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Corruption, competitiveness and illicit drugs market. a quantitative analysis

UniversItalia

*Work developed within the framework of the **EU project JUST/2010/DPIP/AG/1410: New methodological tools for policy and programme evaluation.***

This publication has been produced with the financial support of the Prevention and Information Programme of the European Commission. The contents of this publication are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Commission.

Editing, publishing and diffusion have been financed by the Nando Peretti Foundation



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ISBN 978-88-6507-402-2

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Preface

This work stems from a seemingly trivial observation that one of the researchers happened to make in the early 2000s: the two “rankings” published yearly by two highly credible, international, independent institutions (*Transparency International* and *the World Economic Forum*) respectively on the transparency and competitiveness of the countries, looked like two facets of the same reality, just slightly blurred. The top positions were always given to the same countries, in both charts and – more importantly – in the same order, with very few exceptions.

Thus emerged the idea of further investigation to find, if any, a statistical correlation between the two parameters.

The first attempts were made using the data of the years 2004-2005. Analyses were carried out at both global (world-wide) level and local (regional) level and the first results were very encouraging.

This work was then restarted some years later, following the international financial crisis of late 2000s, and – surprisingly – the correlation index proved to be even higher.

In addition, extending the investigation to the possible correlation between the transparency index and routes used by international organised crime for its illicit trafficking – in particular class A drugs – it has been possible to prove that an even higher correlation exists between the low value of the *Transparency* as measured yearly by *Transparency International* - i.e. the *corruption* of the Public Administrations - and the volume of this illicit International trafficking.

The lack of transparency, i.e. the corruption of Governments and public administrations favours organised crime in all its activities, which, in turn, undermines dramatically the competitiveness of a country in the International markets.

On the basis of these analyses it would also be possible to assess the

consequences of drug policies in unforeseen areas and to hypothesise new approaches for damage limitation.

“Corruption costs; transparency, in the long run, pays”. This is a given in all the civilised world, but it has struggled to get established: for a long time it had been seen as a matter of religion first (since *Calvinism* to the present), and of ethics and philosophy later.

To our knowledge, there has been no attempt to check if there was a *quantitative relationship* between the two values, accurately measured by international institutions independent from each other.

This work is an attempt to investigate this aspect.



Sources of data and methodologies

2.1 Transparency (www.transparency.org)

Transparency International is a non-profit international organisation. Its objective is to measure and monitor the transparency of Governments and – more broadly – the way businesses are run in almost all countries in the world. The “almost” indicates that for some countries – possibly the most corrupt – the data available is not enough for a reliable statistical evaluation of the main index: the **CPI** (*Corruption Perception Index*), on which the yearly ranks in transparency are built.

The *Corruption Perception Index (CPI)* of **TI** is the result of a very complex series of investigations and data processing reflecting the opinions of business people and financial analysts – both resident and non resident - in the relevant countries. The investigation is based on a series of surveys, the number of which depends on the countries' cooperation. The surveys are carried out by researchers of *Transparency International* itself or commissioned to other research Institutes.

For a country to be taken into account, at least three of these investigations (*pools*) are necessary. The consequence is that for some countries, possibly among the most corrupt, the **CPI** can't be evaluated.

The results of the *pools* are computed and evaluated at the University of Passau, under the supervision of Prof. Dr Johann Graf Lambsdorff: a score from 1 to 10 is given to each country. Although still called *Corruption Propension Index (CPI)* – this score represents actually its complement to 10. i.e. the higher the score, the higher the *Transparency* of the country the score refers to.

A *confidence interval* is associated to each score. The confidence interval is a function of the *distribution* of the values obtained in the computation and the number of *surveys* available. Generally speaking the most *transparent* countries are also those for which more data are available and this results in an more narrow *confidence interval* around the estimated score for the most virtuous countries.

It has to be noted that the confidence interval is not always symmetrical with respect

to the value of the estimated score. For more information on this methodology, please refer to the website:

<http://www.transparency.org/surveys/index.html#cpi>

2.2 Competitiveness

The level of competitiveness is evaluated yearly, since 1999, by the *World Economic Forum (WEF)*. It publishes a detailed early report, the *Global Competitiveness Report (CGR)*, available on the WEF website:

<http://www.weforum.org/issues/global-competitiveness>

Originally, the report considered mainly industrialised countries, but in recent years, the reports cover almost all countries in the same way. Currently, the report is comprised of about 140 countries. These countries are classified also on the basis of their stage of development as follows:

- Stage 1: *Factor driven* economies
- Stage 1-2 Transition 1-2
- Stage 3 *Efficiency driven* economies
- Stage 2-3 Transition 2-3
- Stage 3 *Innovation driven* economies (developed countries)

The criteria applied for the evaluation of the competitiveness level is independent from the *stage of development*. The 'rank' of a country is judged in 'absolute' terms and in comparison to the competitiveness of the countries in the same *stage of development*.

Italy, for example, is in many pillars (see below) far behind most industrialised countries.

The methodology for the evaluation of the **GCI** (*Global Competitiveness Index*) is based on a series of surveys and analysis carried out by experts of the *WEF* in cooperation with local experts (in Italy, for instance: the University *L. Bocconi* of Milan and a well known company of private consultants).

The *pillars* of the economy are taken into account in these investigations. They are:

- 1 Institutions
- 2 Infrastructure
- 3 Macroeconomic stability
- 4 Health and primary education
- 5 Higher education and training
- 6 Goods market efficiency
- 7 Labour market efficiency
- 8 Financial Market sophistication
- 9 Technological readiness
- 10 Market size
- 11 Business sophistication
- 12 Innovation

Many *sub-components* are taken into account for each of these *pillars*. The number

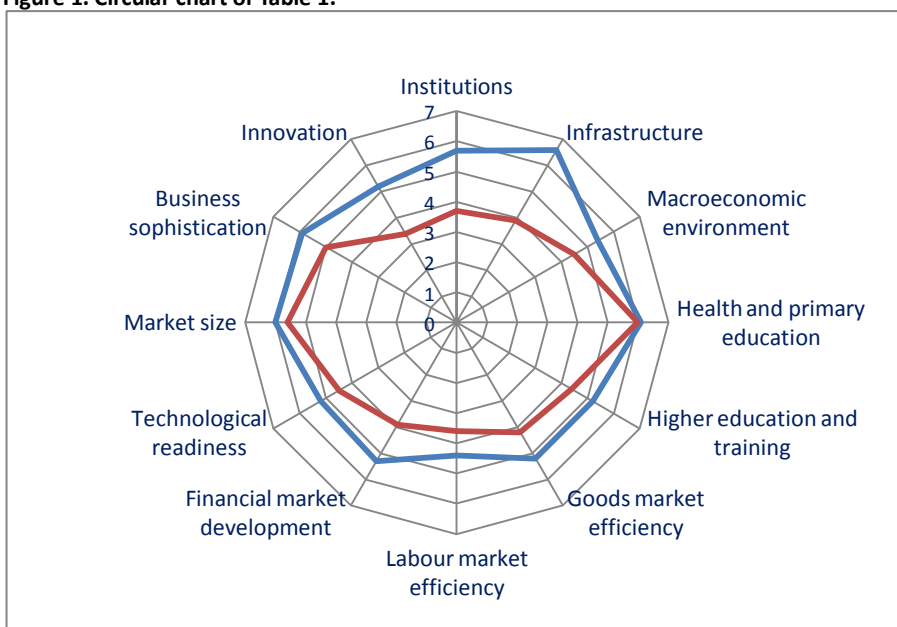
of these *sub-components* depends on the complexity of the *pillar*. For instance: there are two only for the *Market size* (domestic and International), whilst there are twenty or more for the most complex *pillars* such as *Institutions*.

The results of the surveys and analysis originate a *score* (1 to 7: worst to best) for each pillar as reported in the *profile of the country*. Table 1 and Figure 1 show – as an example – the comparison between Germany (external line) and Italy for the year 2010, in numeric and graphic form respectively. The comparison has been made quoting on the same table and on the same diagram the *scores* given to each *pillar* for the two countries and similarly presented in the same diagram, for easy of reading¹. An additional table reporting the advantage of Germany in percentage has been added and the average, minimum and maximum differentials have been added as well. According to the report of WEF, the main problems that make it difficult for Italian enterprises to compete in the international markets are: the complexity of bureaucracy in public administration and *corruption*. These two problems, for Italy, amount to 25% of the topic answers given in the surveys, whilst the corresponding (summed) value for Germany is less than half (around 12%).

1 In the original report of WEF, similar diagrams are presented for each country, together with the 'average' of the score of the country at a similar development level (for Germany and Italy: OCSE countries).

Table1. Comparison between Germany-Italy on 12 pillar of economy.

	Pillar	Germany	Italy	Delta% D/I
1	Institutions	5.7	3.7	54.05
2	Infrastructure	6.6	3.9	69.23
3	Macroeconomic environment	5.4	4.5	20.00
4	Health and primary education	6.1	6.0	1.67
5	Higher education and training	5.2	4.4	18.18
6	Goods market efficiency	5.2	4.2	23.81
7	Labour market efficiency	4.4	3.6	22.22
8	Financial market development	5.3	3.9	35.90
9	Technological readiness	5.2	4.5	15.56
10	Market size	6.0	5.6	7.14
11	Business sophistication	5.9	5.0	18.00
12	Innovation	5.2	3.4	52.94
	Delta% ave. on 12 pillars			28.23
	Delta% max. (Infrastructure)			69.23
	Delta% min. (Health and primary education)			1.67

Figure 1. Circular chart of Table 1.

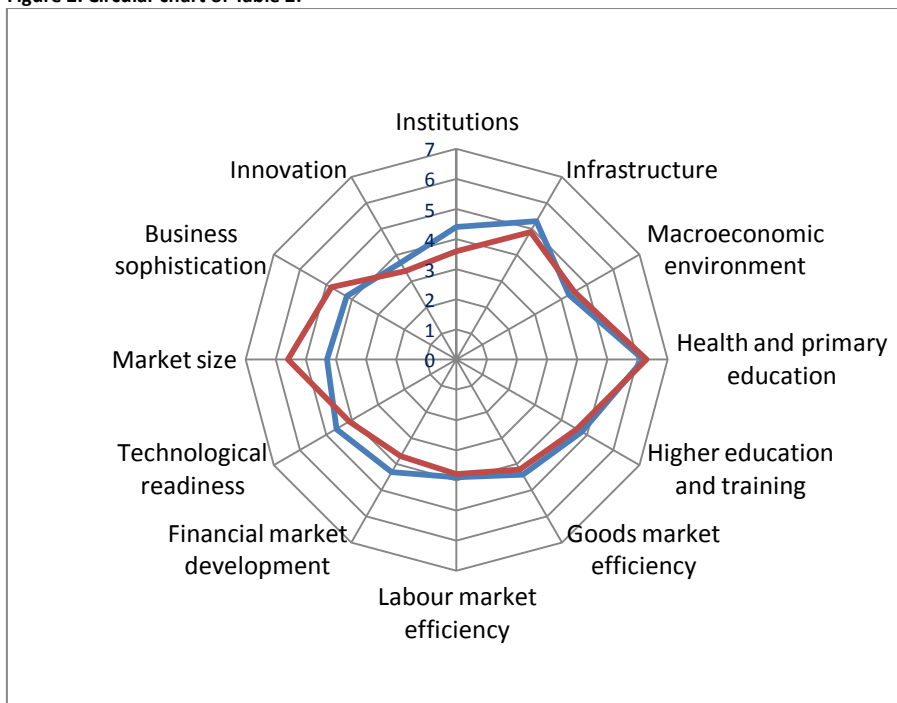
The comparison with Portugal is also interesting, (until not too long ago an underdeveloped country with respect to Italy). See Table 2 and Figure 2 for data to compare.

Table 2 and Figure 2 show clearly the remarkable progresses made by Portugal in the last years, in particular in homogeneous development. This is highlighted by scores consistently close to the average of countries belonging to the same *state of development*, with a commendable exception for the pillar *Sanity and primary education* scoring close to the maximum of all OCSE countries. In addition, it is worth noting that the area in which Portugal surpasses Italy is wider than the area in which Italy does, and the overall comparison shows an advantage for Portugal. However, the consistency of the values of the 12 pillars is impressive, as it is a sign of harmonious development and as such does not favour any of the pillars with respect to one another, which is something that cannot be said for Italy.

Table 2. Comparison Portugal - Italy on 12 pillars of economy: source WEF- 2010 data.

	Pillar	Portugal	Italy	Delta% P/I
1	Institutions	4.4	3.6	22.22
2	Infrastructure	5.3	4.9	8.16
3	Macroeconomic environment	4.3	4.5	-4.44
4	Health and primary education	6.2	6.3	-1.59
5	Higher education and training	4.8	4.6	4.35
6	Goods market efficiency	4.4	4.2	4.76
7	Labour market eff.	3.9	3.8	2.63
8	Fin. market devel.	4.3	3.7	16.22
9	Technological readiness	4.6	4.1	12.20
10	Market size	4.3	5.6	-23.21
11	Business sophistication	4.2	4.8	-12.50
12	Innovation	3.7	3.4	8.82
	Average	4.61	4.6	2.62
	Delta% Max (Institutions)			22.22
	Delta% min (Market size)			-23.21

Figure 2. Circular chart of Table 2.



Returning to the general discussion, the forming of the “merit scores” assigned to the twelve pillars given for each country, gives an “overall score”: the **GCI** (*Global Competitiveness Index*, from 1 to 7) and on this score the *ranking global competitiveness (Global Competitiveness Rank)* is made and published yearly, in decreasing order of merit.

This ranking shows always the same countries at the top, since the first reports (late '90s), with very few changes.



2

Is it possible to hypothesise a correlation between the two indices?

In order to check this hypothesis, 31 countries have been taken into account: 27 of the European Union plus Albania, Croatia, Turkey and Norway: the first three as possible candidates to join the EU, the fourth as a country economically and socially homogeneous with the most advanced countries in the EU.

The *ranks of merit* for *Transparency and Competitiveness* have been worked out on the basis of the rankings published by *Transparency International* and *the World Economic Forum* respectively. These *rankings* are shown in Tables 3 and 4: the tables show a first *visual* confirmation of our hypothesis.

Finally, the two scores obtained in *Transparency and Competitiveness* have been put side by side and treated as *independent* and *dependent* variable, as shown in Table 5. Data have been plotted on the *scatter diagram* of Figure 3, the *regression line* has been drawn and the correlation coefficient computed. The last results **0.91** and **$R^2=0.84$** . Thus, the regression model explains 84% of the variability of the dependent variable.

Table 3. Ranking of Transparency for the 27 UE countries + Albania, Croatia, Turkey and Norway – year 2010.

	Country	CPI	Confidence interval	World-wide ranking	Regional Ranking
1	Denmark	9.3	9.1-9.4	1	1
2	Sweden	9.2	9.1-9.4	4	2
3	Finland	9.2	9.1-9.3	4	2
4	Netherlands	8.8	8.7-9.0	7	4
5	Norway	8.6	8.1-9.0	10	6
6	Luxembourg	8.5	8.0-8.9	11	7
7	Ireland	8.0	7.7-8.3	14	9
8	Austria	7.9	7.4-8.4	15	10
9	Germany	7.9	7.5-8.3	15	10
10	United Kingdom	7.6	7.3-7.9	20	12
11	Belgium	7.1	6.9-7.2	22	13
12	France	6.8	6.4-7.2	25	14
13	Estonia	6.5	6.1-6.8	26	15
14	Slovenia	6.4	5.9-6.8	27	16
15	Cyprus	6.3	6.0-6.6	28	17
16	Spain	6.1	5.7-6.5	30	18
17	Portugal	6.0	5.4-6.7	32	19
18	Malta	5.6	5.3-5.8	37	20
19	Poland	5.3	5.0-5.5	41	21
20	Lithuania	5.0	4.4-5.5	46	22
21	Hungary	4.7	3.9-5.5	50	23
22	Czech Republic	4.6	4.1-5.1	53	24
23	Turkey	4.4	4.0-4.8	56	1
24	Latvia	4.3	3.7-4.8	59	26
25	Slovak Republic	4.3	3.8-4.9	59	26
26	Croatia	4.1	3.7-4.5	62	2
27	Italy	3.9	3.5-4.4	67	27
28	Romania	3.7	3.3-4.2	69	28
29	Bulgaria	3.6	3.2-4.0	79	29
30	Greece	3.5	3.1-3.9	78	30
31	Albania	3.3	3.0-3.3	87	7

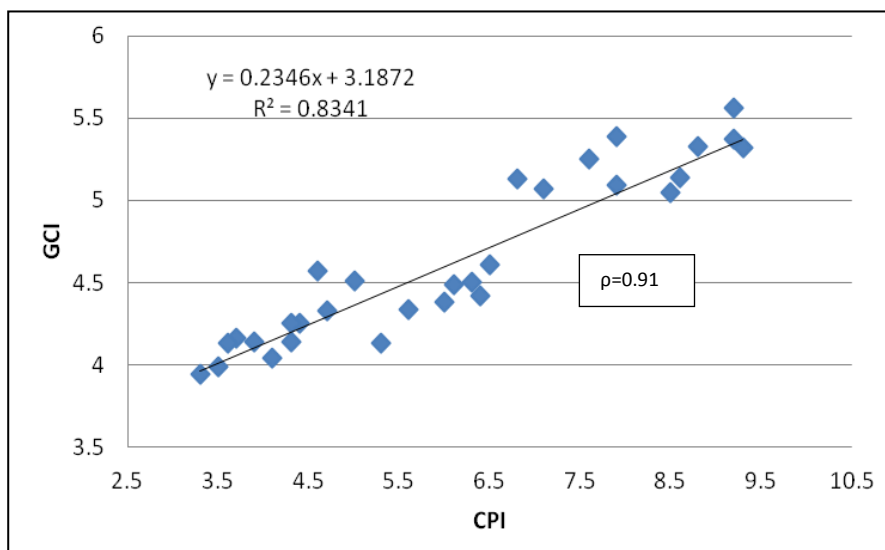
Table 4. Ranking of *competitiveness*, WEF: *Global Competitiveness Report 2010-2011*.

	Country	GCI	Confidence interval	World wide ranking	Regional ranking
1	Sweden	5.56	NA	2	1
2	Germany	5.39	NA	5	2
3	Finland	5.37	NA	7	3
4	Netherlands	5.33	NA	8	4
5	Denmark	5.32	NA	9	5
6	United kingdom	5.25	NA	12	6
7	Norway	5.14	NA	14	7
8	France	5.13	NA	15	8
9	Austria	5.09	NA	18	9
10	Belgium	5.07	NA	19	10
11	Luxembourg	5.05	NA	20	11
12	Estonia	4.61	NA	33	12
13	Czech Republic	4.57	NA	36	13
14	Poland	4.51	NA	39	14
15	Cyprus	4.50	NA	40	15
16	Spain	4.49	NA	42	16
17	Ireland	4.47	NA	29	17
18	Slovenia	4.42	NA	45	18
19	Portugal	4.38	NA	46	19
20	Lithuania	4.38	NA	47	20
21	Italy	4.37	NA	48	21
22	Malta	4.34	NA	50	22
23	Hungary	4.33	NA	52	23
24	Slovak Republic	4.25	NA	60	24
25	Turkey	4.25	NA	61	25
26	Romania	4.16	NA	67	26
27	Latvia	4.14	NA	70	27
28	Bulgaria	4.13	NA	71	28
29	Croatia	4.04	NA	77	29
30	Greece	3.99	NA	81	30
31	Albania	3.94	NA	88	31

Table 5. Competitiveness versus transparency ordered by ranking of transparency.

1	Albania	3.3	3.94
2	Greece	3.5	3.99
3	Bulgaria	3.6	4.13
4	Romania	3.7	4.16
5	Italy	3.9	4.14
6	Croatia	4.1	4.04
7	Slovak Republic	4.3	4.25
8	Latvia	4.3	4.14
9	Turkey	4.4	4.25
10	Czech Republic	4.6	4.57
11	Hungary	4.7	4.33
12	Lithuania	5.0	4.51
13	Poland	5.3	4.13
14	Malta	5.6	4.34
15	Portugal	6.0	4.38
16	Spain	6.1	4.49
17	Cyprus	6.3	4.50
18	Slovenia	6.4	4.42
19	Estonia	6.5	4.61
20	France	6.8	5.13
21	Belgium	7.1	5.07
22	United Kingdom	7.6	5.25
23	Germany	7.9	5.39
24	Austria	7.9	5.09
25	Ireland	8.0	4.47
26	Luxembourg	8.5	5.05
27	Norway	8.6	5.14
28	Netherlands	8.8	5.33
29	Finland	9.2	5.37
30	Sweden	9.2	5.56
31	Denmark	9.3	5.32

Figure 3. Scatter diagram of competitiveness versus transparency, regression line and correlation coefficient.





General considerations arising from the correlation between transparency and competitiveness

4.1 General considerations

The most virtuous countries are also the most competitive and prosperous. This prosperity expresses and shows itself also by mean of the presence of a *welfare state*, which is able to deploy in favour of less fortunate people the resources collected through taxation. These resources are mainly devoted to this purpose and to education at any level and to R&D as well and are, in addition, very well administrated². The budget for the “Defence”, on the contrary, is almost negligible compared with that of countries such as US and Russia also in relative terms, i.e. the percentage of GDP for the Defence is generally less than 3% for these countries against 7% - or more – of the USA and – possibly - of Russia as well.

4.2 Considerations on further aspects

It's worth noting that this model – used for the first time on the data of year 2004 – has withstood despite the International crisis occurred from then to present time. With respect to the crisis, it's evident that the “smallest” (in number of inhabitants) countries such as Iceland, for instance, are those that had the highest shrinkages in *competitiveness*, because their economic and financial resources were excellent if considered *per capita*, but very modest in absolute value. Therefore they were inadequate for facing the crisis with strong liquidity injections³ and, in addition, without the “umbrella” of a common strong currency that helped many EU countries in that contingency.

Italy has collapsed down to the 69° place in the world-wide *ranking* for *transparency*, confirming its rank for *competitiveness*: a not commendable 48° place, surpassed by many countries of sub-Saharan Africa and by all the Baltic countries, that joined the EU only in 2004.

It's sad but dutiful to close this paragraph with a pessimistic remark about the long-term prospects. As a matter of fact, the birth-rate in the most advanced and

2 It is painful but due to remind that Italy is the country with the lowest percentage of GDP invested in R&D in the area of “UE15”

3 In 2009 Island obtained a loan of some 40 billion dollars from Russia

industrialised countries is continually decreasing (well below the limit of two children per woman) and conversely a worrying increase of the birth-rate in the less developed countries, also due to lack in awareness in family-planning and birth-control is observed.

The consequence, we would say the real risk, is that the richest countries will become richer and richer, but with no young people to provide pensions for the elders; whilst the poorest will be poorer and poorer, with no hope but illegal immigration and with a very high infant-mortality rate .

4

How Italy competes in the international scenario

5.1 Transparency and Competitiveness

Italy is in 69th place for transparency, according to *Transparency International*, Italy is in the “red area” of the most corrupted countries of the world – and at 48th place as for competitiveness⁴. In those two rankings, it is surpassed by Croatia, Montenegro and the Slovak Republic for *Transparency* and by Slovenia, Portugal e Lithuania for *Competitiveness*.

Table 6 and Figure 4 show in all its evidence the constant downhill of Italy in *Transparency* in the last ten years, compared with some reference-countries. It is a constant concern of many prominent International observers since the early 2000. In fact, the *World Economic Forum*, so states on page 27 of their *Global Competitiveness Report 2010-11*:

“Italy remains stable at is 48th place this year, still by far the lowest-ranked G-7 member country. The country continues to do well in more complex areas measured by the GCI, particularly the sophistication of its businesses environment, where it is ranked 23rd, producing goods high on the value chain and with the world’s top business clusters (1st). Italy also benefits from its large market size—the 9th largest in the world—which allows for significant economies of scale.

However, Italy’s overall competitiveness performance continues to be held back by some critical structural weaknesses in the economy.

The labour market remains highly rigid, ranked 118th for its labour market efficiency, hindering job creation. Financial markets are not sufficiently developed to provide needed finance for business development (ranked 101st).

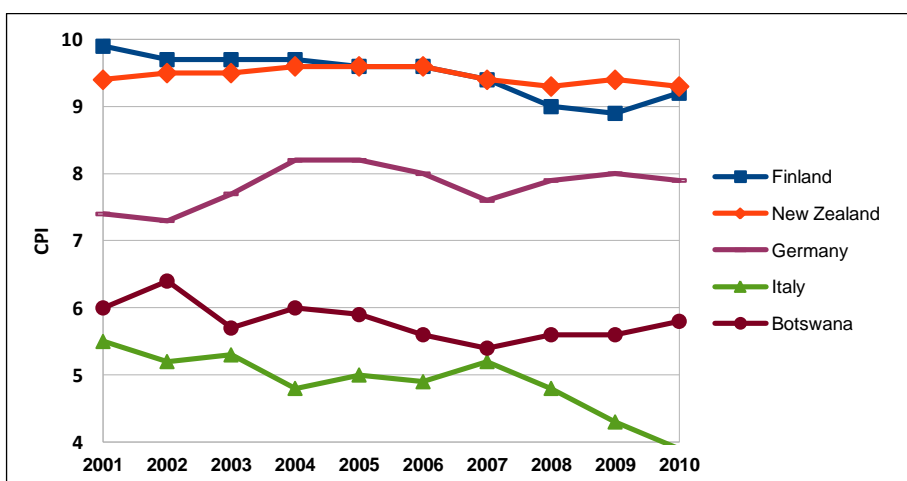
Other institutional weaknesses include high levels of corruption and organized crime and a perceived lack of independence within the judicial system, which increase business costs and undermine investor confidence, with Italy ranked 92nd overall for its institutional environment.

4 data 2011, referring to year 2010. In the subsequent report 2011-2012, Italy is placed by WEF some places above (43rd)

Table 6 – Trend of the Transparency score for some selected countries – years 2001-2010
 Source: *Transparency International – 2011 Report*

Country	YEARS										Average
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Finland	9.9	9.7	9.7	9.70	9.6	9.6	9.4	9.0	8.9	9.2	9.5
New Zealand	9.4	9.5	9.5	9.6	9.6	9.6	9.4	9.3	9.4	9.3	9.5
Germany	7.4	7.3	7.7	8.2	8.2	8.0	7.6	7.9	8.0	7.9	7.8
Italy	5.5	5.2	5.3	4.8	5.0	4.9	5.2	4.8	4.3	3.9	4.9
Botswana	6.0	6.4	5.7	6.0	5.9	5.6	5.4	5.6	5.6	5.8	5.8

Figure 4. Trend of Transparency score in the last ten years for some selected countries



Recently, with the Government headed by Mr. Mario Monti, it seems that Italy has regained most of its international credibility and the confidence of its main European partners. This also because both the Prime Minister himself and other high state officials stressed vigorously the need to follow the recommendations of the European Commission.

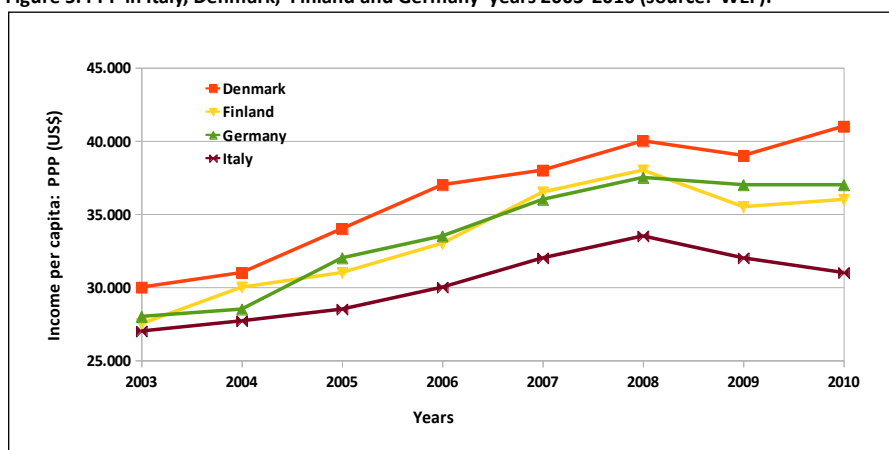
The Government has been trying to impact deeply the labour market. The need to fight corruption and tax evasion has been stressed also by Mr. Giampaolino – President of Court of Auditors (*Corte dei Conti*), who said “*la corruzione dilaga*” (*the corruption is rampant*) and by the Minister of Justice, Mrs Severino, who has been trying to introduce as new anti-corruption laws, provisions for the bribes in

private business-transactions to be considered a criminal offences (at the moment *bribing* is considered such only if a public official is involved).

The benefits of these measures can be seen only in the long-run, as the *transparency* is much more *inelastic* than *competitiveness* is, i.e. it reacts much more slowly than competitiveness does to the provisions of law and other governmental measures, because it is more “entrenched” in the habit of a country and its inhabitants. Proofs of that are countries such as Ireland and Iceland that both maintained a remarkably good score in *transparency* despite of their decreasing score in *competitiveness* following the financial crisis they had to face in recent years.

Coming back to Italy, this continuous, grovelling loss in competitiveness resulted in a remarkable loss in the purchasing power of the families as shown in Figure 5, where the PPP (Parity Purchasing Power) of Italy is reported with respect to Denmark, Finland and Germany (years 2003-2010; source: WEF).

Figure 5. PPP in Italy, Denmark, Finland and Germany years 2003-2010 (source: WEF).



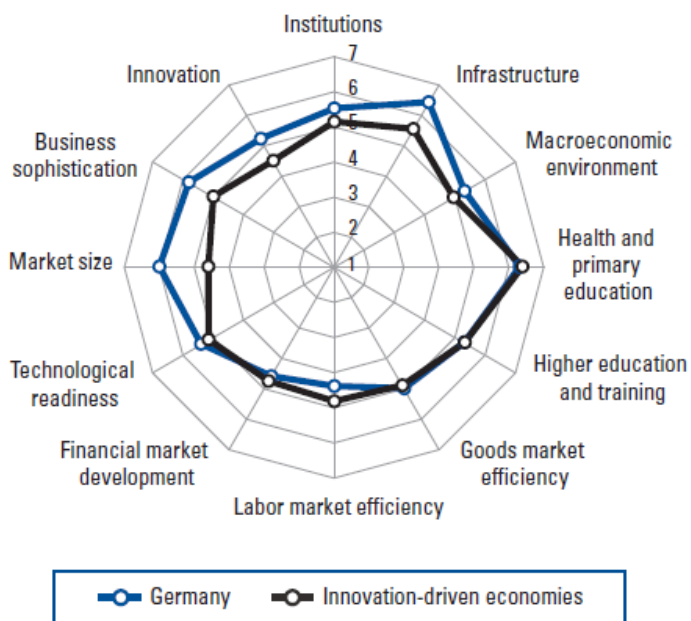
As for *competitiveness*, the figure isn't much better: Italy is at the lowest places both in the EU15 and in the EU27 areas. In fact it is by far the least competitive of G8-countries and is 21st out of 31 in a rank comprising the 27 EU countries plus Norway, Albania, Croatia and Turkey.

In this particular ranking, Italy, at 21st place is surpassed by Portugal, Slovenia and Lithuania and closely followed by Malta, Hungary and Slovak Republic. It is worth of note, which stresses further the down fall of Italy, the 12th place of Estonia, a country of only 1.3 million inhabitants and belonging to **transition stage 2-3**.

Here below, the synthetic *profiles* of Italy compared with that of Germany and Estonia, are shown, as they are published by WEF in the mentioned report 2010-2011:

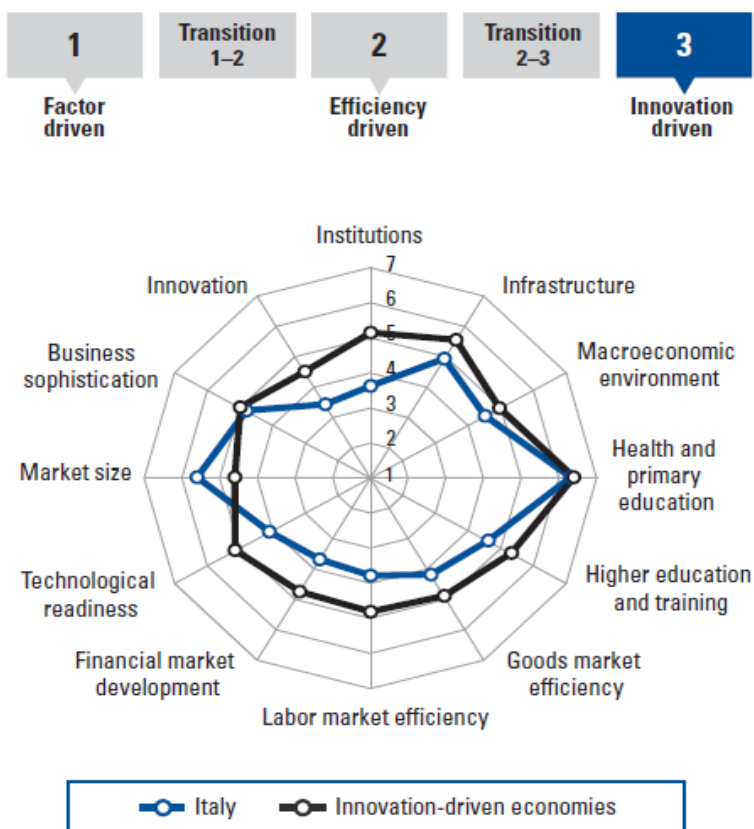
from the profile of Germany

Stage of development



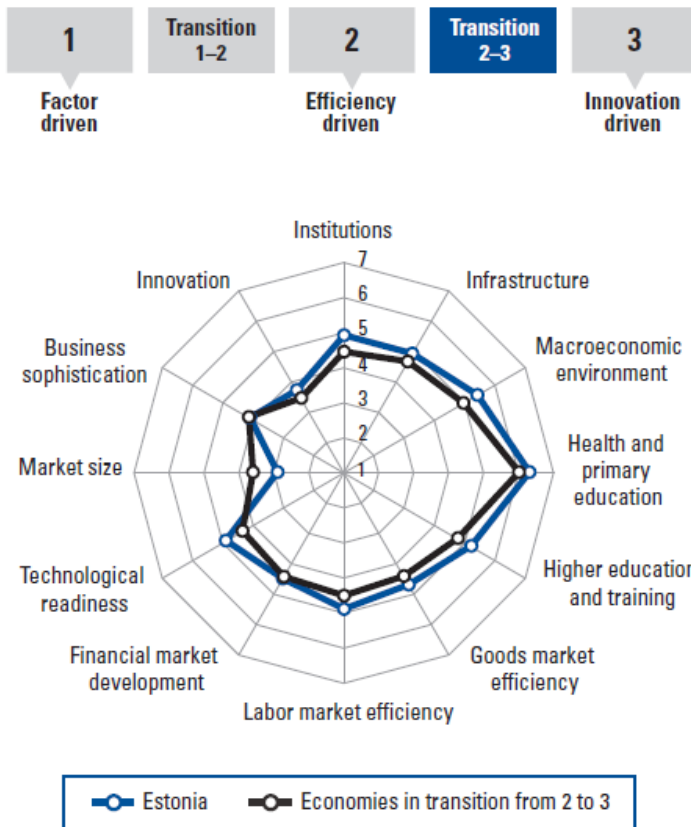
from the profile of Italy

Stage of development



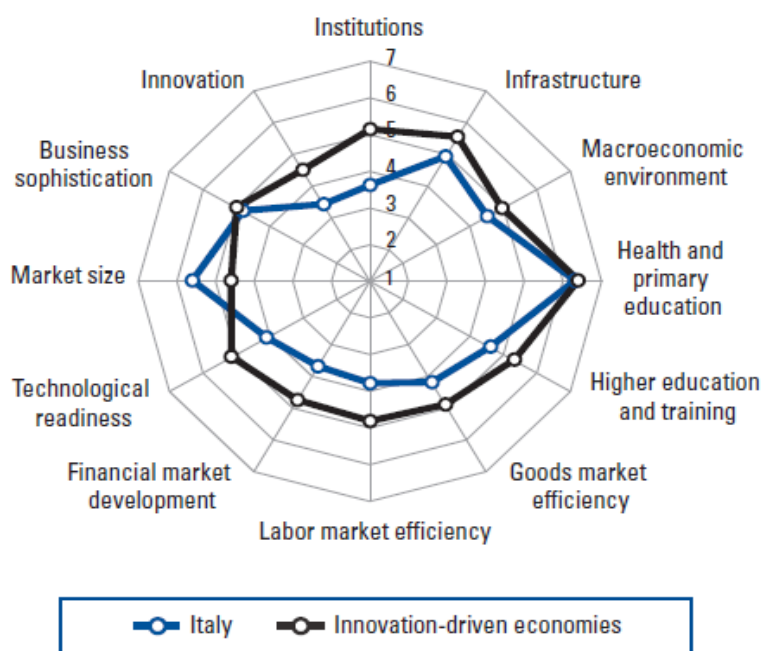
from the profile of Estonia

Stage of development



from the profile of Italy

Stage of development



The gap between Italy and Germany is evident and especially remarkable in some *pillars* such as “**Institutions**” and “**Infrastructure**”, another weak point of the Italian competitiveness.

But also compared to the “little” Estonia, Italy seems to be not in good shape: **Estonia** is 21st in the world-wide ranking for **transparency** and is placed 33rd in the world-wide ranking for **competitiveness** versus. the 47th place of Italy, despite Estonia is classified as a “less advanced country” (*transition stage 2-3 instead of 3, that Italy belongs to*).

5.2 Relevance of the public debt

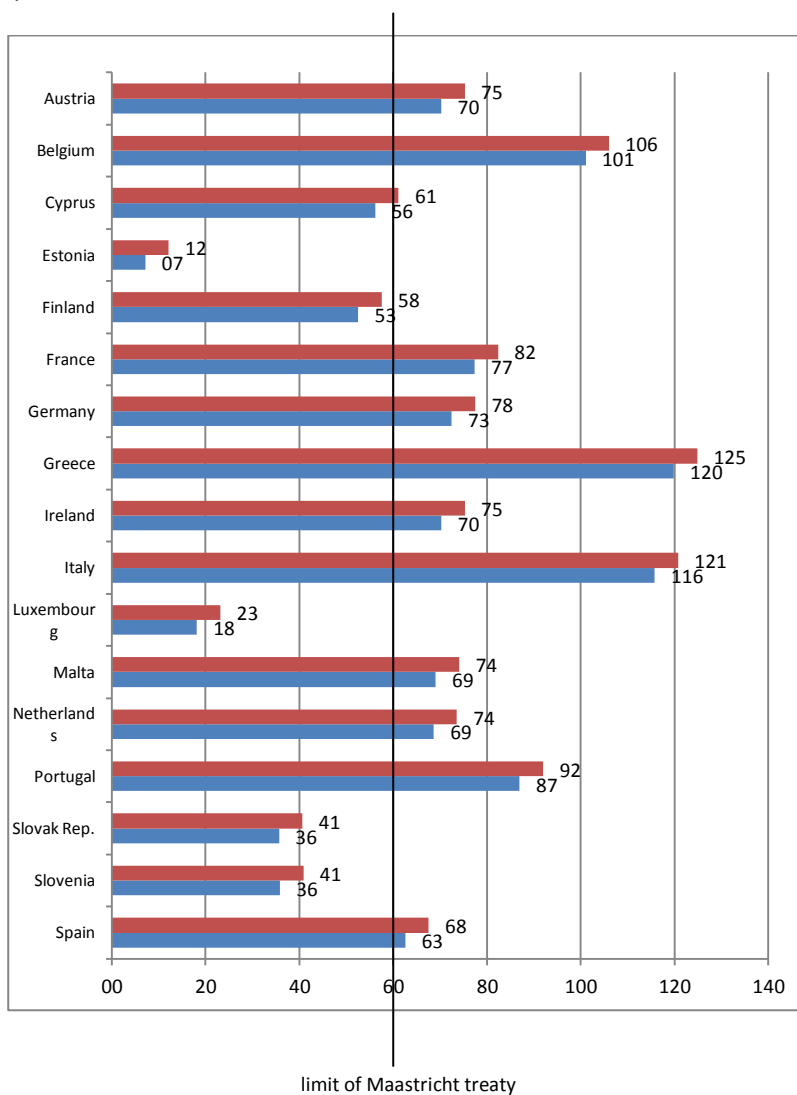
One of the most important problem for Italy is its dramatically high public debt, that undermines any possibility of investing in R&D, growth and therefore in employment. Italian public debt level was (and still is) so high that it had become a serious concern not only for the Italian Governments, but also, and perhaps even more, for its European partners who enforced Italy to take drastic measures which the Monti government is has tried to do.

As a confirmation of the above, and of how a low public debt can help to overcome even the harshest of crisis, it is sufficient to look at the following Figure 6 which shows the public debt as a percentage of the GDP of the 17 countries of Euro zone. It is clear that the 'little' Estonia, who started from a modest 7.2% before the crisis of 2010, has been able to continue with no problem its policy of investment in innovation, infrastructure, R&D, slightly increasing the public debt, but still remaining well below the limit fixed by the Maastricht treaty, limit that – by the way – is abundantly surpassed by almost all other countries of the Euro-zone.

In summary, as for growth, Italy has remained paralyzed by the need to implement policies aimed primarily at expenditure restraint, whilst the “little” Estonia has been able to continue its policy of development, increasing slightly its public debt, which still remains the lowest of the Euro-zone countries

The great part of the loss in competitiveness can be attributed to illicit economy and to *grey economy*, which is strictly connected to *money laundering*, that will dealt with later.

Figure 6. Public debt 2010 e 2011 as % of GDP of the Euro-zone countries (source: WEF, mentioned report).



The grey economy

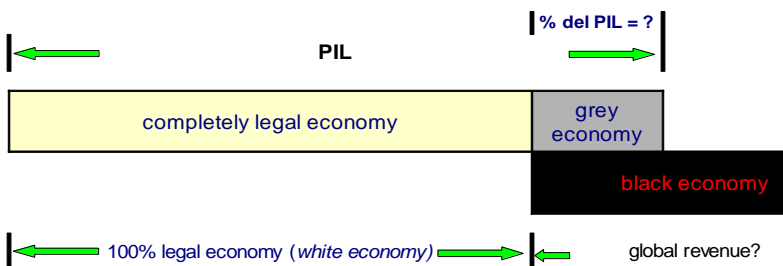
6.1 What it is

The *grey economy* is a part of “legal economy”, therefore participating in the formation of the GDP, - as a matter of fact – it is mostly due to the investments in legal activities of the *black money* gained by the organised crime. This phenomenon is remarkably serious in Italy.

Relevance of grey economy

The weight of the *grey economy* as a part of GDP can reach a two-digit percentage in the most corrupted countries, with all the dramatic consequences on the legal economy and the competitiveness of a country.

Figure 7. Schema and the partial overlap of the *black economy* and the legal economy.



6.2 Grey economy and corruption

The corruptibility of Public Administrations, which is at the same time an accomplice and a victim of the power of the grey economy is particularly remarkable in Italy, as better detailed in paragraph 6.3. The dramatically self-sustaining mechanism is schematically shown in Figure 8.

Basically, a minimum of corruption or *propensity for corruption* in the Public Administration yields a perverted, self-sustaining mechanism, in which the corruption can only continue to grow up, to the detriment of the competitiveness

of the whole country and of the employment of young people. This is – of course – another advantage to the organised crime, that can have a larger base of recruitment.

6.3 Dimension of the phenomenon in Italy

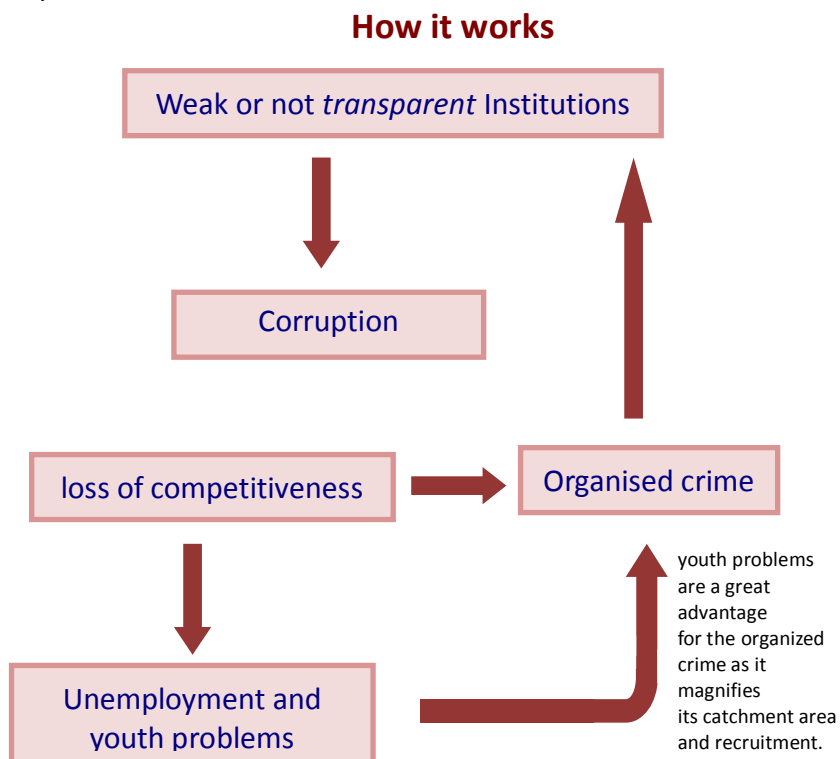
Many International Institutions, such as the UNODP, the Monetary Found and the WEF, expressed their concerns on the issue in many reports and these concerns have been growing up continually.

From this stand-point Italy is the most worrying country in the area of *industrialised countries*.

The total turnover of the organised crime in Italy is worth of more than 120 billion Euro per year, according to the estimates of some credible sources⁵, or ten times the GDP of Estonia, for instance and one tenth of the whole Italian GDP. The estimated values of that turnover, broken down by *prevalent* activities is shown in Table 7.

5 Recent TV interview to Dr. Grasso, Chief of DDA (the Italian Anti-Mafia Office).

Figure 8. Functional schema of how the *perverted circle* weakness of Institutions-loss in competitiveness works



According to these studies, the *budget allocated* for corruption only is 2,750 million (almost 3 billion) Euros per year. This impressive amount of money is devoted by the organised crime to the corruption of Officials of the Public Administration (both central and peripheral) in order to pursue their aims and / or to influence the legislative power.

Also relevant is the cost of money laundering and this is a further proof of the interest that the organised crime has in making *legal* its activities with devastating effects on the *competitiveness*, as the aim of such enterprises is not to compete on the market, but to *launder money*.

The money laundering techniques are many and continuously evolving for bypassing the provisions for law enforcement as they are issued. In this, the organised crime proves to be very flexible and holding very remarkable skills.

Table 7. Estimate of the turnover and profits of the organised crime in Italy (source: UNODC - *Illicit financial flows-2011*)

Income	(bill €)	Expenditures	(bill. €)
Drugs trafficking	60.00	Management	0.60
Armaments trafficking	5.80	Personnel Costs	0.57
Protection racket	9.00	Logistics	
Usury	15.00	Costs of corruption	2.75
Ecomafia	16.00	Investments	26.00
		Money laundering	19.50
Other criminal activities	29.42	Stocks	6.50
		Other costs	1.25
		Total costs	57.17
		Profits	78.05
Total Income	135.22	Checksum	135.22

6.4 Main sources and money laundering methods use by the organised crime in Italy

Real estate transactions

The opportunity is given by the very high gap existing between the real price of the transaction and the *minimum* to be stated in the registered contract in order to avoid subsequent tax investigations. The huge difference between the real price paid and the cadastral value is paid in *black money*. This allow to move huge amount of *black money* and the system has been used even by large companies for creating off-balance sheets reserves. Recently the Government headed by Mr. Mario Monti ordered a re-evaluation of properties' cadastral value, trying to reduce the amount of not traceable money involved in real estate transactions.

Businesses (supermarkets, bars and restaurants)

It is one of the most diffused means of money laundering, particularly by the organisations of the Regions Campania and Puglia. They open luxury restaurants, supermarkets and other commercial activities, the aim of which is not to make money, but just to launder money. The system is very simple indeed, due the high volume of cash circulating and to the possibility of injecting money to cover the difference between receipts ("scontrini fiscali") issued - many of which purposely fake - and the actual cash entered with regular sales of the working day. In such a way, a lot of *black money* enters in all respects in part of the legal economy i.e. in the *grey economy*.

Agencies buying gold and precious

This is an activity only recently came to light, thanks to the seizing in Switzerland of some metric tons of gold bars. The technique consists in buying gold and precious in cash and from private (mostly family in need of money), therefore with no registration nor traceability; then melt the gold in bars and export them illegally somewhere, Switzerland in particular, where there are discreet banks and private company specialised in housing bullions of gold and other precious metals.

Rigged football matches

Players are corrupted so that the desired result will very possibly come up. Then huge bets are made on the websites of foreign bookmakers on matches and winnings are cashed legitimately in Italy. Many trials are ongoing in Italy, with both the national judicial system and the National Football Association and several players have already been sentenced or fined.

Legal gambling

This is one of the cleverest and cheapest technique used particularly in North-East of Italy. It consists of buying winning national lottery tickets with a surcharge and then cash in the money legally. The surcharge paid is usually of around 10%, among the cheapest money laundering costs. This system benefits from the anonymity of the lottery scratch cards and similar which is difficult to curb.

Export and return of capital through the 'tax shield'

This technique of *money laundering* has been practically offered "for free" by some of the previous Government with the 'tax shield' offered to the capitals coming back in Italy from the banks located in some tax heavens. The provisions were intended to encourage the rich entrepreneurs to 'recall' their capitals from those banks and re-invest them in Italy, but, as a matter of fact, it has proven to be a marked favour to the organised crime.

But from where does the money to be laundered come from? As for the criminal organisation based in Italy, it comes mainly from the drugs trafficking.

The proceeds of trafficking in illegal drugs and corruption

7.1 First analysis at global level

The corruption level in a country is deeply affected by the high volume of the profits coming from the drug trafficking and from the illegal economy in general. These profits are partially reinvested in the legal economy, increasing the overall corruption for which a huge budget is available and spent, as already shown in Table 7 for Italy. According to report of UNODC (*Illicit financial flows-2011*) the estimated world-wide turnover of the organised crime is some 870 billion dollars per year, equals to 1.9 of the world GDP. Out of them, 580 billion dollar (or 1% of world wide GDP) is available for *money laundering*.

The highest earnings come from drug trafficking and are estimated to be 50% of the revenues of the Transnational organised crime, i.e. between 0.6% and 0.9% of world-wide GDP. The money available for *laundering* (therefore for *grey economy*) is estimated to be equal to 0.4%-0.6% of the global GDP. Some data are shown in Figure 9.

Enforcement actions seem weak or of low efficacy. In fact, the interception rate of anti-laundering activities is about 1% of the available funds; more likely around 0.2%.

It's worth noting that the proceeds partially reinvested in the legal economy adversely effects the competitiveness of a country. In other words, the proceeds of the illegal economy undermine both the transparency and the competitiveness of a country.

An overall estimate of these proceeds coming from the trafficking of heroin from Asia is given in Figure 10. As for cocaine, the UNODC estimates the value of the transnational trading to 88 billion US\$ per year, also stressing that it is the main of the drugs-trafficking as for revenues and profits.

It's also worth noting that the revenue are mainly generated in the transport and selling phases, where the price (and the mark-up) increases more than other commercial products. It is clearly shown in the Figure 10, which shows the process for the various phases of the trading of cocaine and heroin, as estimated for the UK market. Similar situation is easily conceivable for all other consumer countries.

Figure 9. Estimating illicit financial flows estimate resulting from drug trafficking and other transnational organized crimes. Year 2008 – source: UNODC:

http://www.unodc.org/documents/data-and-analysis/Studies/Illicit_financial_flows_2011_web.pdf.

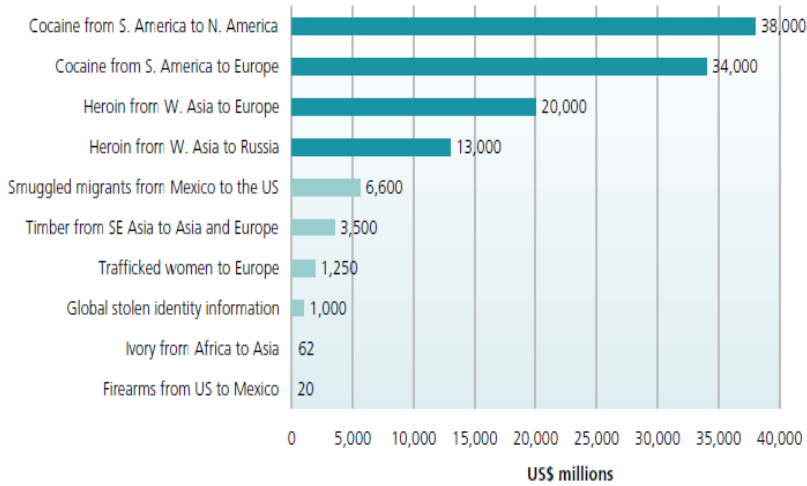
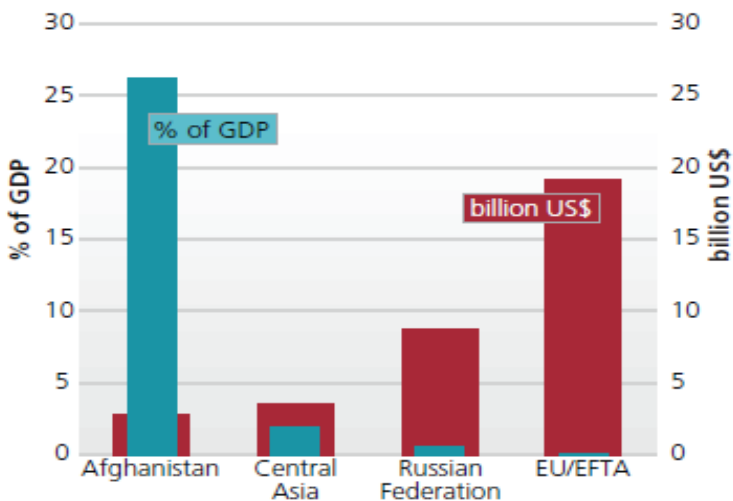


Figure 10. Estimating illicit financial flows estimate resulting from drug trafficking and other transnational organized crimes. Years 2008-2009. Source: UNODC:

http://www.unodc.org/documents/data-and-analysis/Studies/Illicit_financial_flows_2011_web.pdf.



Unfortunately there are no standardized synthetic indicators that allow to have a comparative view related to the earnings of traffic and trade in illegal drugs at country level to correlate directly with indicators of transparency and competitiveness. It is possible, however, to extract pertinent information from the UNODC publications, enabling qualitative analysis and some pilot correlation studies. A first interesting analysis is based on the maps showing the incidence and the extent of corruption in the world and those of the trafficking routes for drugs. As a matter of fact, a large part of the proceeds the organised crime and of corruption are observed in the countries affected by the routes of drug trafficking, as well as in countries of origin and destination.

Figure 11. Increases in the prices of heroin and cocaine destined for the market in the UK Source: <http://www.counthecosts.org/seven-costs/creating-crime-enriching-criminals/crime-briefing>.

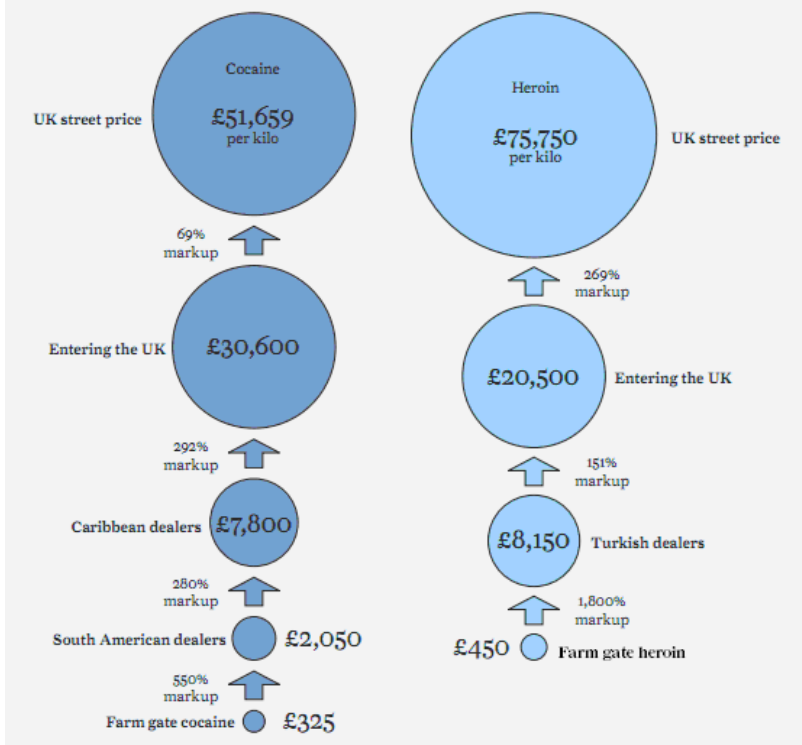


Figure 12 shows the map of corruption, while Figures 13 and 14 show the routes of heroin and cocaine respectively to Europe. It is evident that the countries of origin and/or located on the transit routes for heroin and cocaine have high values of corruption. If the right side of the map is considered and focused on the northern and Balkan heroin routes, the phenomenon is even more evident (Figure 15).

Figure 12. Map of the corruption for different countries (from light yellow for lower corruption index to dark red for high/very high). source:

<http://www.transparency.org/>.

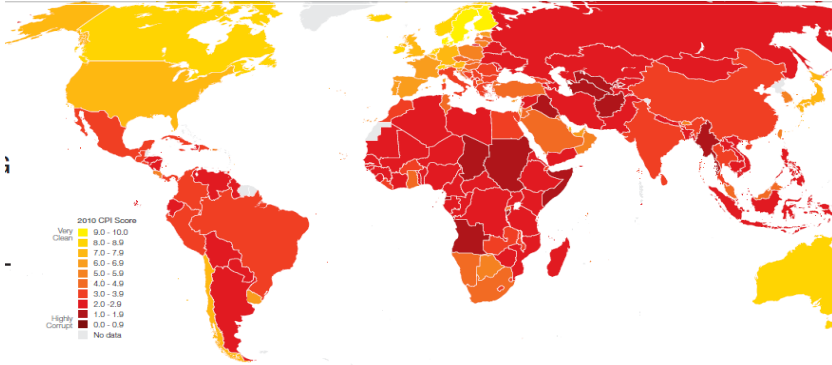


Figure 13. The routes trafficking of heroin coming from Asia.

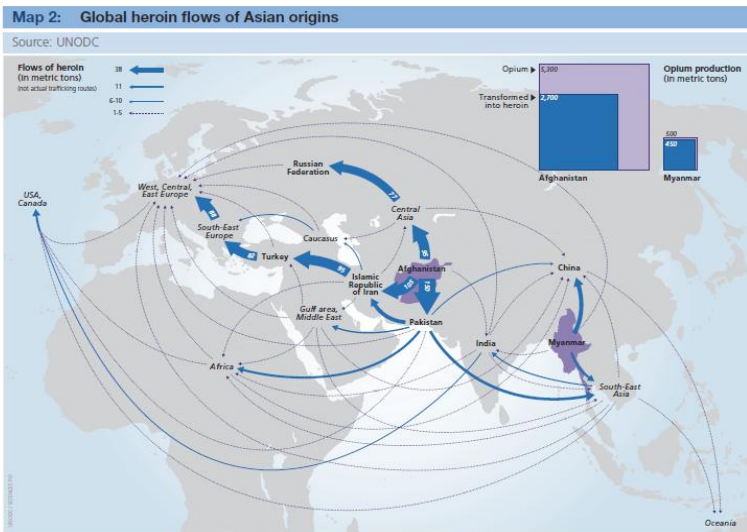
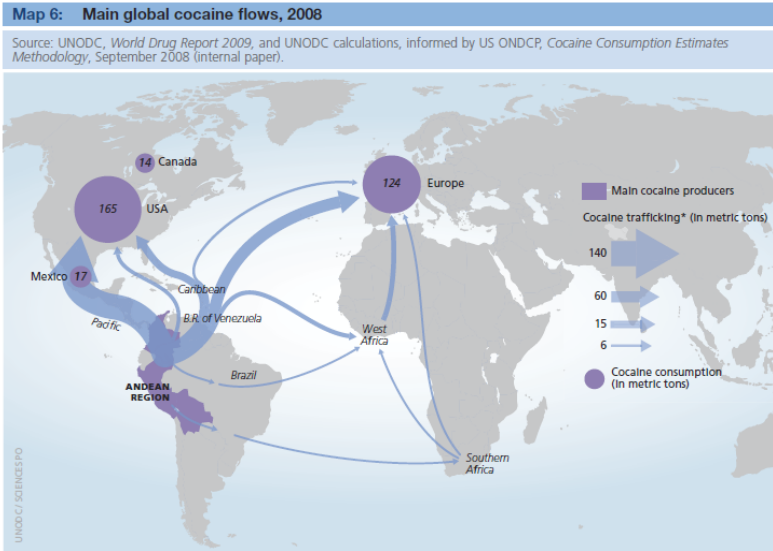


Figure 14. The routes of cocaine-trafficking.

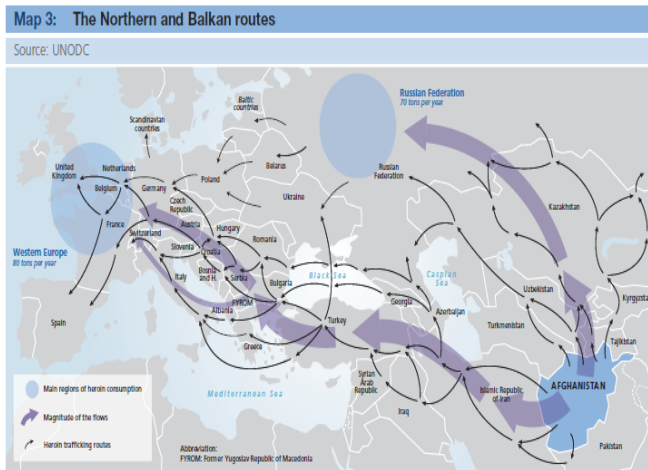
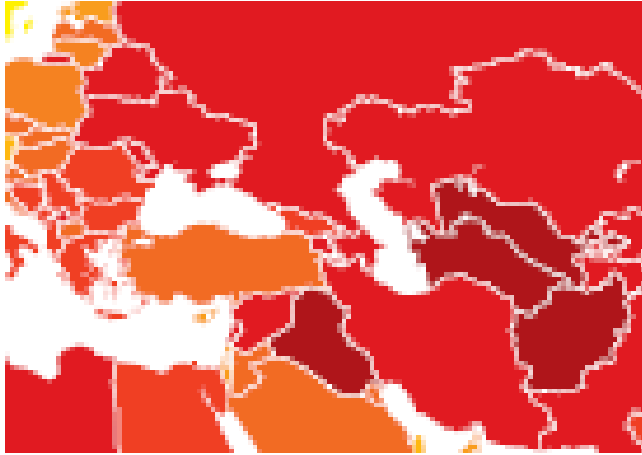


The analysis suggests that the main socio-economic consequences of criminal finance reside in the perpetuation and promotion of criminal activities. In particular, with regard to drug trafficking, it is estimated that the socio-economic costs associated with drug abuse are twice the earnings of criminal organizations and, in some countries, like the United States and Great Britain, it can even reach a ratio of 3:1 (source UNODC).

The proceeds of drug trafficking are significantly re-invested in the same activity. The social consequences are significant. "Losses" for consumers go well beyond their consumption expenditure. One has only to think that the loss of productivity in the United States, for example, is estimated to have the highest social costs linked to the drug trade. Others results are health-problems, violence and corruption.

The proceeds invested in the legal economy have consequences ranging from the distortion of investment and prices, unfair competition, weakening of institutions. It is quite possible that an investor of illegal funds makes decisions based on the probability of being detected rather than on optimizing the productivity of the investment. Therefore, the illegal funds invested in the legal economy have a negative effect on economic growth, due to the attraction towards less productive activities.

Figure 15. Comparison between the map of corruption and the map and the Northern route of the heroin-trafficking.



Estimates in industrialized countries show that an increase in recycling activity is associated with a reduction in the rate of economic growth. One study showed, for example, that every billion dollars recycled into the legal economy reduces economic growth from 0.04% to 0.06% in the 17 OECD countries analyzed.

In fact, the laundering of *black money* and its subsequent entry into the legal economy cannot happen without connivance or at least carelessness at the institutional level and this complicity is obtained through corruption. This, as well as directly promoting organized crime, favours also indirectly, through a reduction of meritocracy and, therefore, competitiveness, which in turn generates unemployment and youth problems, which are functional to the organized crime, according to the perverse circuit shown in Figure 8.

7.2 The “case” Italy

Italy hosts some of the criminal organizations that control the drug trafficking worldwide in collaboration with international cartels: the Ndrangheta for cocaine and the Mafia for heroin-traffic in particular.

Some of the estimates reported by UNODC (Illicit financial flows-2011) can be found in Table 7, which requires no further comments. Note that the profits are largely reinvested in the legal and illegal economy. This table is the result of the estimates produced by SOS enterprise and provides a pictorial setting for Italy currently estimated to be too high: the proceeds of the drug trade are estimated at 60 billion euro in 2009. More conservative assumptions provide an estimate of the total income in 2010 of about 24 billion euro (Fabi et al. Rey in, Rossi & Zuliani, 2011). The estimate of SOS enterprise is 3.9% of GDP, the estimate produced by Fabi et al. for 2010 is 1.5% of GDP and is more in line with the estimates produced by other countries.

7.3 A first attempt to correlate the turn-over derived from the drugs-trafficking and the corruption index

The UNODC's report *“Estimating illicit financial flows Resulting from drug trafficking and other transnational organized crimes”* supplies data from some particular studies that quantify the turn-over of illegal drug trafficking and trade in some consumer-countries. Table 8 shows the results from most recent studies (since 2000) in absolute terms and proportionally to the resident population.

A regression model with corruption provided by Transparency International for the same years in the same countries has been worked out. The results are shown in Figure 16 (the figure for Italy is € 24 billion for 2010). The corruption index used is given by the maximum theoretical CPI (10: total transparency) from which the actual CPI is subtracted = 10-CPI (last column of Table 8).

The result is impressive (Figure 16). The correlation coefficient is $\rho = 0.99$. The ratio is approximately of direct proportionality (intercept very close to 0). The point that represents Italy is very influential, but, also excluding it from the analysis and by applying the regression only on the other 5 countries, the correlation coefficient is very high $\rho = 0.86$, confirming a strong correlation between the level of corruption and the turn-over of trafficking in illegal drugs.

It is also interesting to consider the expected value of turn-over for drug trafficking in billions of U.S. dollars per million inhabitants for Italy provided by inverse regression function estimated on the basis of the other 5 points. Figure 17 shows this second regression function. The expected value of turn-over for drug trafficking in billions of U.S. dollars per million population in Italy is 0.529, virtually identical to the value independently estimated on the basis of information and data of different sources (Fabi et al. in Rey, Rossi & Zuliani, 2011). This confirms the adequacy of the approach used in this analysis performed for the first time in Italy.

Table 8. Estimate of the turnover of the drug-trafficking and commerce in some countries for some years and corruption index for the same years.

Country	Year of the study	Proceeds from drugs in billion US\$	Proceeds per million inhabitants	10-CPI for the same year
United States	2000	64	0.21	2.2
United Kingdom	2004	8.4	0.14	1.4
Australia	2003	1.5	0.07	1.2
Netherlands	2003	2.07	0.12	1.1
Germany	2008	13.8	0.17	2.1
Italy	2010	31.58	0.53	6.1

Figure 16. Regression analysis of the corruption index (10-CPI) as a function of the proceeds from drug-trafficking per million inhabitants.

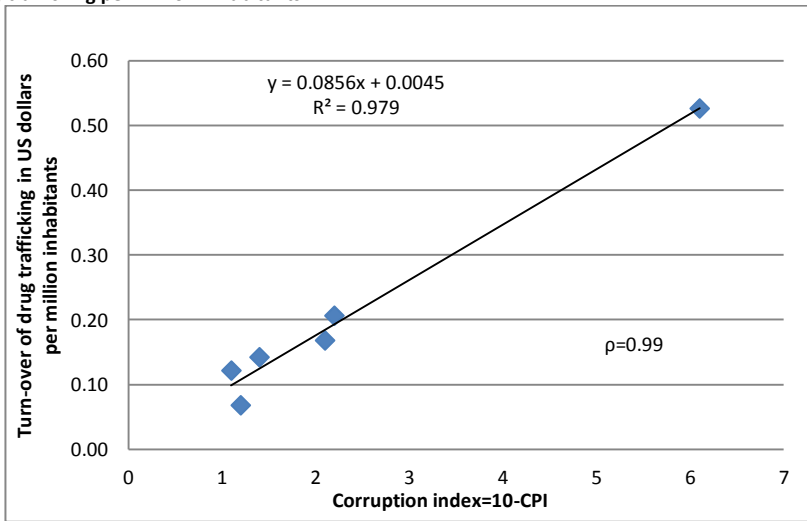
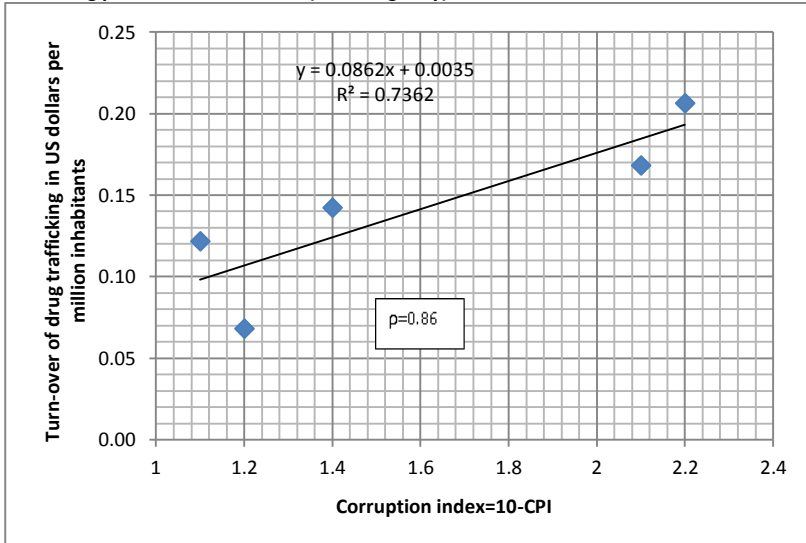


Figure 17. Regression analysis of the *corruption index* (10-CPI) as a function of the proceeds from drug-trafficking per million inhabitants (excluding Italy).



For a more comprehensive analysis, data on the proceeds of trafficking and trade of illegal drugs from other countries and for other years would be needed; especially for producer and transit countries but, at the moment, these data are not available unfortunately.

Final remarks

The quantitative analysis undertaken provides a measure of the perverse relationship between corruption and economic weakness and, secondly, between the proceeds of organized crime, money laundering, corruption and loss of competitiveness.

The trafficking of illegal drugs is an important part of the proceeds of the illegal economy, which allows criminal organizations to enter into the legal economy by reducing the competitiveness of countries.

Italy is particularly exposed to this vicious circle and suffers severely from the consequences. Among the indirect consequences, it must be included the high tax burden relative to GDP, which requires the painful interventions we are seeing and ends up reducing internal growth.

In Europe there has been a gradual change of prohibitionist policies on drugs. More and more EU countries decriminalise personal use, such as Portugal and the Czech Republic, or make prosecution optional, such as Poland. But this is not enough to change the dynamics of supply. It proves useful only in reducing the unintended consequences on the demand side, reducing the social cost of consumption, which can also be achieved by introducing therapeutic interventions such as the controlled administration of opiates or consumption rooms where it is possible to use securely substances by injection. These interventions have been scientifically evaluated and are spreading all over the world, including unexpected countries, such as Iran, where drug policies have strongly ideological bases. To make a difference and break the vicious circle that pollutes the legal economy, including the corruption of institutions, there is no other way but legalization of illegal drugs. The analysis of the possible benefits of legalization, at least of cannabis, is given in Chapter 5 of the mentioned book by Rey, Rossi & Zuliani (2011), where are also briefly analyzed the different approaches to drug policy in some countries. Further details can be found on the website of the European project currently in progress ***New methodological tools for policy and program evaluation*** (www.drugpolicyevaluation.eu), as part of which this study has been carried out. When this report was finished already, the 2012-2013 reports from

Transparency International and from the *World Economic Forum* were (both) made available. They show a further worsening of Italy as for *transparency* and a little rising in competitiveness. Italy, in fact, ranked at the 72nd and 42nd place respectively in the *Transparency* and competitiveness ranks, with respect to 69th and 43rd.

Again the WEF report stresses the endemic problems of Italy as follows:

“Italy moves up by one place to reach the 42nd position this year. The country continues to do well in some of the more complex areas measured by the GCI, particularly the sophistication of its businesses, where it is ranked 28th, producing goods high on the value chain with one of the world’s best business clusters (2nd). Italy also benefits from its large market size—the 10th largest in the world—which allows for significant economies of scale. However, Italy’s overall competitiveness performance continues to be hampered by some critical structural weaknesses in its economy. Its labour market remains extremely rigid—it is ranked 127, hindering employment creation. Italy’s financial markets are not sufficiently developed to provide needed finance for business development (111th). Other institutional weaknesses include high levels of corruption and organized crime and a perceived lack of independence within the judicial system, which increase business costs and undermine investor confidence: Italy is ranked 97th overall for its institutional environment. The efforts being undertaken by the present government to address such concerns, if successful, will be an important boost to the country’s competitiveness.”

Just after the publication of these reports the Government was obliged to resign by the Parliament, almost to deny the hopes expressed by the WEF.

Annex A: Acronyms and Abbreviations

Acronym	Description	Web site
ACR	Adjusted Competitiveness Rank	
ATR	Adjusted Transparency Rank	
CPI	Corruption Perception Index	www.transparency.org
CR	Competitiveness Rank as published by WEF	
Eurozone	Countries using Euro as a common currency: EU15 less GB, Denmark and Sweden, plus Cipro, Malta and Slovenia, that joined after 1.4.2004. From 1.1.2009 and 1.1.211 respectively entered the Euro zone. In total 17 countries use Euro, at the moment.	
GCI	Global Competitiveness Index	www.weforum.org
GDP	Gross Domestic Product	
GPD per capita		
HDI	Human Development Index	
OECD (OCSE)	Organisation for Economic Cooperation and Development	www.oecd.org/
PPP	Parity Purchasing Power	
TI	Transparency International	www.transparency.org
TR	Transparency Rank – Placement of a country in the ranking for transparency published yearly by TI	
EU	European Union	
EU12	Countries entering the EU from 1.5.2004	
EU15	European Union before 1.5.2004	
EU17	The EU countries using Euro as common currency	
EU27	The 27 countries of the EU	
UNDP	United Nation Development Program	www.undp.org
UNODC	United Nation Office for Drugs and Crime	http://www.unodc.org/
WEF	World Economic Forum	www.weforum.org

Annex B: Main Data Sources

Acronym	Description	Web site
WEF	World Economic Forum	www.weforum.org
OCSE	Organization for Economic Cooperation and Development	http://www.oecd.org/home/0,3675,en_2649_201185_1_1_1_1_1,00.html
UNODC	United Nations Office on Drugs and Crime	http://www.unodc.org/
IMF	International Monetary Fund	http://www.imf.org/external/index.htm

Annex C: References

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Made and printed in Italy
January 2013 by UniversItalia,
Passolombardo street 421, 00133 - Rome
Tel: 06/2026342 – e_mail: info@universitaliasrl.it – www.unipass.it