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Shadow economy: analyzing Calabria's case

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## Introduction

This paper studies the shadow economy in Calabria. Before the specific analysis of the region it is important to discuss the topic in general. The first part of the thesis is a literature survey of the causes of shadow economy and the main methods to calculate it. It also surveys, findings on the effect of the shadow economy on the official economy. These lessons are used to understand Calabria's case in section 2.

The second part starts with an overview of Calabria's economic situation throughout history and then focuses on the causality between the underdevelopment of the region and the shadow economy. The main research question is about the causality between economic backwardness in Calabria and its large shadow economy. Has Calabria's economy been slowed down by the shadow economy, or is the slow growth the reason for the shadow activities? The discussion of this issue is summarized in the last sub section (2.2.6) "Analyzing the problem from a different angle".

## Section1

### 1.1 Shadow economy: definition

Any discussion of the shadow economy, also known as hidden, underground or black economy, must begin with a coherent definition of the phenomenon. Researchers have suggested many different definitions. Feige (1989,1994), Schneider (1994), Frey and Pommerehne (1984) and Lubell (1991) define underground activities as “all currently unregistered economic activities which contribute to the officially calculated (or observed) Gross National Product.” Smith [1994, p. 18] defines it as “market-based production of goods and services, whether legal or illegal that escapes detection in the official estimates of GDP.”

Both definitions refer to income gained by activities that bypasses government control, regulation and taxation, and that would be taxable if reported to the authorities .

A clearer view is presented in table 1:

Type of Activity	Monetary Transactions		Nonmonetary Transactions	
ILLEGAL ACTIVITIES	Trade in stolen goods; drug dealing and manufacturing; prostitution; gambling; smuggling, and fraud		Barter: drugs, stolen goods, smuggling etc. Produce or growing drugs for own use. Theft for own use.	
	Tax Evasion	Tax Avoidance	Tax Evasion	Tax Avoidance
LEGAL ACTIVITIES	Unreported income from self-employment; Wages, salaries and assets from unreported work related to legal services and goods	Employee discounts, fringe benefits	Barter of legal services and goods	All do-it-yourself work and neighbor help

table 1: a taxonomy of types of underground economic activities. Source: Friedrich Schneider and Dominik Enste: IMF working paper “*Shadow economies around the world*”

Any attempt to define the phenomenon precisely is difficult since the shadow economy changes continuously adjusting to changes in policy and to moral and social attitudes.

## 1.2 A literature survey of the main causes of the shadow economy

### 1.2.1 Intensity of regulation

The intensity of regulation is one of the factors that induce individuals to move from the official to the black economy, since regulations limit the possibilities of work in the official economy. The regulations referred to are regulations of the labor market, like minimum wages, employment protection or restrictions on foreign workers, and regulations in goods markets, like trade barriers. Such regulations increase the costs of labor in the official economy, and these costs fall mainly on the workers. This creates an incentive for them to work in the unofficial economy, where these costs don't are spared.

Johnson, Kaufmann, and Zoido-Lobatón (1998b) find empirical support to the claim that labor regulations have a positive effect on the shadow economy. Another empirical study that reaches similar results is Friedman et al. (2000).

### 1.2.2 Tax and social security burdens

Many studies claim that one of the main causes of shadow economy is the burden of taxes and of social security payments.<sup>1</sup> The higher the gap between income before and after tax, the greater is the incentive for workers to become employed in unreported jobs. Schneider (1994b, 2000, 2004, 2005, 2007) and Johnson, Kaufmann and Zoido-Lobatón (1998a, 1998b) have found statistically significant evidence for the effect of direct and indirect taxation on the shadow economy. Studies on Austria and on the Scandinavian<sup>2</sup> countries (in which direct and indirect taxation was proven to be the principal driving force towards underground labour, followed

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<sup>1</sup> See Thomas (1992); Lippert and Walker (1997); Schneider (1994a,b, 1997, 1998a,b, 2000, 2003b, 2005, 2007); Johnson, Kaufmann, and Zoido-Lobatón (1998a,1998b); Tanzi (1999); Giles (1999a); Mummert and Schneider (2001); Giles and Tedds (2002) and Dell'Anno (2003), as well as Feld and Schneider (2010), among others.

<sup>2</sup> Schneider 1986 studies on Denmark,Norway and Sweden.

by the intensity of regulation and the complex tax system). In order to evaluate the tax burden we need to consider three issues:

A. Share of direct taxes out of total taxation.

B. Size of government: Public expenditures as percent of GDP.

C. Fiscal freedom, measuring the fiscal burden in an economy i.e tax rates on individual and corporate income.

### 1.2.3 Public sector services

The rise of the shadow economy leads over time to a reduction in public revenues, which cause a decline in public services. This process also causes a rise in the tax rates for people and firms in the official economy, which further increases the incentive to move to shadow economic activities. This of course creates a sort of vicious circle. Johnson, Kaufmann, and Zoido-Lobaton (1998a/b) show, in their study on the public sector and the underground economy, that the smallest shadow economies are clearly countries where tax bases are as wide as possible and exemptions are few as possible, so high tax revenues require relatively lower tax rates. In conclusion to the studies made on public sector services as a cause for underground economy Johnson, Kaufmann, and Zoido-Lobaton (1998a, p. 1) state that : “Wealthier countries of the OECD, as well as some in Eastern Europe, find themselves in the ‘good equilibrium’ of relatively low tax and regulatory burden, sizeable revenue mobilization, good rule of law and corruption control, and a [relatively] small unofficial economy. By contrast, a number of countries in Latin American and the former Soviet Union exhibit characteristics consistent with a ‘bad equilibrium’: tax and regulatory discretion and burden on the firms are high, the rule of law is weak, and there is a high incidence of bribery and thus a relatively high share of activities in the unofficial economy.”

#### 1.2.4 Official economy

A number of studies carried out by Bajada and Schneider, 2005; Schneider and Enste, 2006; Feld and Schneider, 2009, point at another factor that affects the shadow economy, namely the state of the economy.

When the economy is in recession, people who suffer income losses might engage in shadow economy activities to compensate for these losses. Of course the opposite happens in booming economies.

In order to observe this mechanism we should examine the variables of GDP per capita and the rate of unemployment. These two variables are negative correlated and we should expect unemployment to be positively correlated with the shadow economy.

#### 1.3 Indicators of the shadow economy

Since the shadow economy consists of unofficial and unregistered transactions it is hard to measure it, and to study and research it.<sup>3</sup> Hence, we search for indicators that can help in measuring the shadow economy. Such indicators are in three main categories:

- Labor market indicators
- Monetary indicators
- Official economy indicators

##### 1.3.1 Labor market indicators

One indicator to the state of the shadow economy is the labour force participation rate. This is the percentage of working-age individuals who are employed or looking for a job and therefore participate in the official labor market.

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<sup>3</sup> indicators from “*shadow economies all over the world: New estimates for 162 countries from 1999 to 2007*” Friedrich Schneider, Andreas Buehn, Claudio E.Montenegro

### 1.3.2 Monetary indicators

Economic activities in the shadow economy are usually carried out by cash, to avoid traces. Hence, the shadow economy is correlated with the use of cash or currency in the economy.

### 1.3.3 Official economy indicators

Shadow economies of course have effects on the official economy. The money produced is in fact often transferred or used in the official economy. This implies that changes in GDP and unemployment are very important to analyze in order to understand how shadow economy interacts with the official one.

## 1.4 The main methods of estimating the shadow economy:

Researchers have used many methods to measure the size of the shadow economy. Schneider (2005) classifies these methods to three categories: direct approaches, indirect approaches and the MIMIC (model) approach.

1.4.1 The direct approaches (or microeconomic approaches) use well- defined and structured surveys, questionnaires, interviews and tax audits, which are then used to construct some estimates of the size of the underground economy. This approach has pluses and minuses. Its advantage is that it collects a fair amount of detailed information about the structure of the shadow economy and the composition of those who work in it. Its disadvantage is that there might be sample selection bias, or errors in the measurement of interviews and surveys. Another disadvantage is that it gives an estimate at a given point in time without dynamics.



1.4.2 The indirect approaches are mainly macroeconomic. There are five main such indicators: official and actual labor force participation, national income measured by expenditures, national income measured by transactions, electricity consumption and GDP.<sup>4</sup> Another indirect measure is the currency demand approach, which uses the demand for currency to estimate the size of the shadow economy.

These methods have been though criticized on two main grounds, first they are based on very strict assumptions and second, we cannot join such indicators to improve the estimate of the shadow economy since they are independent measures.

1.4.3. The MIMIC, multiple causes, multiple indicators, approach is based on a structural model in which the shadow economy is an unobserved variable.<sup>5</sup> The model is essentially a two steps regression model. The first step analyzes the causes and indicators of the shadow economy. In the second step the effect of these causes and indicators is tested empirically.

The main indicators and causes used in this approach are those mentioned in paragraphs 1.2 and 1.3. This method also faces criticisms, like Breusch (2005) who says: “this approach does not rely on micro foundations.” A most recent study that overcomes much of the critiques, is by Giles, and it combines MIMIC and currency demand approaches, in which many of the previously critical points are overcome.

## 1.5 Effects of the shadow economy on the official economy

In order to understand the effects of the shadow economy on the official one we must integrate the underground economy within a macroeconomic model. One

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<sup>4</sup> Kaufmann and Kaliberda (1996) : they assume that electric power consumption is the best way to trace economic activity, electric power consumption and economic activity have been empirically proven to move together and be tightly locked. The suggestion is that an increase in electrical consumption should go along with an increase in economic activities either official or unofficial therefore implying an increase of shadow economy.

<sup>5</sup> Frey and Weck- Hannemann (1983)

such model (Houston 1987) concludes that the size of the black economy should be taken into consideration when setting taxes and regulatory policies.<sup>6</sup> Adam and Ginsburgh (1985) conducted research on the effects of the shadow economy on economic growth in Belgium. They found a positive relationship between the underground economy and the official economy. They also found that if there is not enough enforcement, the costs to entry in the shadow economy will be lower and an expansionary fiscal policy would have a positive stimulus both on the official and underground economies.

An opposite hypothesis is that a decrease of the underground economy would lead to higher economic growth. The reason is that a decrease in the shadow economy would increase tax revenues, which will raise the quality and quantity of public services, which would stimulate growth in the official sector. Loayza's studies<sup>7</sup> use an endogenous growth model whose production technology depends on public services. This model assumes that governments impose excessive taxes and regulations and law enforcement is low. The model shows that as a result the size of the shadow economy increases and reduces economic growth.

Loayza's view is not accepted by all. One critique is on the assumption that the production technology depends on tax- financed public goods and services. The assumption that the informal sector pays no taxes at all, but only penalties is also criticized. There were claims that these two assumptions bias the results.

### 1.5.1 The neoclassical view.

The neoclassical view on the shadow economy<sup>8</sup> sees the shadow economy as a positive development that satisfies the demand for urban services and small scale

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<sup>6</sup> theoretical macro model of business cycle analyzing tax and monetary policies linkages to shadow economy.

<sup>7</sup> "The economics of the Informal sector: A simple model and some empirical evidence from Latin America" (1997) Loayza

<sup>8</sup> the distinction of neo -classical view is defined in the IMF working paper : "shadow economies around the world: size causes and consequences."

manufacturing, and adds to the competitive environment. Asea (1996, p.166) states that the informal sector can contribute: “to the creation of markets, increase financial resources, enhance entrepreneurship, and transform the legal, social and economic institutions necessary for accumulation.” The option of work in an informal sector, rather than not working at all, creates a positive correlation between the underground economy and economic growth. The contrasting theoretical views of Loayza and of Asea call for an empirical assessment of the relationship between the shadow economy and overall economic performance.

So far the empirical findings were partial and not very conclusive. Loayza finds that in Latin American countries in the early 1990s the increase of the informal sector has negatively affected economic growth. Schneider (1998b) finds that over 66% of the income earned in the shadow economy is spent in the official sector, and that contributes to economic growth<sup>9</sup>. Bhattacharayya (1993,1999) finds that the revenues from the informal sector increase consumers’ expenditures on both non-durable and durable consumption. These results seem to be quite partial, so there is need for further empirical analysis.

## 1.6 Relation between corruption and shadow economy

We next turn to examine how the shadow economy is related to corruption.<sup>10</sup> A common view is that they are “twin” phenomena, namely related either as substitutes or as complements. A recent model by Choi and Thum (2005) discusses the case of two entrepreneurs who go underground to stop an official from asking them bribes, which reduces corruption. Hence, this model points at a possible substitution between corruption and shadow economies. An opposite view sees the shadow economy and corruption as complements. Johnson et al. (1997) present a model where labor is either employed in the informal sector or in the official one. In this model corruption increases the shadow economy, and thus reduces the official sec-

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<sup>9</sup> individuals who are not paying taxes are incentivized to spend their income on other matters and consume more.

<sup>10</sup> Dreher and Schneider (2006) define corruption as the misuse of public power for private benefit.

tor, as it is seen as a form of complementary regulation that drives workers and entrepreneurs to go underground. Others, like Hindriks<sup>11</sup> et al (?) and Echazu and Bose<sup>12</sup> (2008) also demonstrate that corruption and underground economic activities can be seen as complements.

These different results raise the question whether the relation between the shadow economy and corruption differs in rich and poor countries. Axel Dreher and Friedrich Schneider (2006) paper examines exactly this issue. As the authors say: “We hypothesize that corruption and shadow economy are substitutes in high income countries while they are complements in low income countries. The hypotheses are tested for a cross section of 120 countries and a panel of 70 countries for the period 1994-2002. Our results show that the shadow economy reduces corruption in high income countries, but increases corruption in low income countries. We also find that stricter regulations increase both corruption and the shadow economy.” One reason for the inconclusive results of these studies is the difficulty of collecting accurate data on corruption and the shadow economy across countries and over time.

## 1.7 The evolution of the shadow economy over time

As we have seen throughout this discussion, measuring the shadow economy and its dimensions is quite difficult. One way to cope with it is to compare the results of various measurement methods and compare the resulting trends over time. This is done in Table 2, which has been calculated using a MIMIC approach, which has been combined and corrected by the currency demand approach.<sup>13</sup> From the table

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<sup>11</sup> In this model the tax payer colludes with the official, who under reports the tax debt of the tax payer in exchange for a graft.

<sup>12</sup> In their model they consider different types of corrupt bureaucrats in the official and shadow economies.

<sup>13</sup> as we have seen in the paragraph 1.4.1 page 9 when speaking about the methods to calculate shadow economy the MIMIC approach overcomes many of the problems found in the direct methods and in the previous indirect methods, further when combined to the currency demand approach the disadvantage of the MIMIC approach, which is, that only relative sizes of the shadow economy are obtained, is overcome such that we obtain absolute figures.

we can see a clear trend of increase in the shadow economy from 1989 up until the early 2000s. Then the trend reverses and the share of the shadow economy declines. In 1999 the average size of the shadow economy in the OECD countries was 16.8% of GDP and it dropped to 13.9% in 2007. The decline began a bit later in Austria, Switzerland and Germany. The reduction in the shadow economy was strongest in Italy, in which it decreased by 5 percentage points and in Sweden, where it declined by 4 Percentage points. Countries in Southern Europe, like Greece, Italy and Spain still have the highest rates of the shadow economy. Interestingly, the Scandinavian countries also have large shadow economies.

We can think of many reasons for the differences in the size of the informal sector across countries. One such reason is the degree of regulations, and another could be the ratio between direct and indirect taxes. Both are low in the US, which also has a small shadow economy, of only 7.2% of GDP.

OECD-countries	Shadow Economy (in % of official GDP)									
	Average 1989/90	Average 1994/95	Average 1997/98	Average 1999/00	Average 2001/02	2003	2004	2005	2006	2007
1. Australia	10.1	13.5	14.0	14.3	14.1	13.7	13.2	12.6	11.4	10.7
2. Belgium	19.3	21.5	22.5	22.2	22.0	21.4	20.7	20.1	19.2	18.3
3. Canada	12.8	14.8	16.2	16.0	15.8	15.3	15.1	14.3	13.2	12.6
4. Denmark	10.8	17.8	18.3	18.0	17.9	17.4	17.1	16.5	15.4	14.8
5. Germany	11.8	13.5	14.9	16.0	16.3	17.1	16.1	15.4	14.9	14.6
6. Finland	13.4	18.2	18.9	18.1	18.0	17.6	17.2	16.6	15.3	14.5
7. France	9.0	14.5	14.9	15.2	15.0	14.7	14.3	13.8	12.4	11.8
8. Greece	22.6	28.6	29.0	28.7	28.5	28.2	28.1	27.6	26.2	25.1
9. Great Britain	9.6	12.5	13.0	12.7	12.5	12.2	12.3	12.0	11.1	10.6
10. Ireland	11.0	15.4	16.2	15.9	15.7	15.4	15.2	14.8	13.4	12.7
11. Italy	22.8	26.0	27.3	27.1	27.0	26.1	25.2	24.4	23.2	22.3
12. Japan	8.8	10.6	11.1	11.2	11.1	11.0	10.7	10.3	9.4	9.0
13. Netherlands	11.9	13.7	13.5	13.1	13.0	12.7	12.5	12.0	10.9	10.1
14. New Zealand	9.2	11.3	11.9	12.8	12.6	12.3	12.2	11.7	10.4	9.8
15. Norway	14.8	18.2	19.6	19.1	19.0	18.6	18.2	17.6	16.1	15.4
16. Austria	6.9	8.6	9.0	9.8	10.6	10.8	11.0	10.3	9.7	9.4
17. Portugal	15.9	22.1	23.1	22.7	22.5	22.2	21.7	21.2	20.1	19.2
18. Sweden	15.8	19.5	19.9	19.2	19.1	18.6	18.1	17.5	16.2	15.6
19. Switzerland	6.7	7.8	8.1	8.6	9.4	9.5	9.4	9.0	8.5	8.2
20. Spain	16.1	22.4	23.1	22.7	22.5	22.2	21.9	21.3	20.2	19.3
21. USA	6.7	8.8	8.9	8.7	8.7	8.5	8.4	8.2	7.5	7.2
Unweighted average for 21 OECD countries	12.7	16.2	16.8	16.8	16.7	16.5	16.1	15.6	14.5	13.9

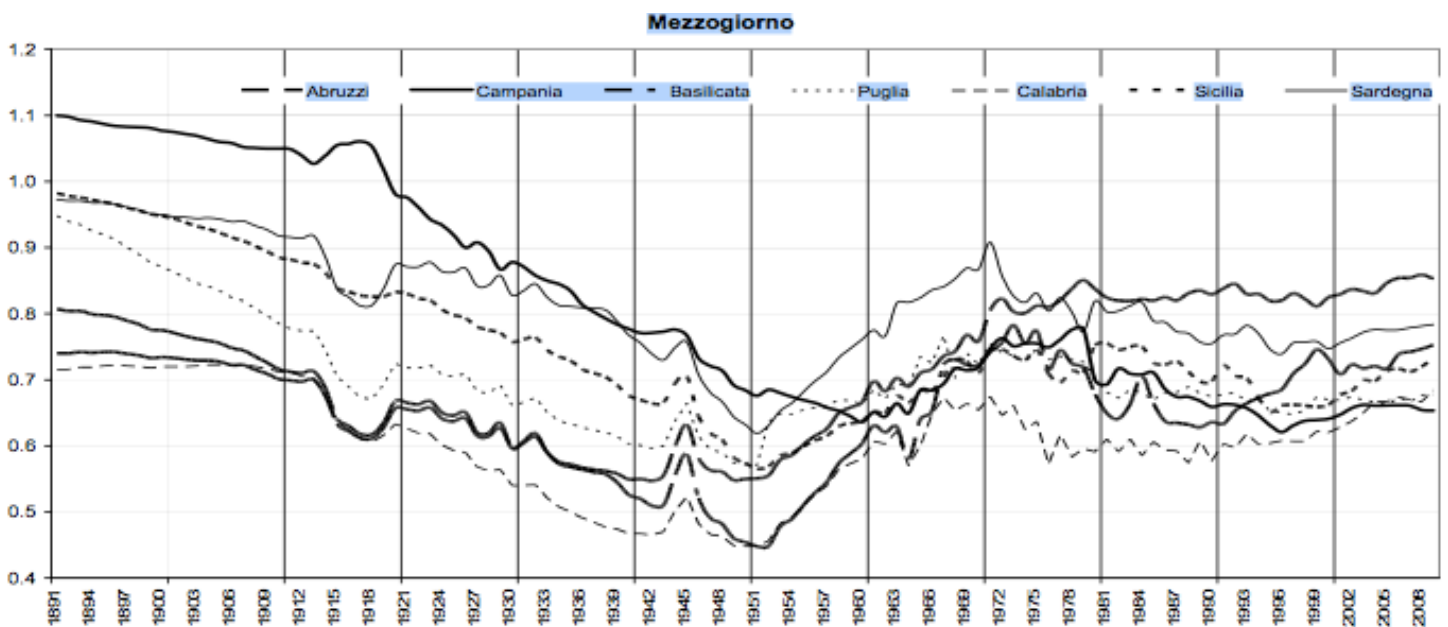
Source: Own calculations.

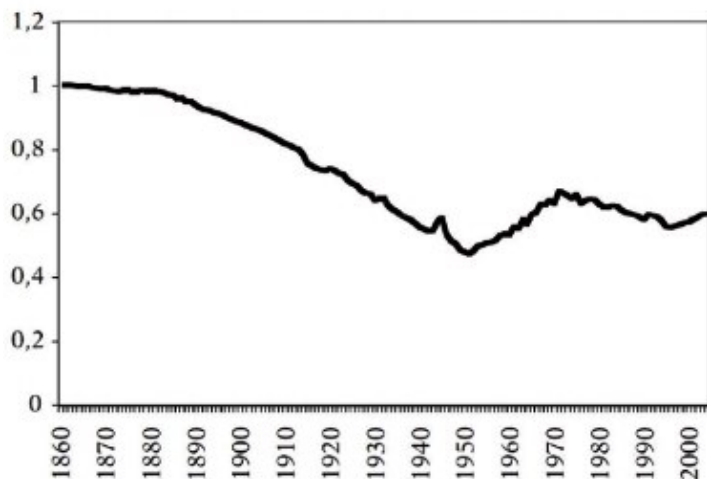
table 1.1 size of shadow economy with respect to GDP from 1989 to 2007. Source IMF working paper: "shadow economies around the world, size, causes and consequences."

## Section 2: Analyzing the case of Calabria:

### 2.1 Understanding the regions problems

Among the European countries, Italy has the highest regional disparities. The problem of the less developed south of Italy has been named the 'Questione Meiridionale', and it reflects the view that this is not only difference in GDP per capita between the North and the South, but also differences in cultural background. Among the poorest southern regions of Italy, Calabria stands out as the poorest and being economic backward for so long. The region has been lowest in regional GDP ranking for more than 50 years and there is no change in sight. It is important to remember that this underdevelopment is relative to other regions. As the rest of Italy, Calabria has experienced in the past 60 years a fast economic growth with extraordinary modernization, but it was not fast enough to keep in pace with the rest of Italy.





▲ Graph 2.1 on the above page: Data on GDP growth rate levels of the Southern regions of Italy from 1891 to 2008. Source: Malanima

← Graph 2.2 Italian Southern regions GDP in percentage of the northern ones. Source: Malanima

To understand the reasons for these disparities and for the divergence of the southern Italian regions, in particular Calabria, from the more developed central and northern areas, we must go back to Italy's unification. The economic history of Italy since 1861 is the background, which will help us understand why Calabria finds itself in its current situation. As we see from the graph 2.1. and 2.2 this economic history can be divided to four main periods:

- 1861-1920: In the post unification period the differences between the South and the North were not significantly large. The South had normal levels of GDP in that period, though Calabria was already one of the poorest regions among the southern regions.
- 1920-1950: At the beginning of the 20th century an intense industrialization process began in the North-West of Italy. In the mean time the southern regions were not able to keep in pace, as some of the industrial sectors crashed due to growing competition from northern firms. The economic gap between the two areas began to widen and reached a peak at the beginning of the 50's. The decline during this period was also caused by great damages to infrastructure and equipment during World War II<sup>14</sup>. While GDP per capita of the southern regions in 1861 was 80% of the Centre-Northern ones, until 1951 it had declined to 53%.

<sup>14</sup>The damages that world war II caused, were not higher in the south of Italy, though the already precarious situation and the low levels of infrastructures in the south made it extremely difficult for the south to recover from the post-war situation.

- 1950-1970: In this period a series of policies by the central government, like the “cassa per il mezzogiorno” and “legge speciale”, were implemented to help the South to catch up with the rest of Italy . These provided a favorable ground for economic growth, despite the great effort and large capital investments which they required. These investments, which came from outside the region, enabled Calabria to reduce its gap from the rest of Italy. This period was the first that the gap between the north and the south shrank significantly over an extended period of time, as can be seen in graph 2.1. But this process of growth did not solve some of the deeper problems of the South, and thus did not continue for long and tapered off in the 70’s. Among these deeper problems were the economic dependency of Calabria on external investments, and the creation of a rent seeking political class, which grabbed much of the outside investments for own personal use and not for the region’s benefit.
- 1970-2000: The massive support of the central Government for growth and industrialization of the region pushed for growth on the one hand, but created dependency on external investments on the other hand. As a result Calabria experienced what was called “the great change.” In the late 1960’s and in the 70’s income and consumption in Calabria increased sharply, while the number of enterprises declined. Deindustrialization did not impede the social modernization of Calabria, which took place in the years when the rest of Italy was suffering from a recession. This social revolution in consumption habits was not accompanied by solid economic development and the region’s output could not support the growing internal demand. One possible explanation that appears in the literature for this phenomenon is that many of the early investments were short-term, but viewed as long-term by consumers, who increased consumption by much more than future income. Adherents of the model of rational expectations reject this kind of explanation. They offer other possible explanations. One is that in addition to domestic output the region enjoyed much remittance income from migrant workers to the North and Center. Another possible explanation, which is pursued later in this thesis, is that the gap between income and consumption reflects unreported in-

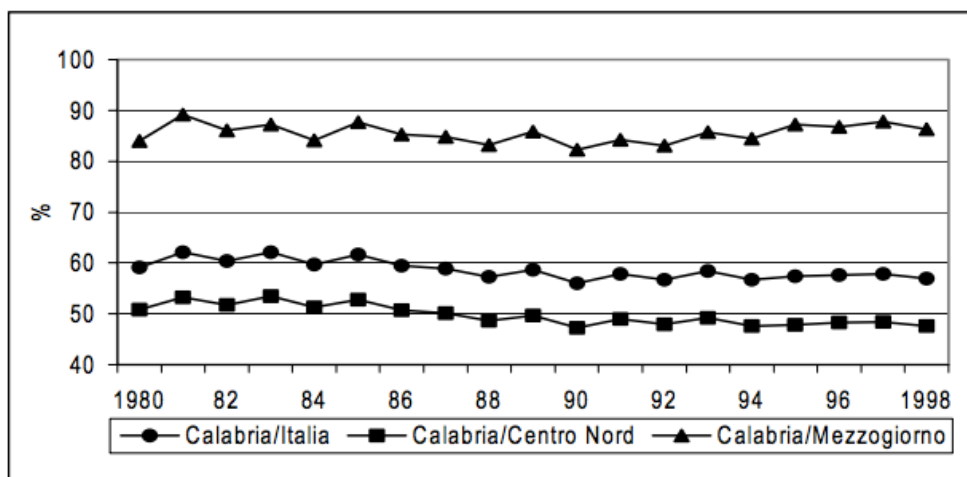


come in the shadow economy. Whatever the explanation, the fact of excess consumption over income is reflected by high trade deficits in the South and especially in Calabria, as shown in Table 2.3.

	1980	1985	1990	1995	2001
Calabria	28,0	30,8	40,7	27,4	27,3
Mezzogiorno	15,0	18,0	22,7	17,0	17,1
Centro-Nord	-4,5	-7,0	-6,0	-9,1	-6,5

table 2.3 Percentage of net imports over GDP 1980-2001 Data source ISTAT Fixed prices 1995

The first half of the 90's are characterized once again by a growing gap between the northern and southern regions. GDP per capita in the South as percentage of the North shows a return to the levels of the early 50's<sup>15</sup>.



Graph 2.4. source: [http://www.dps.tesoro.it/documentazione/qcs/POR\\_rmp/POR\\_Calabria\\_testo\\_e\\_all/POR%20Calabria\\_per%20capitoli/I\\_POR\\_Calabria.pdf](http://www.dps.tesoro.it/documentazione/qcs/POR_rmp/POR_Calabria_testo_e_all/POR%20Calabria_per%20capitoli/I_POR_Calabria.pdf)

As we can see from Graph 2.4, at the early 90's Calabria's GDP per capita was less than 50% of that of the northern regions and it was one of the worst performing regions in Italy. Although between 1996 and 2001 the rates of growth of GDP in the south rise to 2%, while the Center-North grows at 1.5% only, this seems to be like a temporal episode. As we show below, Calabria is still much less developed than the rest of Italy and is the most backward in the South.

<sup>15</sup> As mentioned above, in the paragraph regarding Italy's growth between 1920 and 1950, Calabria's GDP in 1951 was 53% of Italy's GDP, level which was once again reached at the end of the 90's.

## 2.2 Analyzing the region's situation at the present

### 2.2.1 The shadow economy in Calabria

In presenting the shadow economy in Calabria we focus on the variable of irregular or hidden work. The issue of black labor concerns many developed countries and has become especially relevant for Italy. As recently estimated by ISTAT the Italian shadow economy has produced in 2008 an extra value of 255 to 275 billion euros, which are between 16.3% to 17.5% of Italian GDP correspondingly. Among the various regions, Calabria is first in its level of the underground economy, with a valued added of about 5.5 billion Euros, which are 18% of its total GDP. Black labor in Italy is a complex and variable phenomenon, which differs significantly across regions and across sectors. This is why we need to discuss separately the north and the south.

Regions	Irregular full time equivalent units
Piemonte	11,6
Valle d'Aosta/Vallée d'Aoste	11,3
Liguria	12,7
Lombardia	7,3
<i>Bolzano/Bozen</i>	7,0
<i>Trento</i>	8,0
Veneto	8,3
Friuli-Venezia Giulia	11,0
Emilia-Romagna	8,2
Toscana	9,2
Umbria	12,2
Marche	9,4
Lazio	10,7
Abruzzo	13,7
Molise	22,9
Campania	18,5
Puglia	18,0
Basilicata	22,4
Calabria	28,5
Sicilia	20,8
Sardegna	21,9
Italy	12,0



table 2.5. Irregular full time equivalent units by region Year 2011 (a) (percentage on total full time equivalent units) Source: ISTAT

Enterprises in the north usually use black labor for reasons of convenience. Workers are usually regular and only a part<sup>16</sup> of their salary is paid irregularly. Such collusion between worker and employer is known as grey labor. This collusion keeps workers on a regular contract and therefore protected both for social security and insurance. Black labor in the north is usually prevalent for illegal immigrants.

In the South the situation is very different, where instead of black labor for convenience we observe black labour for survival of enterprises.

Many firms feel obliged to choose operation in the unofficial economy in order to avoid shutting down production, as they cannot sustain the legal tax burden and legal cost of labor. As a result, unofficial work in the South, and in particular in Calabria, is characterized by fully irregular workers three times more than in the other industrialized countries.

REGIONS GEOGRAPHICAL AREAS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
North-west	10,2	8,9	7,7	8,3	8,5	9,0	9,2	9,2	9,2	9,1
North-east	9,8	8,9	8,0	8,2	8,4	8,4	8,6	8,5	8,5	8,5
Centre	13,1	11,5	10,0	10,5	10,7	10,3	10,3	10,1	10,4	10,4
Centre and North	10,9	9,6	8,4	8,9	9,1	9,2	9,4	9,2	9,3	9,3
South and Islands	21,1	20,4	19,7	19,2	19,7	19,4	18,6	18,8	19,9	20,3
Italy	13,8	12,7	11,6	11,7	12,0	12,0	11,9	11,8	12,2	12,2
Calabria	26,0	26,0	24,7	26,1	27,6	28,2	27,4	27,1	29,0	31,5

table 2.6 Irregular labour in the region (2001-2010) source: ISTAT

The ISTAT 2011 report on irregular fulltime workers states: “In 2010 The South and Islands area recorded the highest incidence of irregular work in the Country, almost double than that of the Centre and North areas. The lowest rate of irregular employment was observed in the North-east area (8.5 percent), followed by the

<sup>16</sup> Parts of the salary paid irregularly might be extra hours of work

North-west (9.2 percent) and the Centre (10.4 percent). In 2011 the same picture as the previous year was confirmed, broadly speaking, in the southern regions. Calabria was the region with the highest value (31.5 percent), remarkably higher than in the previous year, when it was (29 percent)”

The shadow economy is particularly wide In Calabria due to a number of factors. These are excess labor supply relative to labor demand, the influence of criminal organizations in the region (analyzed in the sub-section 2.2.5), the combination of shadow and illegal activities, the presence of illegal immigrants, and the recent economic depression. As we can see from table 2.6. below, the 2008 crisis led to a sharp increase in irregular labor in Calabria. Between 2008 and 2009 irregular labor in the region increased by 2 percentage points, which is much higher than the Italian average of 0.04 percentage points.

## 2.2.2. GDP

<b>GDP per capita per region</b> Years 2000-2012 (euro, fixed prices 2005)													
REGIONS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Piemonte	27.08 4	27.52 0	27.41 8	27.25 3	27.33 2	27.35 7	27.80 6	27.79 2	27.01 3	24.65 5	25.43 0	25.63 9	24.91 0
Valle d'Aosta	31.86 9	32.29 4	32.15 4	32.31 9	33.01 2	32.67 2	33.23 2	33.54 7	33.02 7	30.87 7	32.19 4	32.07 6	30.84 3
Liguria	25.51 4	26.30 1	25.84 2	25.76 6	25.74 9	25.51 6	25.62 4	26.50 2	26.12 6	24.83 1	24.83 7	24.95 1	24.26 9
Lombardia	31.08 6	31.59 0	31.70 9	31.31 5	31.28 3	31.22 0	31.56 0	31.84 8	31.67 0	29.42 6	30.38 2	30.27 4	29.43 4
Trentino-Alto Adige/ Südtirol	31.50 1	31.57 4	30.98 9	30.74 0	30.91 2	30.71 7	31.30 7	31.55 5	30.92 5	29.68 7	30.10 2	30.07 5	29.35 8
<i>Bolzano/Bozen</i>	33.01 9	33.11 6	32.37 8	32.28 5	32.96 0	32.65 7	33.61 0	33.67 7	33.13 5	32.07 3	32.54 3	32.74 1	32.28 4
<i>Trento</i>	30.02 6	30.07 6	29.64 5	29.25 2	28.94 6	28.85 4	29.09 4	29.51 4	28.80 1	27.39 6	27.75 9	27.51 5	26.54 7
Veneto	28.75 6	28.78 2	28.33 0	28.30 3	28.68 4	28.75 3	29.20 1	29.48 8	28.30 3	26.53 8	26.80 8	27.04 4	26.23 2
Friuli-Venezia Giulia	27.63 4	28.16 8	27.82 8	27.01 7	27.07 3	27.69 0	28.33 1	28.71 2	27.92 4	25.93 1	26.57 4	26.56 3	25.98 6
Emilia-Romagna	30.65 9	30.96 3	30.63 7	30.18 1	30.34 2	30.26 6	31.15 9	31.53 1	30.82 8	28.48 4	28.68 1	29.08 6	28.21 1

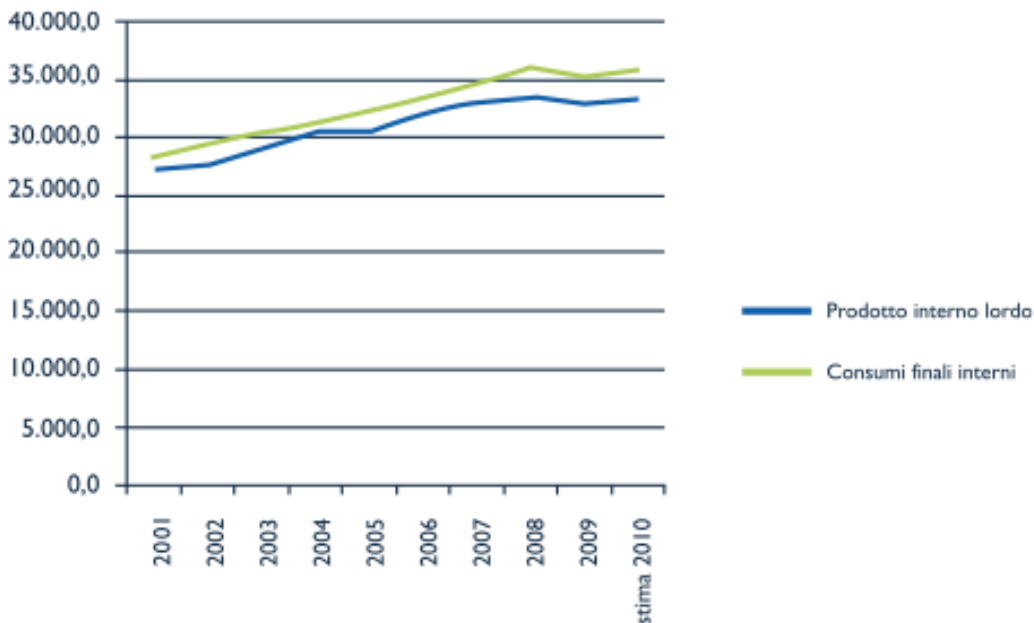
Toscana	26.09 1	26.49 0	26.69 3	26.38 6	26.49 3	26.38 1	26.92 4	27.08 2	26.73 9	25.43 6	25.58 6	25.63 4	25.07 4
Umbria	23.55 0	23.95 3	23.68 0	23.36 4	23.41 0	23.26 5	23.62 7	23.70 9	23.18 3	21.20 7	21.43 4	21.18 1	20.46 2
Marche	24.19 0	24.52 8	25.06 6	24.59 9	24.77 7	24.82 9	25.42 6	25.73 8	24.86 2	23.45 0	23.68 0	23.55 5	22.79 3
Lazio	27.44 7	28.28 0	28.97 2	28.67 5	29.46 6	29.39 7	29.35 2	29.29 3	28.36 5	27.22 8	27.25 9	27.19 1	26.19 8
Abruzzo	20.64 4	21.01 0	20.81 5	20.37 8	19.89 9	20.16 6	20.57 8	20.86 8	20.72 4	19.28 1	19.52 5	19.84 1	19.31 6
Molise	18.22 7	18.60 0	18.72 0	18.41 0	18.72 4	18.89 3	19.49 1	19.77 4	18.97 7	18.00 5	17.76 9	17.44 1	17.03 5
Campania	15.26 5	15.65 4	15.94 0	15.80 2	15.78 6	15.80 9	16.07 7	16.30 4	16.02 9	15.11 3	14.88 1	14.71 8	14.42 2
Puglia	16.31 3	16.49 4	16.40 1	16.23 2	16.38 1	16.34 6	16.69 7	16.76 9	16.52 0	15.60 4	15.64 7	15.60 9	15.16 2
Basilicata	16.58 0	16.72 4	16.63 6	16.40 3	16.68 5	16.54 7	17.13 3	17.41 7	17.18 1	16.29 8	16.02 2	16.24 3	15.69 2
<b>Calabria</b>	<b>14.85 8</b>	<b>15.33 6</b>	<b>15.26 1</b>	<b>15.47 3</b>	<b>15.80 6</b>	<b>15.51 6</b>	<b>15.84 4</b>	<b>15.98 7</b>	<b>15.65 5</b>	<b>14.95 7</b>	<b>14.97 7</b>	<b>14.83 7</b>	<b>14.38 3</b>
Sicilia	15.13 8	15.70 9	15.75 5	15.67 3	15.62 5	16.13 2	16.33 8	16.42 0	16.06 5	15.34 6	15.29 3	15.07 7	14.52 1
Sardegna	17.73 4	18.03 6	17.88 3	18.14 0	18.28 3	18.38 0	18.57 6	18.79 9	18.73 7	17.81 2	17.73 6	17.75 5	17.16 2
<b>Nord-ovest</b>	<b>29.36 5</b>	<b>29.88 6</b>	<b>29.88 8</b>	<b>29.60 3</b>	<b>29.61 6</b>	<b>29.56 1</b>	<b>29.91 4</b>	<b>30.18 4</b>	<b>29.81 8</b>	<b>27.64 6</b>	<b>28.46 7</b>	<b>28.47 7</b>	<b>27.68 7</b>
<b>Nord-est</b>	<b>29.58 5</b>	<b>29.77 7</b>	<b>29.37 4</b>	<b>29.08 0</b>	<b>29.32 7</b>	<b>29.38 1</b>	<b>30.03 1</b>	<b>30.35 8</b>	<b>29.44 9</b>	<b>27.49 1</b>	<b>27.79 0</b>	<b>28.04 3</b>	<b>27.24 1</b>
<b>Centro</b>	<b>26.28 2</b>	<b>26.87 4</b>	<b>27.31 4</b>	<b>26.98 7</b>	<b>27.41 8</b>	<b>27.34 6</b>	<b>27.61 9</b>	<b>27.70 1</b>	<b>26.99 5</b>	<b>25.70 6</b>	<b>25.82 1</b>	<b>25.77 1</b>	<b>24.96 9</b>
<b>Centro-Nord</b>	<b>28.50 5</b>	<b>28.95 3</b>	<b>28.96 8</b>	<b>28.66 8</b>	<b>28.87 5</b>	<b>28.84 8</b>	<b>29.26 1</b>	<b>29.48 8</b>	<b>28.86 1</b>	<b>27.01 7</b>	<b>27.47 3</b>	<b>27.53 6</b>	<b>26.73 9</b>
<b>Mezzogiorno</b>	<b>16.00 9</b>	<b>16.39 6</b>	<b>16.43 8</b>	<b>16.35 0</b>	<b>16.39 0</b>	<b>16.51 1</b>	<b>16.80 5</b>	<b>16.96 6</b>	<b>16.69 2</b>	<b>15.81 2</b>	<b>15.74 3</b>	<b>15.64 7</b>	<b>15.19 7</b>
<b>Italia</b>	<b>24.02 1</b>	<b>24.45 3</b>	<b>24.48 6</b>	<b>24.28 5</b>	<b>24.46 3</b>	<b>24.50 9</b>	<b>24.90 5</b>	<b>25.14 0</b>	<b>24.65 9</b>	<b>23.16 5</b>	<b>23.45 1</b>	<b>23.46 9</b>	<b>22.80 7</b>

Table 2.7. GDP per capita.

Source: Istat Volume of GDP per capita (fixed prices 2005)

The first thing to note in Table 2.7 is that for the past 12 years, Calabria has had the lowest GDP per capita in Italy. As discussed in section 2.0 this is not surprising, since the critical problems of the region have yet not been solved. On the positive side note that the region has not suffered the full negative shock of the financial crisis

and the decrease in its GDP between 2008 and 2009 was below Italy's average. Output per capita in Italy and in the north declined by 2000 euro, namely by 8%, in the south it declined by 800 euro, which is 5%, and in Calabria it declined only by 400, which are 2.5%. Between 2009 and 2010 GDP in Calabria has slightly increased, very different from the decline in this severe recession in Italy and the rest of Europe. In 2011 and 2012 GDP has decreased again.



Graph 2.8. Gross Domestic Product and and internal final consumption of Calabria from 2001 to 2010 (data source ISTAT)

Graph 2.8 further demonstrates the decline in growth following the global financial crisis. It also demonstrates that consumption is higher than income, which attests for the scale of the shadow economy. This can explain why demand for goods and services in the region remains high even when GDP is low or decreasing.

## 2.2.3 Unemployment

REGIONS GEOGRAPHICAL AREAS	2000 (b)			2005			2011			2012		
	Male s	Fem ales	Total	Male s	Femal es	Total	Male s	Fema les	Total	Male s	Femal es	Total
Piemonte	4,8	11,5	7,7	3,3	6,4	4,7	6,9	8,6	7,6	8,2	10,5	9,2
Valle d'Aosta/Vallée d'Aoste	3,3	3,3	3,3	2,5	4,3	3,2	5,1	5,4	5,3	7,3	7,0	7,1
Liguria	9,7	9,1	9,4	3,2	9,1	5,8	5,8	7,0	6,3	6,4	10,3	8,1
Lombardia	2,8	5,6	3,9	3,1	5,4	4,1	5,1	6,7	5,8	6,7	8,5	7,5
Trentino-Alto Adige/ Südtirol	2,1	5,1	3,3	2,3	4,3	3,2	3,5	4,4	3,9	4,6	5,8	5,1
<i>Bolzano/Bozen</i>	1,6	2,2	1,8	2,2	3,5	2,8	3,0	3,8	3,3	3,6	4,8	4,1
<i>Trento</i>	2,6	7,9	4,7	2,4	5,2	3,6	4,0	5,1	4,5	5,6	6,8	6,1
Veneto	3,1	7,4	4,9	2,9	6,2	4,2	4,0	6,4	5,0	5,7	7,8	6,6
Friuli-Venezia Giulia	2,4	9,0	5,0	3,2	5,3	4,1	4,1	6,5	5,2	5,8	8,1	6,8
Emilia-Romagna	2,3	4,9	3,5	2,7	5,3	3,8	4,5	6,3	5,3	6,4	7,9	7,1
Toscana	2,7	9,1	5,4	3,7	7,3	5,3	5,4	7,9	6,5	6,5	9,5	7,8
Umbria	5,8	8,5	7,0	4,1	8,8	6,1	5,2	8,3	6,5	8,4	11,6	9,8
Marche	4,6	5,7	5,0	3,4	6,5	4,7	5,4	8,4	6,7	7,9	10,6	9,1
Lazio	7,5	16,4	11,1	6,4	9,5	7,7	8,1	9,8	8,9	9,8	12,1	10,8
Abruzzo	9,6	11,0	10,2	4,5	12,7	7,9	7,1	10,7	8,5	9,4	12,9	10,8
Molise	8,0	13,8	10,1	8,2	13,2	10,1	8,9	11,6	9,9	10,4	14,5	12,0
Campania	15,1	29,3	20,1	11,9	20,8	14,9	13,7	19,0	15,5	17,5	22,3	19,3
Puglia	11,9	24,4	16,3	11,5	20,9	14,6	11,1	16,9	13,1	14,0	18,7	15,7
Basilicata	12,6	17,8	14,4	8,5	18,5	12,3	11,2	13,2	12,0	14,5	14,4	14,5
Calabria	15,8	25,7	19,0	12,2	18,2	14,4	12,2	13,6	12,7	18,1	21,2	19,3
Sicilia	18,9	34,1	24,1	13,4	21,6	16,2	12,8	17,2	14,4	17,5	20,6	18,6
Sardegna	11,6	22,5	15,7	9,8	18,0	12,9	12,8	14,6	13,5	15,3	15,9	15,5
North-west	4,1	7,6	5,6	3,2	6,0	4,4	5,6	7,2	6,3	7,1	9,2	8,0
North-east	2,6	6,4	4,2	2,8	5,6	4,0	4,2	6,2	5,0	5,9	7,7	6,7
Centre	5,4	11,8	8,1	4,9	8,3	6,4	6,7	8,9	7,6	8,4	11,0	9,5

Centre and North	4,0	8,4	5,9	3,6	6,6	4,8	5,5	7,4	6,3	7,1	9,3	8,0	
South and Islands	14,6	26,5	18,8	11,4	19,6	14,3	12,1	16,2	13,6	15,9	19,3	17,2	
Italy	7,7	13,6	10,0	6,2	10,1	7,7	11,9	7,6	9,6	8,4	9,9	11,9	10,7

table 2.9. **Unemployment rate by gender and region** Years 2000, 2005, 2011 and 2012 (a) (percentage values) Source: ISTAT

As we can see from Table 2.9, Calabria and Campania have the highest rate of unemployment in Italy.<sup>17</sup> This matter is very relevant, since unemployment in Calabria is a long term phenomenon. Also, female unemployment is very high, and indicates that the socio-cultural background of the region matters significantly. Before the 2008 crisis, unemployment decreased due to many policies directed at increasing the flexibility of labour, and due to large migration of workers to the North of Italy. But after 2008 the trend in unemployment changes once again and it is even higher than the pre-crisis levels of 2005. Of course it is possible that this rise can be partly attributed to transition of workers from the formal to the informal sector.

REGIONS GEOGRAPHICAL AREAS	2000 (a)			2005			2011			2012		
	Ma- les	Fe- ma- les	Total	Ma- les	Fe- ma- les	Total	Ma- les	Fe- ma- les	Total	Ma- les	Fe- ma- les	Total
Calabria	28,5	64,8	46,7	33,3	62,3	47,9	38,6	63,7	51,2	36,1	60,4	48,3
North-west	24,2	44,8	34,5	22,8	42,0	32,4	22,5	39,8	31,1	22,3	38,0	30,1
North-east	22,4	42,1	32,2	22,0	40,6	31,2	22,0	38,4	30,2	21,1	37,1	29,1
Centre	25,9	48,0	37,1	24,8	44,5	34,8	24,2	43,2	33,8	23,6	41,2	32,5
Centre and North	24,1	45,0	34,6	23,2	42,4	32,7	22,8	40,4	31,6	22,3	38,7	30,5
South and Islands	27,9	61,1	44,7	30,1	62,5	46,4	34,5	63,2	49,0	33,0	60,7	47,0
Italy	25,5	50,8	38,2	25,6	49,6	37,6	26,9	48,5	37,8	26,1	46,5	36,3

table 3.0. **Inparticipation (Inactivity) rate (15-64 years) by gender and region** Source: Istat, Rilevazione sulle forze di lavoro Years 2000, 2005, 2011 and 2012 (percentage values)

<sup>17</sup> ISTAT: "The unemployment rate is given by the percentage ratio of the population aged 15 and over seeking employment to the labour force. The latter is given by the sum of people in employment and people seeking employment. The definition of a person seeking employment refers to the concept of actively seeking work, i.e. having performed at least one job-seeking action of a given type in the four weeks preceding the one to which the information gathered during the interview refers and being available to work in the two weeks that follow."



We next examine the <sup>18</sup>inactivity rates, which is the opposite of the rate of participation in the labor market. We notice in Table 2.0 that In 2012 in the southern regions (except for Abruzzo and Sardegna) this rate was well above the high Italian average of 36 %. The peaks are in Campania, Calabria (48.3%) and Sicily. The largest gender differences continued to characterize the South and the Islands, in which they remained around 30%. The marked regional dualism is once again confirmed since throughout the entire Centre and North area, except for Lazio, the gender gaps do not exceed 20%. So even though participation in the labor market increased in 2012, the rate of participation in general and of females especially is still very low in the South and Islands. In this area two women out of three are still out of the labor market, which is much higher than in the rest of Italy and of Europe.

#### 2.2.4 Size of industry sectors

number of employees	economic activities								Total	
	manufacturing		construction		trade, transportation and hotels		other services			
	firms	employees	firms	employees	firms	employees	firms	employees	firms	employees
1	145.026	145.958	340.092	341.471	822.225	824.393	1.298.674	1.297.347	<b>2.606.017</b>	<b>2.609.169</b>
2-9	217.290	870.897	237.989	830.598	709.558	2.372.997	466.543	1.449.912	<b>1.631.380</b>	<b>5.524.404</b>
10-19	46.591	621.567	21.674	279.131	49.467	640.359	24.968	326.220	<b>142.700</b>	<b>1.867.278</b>
20-49	22.142	665.964	6.491	186.245	15.842	464.820	10.834	328.249	<b>55.309</b>	<b>1.645.277</b>
50-249	9.449	916.886	1.429	124.812	5.140	493.553	5.760	575.275	<b>21.778</b>	<b>2.110.525</b>
250 e più	1.466	1.088.238	83	54.568	904	1.082.523	1.254	1.323.751	<b>3.707</b>	<b>3.549.081</b>
<b>Total</b>	<b>441.964</b>	<b>4.309.510</b>	<b>607.758</b>	<b>1.816.824</b>	<b>1.603.136</b>	<b>5.878.646</b>	<b>1.808.033</b>	<b>5.300.755</b>	<b>4.460.891</b>	<b>17.305.735</b>

table 3.1. data source: ISTAT. The above table shows the amount of firms with a determined number of workers per sector in Calabria.

<sup>18</sup> ISTAT: "The inactivity rate used here is obtained from the percentage ratio of non-participants in the labour force in the 15-64 age group to the corresponding population. "Non-participants in the labour force" are defined as those individuals who are classified as neither being employed nor seeking for job."

As we can see from Table 3.1 the number of firms in Calabria with more than 250 employees is much lower than those having a small number of employees. This might not seem too strange since Italy in general is a country characterized by small and medium enterprises. But this is more extreme in Calabria, which has very few big firms. This is partly due to historical reasons, namely the dismantlement of large firms in the 70's. Table 3.1 shows that highest share of firms hire only 2-9 employees per firm, which is very low. Of course, it makes sense the number of small firms is large, but Table 3.1 shows also that the majority of employees are in small firms. The small firms (those ranging between 2-9 employees) account for the largest number of employees, 5.524.404, which is almost third of the workers. This fact is related to the phenomenon of the shadow economy. First, the data on the number of employees might be biased because of the large shadow economy. Second, the presence of an unofficial economy creates an incentive for firm owners to keep their firms small, since larger firms can be traced more easily by the state.

Regions	Average employees
Piemonte	4,1
Valle d'Aosta/Vallée d'Aoste	3,2
Liguria	3,4
Lombardia	5,0
<i>Bolzano/Bozen</i>	4,4
<i>Trento</i>	4,1
Veneto	4,2
Friuli-Venezia Giulia	4,2
Emilia-Romagna	4,3
Toscana	3,4
Umbria	3,6
Marche	3,6
Lazio	4,6
Abruzzo	3,4
Molise	2,7

Campania	3,0
Puglia	3,0
Basilicata	3,0
Calabria	2,6
Sicilia	2,9
Sardegna	3,0
Italy	3,9

Table 3.2. Average number of employees in enterprises by region. (2010) data source: ISTAT

Table 3.2 confirms that Calabria has the lowest average number of employees per firm, 2.6, while the average for the 22 regions is 3.61.

This figure, and previous data on low rates of participation, high rates of unemployment and the data on the large gaps between consumption and income, all point at the conclusion that the shadow economy in Calabria is much larger than in other regions of Italy.

### Corruption 2.2.5

The existence of a large shadow economy and of irregular work is closely related to the issue of social towards the law. Any action taken to fight the shadow economy must consider also the social culture, which is also related to the level of corruption. This is particularly true in a region like Calabria, in which the presence of the ‘Ndrangheta’ makes any legal action much more difficult.<sup>19</sup>

As Stiglitz(2001,2002) says, there is a strong relationship between low social cohesion, increasing poverty in a region and illegal forms of economic activity. Certainly the deeply rooted presence of criminal organizations in Calabria, which violently

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<sup>19</sup> “The ‘Ndrangheta is a Mafia-type criminal organization in Italy, centered in Calabria. Despite not being as famous abroad as the Sicilian Cosa Nostra, and having been considered more rural compared to the Neapolitan Camorra and the Apulian Sacra Corona Unita, the ‘Ndrangheta became the most powerful crime syndicate of Italy in the late 1990s and early 2000s.” Source: Wikipedia.

control many activities, amplifies social fragmentation and the polarization of income.

The links between the criminal and illegal activity and the development process are numerous and complex. A recent study of CENSIS lists these links and sets them in three different types:<sup>20</sup>

- Capital: Many firms raise finance to capital from illegal sources at relatively low costs per unit of capital. Clearly, over time these costs tend to rise and stifle much economic activity.
- Labor: Many firms recruit their labour force from illegal sources. These workers might also be used for illegal activities and that might distort the firms activities and reduce its chance to succeed.
- Market control: Many firms gain access to part of the market by using ties to criminal organization. This also distorts the market outcome.

Criminal organizations usually aim to achieve the following main objectives:

- maximizing profits
- controlling territory
- money laundering
- acquisition of market share
- performing fully illegal activities (drug traffic, loan sharking)
- control over workers and labor unions
- control over economic-social interdependencies.

When these activities continue over a long period of time they create not only an unfavorable economic background but also a collusion between the state and these illegal activities. This creates socio-cultural distortions and raises the social tendencies toward illegal actions in general and shadow economic activities especially. It is therefore important for regions with high corruption to fight this problem together

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<sup>20</sup> Centre for social Investment Studies, founded in 1973. It is nowadays one of the most important sources for firms and government regarding social, economical and institutional studies.

with that of shadow economy. As shown in section 1 corruption is correlated with the shadow economy.

### 2.2.6 Analyzing the problem from a different angle

Understanding the relation and the causality between the underground economy and economic growth is not easy. As seen in section 1, there are different views on both the effects of the shadow economy on development and on the causality between these two phenomena. Furthermore, while these are general views on the issue, we have seen that Calabria (and Sicily and Campania) is a very special case, which makes some of the general theories irrelevant.

The empirical evidence on Calabria shows that the high levels of the shadow economy are closely tied to the slow economic growth and backwardness of the region. For this reason the neoclassical view<sup>21</sup> (discussed in section 1) cannot be considered as relevant for the case of Calabria. The empirical evidence clearly supports the view that the shadow economy is detrimental for growth and is also correlated with unemployment and criminality. The question therefore arises on what causes what. Is the shadow economy slowing growth, or has the slow economic growth in Calabria been the main cause of the shadow economy and its increase over time? This is therefore the final research question in this thesis.

Given the data, the historical processes and the findings described above, I tend to think that the more plausible hypothesis is that shadow economy is a major cause for Calabria's backwardness. For a starting point consider the development of economic, political and legal institutions, which took place gradually in Italy and in Calabria mainly in the 20th century, after the unification of the country. This is the pe-

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<sup>21</sup> "in the neo classical view, the underground economy is optimal in the sense that it responds to the economic environment's demand for urban services and small- scale manufacturing. From this point of view, the informal sector provides the economy with a dynamic and entrepreneurial inspirit and can lead to more competition and higher efficiency."

source: IMF working paper shadow economies around the world.

riod of gradually widening public sector, with increasing public service on the one hand and rising taxation on the other hand. We can therefore view the rise of a hidden and underground economy in Italy as a parallel process to this one. This has been stronger in more rural and underdeveloped regions, where it is easier to hide and the state controls are weaker. Calabria, as described in paragraph 2.1, has always been a region in which the agricultural sector was very developed, and this helped the development of a shadow economy as agricultural activities are not easily traceable. This phenomenon, together with the criminal activities carried out by organizations such as 'Ndragheta, tends to become inertial and gradually affect the social background more and more. As already mentioned in section 1, once such a shadow economy appears, it creates a number of effects, which might lead to a development trap:

- Since only part of the population is paying taxes, the tax burden on others rises and it increases the incentive to engage in unofficial economic activities.
- The state's loss of tax income results in less public services and of lower quality (like schooling, transportation and housing). This has a negative effect on the economy and pushes more people to the shadow economy.
- The Shadow economy and the criminal organizations both have an effect on the growth and size of the firms. To avoid contact with the state or with criminal organizations, firm owners prefer to keep their firms small. This hinders economic growth.

For the above reasons the shadow economy must be tackled together with policies for economic growth. Increasing the tax base and increasing public services are both important for this process. There are serious questions on how to implement such policies, but this is far beyond the scope of this paper, but I believe that fighting the shadow economy should come before speeding up economic growth.

### 3. Conclusions

In this paper I have analyzed how the shadow economy impacts growth through various factors. The first section was dedicated to defining this phenomenon and understanding how underground economy can be calculated and measured. A survey of the main research has been carried out in order to compare different views and results regarding the unofficial sector. Being unofficial economy completely unregistered and hidden it is a complex topic and none of the results should be considered irrelevant or put to one side when trying to analyze it. The second section focuses on the region Calabria, as the phenomenon of the shadow economy in this region, its size and effects are quite unique. The analysis shows how unofficial activities represent a great problem in this region with the highest levels of the country. The final part of the paper presents an hypotheses on how shadow economy is the cause of Calabria's backwardness, which starts in the 20th century and still hasn't found a solution. The key to stabilize the region's situation lies in fighting underground and criminal activities, prior or contemporary to the implementation of any growth policy.

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