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Highlights in this issue:

- **The regional divide in Italy is large also as regards export capability.**
- **The South is less open than the Centre-North and exports a more limited number of products**
- **However both macro-regions experienced stagnating productivity over the past decade**
- **Enhancing productivity growth and innovation is a challenge for the whole country.**

Italy's regional divide: does it matter also for exports?

*By Marco Montanari**

Summary

The existence of a large and persistent regional economic divide in Italy is a well-known phenomenon. This Country Focus analyses a less frequently studied dimension of this divide: the performance of exports and their composition.

The regional divide in Italy is large also as regards export capability. Besides being much less open than the Centre-North, the South's economy exports a more limited number of products.

However some weaknesses are common to the two areas. Both experienced stagnation in productivity over the past decade, a development that is at the root of the cost competitiveness losses recorded by the Italian economy as a whole. Moreover, compared to the other advanced economies, neither has a comparative advantage in high-technology industries. Finally, the South appears less exposed than the Centre-North to competition from China in the EU market and its export growth performance in value terms was slightly better over the last decade, even if its exports were more severely affected by the recent crisis.

While the South has considerable scope for catching up with the rest of the country also in export capability, the need to enhance productivity growth (and hence competitiveness) and, in a longer term perspective, re-orient the productive structure towards more innovative sectors is a key challenge for Italy as a whole.

Introduction

The existence of a large and persistent regional economic divide in Italy is a well-known and extensively studied phenomenon. This Country Focus looks at a dimension of regional disparities which is less frequently investigated: the performance of exports and their geographical and sectoral specialisation. These aspects are relevant for an economy like Italy, characterised by a large export-oriented manufacturing sector. For the purposes of our analysis, Italy is divided into two macro-regions, following the National Statistical Institute (ISTAT) classification: the Centre-North and the South.[1] These are the geographical areas across which economic disparities are most evident. We will only focus on exports of goods, as data for exports of services at the regional level are incomplete.

The Country Focus is structured as follows. First, it provides an overview of some of the dimensions of Italy's regional economic divide that are most relevant to competitiveness developments over the last decade. Subsequently, it analyses the recent evolution and geographical orientation of regional exports. The last section

*** Directorate for the Economies of the Member States.**

investigates two selected aspects of the sectoral specialisation of the Centre-North and the South: the comparative advantages and similarity of their goods exports relative to the main competitors.

Regional disparities at a glance

While regional economic disparities in Italy remain large...

When discussing regional divergences in Italy's economy, a clear distinction has to be made between disparities in levels and recent macroeconomic developments. Regional disparities in per-capita GDP levels remain large. In 2009, the Centre-North and the South respectively represented about 65% and 35% of Italy' population, but accounted for 76% and 24% of the country's total GDP. As a result, GDP per capita in the South is around 60% of that in the Centre-North. Overall, in 2007, labour input factors – i.e. participation and unemployment rate, working age population and average hours worked - accounted for about two thirds of the gap in GDP per capita between the two macro-regions, while labour productivity explained the remaining third (Bardone and Reitano 2009).

No major changes in regional disparities can be observed in the period since the euro adoption. Over 1999-2009, real GDP growth (Figure 1, Panel A) has been only marginally stronger in the Centre-North (0.7% on average) than in the South (0.5% on average), while the gap in GDP per capita has slightly shrunk (Figure 1, Panel B) as population growth has been stronger in the Centre-North thanks to immigration. As regards labour productivity developments (measured as real GDP per full-time equivalent employed), the South performed slightly better than the Centre-North, although this was accompanied by an increase of the employment gap vis-à-vis the regions in the Centre-North.[2]

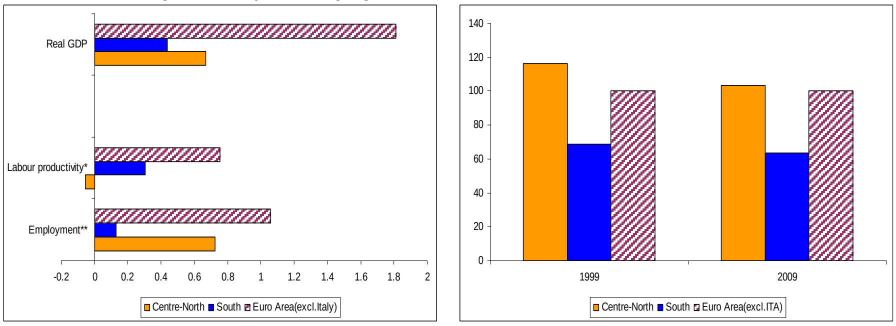
...stagnating productivity and low economic growth characterised both the Centre-North and the South

Hence, while it is true that Italy remains a country with large regional disparities, over the last decade both the Centre-North and the South witnessed stagnation in productivity and significantly lower economic growth than the euro area. Slow productivity growth is at the root of the competitiveness losses recorded by the Italian economy as a whole since the late 1990s, which have been extensively documented (see, for instance, European Commission 2010).

Figure 1. GDP developments

Panel A: Real GDP growth and its supply side determinants
1999-2009 average annual percentage growth

Panel B: Levels of GDP per capita***
euro area (excl.Italy)=100



*Real GDP per full-time equivalent employed. **Full-time equivalent employed. ***In purchasing power standards.
Source: own calculations based on ISTAT and AMECO data

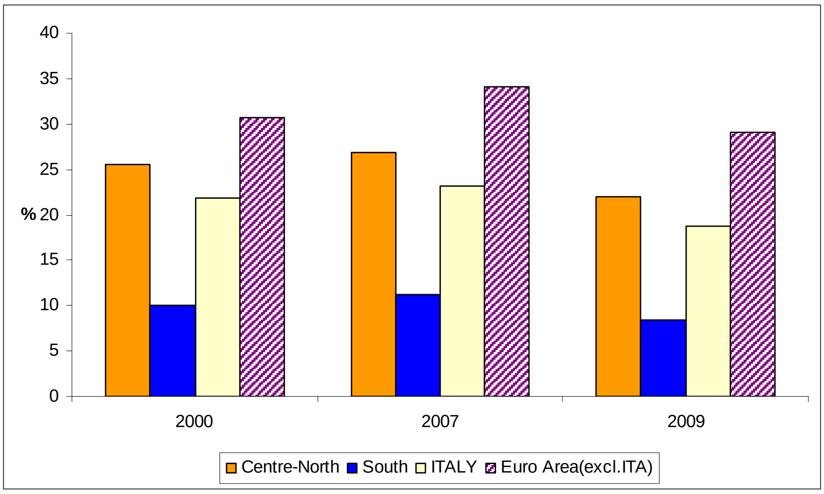
In the analysis of regional exports that follows we will abstract from issues of cost/price competitiveness, as it cannot be properly measured at the regional level. Instead, we focus on the evolution of exports of goods in value terms and some of its structural determinants.[3]

The recent evolution and geographical pattern of regional exports

The Southern economy continues to be much less open than that of the Centre-North. The difference in the export-to-GDP ratio between the two macro-regions has remained broadly stable over the last decade at around 15 pps, while the difference between the South and the euro area average has constantly exceeded 20 pps (Figure 2).

The Southern economy is much less open than that of Centre-North

Figure 2. Export-to-GDP ratio



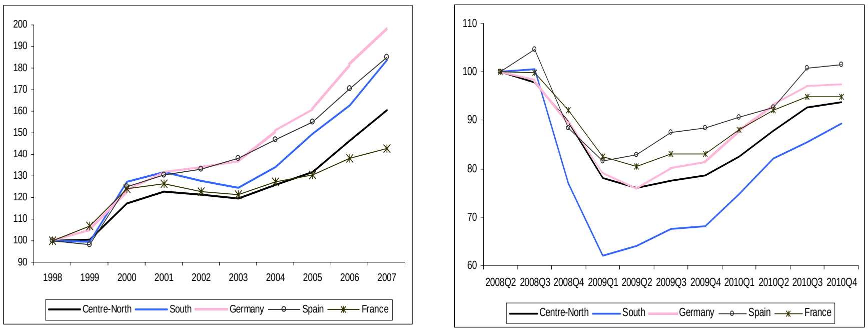
Source: own calculations based on ISTAT data

The impact of the crisis on exports was stronger in the South

From a very low base (10% in 1998), the share of the South in total Italian exports rose slightly, to 12%, in 2007, as export growth in the pre-crisis period was stronger in the South than in the Centre-North. The South's export growth performance in values has been similar to that of Spain, while the Centre-North's exports grew in line with those of France until 2005 and then accelerated in 2006-2007 (Figure 3, Panel A). The effects of the crisis proved more severe for the South, whose exports plunged by almost 40% from the third quarter of 2008 to the first quarter of 2009. The already low export-to-GDP ratio decreased to just 8% in 2009. The decline in the Centre-North's exports (by slightly more than 20%) has been in line with that of Germany. After reaching the trough, the South is now experiencing a faster rebound in exports and its share of total Italian exports is almost back to the 2007 level. However, in the fourth quarter of 2010 the export values of both the Centre-North and the South were still below their pre-crisis levels (Figure 3, Panel B).

Figure 3. The evolution of exports in value terms

Panel A: The pre-crisis period index 1998=100 | **Panel B: The crisis and recovery** index 2008Q2=100

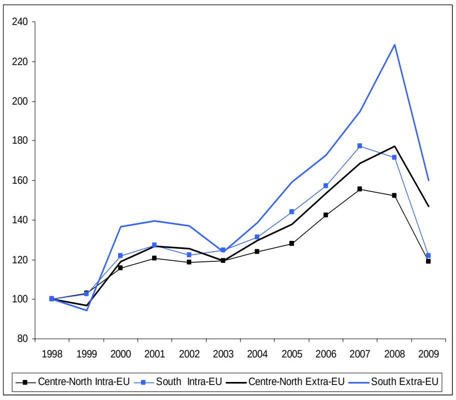


Source: own calculations based on ISTAT and Eurostat data

As regards the geographical orientation of exports, the intra-extra EU breakdown appears fairly similar across the two macro-regions, with the South experiencing a larger increase for both intra-EU and, more markedly, extra-EU exports in the pre-crisis period (Figure 4, Panel A). Nevertheless, two relevant differences can be observed within the two broad destination groups (Figure 4, Panel B). First, as we would expect from the international trade literature,[4] a clear "gravity effect" (whereby distance is one of the main determinants of trade flows) is at work. A larger share of the South's exports goes to the Mediterranean region, both to EU member states (e.g. Spain) and to extra-UE areas/countries (Northern Africa and Turkey), while the exports from the Centre-North are more oriented towards continental Europe. Second, when looking further afield - where proximity is no longer a relevant factor for trade flows - the penetration of the South's exports into emerging Asian markets is very low compared to that of the Centre-North.

Figure 4. The geographical orientation of exports

Panel A. Intra-EU and extra-EU exports
index 1998=100



Source: own calculations based on ISTAT data

Panel B. Exports by destination
percentage share of total, 2010

Area/Country	Centre-North	South
Intra-EU	58	54
euro area	44	44
Germany	14	10
France	12	10
Spain	5	10
Extra-EU	42	46
Russia	2	1
Turkey	2	4
Northern Africa	3	9
Middle East	4	5
Emerging Asia	10	5
Northern America	7	8
Central-South America	3	2

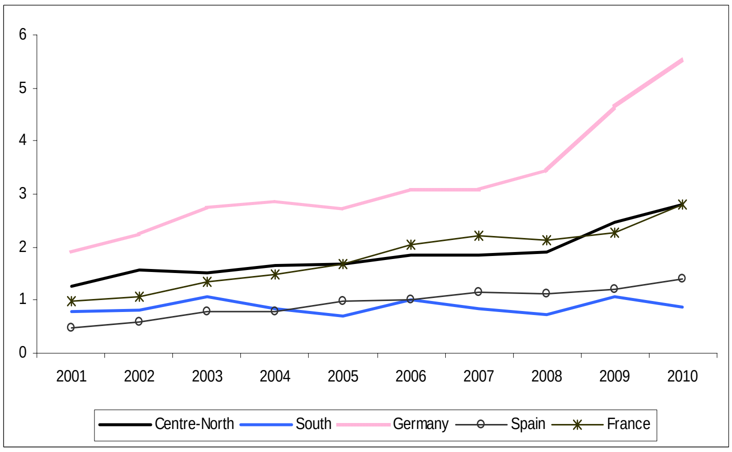
Source: ISTAT

A very low share of South's exports goes to emerging Asia

Focusing on China, the largest market in that area, the share of the South's exports going to that country has remained broadly constant at around 1% over the 2000s, whereas in the case of the Centre-North it has been slowly but steadily increasing to reach almost 3%. Once again, a certain similarity can be observed between the South and Spain on the one hand, and between the Centre-North and France on the other (Figure 5). This seems to indicate that the South is much less able than the Centre-North to benefit from the vigorous growth outlook for the Asian emerging markets.[5]

Figure 5. Exports to China

Percentage of total exports



Source: own calculations based on ISTAT and Eurostat data

A sectoral analysis

In our analysis of the sectoral pattern of goods exports, we follow the OECD classification of manufacturing sectors, which aggregates different product types into four categories based on their technological content: high, medium-high, medium-low, low (OECD 2005). The most interesting feature in Table 1 (second column) is that just two types of product (motor vehicles[6] and refined petroleum products[7]) account for more than one third of the South's manufacturing exports.[8] This sheds light on some of the developments described in the previous section. The rise in oil prices in the pre-crisis years contributed to the increase in the value of refined petroleum exports and consequently to enhance the South's export performance. Conversely, the decline in energy prices and the plunge in demand for motor vehicles during the crisis caused the severe collapse of exports from the South in 2008-2009.

Motor vehicles and refined petroleum account for more than one third of the South's manufacturing exports

To further investigate the sectoral specialisation of exports of the Centre-North and the South vis-a-vis the industrialised countries, we use the Balassa index of revealed comparative advantage (Table 1 – third column). This index is calculated as the ratio between the share of a particular sector in the Centre-North (South)'s total manufacturing exports and the share of this sector in total OECD manufacturing exports (Montanari 2007).[9]

In a similar analysis made for Italy as a whole, Faini and Sapir (2005) and Larch (2005) show that the country's comparative advantages relative to the OECD average tend to concentrate in low- to medium-low-technology sectors. Our analysis broadly confirms this picture also at the regional level. We find that neither the Centre-North nor the South has any comparative advantage in high-technology industries. Looking at less technology-intensive sectors, some differences between the two regions are observed. The Centre-North exhibits its strongest comparative advantages in textiles, non-metallic mineral products and machinery, while the South specialises in refined petroleum products, transport equipment and motor vehicles. Compared with the largest euro area countries, the sectoral patterns of comparative advantages of the Centre-North and the South appear significantly different from those of Germany and France and fairly similar to that of Spain (Table 2).

Both the Centre-North and the South are specialised in low- to medium-low-technology sectors

To measure potential competition in the EU market between the Centre-North, the South, the largest euro area countries and China, we use the similarity index proposed by Finger and Kreinin (1979), which compares the export structures of pairs of countries or regions based on 72 manufacturing industries, corresponding to SITC 2-digit classification (Table 3).[10]

Table 1. The sectoral pattern of exports and comparative advantages

2005-2007 average

	% of total manufacturing exports		Balassa index*	
	Centre-North	South	Centre-North	South
High technology industries	**10.1**	**9.7**		
Aircraft and spacecraft	0.9	2.0	-38	-1
Pharmaceuticals	3.7	3.4	-8	-13
Accounting and computing machinery	0.6	0.1	-65	-91
Radio TV communication equipment	2.1	3.6	-55	-32
Medical precision, optical instrument	2.8	0.6	-17	-74
Medium-high-technology industries	**39.7**	**30.1**		
Electrical machinery, apparatus n.e.c	4.2	2.4	-7	-33
Motor vehicles trailers and semi-trailers	7.5	15.3	-36	25
Chemicals excluding pharmaceuticals	6.5	5.6	-20	-19
Railroad and transport equipment n.e.c	0.8	1.2	-5	28
Machinery and equipment n.e.c	20.6	5.5	29	-39
Medium-low-technology industries	**23.3**	**39.8**		
Shipbuilding	1.1	1.6	-7	13
Rubber and plastics	3.9	3.5	10	5
Refined petroleum, coke, nuclear fuel	1.1	23.3	-48	76
Other non-metallic mineral products	5.1	3.0	37	16
Basic metals, fabricated metal products	12.2	8.4	24	-14
Low-technology industries	**26.9**	**20.4**		
Manufacturing n.e.c and recycling	3.9	3.5	19	15
Wood, pulp, paper and paper products	3.1	1.7	-15	-36
Food beverages and tobacco	5.3	7.9	1	11
Textiles, clothing and footwear	14.5	7.3	55	10

*Values above (below) 0 indicate the existence of relative comparative advantages (disadvantages).
Source: own calculations based on ISTAT and OECD data

Table 2. Comparative advantages according to the technological content of exports

Balassa index*, 2005-2007 average

	ITALY		GER	FRA	SPA
	Centre-North	South			
High technology industries	-34	-36	2	6	-31
Medium-high-technology industries	-3	-19	17	-4	1
Medium-low-technology industries	3	31	-9	-8	7
Low-technology industries	27	16	-8	10	16

*Values above (below) 0 indicate the existence of relative comparative advantages (disadvantages).

Source: own calculations based on ISTAT and OECD data

The Centre-North appears more exposed to competition from China

The export patterns of both the Centre-North and the South are more similar to those of the largest euro area countries than to China's, but the Centre-North seems less sheltered from competition from China, due to a fairly high degree of export overlapping in the textile and machinery sectors. However, it has to be noted that this analysis is subject to an important caveat. While the growing presence of China in the EU market with some of the products in which Italy has some comparative advantages relative to the other OECD countries can be a signal of increased competitive pressure, differences in the quality of products across different exporters may also matter. If the case of textiles, for instance, the strong specialisation of the Centre-North may also reflect comparative advantages in producing higher quality products (Di Mauro *et al.* 2010) There is indeed some evidence of a restructuring process in Italy's traditional manufacturing sectors, notably by larger firms in the Centre-North, with a consequent shift of production towards higher quality/price segments more sheltered from competition from emerging economies (Lissovolik 2008; Bank of Italy 2010).

Table 3. Similarity index for exports to the EU-25

2005-2007 average*

	ITALY		GER	FRA	SPA	CHN
	Centre-North	South				
Centre-North	-	66	73	70	68	54
South		-	71	72	86	41
GER			-	84	77	47
FRA				-	77	42
SPA					-	43
CHN						-

*Higher (lower) values indicate more (less) similar export structures and hence higher (lower) potential competition

Source: own calculations based on ISTAT and Eurostat data

Conclusion

The regional divide in Italy is large also as regards export capability. Besides being much less open than the Centre-North, the South's economy exports a more limited number of products (notably refined petroleum and motor vehicles). However some weaknesses, such as the absence of comparative advantages in high-technology industries, are common to both regions. Moreover, the South appears less exposed than the Centre-North to competition from China in the EU market and its export performance in values was slightly better over the last decade, even if its exports were more severely affected by the recent crisis.

To conclude, the South has considerable scope for catching up with the rest of the country also in export capability, thereby enhancing Italy's overall economic performance. However, the need to enhance productivity growth (and hence competitiveness) remains a key challenge for Italy as a whole. In this regard, ensuring that wage growth properly reflects productivity developments and, in a longer term perspective, re-orienting the country's productive structure towards more innovative sectors would be important steps.

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[1] The South includes the following regions: Abruzzi, Molise, Campania, Apulia, Basilicata, Calabria, Sicily and Sardinia. All regional data presented in the text come from ISTAT, unless otherwise indicated.
[2] Over 1999-2009, the difference in the employment rate between the two areas widened from 17 to 20 pps.
[3] The definition of exports in this Country Focus excludes bilateral trade flows between the Centre-North and the South.
[4] See, for instance, ISAE (2007) for a review of that literature.
[5] The size of firms is likely to play a role in their capability to enter those markets. According to ISTAT and Eurostat data, in 2007 the average number of persons employed by Southern firms in the manufacturing sector was just 6, as against 11 employed by Centre-Northern firms, which is itself a considerably smaller number than the euro-area average of 17 persons employed.
[6] Mainly cars and light commercial vehicles produced by FIAT and exported to the EU market.
[7] Mainly exported to both EU and extra-EU countries in the Mediterranean area.
[8] If the analysis is extended to the incomplete data available for the services sector, it appears that the South's exports are concentrated almost only in the tourism sector and that the share of the South in Italian services exports is even lower than in the case of goods.
[9] The Balassa index (B) is calculated in the following way:

$B = (X_{i,k}/X_i) / (X_{OECD,k}/X_{OECD})$

where

$X_{i,k}$ is the value of country/region *i*'s exports of sector *k*;

X_i is the value of country/region *i*'s total exports;

$X_{OECD,k}$ is the value of OECD countries' exports of sector *k*;

X_{OECD} is the value of total OECD countries' exports.

The Balassa index is then made symmetrical, by considering a simple transformation with

$B^* = 100^*(B-1) / (B+1)$

so that B^* varies from +100 to -100. Values above (below) 0 indicate the existence of relative comparative advantages (disadvantages).

[10] The similarity index (S) is calculated as:

$S = 100^* \Sigma_i \min [(X_{ik}/X_i);(X_{jk}/X_j)]$

where

X_{ik} and X_{jk} are respectively the values of country/region *i*'s and *j*'s exports of sector *k* to the EU;

X_i and X_j are respectively the values of country/region *i*'s and *j*'s total exports to the EU.

The index takes a value between 0 and 100; the higher its value, the more similar the export structures of country/region *i* and country/region *j*. In other words, if the index is close to 0, the two countries/regions' exports are highly complementary, whereas, if it approaches 100, a strong potential competition exists between the two countries/regions on the EU market.

The *ECFIN Country Focus* provides concise analysis of a policy-relevant economic question for one or more of the EU Member States.

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