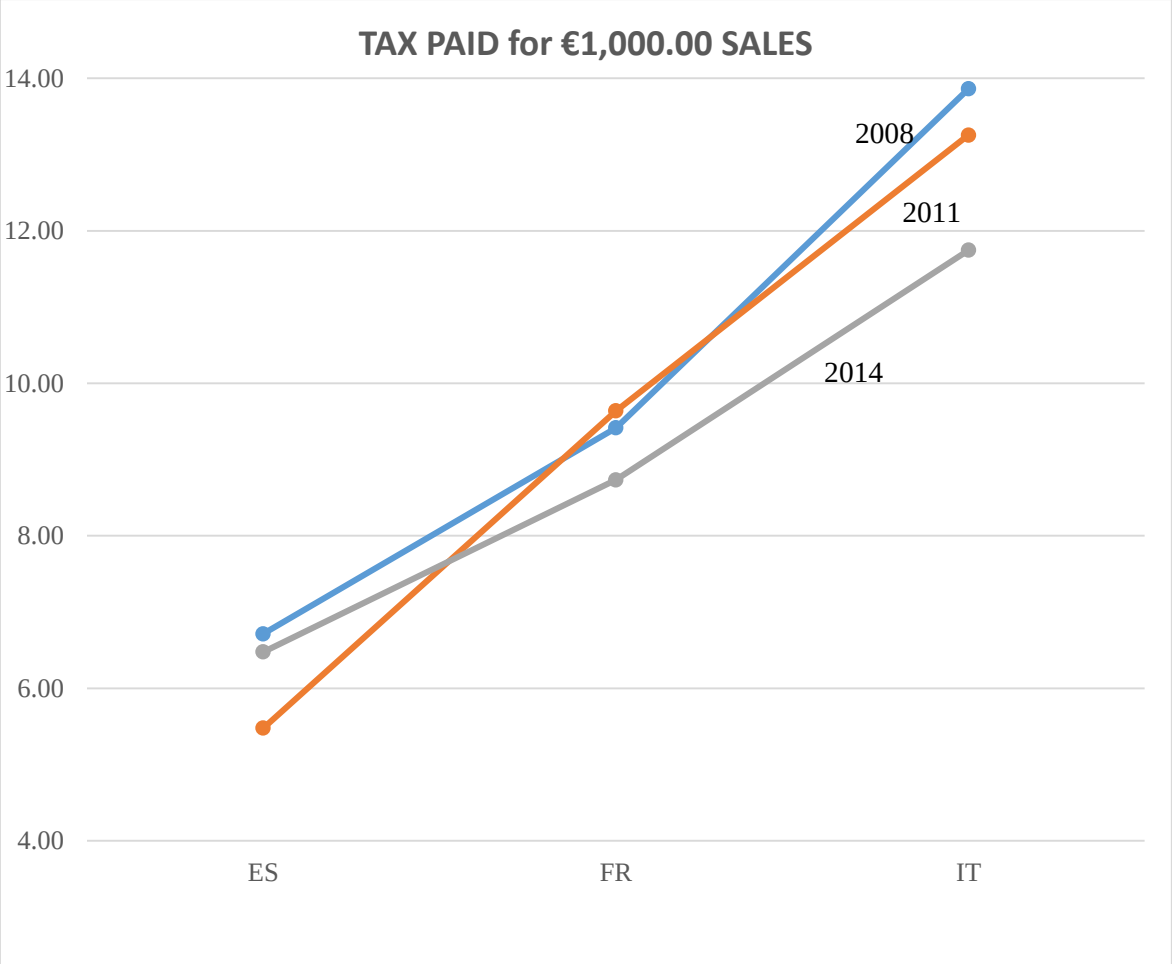
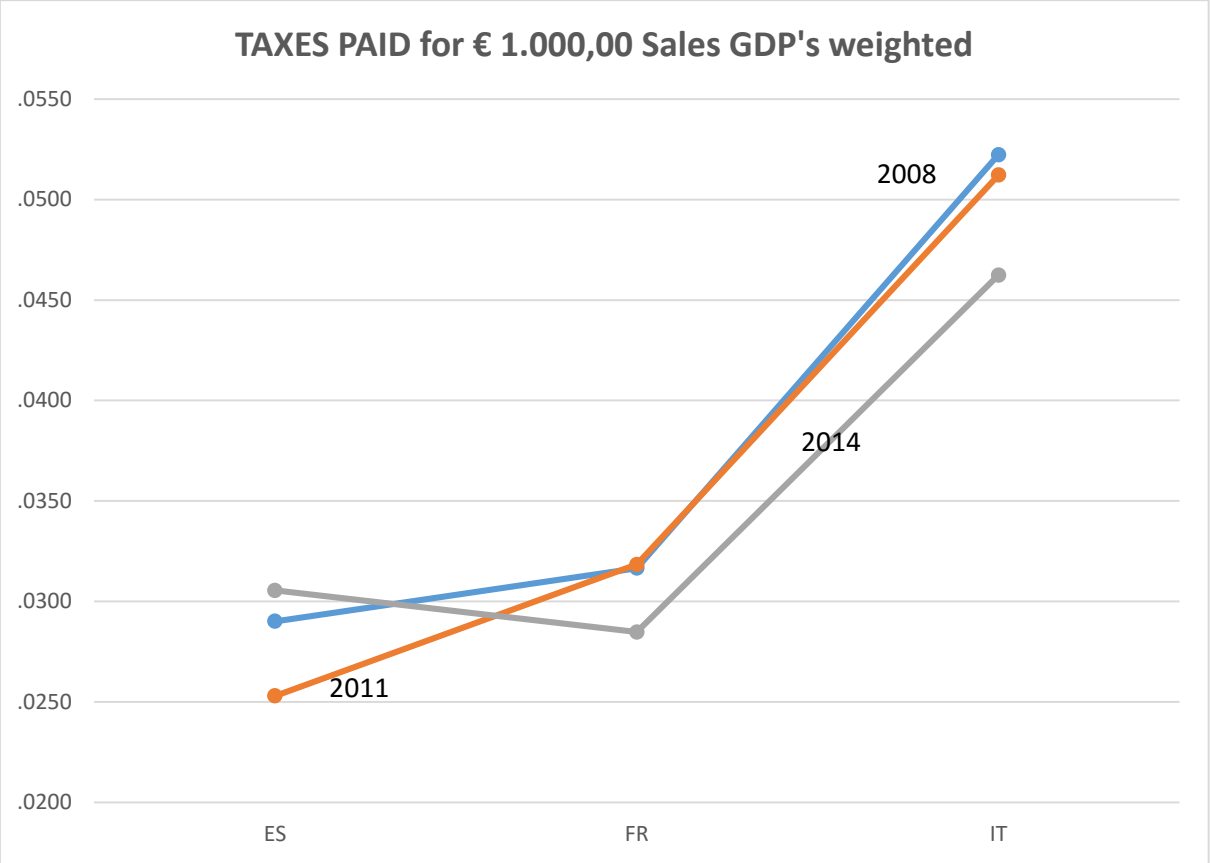
400
300
200
100
0
.00
50.00
100.00
150.00
TR_INDIRECT_TAX_RATE

8. Taxed paid for € 1.000,00 of sales



Country	Mean 2008	Mean 2011	Mean 2014
ES	6.71	5.48	6.48
FR	9.42	9.64	8.73
IT	13.86	13.25	11.75



Country	Mean 2008	Mean 2011	Mean 2014
ES	.0290	.0253	.0305
FR	.0317	.0318	.0285
IT	.0522	.0512	.0462

9. ANOVA analysis

Independent variable 1: Countries

- Group 1: Spain
- Group 2: France
- Group 3: Italy

Independent variable 2: Source of Finance

- Group 1 = Commercial credit - commercial debts IF > 45 days;
- Group 10 = Gearing = ((Non-current liabilities + Loans) / Shareholders funds) * 100 IF < 50;
- Group 20 = 10 + 1;
- Group 11 = Gearing IF> 200;
- Group 21 = 20 + 1;
- Group 100 = All others companies

Dependent variable: Mark-up (trimmed 5% turnover over trimmed 5% material cost) = (tr. Turnover – tr. Material cost) / tr. Material cost

Descriptive Statistics 2008				
Dependent Variable: MARKUP_trTURNOVER_trMATCOST				
Country ISO Code	**FINANCE 6**	**Mean %**	**Std. Deviation**	**N**
ES	**1**	61.10	48.56	729
	10	80.27	88.04	2781
	11	58.18	42.83	605
	20	76.78	87.47	618
	21	58.47	41.88	194
	100	71.05	62.66	2463
	Total	72.64	73.15	7390
FR	**1**	88.17	48.93	559
	10	105.03	84.68	3218
	11	92.52	52.48	530
	20	93.61	66.20	439
	21	89.80	42.18	131
	100	94.44	64.77	2066
	Total	98.56	72.95	6943
IT	**1**	58.54	40.64	1484
	10	67.32	70.16	1784
	11	55.54	40.13	913
	20	70.35	75.48	782
	21	61.07	39.09	704
	100	71.55	86.46	1916
	Total	64.98	65.77	7583
Total	**1**	65.19	46.05	2772
	10	87.54	84.26	7783
	11	65.89	47.11	2048
	20	78.06	78.21	1839
	21	64.24	41.18	1029
	100	78.70	71.99	6445
	Total	78.20	72.03	21916

Descriptive Statistics 2011				
Dependent Variable: MARKUP_trTURNOVER_trMATCOST				
Country ISO Code	**FINANCE6**	**Mean %**	**Std. Deviation**	**N**
ES	**1**	70.71	75.85	894
	10	94.29	114.64	2745
	11	70.17	62.76	679
	20	97.66	131.05	521
	21	67.80	59.29	184
	100	84.65	91.33	2451
	Total	85.70	99.90	7474
FR	**1**	95.02	72.88	445
	10	111.03	93.60	3765
	11	95.17	55.93	562
	20	111.77	81.98	216
	21	96.08	65.78	57
	100	100.98	80.01	1882
	Total	105.88	85.89	6927
IT	**1**	64.32	59.58	1660
	10	74.84	86.30	1620
	11	62.11	46.16	960
	20	76.03	70.23	759
	21	63.82	45.46	821
	100	78.57	100.85	1852
	Total	70.81	76.24	7672
Total	**1**	70.78	67.64	2999
	10	98.16	100.83	8130
	11	73.04	55.86	2201
	20	88.72	98.12	1496
	21	66.24	49.84	1062
	100	87.80	91.54	6185
	Total	86.86	88.98	22073

Descriptive Statistics 2014				
Dependent Variable: MARKUP_trTURNOVER_trMATCOST				
Country ISO Code	**Source of finance**	**Mean %**	**Std. Deviation**	**N**
ES	**1**	66.19	72.70	979
	10	95.69	128.30	2977
	11	70.88	67.37	743
	20	88.43	82.97	413
	21	83.03	109.76	137
	100	85.57	94.80	2489
	Total	85.71	104.94	7738
FR	**1**	92.62	59.32	407
	10	116.04	113.62	4263
	11	96.59	54.29	707
	20	120.41	92.70	58
	21	78.93	37.24	17
	100	105.68	80.59	1735
	Total	110.24	99.23	7187
IT	**1**	69.15	64.17	1355
	10	80.97	98.93	1785
	11	70.33	87.10	656
	20	84.49	134.26	977
	21	64.50	48.14	672
	100	78.82	91.09	2294
	Total	76.37	92.69	7739

Analysis of material score and turnover

	Material cost			Turnover		
	2008	**2011**	**2014**	**2008**	**2011**	**2014**
ES	305170	231344	204142	461435	363221	317767
FR	271693	272581	265274	484246	494886	485264
IT	465006	431906	367931	701017	665931	577864

Variation				
	Material cost		**Turnover**	
	2008-2011	**2011-2014**	**2008-2011**	**2011-2014**
ES	-24.19%	-11.76%	-21.28%	-12.51%
FR	0.33%	-2.68%	2.20%	-1.94%
IT	-7.12%	-14.81%	-5.00%	-13.22%

10. Regression analysis[52]

10.1. Regression Model of taxation

Following the test using in the model to see possible problem are displayed[53].

Serial correlation test

The Durbin-Watson, or DW, statistic is the traditional test for serial correlation. The Durbin-Watson statistic is under the null hypothesis no serial correlation. The Durbin-Watson could take values from 0 to 4 with the center in 2. So values near 0 meaning that the data are positive correlated; while values near 4 meaning that the data are negative correlated; so values near 2 are desirables.

Heteroskedasticity test

A statistical assumption for ordinary least squares (OLS) is that the error terms have a common variance for all observations; when it happens error terms are homoskedastic. On the other hand, when the variance of error vary is said to be heteroskedastic.

Residual normally distributed test

Jarque –Bara test

[52]

[53] For further explications of the tests refer to (Woolddridge, 2008), (Vogelvang, 2005), (Carrascal Arranz, et al., 2001)

SPAIN

Taxation

Hausman test

Correlated Random Effects - Hausman Test

Equation: TAX_1M

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	100.505845	12	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
GDP(-1)	-1.027862	-0.045325	0.776714	0.2649
INTERESTPAID	-0.424011	-0.220697	0.001230	0.0000
MCREDITORS	-0.016140	-0.023342	0.000005	0.0008
MNONCURRENT	-0.013767	-0.012204	0.000002	0.2838
MSHAREHOLDER	0.034036	0.025334	0.000002	0.0000
D2008	1177.003642	233.952315	1101395.1429 44	0.3689
D2009	-588.206259	-1769.364001	1878030.4095 79	0.3887
D2010	3344.690279	-3139.145656	265239.03421 2	0.6898
D2011	3301.046415	-2795.019305	262753.19377 7	0.3236
D2012	5193.859277	-4358.896160	90799.323235 243750.18377	0.0056
D2013	5661.204439	-4273.406239	4 346326.82850	0.0049
D2014	4576.741760	-3488.263409	3	0.0644

Cross-section random effects test equation:

Dependent Variable: TAXATION
Method: Panel Least Squares
Date: 06/04/16 Time: 20:13
Sample: 2006 2014 IF COUNTRYISOCODE_A=1
Periods included: 8
Cross-sections included: 842
Total panel (unbalanced) observations: 4555

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	26629.91	20043.43	1.328611	0.1841
GDP(-1)	-1.027862	0.884959	-1.161479	0.2455
INTERESTPAID	-0.424011	0.050011	-8.478354	0.0000
MCREDITORS	-0.016140	0.003476	-4.643214	0.0000
MNONCURRENT	-0.013767	0.001717	-8.019507	0.0000
MSHAREHOLDER	0.034036	0.001815	18.74944	0.0000
D2008	1177.004	1357.737	0.866886	0.3861
D2009	-588.2063	1625.925	-0.361767	0.7175
D2010	-3344.690	1015.382	-3.294022	0.0010
D2011	-3301.046	1025.834	-3.217915	0.0013
D2012	-5193.859	952.6377	-5.452082	0.0000
D2013	-5661.204	1024.221	-5.527324	0.0000
D2014	-4576.742	1068.320	-4.284054	0.0000

Effects Specification

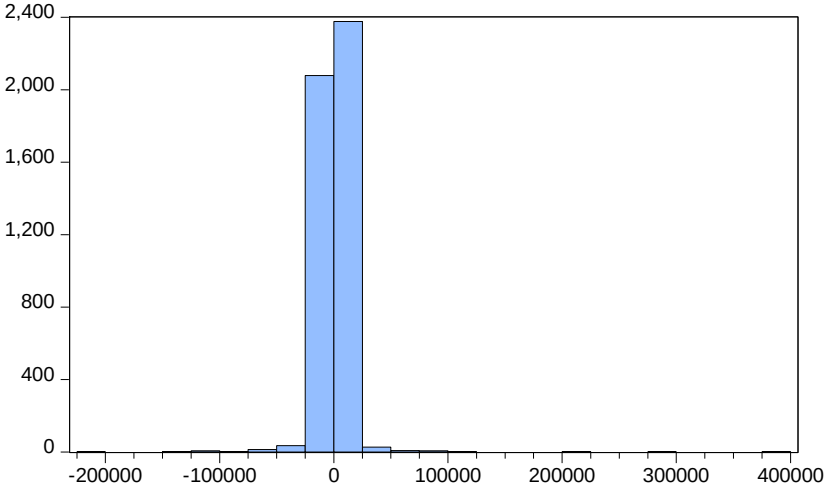
Cross-section fixed (dummy variables)

R-squared	0.531492	Mean dependent var	1446.419
Adjusted R-squared	0.423511	S.D. dependent var	18894.22
S.E. of regression	14345.79	Akaike info criterion	22.14765
Sum squared resid	7.62E+11	Schwarz criterion	23.35206
Log likelihood	-49587.28	Hannan-Quinn criter.	22.57178
F-statistic	4.922085	Durbin-Watson stat	2.063895
Prob(F-statistic)	0.000000		

Serial correlation test

In our case the DW is 2,06 meaning that there is no serial correlation in the residual

Residual normally distributed



Series: Standardized Residuals
Sample 2006 2014 IF COUNTRYISOCODE_A=1
Observations 4555

Mean	-1.28e-14
Median	124.7684
Maximum	394811.3
Minimum	-222418.1
Std. Dev.	12932.65
Skewness	7.532136
Kurtosis	294.9425
Jarque-Bera	16219089
Probability	0.000000

France

Taxation

Hausman test

Correlated Random Effects - Hausman Test
Equation: TAX_2M
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	144.725193	12	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
GDP(-1)	0.114083	-0.099973	0.021073	0.1403
INTERESTPAID	-0.034769	-0.095484	0.000134	0.0000
MCREDITORS	0.006418	0.010349	0.000003	0.0326
MNONCURRENT	-0.002853	0.002446	0.000000	0.0000
MSHAREHOLDER	0.005589	0.010618	0.000001	0.0000
D2008	1125.819869	-790.773963	38589.690760	0.0881

D2009	1781.916009	-1287.442230	95547.140568	0.1097
D2010	-389.595858	-300.931406	28115.670931	0.5970
D2011	-571.885494	-321.234748	87762.071570	0.3975
D2012	1807.855725	-1335.200657	162914.66256 2	0.2416
D2013	2445.596007	-1996.948120	201812.27361 6	0.3179
D2014	3063.460832	-1981.128316	242135.91766 7	0.0278

Cross-section random effects test equation:

Dependent Variable: TAXATION

Method: Panel Least Squares

Date: 06/04/16 Time: 20:23

Sample: 2006 2014 IF COUNTRYISOCODE_A=2

Periods included: 8

Cross-sections included: 474

Total panel (unbalanced) observations: 2771

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3520.373	4633.392	0.759783	0.4475
GDP(-1)	0.114083	0.152815	0.746548	0.4554
INTERESTPAID	-0.034769	0.023539	-1.477088	0.1398
MCREDITORS	0.006418	0.002979	2.154860	0.0313
MNONCURRENT	-0.002853	0.001361	-2.095893	0.0362
MSHAREHOLDER	0.005589	0.001151	4.855738	0.0000
D2008	-1125.820	642.8412	-1.751319	0.0800
D2009	-1781.916	689.4427	-2.584574	0.0098
D2010	-389.5959	633.2478	-0.615234	0.5385
D2011	-571.8855	687.6384	-0.831666	0.4057
D2012	-1807.856	746.0644	-2.423190	0.0155
D2013	-2445.596	782.9094	-3.123728	0.0018
D2014	-3063.461	809.8518	-3.782743	0.0002

Effects Specification

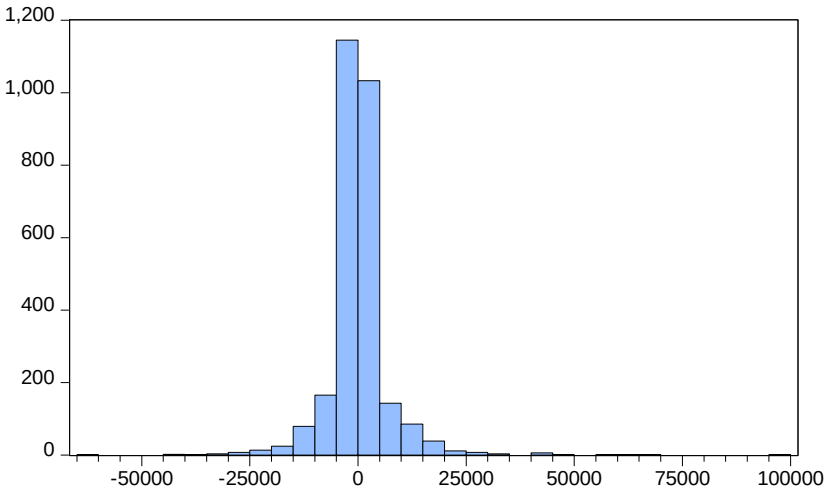
Cross-section fixed (dummy variables)

R-squared	0.751746	Mean dependent var	6673.449
Adjusted R-squared	0.699053	S.D. dependent var	14162.87
S.E. of regression	7769.558	Akaike info criterion	20.91175
Sum squared resid	1.38E+11	Schwarz criterion	21.95127
Log likelihood	-28487.23	Hannan-Quinn criter.	21.28717
F-statistic	14.26656	Durbin-Watson stat	1.534102
Prob(F-statistic)	0.000000		

Serial correlation test

In our case the DW is 1,50 meaning that there is no serial correlation in the residual

Residual normally distributed



Series: Standardized Residuals
Sample 2006 2014 IF COUNTRYISOCODE_A=2
Observations 2771

Mean	-1.63e-13
Median	-111.9092
Maximum	98054.01
Minimum	-60545.54
Std. Dev.	7056.665
Skewness	1.827811
Kurtosis	30.61458
Jarque-Bera	89587.42
Probability	0.000000

Italy

Taxation

Hausman test

Correlated Random Effects - Hausman Test
Equation: TAX_3M
Test cross-section random effects

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		111.087551	12	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
GDP(-1)	0.083402	0.144858	0.063210	0.8069
INTERESTPAID	0.008216	0.018440	0.000115	0.3402
MCREDITORS	0.003224	0.000847	0.000001	0.0058
MNONCURRENT	-0.001270	-0.001183	0.000000	0.8651
MSHAREHOLDER	0.019972	0.013082	0.000001	0.0000
D2008	2550.545107	-2470.994797	111518.17933 2	0.8117
D2009	3545.115005	-3495.140299	110916.70257 4	0.8807
D2010	3427.865841	-3219.093504	13980.574695	0.0775
D2011	3755.512250	-3579.447860	6105.411536	0.0242
D2012	5457.892469	-5301.356549	36631.179941	0.4134
D2013	4515.510497	-4406.384522	33486.291234	0.5509
D2014	4498.545163	-4594.298368	1253.700675	0.0068

Cross-section random effects test equation:
Dependent Variable: TAXATION
Method: Panel Least Squares
Date: 06/04/16 Time: 20:26
Sample: 2006 2014 IF COUNTRYISOCODE_A=3
Periods included: 8
Cross-sections included: 1000
Total panel (unbalanced) observations: 7636

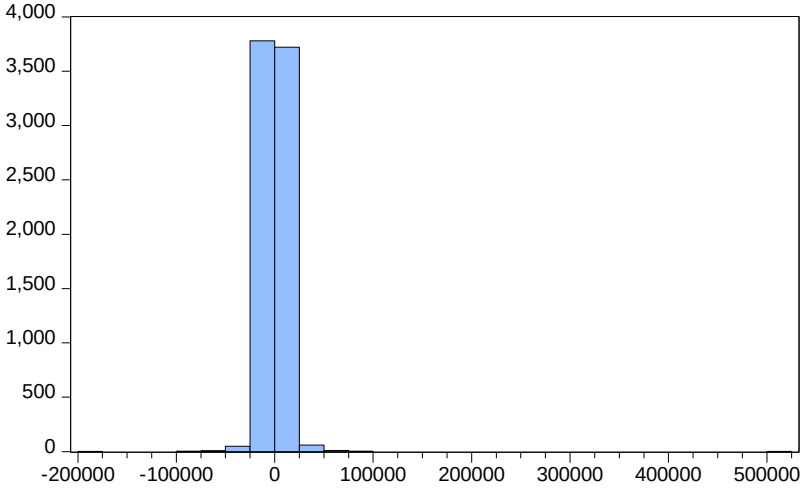
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6082.161	6743.381	0.901945	0.3671
GDP(-1)	0.083402	0.255442	0.326500	0.7441
INTERESTPAID	0.008216	0.019680	0.417469	0.6763
MCREDITORS	0.003224	0.001516	2.126830	0.0335
MNONCURRENT	-0.001270	0.000928	-1.368923	0.1711
MSHAREHOLDER	0.019972	0.001098	18.19330	0.0000
D2008	-2550.545	601.8127	-4.238105	0.0000
D2009	-3545.115	602.7170	-5.881890	0.0000
D2010	-3427.866	516.4334	-6.637576	0.0000
D2011	-3755.512	507.4009	-7.401469	0.0000
D2012	-5457.892	537.8491	-10.14763	0.0000
D2013	-4515.510	536.2030	-8.421271	0.0000
D2014	-4498.545	501.5793	-8.968762	0.0000

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.519040	Mean dependent var	8509.600
Adjusted R-squared	0.445632	S.D. dependent var	14748.95
S.E. of regression	10981.46	Akaike info criterion	21.56869
Sum squared resid	7.99E+11	Schwarz criterion	22.48853
Log likelihood	-81337.26	Hannan-Quinn criter.	21.88427
F-statistic	7.070666	Durbin-Watson stat	1.697435
Prob(F-statistic)	0.000000		

Serial correlation test

Durbin-Watson stat 1.70

Residual normally distributed



Series: Standardized Residuals
Sample 2006 2014 IF COUNTRYISOCODE_A=3
Observations 7636

Mean	3.35e-14
Median	-23.83300
Maximum	512310.2
Minimum	-182778.0
Std. Dev.	10228.59
Skewness	15.79821
Kurtosis	848.8738
Jarque-Bera	2.28e+08
Probability	0.000000

10.2. Regression Model of margin

Spain

Margin

Hausman test

Correlated Random Effects - Hausman Test

Equation: MARGIN_1M

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	174.099496	12	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
GDP(-1)	4.925628	2.691040	13.740064	0.5466
INTERESTPAID	0.714855	1.452517	0.004635	0.0000
MCREDITORS	0.027087	0.027441	0.000026	0.9443
MNONCURRENT	-0.064336	-0.046616	0.000013	0.0000
MSHAREHOLDER	0.073844	0.087524	0.000019	0.0016
D2008	314.214202	1284.080292	25336480.448 353	0.8472
D2009	6516.271993	-4016.246637	39787286.415 466	0.6919
D2010	3542.756771	-2272.900378	8956896.8098 22	0.6713
D2011	9451.082850	-8149.372037	8759299.1130 68	0.6601
D2012	-19111.324627	18699.105169	-5095438.0884 98	0.8551
D2013	-25184.079565	25580.999869	-6625467.9470 32	0.8774

	-22324.16181		- 8329215.2145	
D2014	1	22335.074422	43	0.9970

Cross-section random effects test equation:
Dependent Variable: MARGIN
Method: Panel Least Squares
Date: 06/04/16 Time: 20:28
Sample: 2006 2014 IF COUNTRYISOCODE_A=1
Periods included: 8
Cross-sections included: 940
Total panel (unbalanced) observations: 5630

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	34179.17	86200.60	0.396507	0.6917
GDP(-1)	4.925628	3.768222	1.307149	0.1912
INTERESTPAID	0.714855	0.192115	3.720979	0.0002
MCREDITORS	0.027087	0.014434	1.876647	0.0606
MNONCURRENT	-0.064336	0.006615	-9.725282	0.0000
MSHAREHOLDER	0.073844	0.007361	10.03218	0.0000
D2008	314.2142	12220.21	0.025713	0.9795
D2009	-6516.272	12817.84	-0.508375	0.6112
D2010	-3542.757	11505.49	-0.307919	0.7582
D2011	-9451.083	11499.80	-0.821848	0.4112
D2012	-19111.32	11336.82	-1.685775	0.0919
D2013	-25184.08	11402.00	-2.208743	0.0272
D2014	-22324.16	11501.00	-1.941063	0.0523

Effects Specification

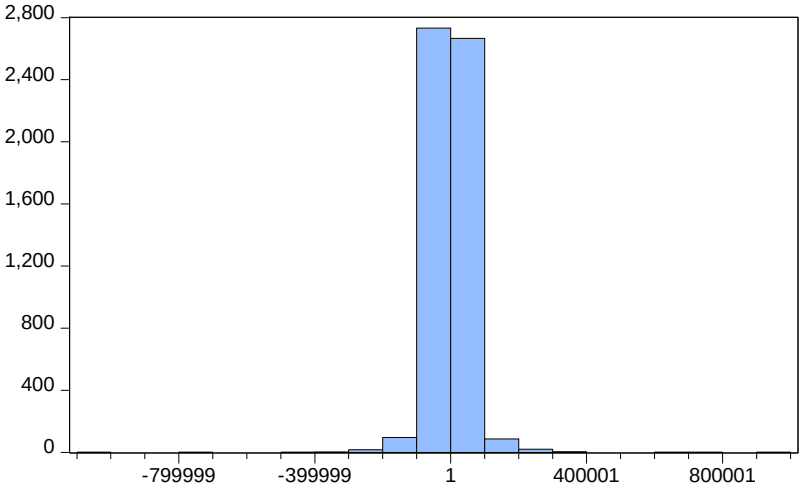
Cross-section fixed (dummy variables)

R-squared	0.830234	Mean dependent var	142206.3
Adjusted R-squared	0.795722	S.D. dependent var	122062.1
S.E. of regression	55168.50	Akaike info criterion	24.82712
Sum squared resid	1.42E+13	Schwarz criterion	25.94921
Log likelihood	-68936.35	Hannan-Quinn criter.	25.21804
F-statistic	24.05641	Durbin-Watson stat	1.383603
Prob(F-statistic)	0.000000		

Serial correlation test

Durbin-Watson stat 1.38

Residual normally distributed test



Series: Standardized Residuals	
Sample 2006 2014 IF COUNTRYISOCODE_A=1	
Observations 5630	
Mean	6.20e-14
Median	-290.2156
Maximum	979168.7
Minimum	-1031600.
Std. Dev.	50292.78
Skewness	0.217243
Kurtosis	89.66688
Jarque-Bera	1762034.
Probability	0.000000

France

Margin

Hausman test

Correlated Random Effects - Hausman Test

Equation: MARGIN_2M

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	35.769142	12	0.0004

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
GDP(-1)	-0.764294	-1.823290	1.418798	0.3740

INTERESTPAID	0.514214	0.471529	0.005164	0.5525
MCREDITORS	0.093560	0.133033	0.000121	0.0003
MNONCURRENT	0.040748	0.051003	0.000011	0.0020
MSHAREHOLDER	0.115608	0.130820	0.000021	0.0009
D2008	1098.579728	-897.588404	2339078.7540 81	0.1918
D2009	5247.794092	-2755.340117	6052341.8483 69	0.3110
D2010	2016.474099	3264.356797	1575081.0843 68	0.3201
D2011	10801.21593 2	12438.614839	5480022.0109 92	0.4843
D2012	11041.35965 3	14317.428452	10461084.402 342	0.3111
D2013	4760.547119	7924.746283	12940455.598 055	0.3791
D2014	10017.06374 7	16098.420019	15550592.959 516	0.1230

Cross-section random effects test equation:
Dependent Variable: MARGIN
Method: Panel Least Squares
Date: 06/04/16 Time: 20:31
Sample: 2006 2014 IF COUNTRYISOCODE_A=2
Periods included: 8
Cross-sections included: 474
Total panel (unbalanced) observations: 2762

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	318664.2	41604.93	7.659289	0.0000
GDP(-1)	-0.764294	1.370843	-0.557535	0.5772
INTERESTPAID	0.514214	0.211673	2.429283	0.0152
MCREDITORS	0.093560	0.026613	3.515635	0.0004
MNONCURRENT	0.040748	0.012150	3.353854	0.0008
MSHAREHOLDER	0.115608	0.010286	11.23912	0.0000
D2008	-1098.580	5737.020	-0.191490	0.8482
D2009	-5247.794	6153.193	-0.852857	0.3938
D2010	2016.474	5658.225	0.356379	0.7216

D2011	10801.22	6135.728	1.760381	0.0785
D2012	11041.36	6660.272	1.657794	0.0975
D2013	4760.547	6983.611	0.681674	0.4955
D2014	10017.06	7223.630	1.386708	0.1657

Effects Specification

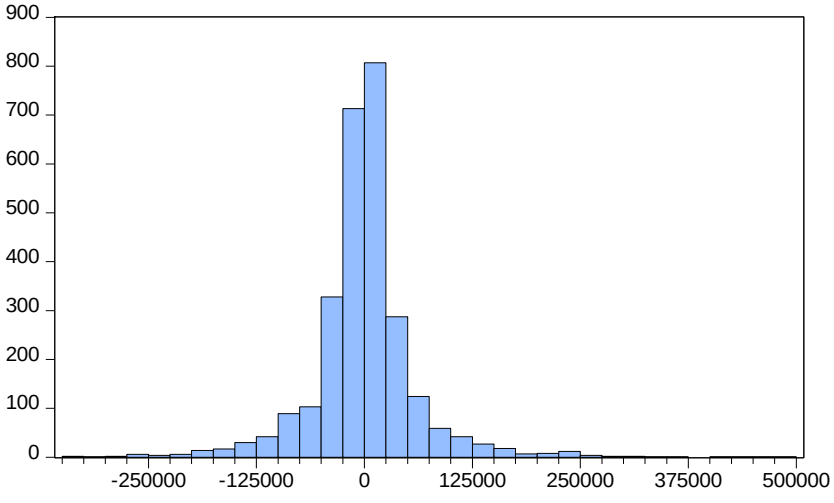
Cross-section fixed (dummy variables)

R-squared	0.895903	Mean dependent var	335366.1
Adjusted R-squared	0.873721	S.D. dependent var	194912.1
S.E. of regression	69263.50	Akaike info criterion	25.28761
Sum squared resid	1.09E+13	Schwarz criterion	26.32994
Log likelihood	-34436.19	Hannan-Quinn criter.	25.66411
F-statistic	40.38822	Durbin-Watson stat	1.088383
Prob(F-statistic)	0.000000		

Serial correlation test

Durbin-Watson stat 1.09

Residual normally distributed test



Series: Standardized Residuals
Sample 2006 2014 IF COUNTRYISOCODE_A=2
Observations 2762

Mean	0.000000
Median	0.000000
Maximum	488517.7
Minimum	-341148.4
Std. Dev.	62886.49
Skewness	0.626168
Kurtosis	11.62514
Jarque-Bera	8741.888
Probability	0.000000

Italy

Margin

Hausman test

Correlated Random Effects - Hausman Test

Equation: MARGIN_3M

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	44.021898	12	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
GDP(-1)	-0.529213	3.777913	3.243542	0.0168
INTERESTPAID	1.291587	1.396263	0.002864	0.0505
MCREDITORS	0.094610	0.088957	0.000013	0.1145
MNONCURRENT	0.032740	0.036151	0.000005	0.1256
MSHAREHOLDER	0.158187	0.143960	0.000016	0.0004
D2008	10284.977318	4803.403040	5698293.011159	0.0217
D2009	7848.867136	2666.753103	5644011.463713	0.0292
D2010	14624.741989	17190.715316	656123.454720	0.0015
D2011	9897.698225	9440.868357	249724.792028	0.3606
D2012	2855.797495	333.529916	1803082.220175	0.0603
D2013	2091.959306	-4602.553597	1638644.031943	0.0498
D2014	9312.741817	-9379.099097	26951.397938	0.6861

Cross-section random effects test equation:

Dependent Variable: MARGIN

Method: Panel Least Squares

Date: 06/04/16 Time: 20:33
Sample: 2006 2014 IF COUNTRYISOCODE_A=3
Periods included: 8
Cross-sections included: 1000
Total panel (unbalanced) observations: 7604

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	187198.2	50811.58	3.684163	0.0002
GDP(-1)	-0.529213	1.925704	-0.274815	0.7835
INTERESTPAID	1.291587	0.156027	8.277980	0.0000
MCREDITORS	0.094610	0.011432	8.275732	0.0000
MNONCURRENT	0.032740	0.007091	4.616937	0.0000
MSHAREHOLDER	0.158187	0.008319	19.01531	0.0000
D2008	10284.98	4534.480	2.268171	0.0234
D2009	7848.867	4538.185	1.729517	0.0838
D2010	14624.74	3892.044	3.757599	0.0002
D2011	9897.698	3821.716	2.589857	0.0096
D2012	2855.797	4049.104	0.705291	0.4807
D2013	-2091.959	4038.900	-0.517953	0.6045
D2014	-9312.742	3779.013	-2.464332	0.0138

Effects Specification

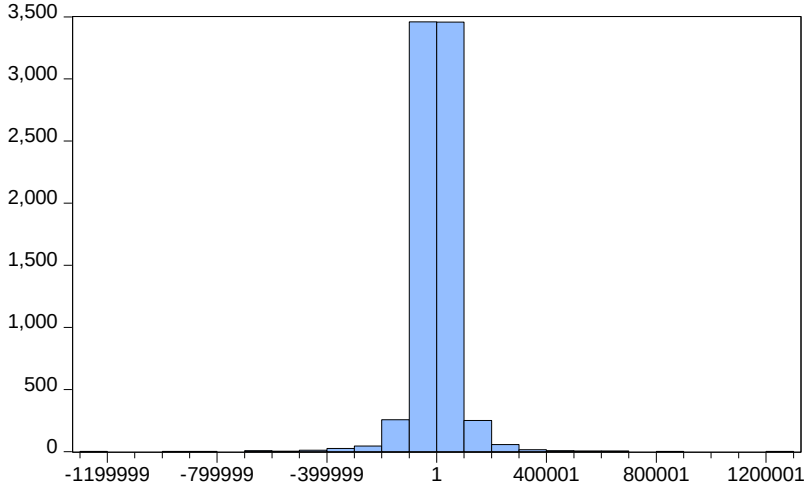
Cross-section fixed (dummy variables)

R-squared	0.836647	Mean dependent var	233211.0
Adjusted R-squared	0.811594	S.D. dependent var	190172.0
S.E. of regression	82545.59	Akaike info criterion	25.60345
Sum squared resid	4.49E+13	Schwarz criterion	26.52660
Log likelihood	-96332.31	Hannan-Quinn criter.	25.92023
F-statistic	33.39499	Durbin-Watson stat	1.278902
Prob(F-statistic)	0.000000		

Serial correlation test

Durbin-Watson stat 1.28

Residual normally distributed test



Series: Standardized Residuals	
Sample 2006 2014 IF COUNTRYISOCODE_A=3	
Observations 7604	
Mean	8.63e-13
Median	-25.22751
Maximum	1270673.
Minimum	-1288369.
Std. Dev.	76861.70
Skewness	-0.450418
Kurtosis	43.06947
Jarque-Bera	508952.9
Probability	0.000000