15. ITALIAN GOODS EXPORTS IN THE LAST TWENTY YEARS: TRENDS AND DETERMINANTS[1]

Italy's goods exports have more than doubled at current prices since 1999. However, the growth was less than that of world trade and below export growth in the other Eurozone economies as a whole, especially until the global financial crisis. Since 2010 the performance of Italy's exports has improved significantly by international comparison, as confirmed by the halt in the prolonged decline of the market share on world imports.

Until 2007, Italian exporters faced structural difficulties in all the main sectors, exacerbated by the loss of price and cost competitiveness caused by a sectoral specialization that is particularly vulnerable to growing competitive pressures from emerging countries and by the presence of a large number of small firms, which find it harder to adapt their product and market portfolios to changes brought about by globalization. From 2007 to 2009, Italian exports were more affected by the crisis than those of the three largest European partners: they were the first to fall, and in 2009 their decline exceeded that of the others.

Since 2010, Italy's performance in foreign markets has improved significantly: exports have increased more than foreign demand and at a pace only slightly below that of Germany. The recovery has spread across all major sectors and especially in euro-area markets, where the greatest signs of weakness had emerged in the previous decade.

The trend reversal has benefited from the improvement in competitiveness caused by the depreciation of the euro and the reduction in relative prices and labour costs, also vis-à-vis Germany. It has also stemmed from the structural changes that occurred in the interim: in 2010 the weight of the sectors less exposed to competition from countries with low labour costs had increased compared with 1999, as had the share of medium-sized and large firms, which are more resilient to external shocks and better able to seize new opportunities in international markets.

The performance of goods exports

Aggregate developments. – Between 1999 and 2017, world exports of goods in volume terms increased by an annual average of 7.6 per cent. In Italy, exports grew by 3.4 per cent, less than in Spain (5.6) and Germany (7.9) but similar to the growth in France (3.5; Table 15.1).

[1] The chapter updates the analysis and recalculates the econometric estimates contained in M. Bugamelli, S. Fabiani, S. Federico, A. Felettigh, C. Giordano and A. Linarello, '*Back on Track? A macro-micro narrative of Italian exports*', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 399, 2017, also published in *Italian Economic Journal*, 4, 1, 2018, 1-31.

Table 15.1

Goods exports (1)
(annualized average growth rates; percentage changes)

	Italy	France	Germany	Spain
		Chain-linked values (2)		
1999-2007	5.3	4.9	10.9	6.3
2007-2010	-3.4	-1.3	-0.6	-0.5
2010-2017	3.8	3.1	4.6	5.1
1999-2017	3.4	3.5	7.9	5.6
		Values at current prices		
1999-2007	8.2	5.4	11.6	9.6
2007-2010	-2.6	-1.2	-0.3	0.1
2010-2017	4.8	3.7	5.5	6.3
1999-2017	5.8	4.1	9.2	8.6

Sources: Based on national accounts data from Istat and Eurostat.
(1) The average growth rate is the cumulative growth rate from the start of the period to the end, divided by the number of years between the two. – (2) The reference year is 2010.

The trends differed greatly between the years preceding the global financial crisis of 2008-09 and those that followed. For Italy, most of the lag compared with Germany was amassed in the years leading up to 2007; since 2010 it has decreased, on average, to below 1 percentage point per year. In contrast, in that period it widened compared with Spain, which experienced the greatest expansion of the euro area's four largest economies. For Spain and Germany, growth since 2010 has exceeded that of world exports (4.1 per cent per year, on average).

By international comparison, Italy's lag shrinks when measured at current prices, both in terms of growth rates of exports (especially in the period up to 2007; Table 15.1) and in terms of global market shares. Between 1999 and 2017, market shares fell by just under a third at current prices and exchange rates and in volume terms, while they fell by a fifth and a tenth respectively for the other three countries as a whole. Italy's share of the value of global imports fell from 4.2 per cent in 1999 to 3.0 per cent in 2010 and remained broadly stable afterwards.

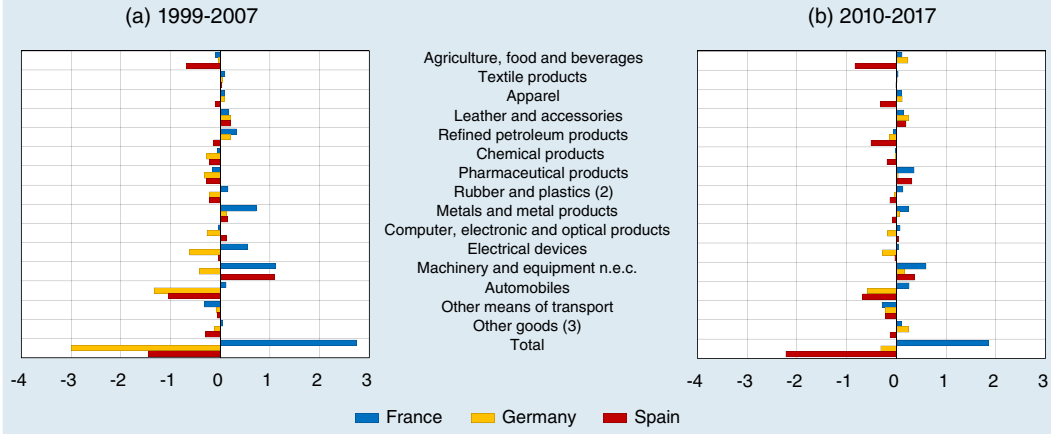
The trend in foreign sales improves further when assessed in terms of domestic value added embodied in exports. With the steady rise in global value chains comes greater use of imported goods and services in manufacturing products intended for sale in foreign markets. As a result, the real contribution of exports to a country's economic activity is less than gross export flows imply. Based on the World Input-Output Database tables currently available,[2] Italy's negative growth gap compared with Spain from 2000 to 2014 is reduced by a fifth if measured in terms of domestic value added embodied in exports rather than on the basis of gross flows; it decreases by only a twentieth against Germany. This is due to the smaller increase in Italy in the use of imported inputs.

[2] M.P. Timmer, E. Dietzenbacher, B. Los, R. Stehrer and G.J. de Vries, 'An Illustrated User Guide to the World Input-Output Database: the case of global automotive production', *Review of International Economics*, 23, 2015, 575-605.

Trends by product and destination. – Until the onset of the global financial crisis, the shortfall in Italy's export growth compared with Germany and Spain was common to all the major industrial sectors, especially motor vehicles (Figure 15.1.a); it built up mostly in EU and euro-area markets (Figure 15.2.a). The gap vis-à-vis Germany has narrowed since 2010, mainly owing to the recovery on these markets (Figure 15.2.b); the gap compared with Spain instead has continued to increase in all the major destinations. Over the last seven years the expansion in Italian sales abroad has been particularly strong compared with Germany in the motor vehicle, pharmaceutical, agri-food and mechanical sectors (Figure 15.1.b).

Figure 15.1

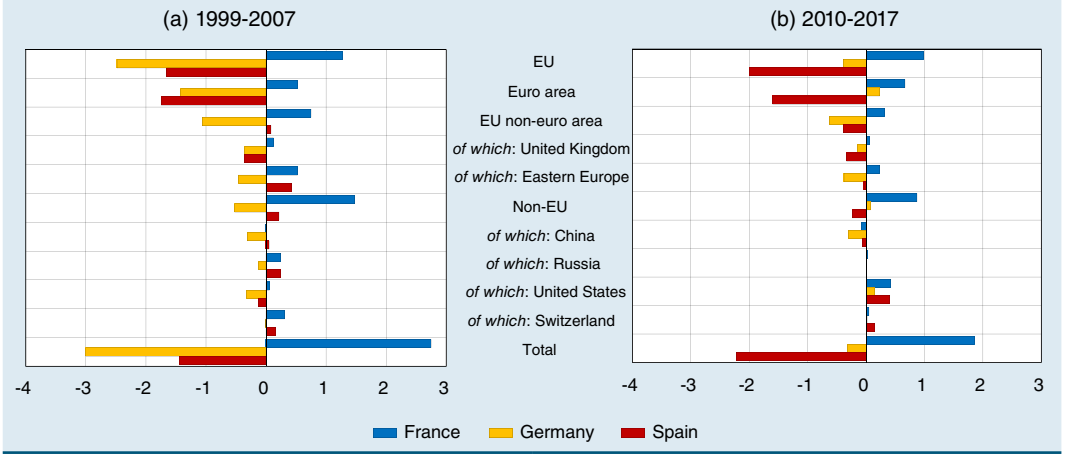
Contribution of the various sectors to the average annual gap in the growth of goods exports at current prices between Italy and the other main euro-area countries (1)
(percentage points)



Sources: Based on Eurostat and national foreign trade data.
(1) The data disaggregated according to the harmonized two-digit classification system were regrouped to approximate the representation of the sectors based on the Nace Rev. 2 classification. The data for France for 1999 are estimated. – (2) Includes other products from the processing of non-metallic minerals. – (3) For France this sector includes goods not allocated elsewhere.

Figure 15.2

Contribution of the various destination markets to the average annual gap in the growth of goods exports at current prices between Italy and the other main euro-area countries
(percentage points)

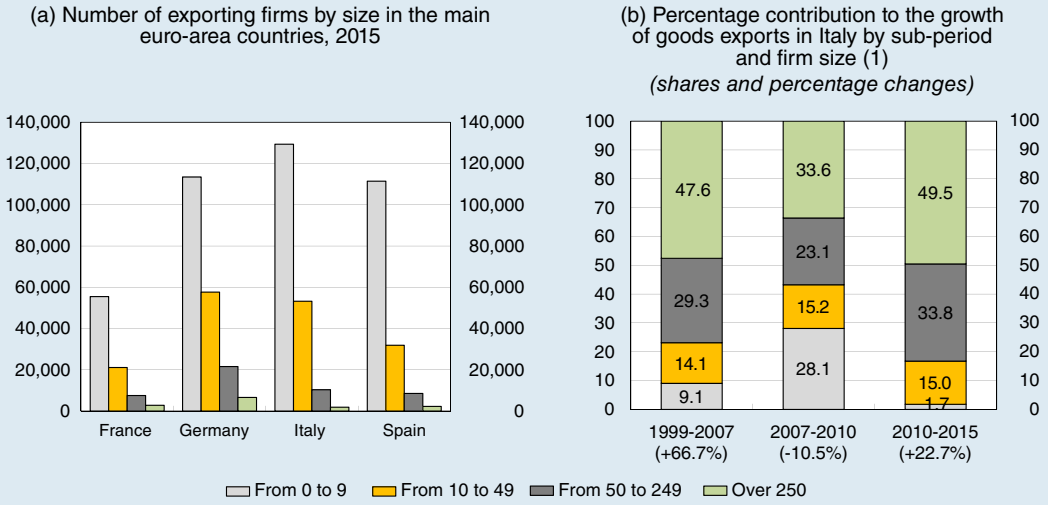


Sources: Based on Eurostat and national foreign trade data.

Exporting firms. – The total number of Italian goods exporters is the same as that of Germany (almost 200,000 in 2015, the last year for which figures are available). However, Italy has a much higher incidence of micro-firms (fewer than 10 employees) and a much lower number of large firms (more than 250 employees; Figure 15.3.a), a characteristic which essentially reflects the structure of the Italian productive system as a whole (see Chapter 15, 'Productivity in Italy: performance and determinants', *Annual Report for 2016*, 2017).

Figure 15.3

Firm size
(percentage points)



Sources: Based on Eurostat and national foreign trade data.
(1) Overall cumulative growth for each sub-period is shown in parentheses under the x-axis. Excludes exports of firms of unknown size.

Smaller businesses are less able to expand their sales in markets where they already operate, even by diversifying product lines, and to conquer new destination markets (see the box 'Business strategies and trends in Italian goods exports').

BUSINESS STRATEGIES AND TRENDS IN ITALIAN GOODS EXPORTS

The performance of a country's exports reflects the sum of the choices made by individual firms regarding whether and how much to export, what products to sell and which markets to target. By quantifying the relative importance of these different channels and how firm characteristics affect them, we can identify the determinants of changes in aggregate exports.

Utilizing Istat data on sales abroad by all Italian firms, a recent paper[1] decomposes the trends in exports – totals and by firm size – into two main components: (a) the change in exports by incumbent firms, defined as sales of a specific product in a specific market by a specific firm for amounts

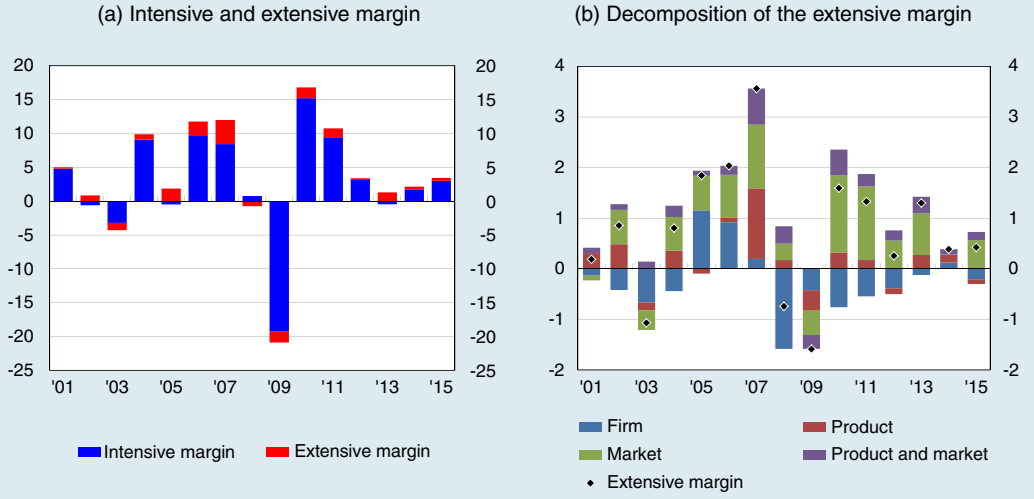
[1] M. Bugamelli, A. Linarello and R. Serafini, 'The "margin call": firm-level export dynamics in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming.

of more than zero for two years in a row (intensive margin); and (b) the change in exports arising from the starting up or ceasing of export activity over a span of two consecutive years (extensive margin). The extensive margin is then further broken down based on the decision of a firm to start up or cease export activity: (a) in any market and for any product (firm); (b) in a given market for products that are also sold elsewhere (market); (c) for a given product in a market where the firm is incumbent with other products (product); (d) for a specific product in a specific market, while continuing to sell other products in other markets (product and market);

Figure A

Contribution to growth in aggregate exports by margin

(annual data; per cent contribution)



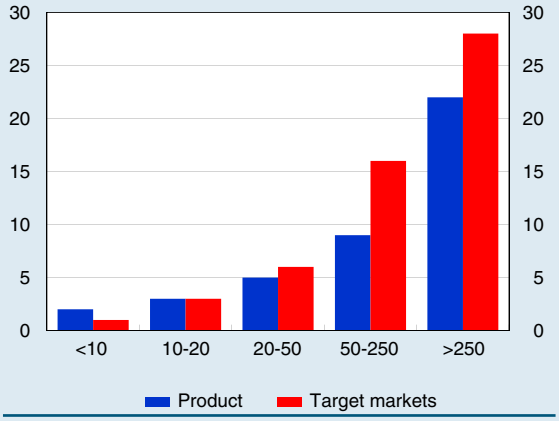
Source: Based on Istat foreign trade data.

The evolution of Italian exports primarily reflected the intensive margin – that is, the performance of exports by firms already present in a market for a given product – which explains about 80 per cent of the average annual change for the entire period 2001-15 (panel (a) of Figure A). The most significant contribution to the extensive margin came from exporting firms having entered a greater number of markets with products they already sold elsewhere. Recomposing the totality of products exported instead had a limited net effect (panel (b) of Figure A).

Figure B

Number of products and target markets by firm size in 2015

(units)



Source: Based on Istat foreign trade data.

The capacity to expand sales and to increase the number of target markets varies with firm size. Firms with more than 250 employees export on average over 20 products to about 30 markets, while those with fewer than 10 employees reach on average one market with two products (Figure B).

The intensive margin almost exclusively reflected the contribution of firms with 50 or more employees (especially the largest firms; see the table), which account for about three quarters of the increase in aggregate exports between 2001 and 2007 and again from 2010 to 2015. The extensive margin was also affected mainly by the practices of medium-sized and large firms, particularly by the capacity of firms with 20 to 249 employees to enter new markets, which was more acute during periods of growth (prior to the collapse of 2008 and during the recovery under way since 2010).

Decomposition of trends of exports by margin and firm size, 2000-2015 (1)
(annual averages; per cent contributions)

WORKFORCE SIZE	Overall growth	Intensive margin	Extensive margin	Decomposition of the extensive margin			
				Firm	Product	Market	Product and market
0 to 9	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
10 to 19	0.2	0.1	0.1	0.0	0.0	0.1	0.0
20 to 49	0.3	0.1	0.2	0.0	0.0	0.2	0.0
50 to 249	1.2	0.9	0.3	-0.1	0.1	0.3	0.1
250 and above	1.9	1.8	0.1	-0.1	0.1	0.1	0.1
Total	3.5	2.8	0.7	-0.2	0.2	0.6	0.2

Source: Based on Istat foreign trade data.
(1) Rounding of decimal points may cause discrepancies in totals.

As already observed in other countries, these results indicate that in Italy, too, export trends are mainly determined by the decisions and strategies of exporters already solidly established in many foreign markets. Greater geographical diversification by the many medium-sized firms could significantly boost sales outside of Italy even more.

Over the last twenty years, the performance of Italian firms on foreign markets has differed greatly according to firm size. Micro-exporters have increased in number but their overall sales growth has been very modest: they experienced greater difficulties in positive cycles and were more exposed to the crisis in world trade, accounting for 28.1 per cent of the drop in overall exports between 2007 and 2010 (Figure 15.3b) compared with a weight of just above 9 per cent. In contrast, sales by medium-sized and large firms grew more than average. The composition of Italian exports thus underwent a significant shift: the share of medium-sized and large firms increased gradually, from 69.3 per cent in 1999 to 74.1 per cent in 2010 and to almost 76 per cent in 2015. Their contribution to the aggregate increase in exports has reached 83 per cent in recent years.

The main determinants of goods exports

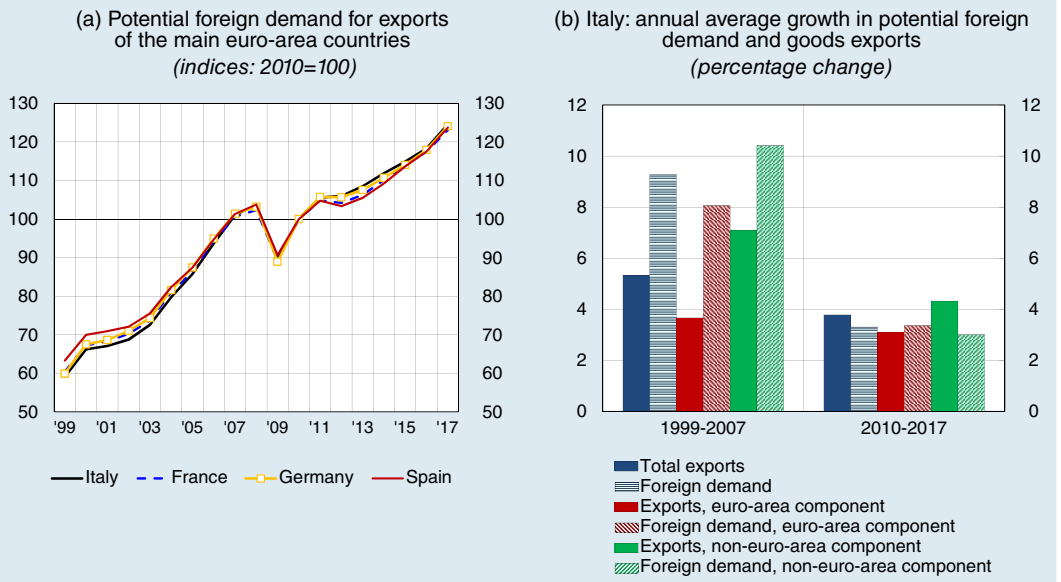
Foreign demand. – Because the exceptional expansion of world trade since 1999 has been driven by the rapid process of integration among the Asian economies, where the presence of European exporters is still limited, changes in potential foreign

demand for Italian goods may be best measured by the growth in imports in each outlet market against their respective weight on Italian exports, rather than by the trend in world imports (see Chapter 10, 'Foreign demand and the balance of payments').

Between 1999 and 2007, demand in Italy's outlet markets grew slightly more than in those of the other main euro-area countries; therefore, Italy's relatively unsatisfactory performance is not attributable to a concentration of sales in less dynamic markets compared with its competitors (Figure 15.4.a). In this period Italian exports increased by about half as much as foreign demand; the gap can be observed both in markets outside the euro area and, to a greater extent, in internal markets (Figure 15.4.b).

Figure 15.4

Foreign demand and goods exports in volume terms



Sources: Based on Eurostat, IMF, Istat and national foreign trade data.

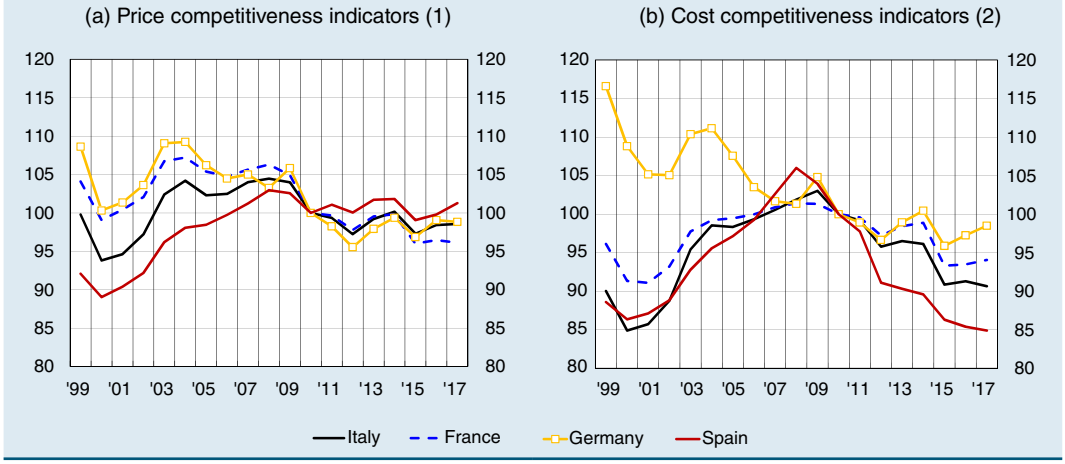
Since 2010 total sales abroad have grown more than potential demand for Italian goods, which in this period increased as much as that for French, German and Spanish products.

Competitiveness. – Price and cost competitiveness worsened in Italy between 1999 and 2007 (Figure 15.5). The loss was more moderate than in Spain but greater than in France and especially Germany, where competitiveness improved as a result of a distinctive combination of wage moderation, strong productivity growth and increased use of imported intermediate goods and services.[3]

[3] For a discussion of the most appropriate indicators for accurately measuring competitiveness, see C. Giordano and F. Zollino, 'Shedding light on price- and non-price competitiveness determinants of foreign trade in the four largest euro-area countries', *Review of International Economics*, 24, 3, 2016, 604-634, and M. Amici, E. Bobbio and R. Torrini, '*Patterns of convergence (divergence) in the euro area: profitability versus cost and price indicators*', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 415, 2017; see also Chapter 8, 'Demand, supply and prices', *Annual Report for 2012*, 2013, and the box 'Competitiveness indicators in the euro area: prices, costs and margins', in Chapter 9, *Annual Report for 2016*, 2017.

Figure 15.5

Price and cost competitiveness indicators of the main euro-area countries (1)
(indices: 2010=100)



Sources: Bank of Italy for panel (a); ECB for panel (b).
(1) Based on producer prices of manufactures. An increase signals a loss of competitiveness. These competitiveness indicators are calculated for each economy in relation to 60 competitor countries (including all members of the euro area). – (2) Based on unit labour costs for the economy as a whole. An increases signals a loss of competitiveness. These indicators are calculated for each economy in relation to 37 competitor countries (including all members of the euro area).

In 2008-10 the depreciation of the euro fostered a general improvement in the competitiveness indicators.

Since the 2011-12 recession the trends have diverged: Italy and Spain have recorded more moderate growth in prices and labour costs compared with Germany and the performance of their foreign sales has improved. The profit margins of Italian manufacturing firms have recovered; they have continued to grow in Germany and, to a greater extent, in Spain.[4]

As a consequence of the growing weight of the emerging economies in world trade, the sharp increase in competitive pressure has led firms in advanced countries to focus increasingly on non-price competitiveness factors, such as the quality of their products. According to our calculations based on CEPII-BACI[5] data that are disaggregated by product and destination market, the quality of exported products, measured by an indicator that captures the characteristics that make it possible to charge higher prices for a given quantity of products sold, has increased in Italy, as it has in Spain and Germany, but more so than in France.[6]

Chinese competition. – China's entry in the World Trade Organisation (WTO) in 2001 is one of the events that has had a significant impact on international trade in recent decades. The share of Chinese exports in world imports has tripled over the past fifteen years, reaching 13 per cent in 2017, the highest level among all countries.

[4] M. Amici, E. Bobbio and R. Torrini 2017, op. cit.

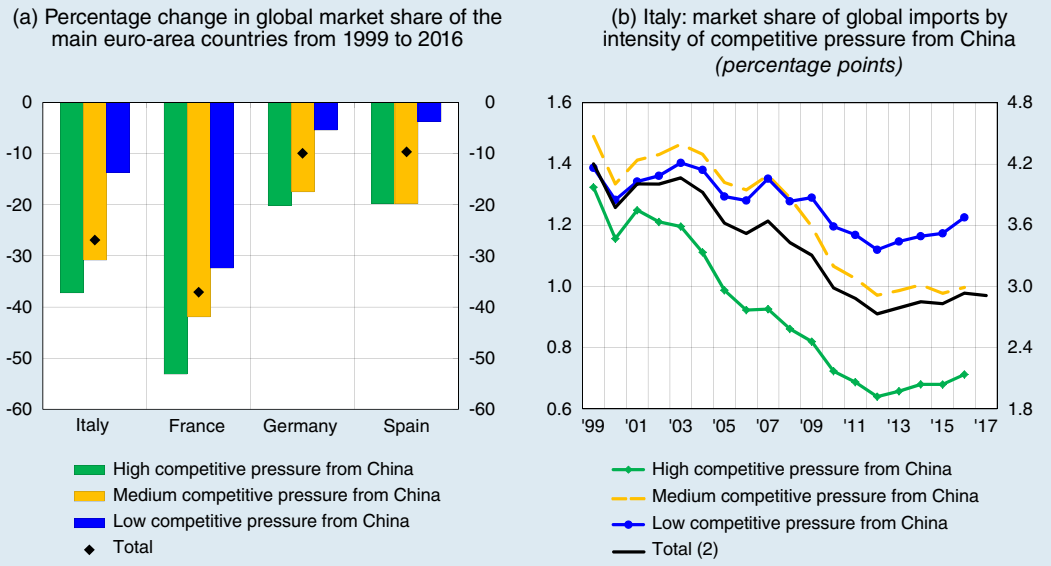
[5] M. Bugamelli, S. Fabiani, S. Federico, A. Felettigh, C. Giordano and A. Linarello, 2017, op. cit.

[6] The improvement in the quality of Italian exports is also highlighted by K. Benkovskis and J. Wörz, 'Non-price competitiveness of exports from emerging countries', European Central Bank, Working Paper Series, 1612, 2013. However, according to the estimates provided in the IMF's Export Quality Database, the quality of sales abroad is high but broadly stationary in the 2000s.

Differentiating exports according to their degree of exposure to Chinese competition, Italy has suffered from China's competitive pressures more than Spain or Germany, as a result of a sectoral specialization that is skewed towards less technologically advanced sectors (Figure 15.6.a). The displacement of Italian exports was very significant until 2007: the 0.6 percentage point decrease in market share compared with 1999, calculated at current prices and exchange rates, is almost entirely attributable to the products most exposed to Chinese competition (Figure 15.6.b).

Figure 15.6

Competitive pressures from China (1)
(percentage points)



Sources: Based on data from CEPII-BACI and IMF.
(1) Market share calculated at current prices and exchange rates; excludes raw materials. The distinction between high, medium and low competitive pressures is based on terciles of the distribution by product of China's market share of global exports (at current prices and exchange rates) in 2007. – (2) Includes raw materials. Right-hand scale.

Since 2010, Italian manufacturing firms have reacted to the heightened competition in global markets. On the one hand, specialization has shifted towards more advanced sectors such as motor vehicles and pharmaceuticals: the weight of the products most exposed to Chinese competition fell by almost a quarter between 1999 and 2010. On the other hand, improving the competitive capacity of Italian firms has led to a recovery in their global market share including, since 2012, in sectors facing greater competitive pressures from China.

Results of econometric and statistical analyses. – The econometric analyses carried out on data aggregated by country and sector confirm that Italy's performance on international markets hinges on price competitiveness more than it does for France and Germany:[7] the deterioration between 1999 and 2007 contributed significantly to the lag of Italian exports. The lack of competitiveness is also partly explained by the exceptionally large share of small firms.

[7] All econometric analyses mentioned in this paragraph are drawn from M. Bugamelli, S. Fabiani, S. Federico, A. Felettigh, C. Giordano and A. Linarello, 2017, op. cit.

Estimates based on micro data relating to the universe of Italian exporting firms show that larger exporters are much more capable of meeting foreign demand, of facing competition from emerging countries and of absorbing exchange rate fluctuations, partly owing to their choice to use invoicing currencies other than the euro (see the box 'The invoicing currency and the effects of exchange rate fluctuations on business activity').

THE INVOICING CURRENCY AND THE EFFECTS OF EXCHANGE RATE FLUCTUATIONS ON BUSINESS ACTIVITY

Italian firms set their prices mainly in euros even when they export outside the European Union (EU). However, a significant proportion of transactions are invoiced in other currencies,[1] in particular in US dollars: in 2015 a good 25.7 per cent of exports to non-EU countries and over 55 per cent of those directed to the United States were invoiced in dollars (see the figure).

There is a relationship between the pricing currency used in international trade and the change in the purchase prices of imported goods corresponding to exchange rate fluctuations (exchange rate pass-through).[2] A recent analysis of Italian firms' exports to non-EU countries between 2002 and 2015 confirms that importers' purchasing prices vary more when exporting firms set their prices in euros than when prices are set in the currency of the destination country.[3] When a third currency is chosen, such as the dollar for exports to Asian countries, price changes are driven by the dollar exchange rate, rather than by the bilateral rates between the euro and the currency of the importing country. This suggests that the prices expressed in the pricing currency are fairly rigid, at least in the short term. Exchange rate variations lead to an almost one-to-one change in import prices only when firms decide to invoice in euros which, in this case, also provokes a more marked response in terms of exported volumes.

The depreciation of the euro observed between 2014 and 2015 makes it possible to look more closely at how pricing strategies may influence the relationship between exchange rate fluctuations and business activity. The surveys carried out by the Bank of Italy on a sample of Italian industrial firms showed that the depreciation of the euro had mixed effects across companies: controlling for other possible determinants,

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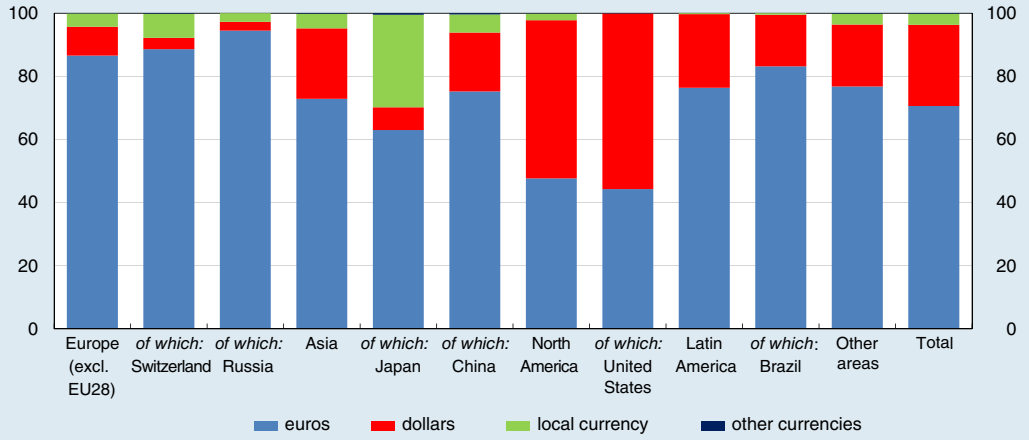
[1] Although referring to potentially different concepts, the terms 'invoicing currency', 'list-price currency' or 'pricing currency' are used synonymously, given that some empirical analyses have shown that they are interchangeable in almost all transactions; see R. Friberg and F. Wilander, 'The currency denomination of exports. A questionnaire study', *Journal of International Economics*, 75, 1, 2008, 54-69.

[2] L.S. Goldberg and C. Tille, 'Vehicle currency use in international trade', *Journal of International Economics*, 76, 2, 2008, 177-192; G. Gopinath, 'The International Price System', Jackson Hole Symposium, Volume 27, Federal Reserve Bank of Kansas City, 2015.

[3] A. Borin, A. Linarello, E. Mattevi and G. Zevi, 'Fluttuazioni del cambio e valuta di pricing: caratteristiche ed effetti sull'attività delle imprese italiane', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming. This paper uses information from Istat's foreign trade database on transactions with non-EU countries and from the surveys on industrial and service firms conducted by the Bank of Italy. In the first case, the invoicing currency is exclusively available for non-EU exports as requested in the customs declarations that firms must compile to meet legal requirements. In the surveys, the question on invoicing currency relates to the currency predominantly used to set prices in the following markets: the euro area, the rest of Europe, the United States, China, the group comprising Russia, Brazil and India, and the rest of the world.

Invoicing currencies for Italy's goods exports to non-EU countries
(per cent)



Source: Based on Istat's foreign trade data.

firms that achieve a higher share of turnover abroad, particularly in the United States, were more likely to express a positive opinion on the effects of a depreciation, while those with a greater share of input purchases in dollars expressed a negative opinion more frequently. Among the firms that found the effect to be positive, those that set prices mainly in a foreign currency in at least one of the non-European markets stated that they had benefited from the depreciation of the euro, above all through an increase in markups, while those that generally used the euro as the invoicing currency recorded increases above all in sales volumes.

The choice of invoicing currency is one of the competitive strategies a business may adopt in function of the characteristics of the target market.[4] The responses provided by the firms surveyed show that the largest and most productive companies are more likely to set prices in a foreign currency; these firms are also better able to manage the risks associated with exchange rate fluctuations and the fixed costs needed to maintain price lists that are differentiated by market. Companies that adopt a currency other than the euro do so above all to meet local customer demands in significant markets or in order to keep their sales prices aligned with those of competitors; in some cases this choice reflects intra-group transaction agreements.

The currency invoicing strategy seems to be associated with a propensity on the part of the largest and most productive firms to pass on exchange rate changes to markups; the shift of exports towards this type of firm may have contributed to making overall export volumes less sensitive to exchange rate fluctuations in recent years.[5]

[4] L.S. Goldberg and C. Tille, 'Micro, macro, and strategic forces in international trade invoicing: synthesis and novel patterns', *Journal of International Economics*, 102, 2016, 173-187.

[5] M. Bugamelli, S. Fabiani, S. Federico, A. Felettigh, C. Giordano and A. Linarello, '*Back on track? A macro-micro narrative of Italian exports*', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 399, 2017, also published in *Italian Economic Journal*, 4, 1, 2018, 1-31.

China's entry in the WTO at the start of this century has resulted in heightened global competitive pressures. In Italy, a country already weakened by unresolved structural problems, these pressures have been coupled with a gradual loss of competitiveness, even vis-à-vis its main European competitors. This has prompted a gradual reorganization of Italy's industrial system and the redistribution of exporters among markets, sectors and size classes.[8] Despite the significant shock of the double crisis, since 2010 the effects of this structural reinforcement have improved Italian firms' ability to compete in international markets. If the composition by sector and firm size of Italian exporters in 2010 had remained as it was at the start of the 2000s, the increase in sales abroad in the following five years would have been lower by at least a fifth.

[8] S. Rossi, *La regina e il cavallo. Quattro mosse contro il declino*, Bari, Laterza, 2006 and A. Brandolini and M. Bugamelli (eds.), '*Report on trends in the Italian productive system*', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 45, 2009; see also A. Linarello and A. Petrella, '*Productivity and reallocation: evidence from the universe of Italian firms*', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 353, 2016.