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**Analysing the Tax Burden of Households by Regions During the Crisis of 2009**

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## **“Analysing the tax burden by regions of Households in Italy during the crisis of 2009”**

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**Abstract** The fiscal system influence the income distribution and the well-being of households, because of the taxes deduct income and consequently depress the consumption. The crisis started in 2008, was coincident with the needs of countries to preserve the net borrowing, not allowing to realise an anti-cyclical fiscal policy in order to support the households capacity to consume and save. However, during the crisis, the Italy adopted some measures to offset the effects of the crisis. A measure in fiscal system can hit the households or the enterprises, depending of which type of taxes is interested in it. It's obviously that an increase in VAT has an effect on consumptions of households, while a deduction of corporate tax helps the enterprises. Moreover in Italy the tax burden is very different among regions because of the different economic structure of each region. Estimating at a regional level the taxes levied by GG is not trivial. The main problem regards the taxes collected by Central Government because of the place where the taxes are collected isn't linked to tax-base. In order to calculate the tax burden in each region, it decided to follow the territorial criteria of real taxable base: a tax collected by Central Government is attributed to the region where the economic action behind the revenue took place. An useful information is to distinguish for each regions the tax burden of households according to economic functions (taxes on consumption, taxes on labour or taxes on capital) to allows to identify the structural difference between the regions and where the effect of crisis had a largest impact . This paper provide the results for households among the regions. It present the main difference during the crisis and the change in tax ratio linked to Gross Domestic Product and Disposable income.

*\* The views expressed in the articles are those of the authors and don't involve the responsibility of National Statistical Office of Italy.*

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## *Introduction*

The crisis we observed in recent years seems not finished yet and the effects are spreading in all countries of the Euro-zone. The consequences of the crisis are large and affect all sectors of the economy. In the Euro-zone the main recipe to react to the crises was based mainly on adopting a strictness policy, characterised by monitoring three key factors: the net borrowing, the debt and the price's index. During the crisis to realise a fiscal policy anti-cyclical in order to support the households was difficult.

In this context Italy had a heavy duty, because of the highest level of debt in Euro-zone (after the Greece). For this reason, Italy budget has to face each year a huge level of expenditures for interests on debt. In order to respect the Maastricht parameters, the Government adopted so far a policy based on two axes: cutting the expenditures and managing the fiscal policy, with a direct impact on households and on corporations. A measure in fiscal system can hit the households or the enterprises, depending of which type of taxes is interested in it. It's obvious that an increase in VAT has an effect on households consumption, while a deduction of corporate tax helps the enterprises.

Moreover in Italy the tax burden is very uneven among regions because of the different economy. The income of households shows a significant disparity among regions, because of the wealth of the region, of different incidence of number of persons employed on total population, of different wage levels, of different sector of economic activities involved in production etc. The effects of the crisis can be therefore unevenly distributed among the regions and the action of Government can enlarge the tax burden of households or can reduce the disparity.

However estimating at a regional level the taxes levied by the General Government (GG) is not trivial. The main problem concerns the taxes collected by Central Government since the place where the taxes are collected is not linked to tax-base. In this paper we focus on tax burden of households and on his territorial effects, presenting a methodology to decompose at a regional level the taxes collected by the Central Government based on the concept of tax base.

### *1. The sector accounts: the role of Government and the Households*

The accounting framework of European System of Accounts (ESA95) allows to study the flows between all sectors operating in the economy. In this paper we focus our attention on two sectors: the General Government and the Households. The framework of sector accounts provides a complete description of the flows occurred between the General Government and the Households.

The main objective of the General Government is to provide services for Households final consumption and to redistribute income and wealth, and raise mainly funds by the taxes<sup>3</sup>. From the point of view of Households, in the framework of sector accounts, taxes affect them in the phase of production and in the phase of redistribution of income.

Firstly it's necessary to recall some important definition of taxes according the ESA95, which distinguishes between Taxes on production (D2) and Taxes on income and the wealth (D5)<sup>4</sup>.

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<sup>3</sup> In this paper we refer to the definition of taxes according ESA95.

<sup>4</sup> There are also other taxes "tax on capital", which consist of taxes levied at irregular and very infrequent intervals on the values of the assets or net worth owned by institutional units or on the value of assets transferred between

The taxes on production consist of compulsory unrequited payments, levied by the General Government, in respect of the production and imports of goods and services, the employment of labour, the ownership of land, building and other assets used in production. The current taxes on income, wealth, etc.. cover all compulsory, unrequited payments levied periodically by the GG on the income and wealth of institutional units.

However it's necessary to underline that some taxes, paid in the production by the corporations, have their tax-base in the phase of consumption: without this phase in fact the tax wouldn't been generated. For instance the excise on tobacco or the excise on oil mineral are taxes paid in advance from the producers, but the taxes is paid really at the time of consumption.

Moreover there are some case where, according to who is the taxpayer, the tax could be directly linked to households consumption or remain treated as intermediate consumption. For instance the excise on oil mineral could be split in these two taxpayers: if the car is used by the household for own use, this is treated as taxes on consumption; if the car is owned by a company, the car is used for the activity of corporations and the acquisition of oil is treated as an intermediate consumption.

However it's difficult to estimate these shares. In this paper we proposed a simplified treatment by applying the weights resulting from the analysis of USE table, which reports the distribution of flows by product between intermediate consumptions and final consumptions. The share on final consumptions can be used to determine the burden of households. This hypothesis is applied in particular for the product "oil mineral" and "electricity". For other taxes as register tax, insurance tax, and other minors taxes we adopted a simplified treatment with the hypothesis that the 50% is paid for consumption purpose (households). The hypothesis of 50% is clearly a simplification, but the impact is modest because of the amounts of these taxes (less than 5% with respect the total burden of households).

The following table summarizes the taxes paid by households according to the percentage of tax burden on households<sup>5</sup>.

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institutional units as a results of legacies, gifts *inter vivos* or other transfers. We didn't treat these kind of taxes which occur in the accumulation account, while we stopped at the use of disposable income accounts.

<sup>5</sup> The reader can observe that the stamp duty misses from this list. The reason is due to the lack of source to distribute this tax by region.

**Table 1. List of taxes paid from the households**

ESA classification	Name of tax	Tax burden on households
D51	Personal income tax	100%
D51	Withholding tax on income from deposits paid by households	100%
D51	Municipal capital gains tax on buildings paid by households	100%
D51	Withholding tax on company dividends paid by households	100%
D51	Tax on invested savings	100%
D51	Taxes on winnings from lottery or gambling	100%
D59	Motor vehicle duty paid by household	100%
D59	Driving licence tax	100%
D2	Value added tax	100%
D2	Excise duty on beer	100%
D2	Excise duty on electricity	Weight of USE table
D2	Local surcharge on electricity duty	Weight of USE table
D2	Excise on oil mineral	Weight of USE table
D2	Excise duty on tobacco	100%
D2	Excise duty on spirits	100%
D2	Registration tax	50%
D2	Taxes on lotteries, gambling and betting	100%
D2	Mortgage taxes and land registry duties	50%
D2	Duty in lieu of registration and stamp duties (excl. Insurance tax)	50%
D2	Surcharges accruing on cadastral acts	50%
D2	Taxes on insurance premiums	50%
D2	Provincial tax on motor vehicle insurances	50%
D2	Municipal real estate tax (ICI) - Part on dwellings	100%

## 2. *The allocation of taxes according to economic function*

The exercise of breaking down the taxes according to the tax-base is an exercise that European Commission carried out since 2003. The idea is to analyse the evolution of taxes according to the main economic function: consumption, labour and capital. The separation of taxes by type of tax base inevitably lead to simplifications and somewhat hybrid categories.

A number of borderline cases and approximations had to be taken into account to arrive at a final classification of taxes. Tax data are not always recorded in sufficient detail to identify individual taxes and allocate them to the corresponding tax-base categories. Moreover some taxes are calculated by using a combination of tax-base.

For instance the personal income tax is calculated with a rate applied to the summary of all incomes received for many reasons (income raising from labour, income raising from holding financial or real activities). The tax paid is the result of different income and therefore a split of this tax according the economic function is necessary.

The contribution of each National Statistical Office is to provide a detailed national tax list according to the economic function. The table provided is consistent with the ESA table 9 (table on taxes and social contribution) and therefore with the data reported for the report of Government Finance Statistics.

The following table summarizes the list of tax paid from the households according to the economic function.

**Table.2 -List of taxes paid by households by economic function**

ESA classification	Name of tax	Economic function
D51	Personal income tax	To be Split
D51	Withholding tax on income from deposits paid by households	Capital
D51	Municipal capital gains tax on buildings paid by households	Capital
D51	Withholding tax on company dividends paid by households	Capital
D51	Tax on invested savings	Capital
D51	Taxes on winnings from lottery or gambling	Capital
D59	Motor vehicle duty paid by household	Consumption
D59	Driving licence tax	Consumption
D2	Value added tax	Consumption
D2	Excise duty on beer	Consumption
D2	Excise on oil mineral	Consumption
D2	Excise duty on electricity	Consumption
D2	Local surcharge on electricity duty	Consumption
D2	Excise duty on tobacco	Consumption
D2	Excise duty on spirits	Consumption
D2	Registration tax	Capital
D2	Taxes on lotteries, gambling and betting	Consumption
D2	Mortgage taxes and land registry duties	Capital
D2	Duty in lieu of registration and stamp duties (excl. Insurance tax)	Capital
D2	Surcharges accruing on cadastral acts	Capital
D2	Taxes on insurance premiums	Capital
D2	Provincial tax on motor vehicle insurances	Capital
D2	Municipal real estate tax (ICI) - Part on buildings	Capital

The detail of split between labour and capital for the personal income taxes is derived from the publication Taxation Trend (table 3). In this volume the tax is split in the following categories: taxes on employed, taxes on self-employed, taxes on capital income and taxes on pension and social transfer. For each category an economic function is identified. There are some cases where the identification is not univocal and a further correction is necessary. In order to sum up separately in the category of labour and capital, we did the following assumption: the taxes paid by the employee are linked to the work; the taxes paid by the self-employed are split between labour and capital according to the weights indicated by the ministry of finance; the capital income are linked to the economic function of capital; finally the social transfer and pensions are split according to the composition of income of this category, reported in the declarations data (source: Ministry of Finance).

**Table.3 -Personal Income Tax- Italy**

	Economic function	2005	2006	2007	2008	2009
Employed	L	54.7	53.8	53.4	54.6	54.2
Self employed	L / K	17.7	18.8	19.6	18.1	16.6
Capital income	K	6.1	6.1	6.3	6.3	6.4
Social transfer and pensions	L/K	21.6	21.4	20.7	21	22.8
Elaboration of the author						
<b>Labour</b>	<b>L</b>	<b>87.9</b>	<b>87.7</b>	<b>87.3</b>	<b>87.6</b>	<b>87.5</b>
<b>Capital</b>	<b>K</b>	<b>12.2</b>	<b>12.4</b>	<b>12.7</b>	<b>12.4</b>	<b>12.5</b>

### 3. *The methodology applied to allocate taxes by regions*

The analysis of tax burden of households at regional level is complicate mainly for two reasons: availability of sources to allocate by region the taxes; the domestic and the “resident” concepts and their implication on allocation of taxes.

The problem of availability of source arises when we are interested to distribute the taxes by region. In general the Government can levy taxes at central level or at local level. In Italy the Central Government is the main collector of taxes, and has the power to settle the majority of tax (tax base, rate, deadline for payment, etc.). The taxes collected from the Local Government concern the taxes on real estate and some additional rate on energy, or on personal income taxes. The main problem regards the taxes collected by Central Government because the place where the taxes are collected isn’t linked to tax-base.

In order to calculate the tax burden in each region, it is decided to follow the territorial criteria of real taxable base: a tax collected by Central Government is attributed to the region where the economic action behind the revenue took place. What really counts is the economic deed which gave rise to the taxation. In the case of Local Government the place where the tax is collected is coincident with the place where the economic action took place For Central Government, an example could be represented by the soldiers: they are spread on the full Italian territory, but only few budget offices are in charge of paying the wages and also the tax on wages. In this case, the use of the criteria of place of payments could introduce a bias in the data. A solution to distribute the tax on wages in this case is based on the regional distribution of compensations of employees of soldiers.

A useful information source is represented by the studies carried out from Ministry of Finance<sup>6</sup>, which disaggregates by region the taxes collected by Central Government by using the approach mentioned above. This exercise concerns several taxes (personal income taxes, electricity energy, lotteries, excise on oil mineral, excise on tobacco, etc.).

The regionalisation of the personal income tax is carried out for each component of income: tax on employees and self-employed and payments for self-assessment (“autoliquidazione”). The need to regionalize personal income taxes is due to the fact that the tax on wages and salaries is paid by the employers, which could be located in one region different from the residence of the households. In this case the Ministry of Finance corrects the data by using the declarations data which reports the taxes paid by the employees according to their residence.

<sup>6</sup> Ministry of Finance: “La regionalizzazione delle entrate erariali”

The taxes on financial activities are regionalised on the base on the stock of financial activities owned by households<sup>7</sup>: for instance the withholding tax on income on deposit and the withholding tax on income on securities other than shares are allocated by using the regional distribution of each financial asset<sup>8</sup>.

With reference to the taxes on production (indirect taxes), the taxes collected from Central Government, as mentioned above, are distributed by region according to the source of Ministry of Finance. The taxes collected by Local Government are distribute by region according to source of the financial statements of regions, municipalities and other entities acting at local level.

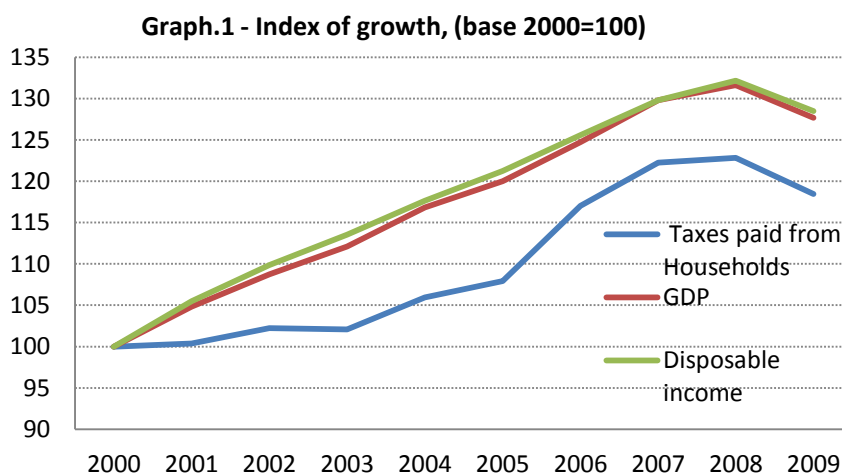
Another issue at regional level arises when we wish to conciliate the concept of tax-burden of households and the allocation of taxes at regional level. The first one refer to the residents in the region, while the taxes paid in one region may refer to the concept of domestic (taxes paid on the territory, by residents and non-resident). This happens for the taxes on production (ESA code- D2), while the taxes on income and wealth are, with proper integration, directly linked to the residence of households. This is the reason why in the regional accounts of households the tax burden is calculated specifically for taxes on income and wealth. At regional level is impossible to move from the concept of domestic to the residents consumption (only consumption on the territory is estimated), and therefore the taxes allocated by proxy variables based on consumption could introduce a bias, mainly for the regions where there is substantial difference between the two concepts (namely regions with considerable touristic flows).

Therefore in order to protect our analysis from this effect, we have proposed a double presentation of the results: the total taxes paid by households and the total taxes net of taxes D2 linked to the economic function on consumption (hereinafter “total tax net”) which can be paid from not only the resident.

However, the tax on electricity, as tax on consumption, is an exception, because it is paid just by the residents and therefore are included also in the second item “total taxes net”.

#### 4. Results

The Graph 1 compares the evolution of main aggregate (GDP, disposable income and taxes paid by households), and shows that the taxes paid by households are increased less with respect to the Gross Domestic Product and to the disposable income.



<sup>7</sup> The methodology of calculating the taxes on income and wealth paid by the households is explained in the manual “The national economic accounts by institutional sector: news estimates according ESA 95”, ISTAT: Metodi e Norme n.23, 2005

<sup>8</sup> Source: Banca d’Italia



As explained in the previous paragraph, taxes paid by households by regions are determined from the amount of taxes on income and wealth and from the amount of taxes on “production”, where the real “taxpayer” is the household. The following table shows the tax burden of households on GDP. There is a substantial stability of the burden in ITALY ( 21.7 pp on 2007 and 21.5 pp on 2009), with small difference by geographical area. This conclusion is confirmed also in the case on taxes on disposable income.

**Table.4 -Taxes paid by households**

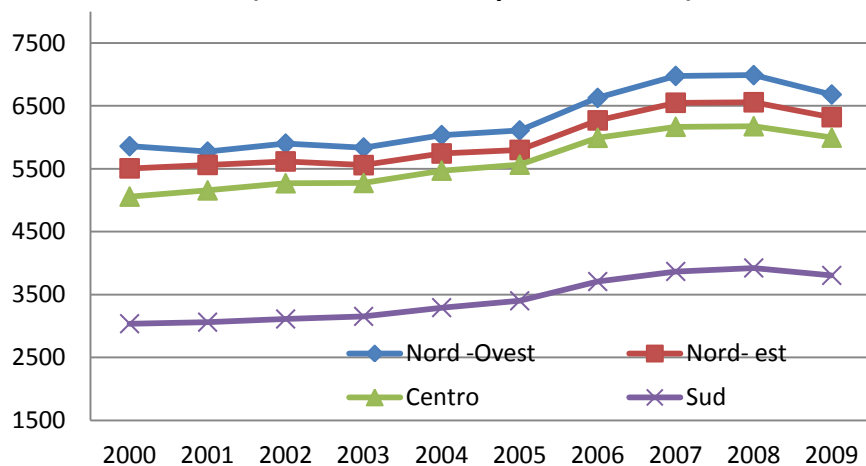
	Taxes on GDP				Taxes on disposable income			
	2007	2008	2009	Difference 2007-2009	2007	2008	2009	Difference 2007-2009
Piemonte	22.5	22.2	22.0	-0.6	31.2	30.3	30.3	-0.9
Valle d'Aosta	25.2	24.2	24.5	-0.7	39.3	37.8	38.4	-0.9
Lombardia	21.8	21.8	21.7	-0.1	34.0	34.1	33.9	0.0
Trentino Alto Adige	20.7	20.4	19.9	-0.8	42.0	43.3	42.0	0.0
Veneto	20.4	20.2	20.2	-0.3	31.5	30.4	30.2	-1.3
Friuli Venezia Giulia	21.5	21.7	21.6	0.1	30.6	29.9	29.9	-0.8
Liguria	24.3	24.1	23.7	-0.6	31.9	31.8	31.7	-0.2
Emilia Romagna	21.8	21.7	21.8	-0.1	31.3	31.2	31.4	0.1
Toscana	21.6	21.5	21.0	-0.6	30.7	30.6	30.0	-0.7
Umbria	22.4	22.1	22.0	-0.4	30.0	29.6	29.1	-1.0
Marche	20.6	20.3	20.1	-0.5	28.9	28.5	28.1	-0.8
Lazio	21.4	21.0	20.9	-0.5	33.7	33.1	32.9	-0.8
Abruzzo	21.8	21.8	22.0	0.2	30.9	30.5	30.4	-0.5
Molise	22.4	21.7	21.5	-0.9	29.5	29.2	28.6	-0.9
Campania	22.2	22.4	22.3	0.2	29.6	29.5	29.1	-0.4
Puglia	22.2	22.5	22.5	0.3	28.5	28.7	28.3	-0.2
Basilicata	19.8	19.6	19.7	-0.1	26.1	25.8	25.6	-0.5
Calabria	20.6	20.8	20.1	-0.6	26.6	26.7	25.7	-0.9
Sicilia	22.3	22.3	22.1	-0.1	29.6	29.4	28.7	-1.0
Sardegna	21.0	21.3	21.3	0.3	29.4	29.9	29.4	0.0
<b>ITALIA</b>	<b>21.7</b>	<b>21.6</b>	<b>21.5</b>	<b>-0.2</b>	<b>31.4</b>	<b>31.1</b>	<b>30.8</b>	<b>-0.5</b>
Nord –Ovest	22.2	22.1	22.0	-0.3	33.0	32.8	32.7	-0.3
Nord- est	21.1	20.9	20.9	-0.2	32.0	31.5	31.5	-0.6
Centro	21.4	21.1	20.9	-0.5	31.8	31.4	31.1	-0.7
Sud	21.9	22.0	21.9	0.0	29.1	29.1	28.5	-0.5
Centro-Nord	21.7	21.5	21.3	-0.3	32.4	32.0	31.9	-0.5

The table 5 reports the trend of the total taxes on disposable income during the years 2000-2009. As expected, we notice the reduction of the index in Italy and by macro-area. The reduction is higher in the Centre-North (the ratio changed from 33.0 to 31.9, and therefore is equal to -1.1 ) with respect to the South (the reduction from 2000 to 2009 is equal to -0.5). This result confirms the process of convergence also highlighted in the previous table. However by observing the table according to the economic function, we notice some differences concerning the evolution of taxes. The increase of taxes on labour are located mainly in the region of North. The taxes on consumptions and on capital have decreased with a marked reduction especially in the Centre-North in the case of taxes on capital. If we focus our attention on the recent three years, for the taxes on consumptions we notice a reduction more marked in the South with respect to the Centre-North. An explanation of this trend is due to the fact that, with difference to the other taxes (correlated directly to the income, as the taxes on labour, or proportional to the income, as the taxes on capital), the taxes on consumptions are correlated only indirectly to the income. A possible explanation could be that the households in South regions, less rich with respect to the North, decided to face the crisis by contracting their consumptions more than the reduction of income.

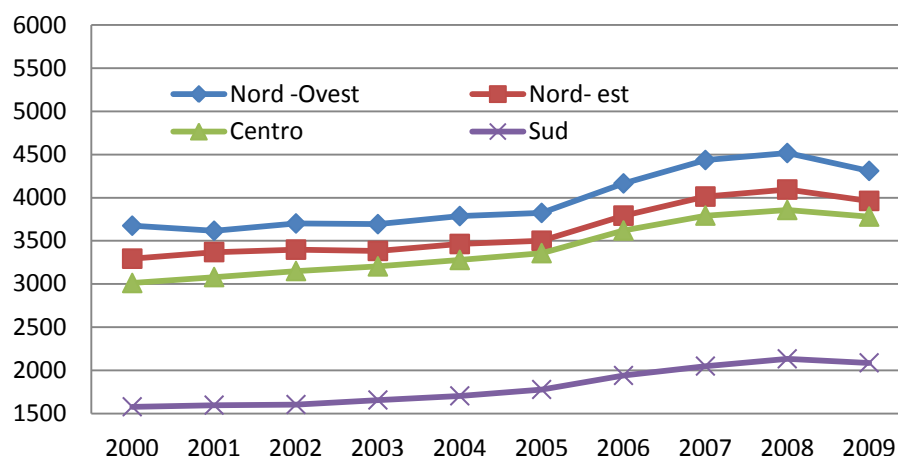
Table.5 - Taxes paid by households according the economic function												
Total taxes (% on disposable income)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Diff '00-'09	Diff '07-'09
Centro-Nord	33.0	31.5	31.0	30.1	30.3	30.2	31.8	32.4	32.0	31.9	-1.1	-0.5
Sud	29.0	27.5	26.8	26.4	27.1	27.2	28.7	29.1	29.1	28.5	-0.5	-0.5
ITALY	32.0	30.4	29.9	29.1	29.4	29.3	30.8	31.4	31.1	30.8	-1.1	-0.5
Taxes on labour (% on disposable income)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Diff '00-'09	Diff '07-'09
Centro-Nord	13.3	13.7	13.5	13.3	13.2	13.2	13.6	14.1	14.6	14.7	1.4	0.6
Sud	10.7	10.2	9.7	10.0	10.0	10.2	10.6	10.8	11.4	11.3	0.6	0.4
ITALY	12.6	12.7	12.5	12.4	12.3	12.4	12.7	13.2	13.7	13.7	1.1	0.6
Taxes on consumptions (% on disposable income)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Diff '00-'09	Diff '07-'09
Centro-Nord	12.9	12.2	12.0	11.5	11.8	11.7	12.2	12.2	11.7	11.6	-1.3	-0.6
Sud	14.0	13.2	13.0	12.6	13.1	13.0	13.7	13.7	13.3	12.9	-1.1	-0.8
ITALY	13.2	12.5	12.3	11.7	12.1	12.0	12.6	12.5	12.1	11.9	-1.3	-0.6
Taxes on capital (% on disposable income)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Diff '00-'09	Diff '07-'09
Centro-Nord	6.8	5.6	5.5	5.3	5.4	5.3	5.9	6.1	5.7	5.5	-1.3	-0.6
Sud	4.4	4.1	4.1	3.9	4.1	4.0	4.4	4.6	4.4	4.4	0.0	-0.2
ITALIA	6.2	5.2	5.1	4.9	5.0	4.9	5.5	5.7	5.4	5.2	-1.0	-0.5

Graph2 shows instead the trend of tax burden per inhabitant by geographic area. For each area we observe an increase with respect to the year 2000, and the ratio increased until 2008. In 2009 a big decrease concerned all the area. The same trend is observed in the graph.3, and consequently we can deduce that the taxes on consumptions did not change the trend of each area.

**Graph.2 Taxes by inhabitant by geografic area  
(thousand of euro per inhabitant)**



**Graph.3 Total taxes net by geografic area  
( thousand of euro per inhabitant)**



The following table 6 shows the amount of tax paid by each resident (Esa code D2 + ESA code D5) in each region with respect to the average national level (Italy =100). The strong evidence is the decreasing of gap between regions situated in the North (that display values above the national average) and regions situated in the South (that display values below the national average). The southern regions show an increase of the index with respect to the regions of the north. The range between Centre-North and South was equal 53.7 in the year 2000 (calculated as the difference between the highest value, 119.4, and the lowest, 65.7) reduced to 46.9 in the year 2009. We notice that an ongoing process of reduction is described since 2000 and is kept also in the last years. The right side of the table reports the same data depurated from the taxes which are allocated on consumption. In the year 2000 we can observe that the Centre-North is equal to 123.8, while the South is equal 58, with a range equal to 65.8. It's worth to notice that the larger range in this second part of table is a result which could be expected because of the features of taxes on consumption which are regressive and therefore contribute to reduce the progressivity of fiscal system. However also in the case of tax burden net of taxes on consumption is possible to observe a reduction the last three years, and the level of this range is 57.6 in 2009 (in 2007 the same difference was equal to 61). Therefore also in this case an acceleration of reduction of this index is observed in these last years.

**Table.6 - Taxes by inhabitant by region (ITALY=100)**

	Total taxes				Total tax net			
	2000	2007	2008	2009	2005	2007	2008	2009
Piemonte	116.4	114.0	112.6	110.8	125.1	120.2	119.2	116.9
Valle d'Aosta	150.8	149.8	145.9	148.8	160.7	156.1	150.1	152.7
Lombardia	133.5	128.9	128.8	127.7	150.1	143.1	142.3	140.3
Trentino Alto Adige	122.4	118.7	120.2	120.9	125.6	123.1	125.6	127.7
Veneto	111.7	109.5	108.5	107.8	117.1	114.5	113.4	113.0
Friuli Venezia Giulia	111.1	111.1	112.5	112.4	119.0	119.0	119.7	119.7
Liguria	114.7	115.5	116.1	117.1	120.6	125.4	125.0	125.6
Emilia Romagna	129.3	124.0	123.2	123.7	138.7	133.5	132.4	132.4
Toscana	110.3	108.9	109.2	108.8	115.2	114.2	113.0	113.9
Umbria	96.3	97.2	96.3	96.3	97.0	98.3	98.7	98.8
Marche	98.3	96.7	95.9	95.5	98.1	97.6	97.3	97.3
Lazio	114.2	114.8	114.2	116.1	123.8	125.0	124.1	126.4
Abruzzo	82.7	83.4	84.0	84.0	81.4	82.2	81.7	81.0
Molise	76.2	79.0	77.9	78.9	76.7	78.1	78.1	78.5
Campania	64.4	66.4	66.7	66.8	60.2	60.9	61.8	61.9
Puglia	66.0	67.3	68.7	68.8	61.5	63.1	64.7	65.3
Basilicata	64.5	65.4	65.9	66.8	63.2	64.5	65.2	66.4
Calabria	58.1	61.9	62.0	62.1	50.9	54.0	54.7	55.9
Sicilia	63.1	67.7	68.3	69.2	56.3	60.1	61.1	62.5
Sardegna	72.5	76.0	77.3	78.4	67.8	73.0	74.4	75.4
ITALIA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nord -Ovest	126.8	123.5	123.1	122.1	135.1	130.7	130.0	128.1
Nord- est	119.2	115.9	115.5	115.5	121.1	118.2	117.8	117.8
Centro	109.5	109.2	108.8	109.6	110.7	111.8	111.0	112.4
Sud	65.7	68.5	69.1	69.5	58.0	60.4	61.4	62.0
Centro-Nord	119.4	117.0	116.6	116.4	123.8	121.4	120.7	120.4
<b>CN - South (difference)</b>	<b>53.7</b>	<b>48.5</b>	<b>47.5</b>	<b>46.9</b>	<b>65.8</b>	<b>61.0</b>	<b>59.4</b>	<b>58.4</b>

The next table (table 7) shows the growth rates of the taxes paid by household for each region. The tax burden per inhabitants has increased in Italy during the years 2000-2008 (+22.5 pp), but the growth assumes different magnitude by region. First, the growth is higher in the regions of the South with respect to the region of the Centre-North and this result is confirmed if we look at the tax on income (D5) or the taxes on production<sup>9</sup> (D2). The table shows also the trend registered during the year 2008-2009. It's useful to stress that the decrease of taxes was homogeneous in the case of D2, while in the case of D5 there were a visible difference among the regions. In particular the regions of the North registered a decrease, and Piemonte and Lombardia were the regions which registered the worst drop. This result is explained because of the direct correlation between income and tax paid in the case of D5.

<sup>9</sup> The taxes on production reported in the table refers to the definition of ESA95, but it is necessary to stress, as explained in the paper in the previous paragraph, that this kind the taxes concerns the households for their activity as final purchasers (consumption as tax-base of the taxes) or for use of own capital (capital as tax-base of the taxes).

**Table.7 - Growth rates of taxes by inhabitants paid from Households**

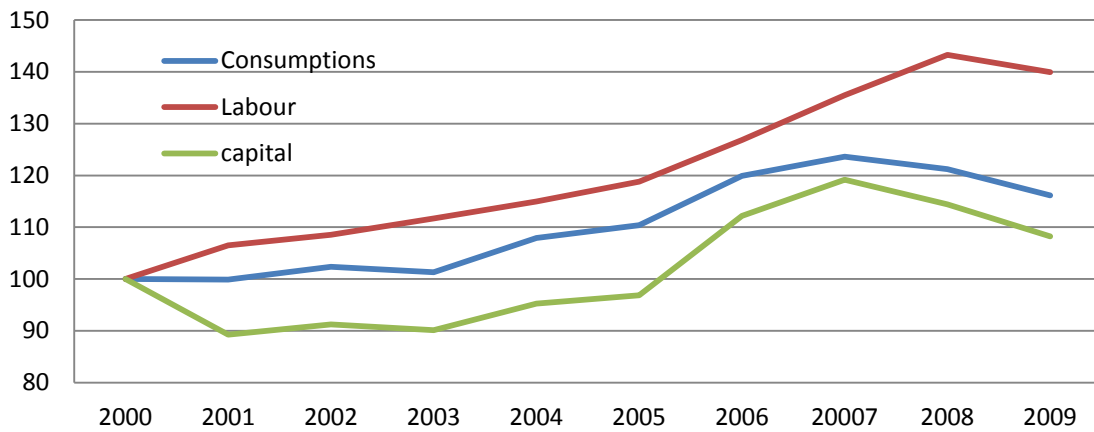
	D5		D2		Total Tax	
	2000-2008	2008-2009	2000-2008	2008-2009	2000-2008	2008-2009
Piemonte	22.5	-4.9	12.9	-5.3	18.3	-5.1
Valle d'Aosta	24.8	-1.0	19.0	-2.7	22.0	-1.8
Lombardia	18.6	-4.3	15.3	-4.5	17.3	-4.4
Trentino Alto Adige	27.7	-1.2	13.0	-5.5	21.0	-3.0
Veneto	24.0	-3.2	12.9	-5.3	18.9	-4.1
Friuli Venezia Giulia	31.5	-3.0	15.6	-4.9	24.5	-3.8
Liguria	34.6	-2.3	11.5	-3.3	23.8	-2.7
Emilia Romagna	22.2	-2.8	9.7	-3.7	16.6	-3.2
Toscana	27.0	-1.8	14.9	-6.5	21.3	-3.9
Umbria	33.2	-2.7	13.4	-4.8	23.5	-3.6
Marche	27.5	-2.8	12.2	-5.4	20.1	-4.0
Lazio	30.0	-0.6	13.6	-3.7	22.7	-1.9
Abruzzo	28.0	-4.0	22.6	-3.1	25.3	-3.5
Molise	39.0	-2.8	18.2	-2.0	28.1	-2.4
Campania	30.7	-2.4	24.0	-4.2	27.2	-3.3
Puglia	34.6	-1.9	21.9	-5.1	27.9	-3.5
Basilicata	34.3	-1.0	19.8	-3.9	27.0	-2.4
Calabria	38.9	-0.5	25.8	-6.0	31.6	-3.4
Sicilia	37.9	-0.2	28.9	-4.3	33.1	-2.3
Sardegna	41.1	-1.5	22.8	-3.0	31.5	-2.2
<b>ITALIA</b>	<b>27.2</b>	<b>-2.8</b>	<b>16.9</b>	<b>-4.6</b>	<b>22.5</b>	<b>-3.6</b>
Nord -Ovest	21.2	-4.3	14.3	-4.6	18.3	-4.4
Nord- est	24.4	-2.8	11.9	-4.7	18.8	-3.6
Centro	29.1	-1.4	13.8	-4.9	22.0	-2.9
Sud	34.9	-1.6	24.6	-4.3	29.4	-3.0
Centro-Nord	24.1	-3.1	13.5	-4.7	19.4	-3.7

The following graph (graph.4) shows the evolution of taxation according the economic function. It is easy to notice that the taxes on labour registered a strong increase, with respect to the taxes on capital and the taxes on consumption. Another point arising from the graph is the fact that the taxes on labour registered a decrease only in the year 2009, while the taxes on consumption and the taxes on capital started to decrease in the year 2008.

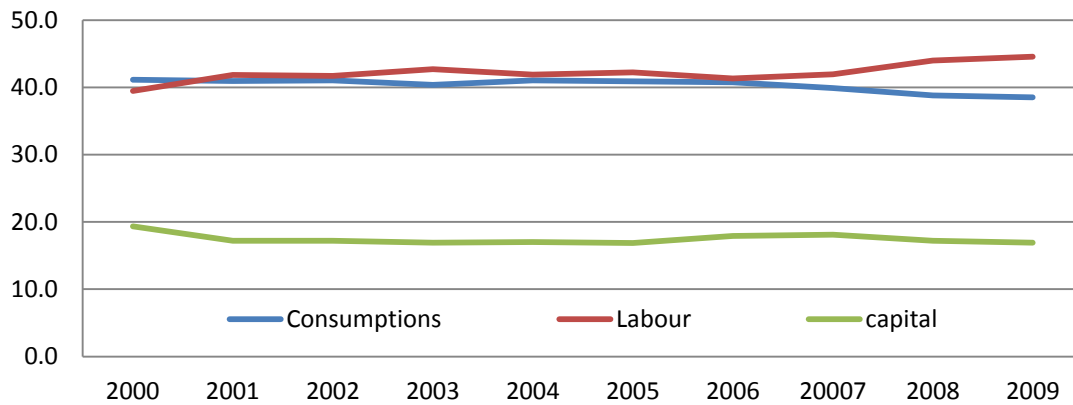
The taxes on labour registered a big increase in 2007 and 2008. The increase in 2007 is the combined effect of the law approved in October 2006 ("Finanziaria 2007") which revised the structure of the personal income tax, and of many contracts renewal (in the public and in the private ssector), happened also in 2008. The taxes on capital registered an increase in 2006 and 2007 due to the good performance of financial activities owned by households, but with the crises of stock exchange in 2008 the taxes on capital started to decrease quickly. The taxes on consumptions registered an increase to 2007, but the effect of economic crisis had an impact on trend on 2008 and 2009. The reduction in 2008-2009 is partially smoothed because of the increase of taxes on lotteries.

Graph.5 shows the shares of each economic function on the total taxes paid by households. As mentioned above, the big increase of taxes on labour is noticeable in the years 2008 and 2009.

**Graph.4 - Growth rates of taxes by economic function (year 200= 100)**

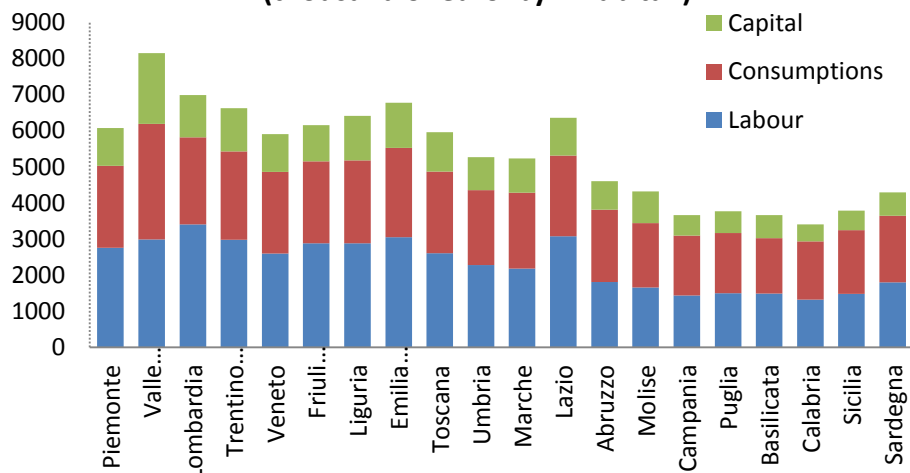


**Graph.5 - Taxes paid from households by economic function (shares %)**



Graph 6 shows the taxes paid by households according to the economic function by region. The analysis of tax composition shows that the North's regions have a prevalence of taxes paid on labour, while in the South there is a balancing between taxes on consumptions and taxes on labour. The taxes on capital are more localised in the North, because of the larger presence of financial asset owned by households.

**Graph.6 -Taxes by economic function - 2009  
(thousand of euro by inhabitan)**



## *Conclusions*

During the recent years, characterised by a heavy crisis that interested all sector of the economy, the Italian households kept a constant tax burden. This was due to the lack of measures oriented to realise a anti-cyclical fiscal policy in order to support the households, because of the budget constraint of Government, which was oriented to respect the Maastricht parameters.

We summarise the main results arising from this work:

- Since 2000 the taxes paid by households have increased in all Italian regions. The taxes growth rate is lower than GDP and disposable income growth rates at national level;
- The crisis reduced the difference of tax burden by inhabitant between the North and the South of the country: this result is confirmed if we analyse the tax burden net of taxes on consumption where the touristic flows can influence the regionalisation;
- The taxes on labour are the main taxes paid by households and their weight have increased over the years, and especially in the years 2008 and 2009. The increase of taxes on labour is located mainly in the region of North;
- The change of calculation of Personal Income taxes (law "Finanziaria 2007") had the effect of increasing the taxes on labour paid by households;
- The taxes on consumption were not strongly modified. Recently the Government decided to increase the VAT (the effects will be analysed when the future data are available);
- With respect to the disposable income the tax burden of households showed a decrease. During the crisis the taxes on consumptions with respect to disposable income registered a reduction more marked in the South with respect to the Centre-North, due to the contraction of their consumptions as remedy to face the crisis.

Another analysis could be introduced by verifying the possibility of tax translation (when the subject touched by the tax has the possibility to translate fully or partially the tax on the final purchaser). This could be a further step of this research but we are conscious of the difficulty to determine the measure of translation of taxes.