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THE WORLD MARKET: MARKET SHARES AND EXPORT PERFORMANCES

The gains in market share recorded by exporters from the South over the period 1995-2002 are all the more remarkable given the unfavourable sectoral structure of global import demand. The use of bilateral and sectoral data makes it possible to distinguish the trade performance which may be directly attributed to exporters and that which follows from the positions they have acquired in markets. During this period, the strong demand for transformed products has benefited the developed countries to the detriment of the South, especially for the least-performing countries. In the North, Japan's exports have suffered from the general weakening of its economy, while the previous high level of the dollar reduced the competitiveness of American products. The European Union has managed to keep its share of the world market, but the appreciation of the euro since 2002 has upset its price-competitiveness. Existing market shares risk also being disturbed by structural changes, such as the emergence of the South, not just as a supplier of the North but also as a rapidly expanding market.

The gains or losses of world market shares by individual countries are often considered as an index of their trade competitiveness. But given changes in demand, the relative medium-term inertia of geographical and sectoral specializations partly affects such outcomes. It is therefore very interesting, for a given period, to be able to distinguish the impact of a country's initial position in different markets relative to its capacity to adapt and to its competitiveness. The analysis put forward here uses data excluding non-agricultural raw materials which allows recent trends (for 1995-2002) in trade flows to be broken down (see box)[1].

The Partition of the World Market

The period from 1995 to 2002[2] was characterised by a marked slowdown in the growth of world trade expressed in dollars: up by an annual average of 2.6% as compared to 12% for the previous 10 years. However a large part of this slowdown stems from the dollar fluctuation, which rose by 28% (in effective terms) over the period, compared to a 39% depreciation in the previous 10 years. A rise in the dollar leads to a fall in the dollar value of trade carried out in other currencies (while a depreciation increases the value). The unit values for bilateral trade flows available in the database used here allow the calculation of price indices and trade flows data expressed in constant prices and exchanges rates of 1995. The slowdown in world trade expressed in volume terms is thus far more moderate: annual growth stood at 5.4% for 1995-2002, compared to 6.2% for the 10 previous years[3]. The strength of exports from the "South"[4] is remarkable: annual average growth stood at 9.4%, leading to a rise in its share of the world market of 5.5 percentage points (Table 1).

Table 1 – Growth in world trade in volume terms, 1995-2002
Exports in rows and imports in columns

in %	Annual average growth rate			Market share in 2002 and change during period		
	North	South	World	North	South	World
North	3.7	5.5	4.1	55.8 -5.6	17.5 +0.1	73.2 -5.5
South	9.7	8.8	9.4	20.3 +4.3	6.5 +1.1	26.8 +5.5
World	5.1	6.3	5.4	76.0 -1.3	24.0 +1.3	100

Source: BACI, authors' calculations.

Leaving aside this overall trend, the performances for different countries, from the "North" as well as the "South" differ. These are analysed here by breaking down the volume growth in trade for each country into three components: a geographic structure effect, a sectoral effect

1. See A. Cheptea, G. Gaulier & S. Zignago, "Trade Competitiveness: A Disaggregated View by Shift-Share Analysis", *CEPII Working Paper*, forthcoming.
2. To reduce business cycle effects, growth rates are calculated at the beginning and end of the period using a two-year average (i.e. growth for 1995 = average of 1995-1996, for 2002 = average of 2001-2002).
3. The growth in the volume of trade for 1985-1995 is calculated using figures provided by the WTO, covering manufactured goods and agricultural products.
4. The "North" here includes the developed, OECD countries, Taiwan, Hong Kong and Singapore. The "South" refers to the rest of the world.

BOX – A BREAKDOWN OF EXPORT GROWTH

Based on bilateral trade for more than 200 countries and 5000 products, between 1995 and 2002[1], this study selects 77 countries and aggregates products to a level of 54 sectors which are a combination of industries and stages of production[2].

The method used is similar to a shift-share analysis, but has the advantage of being independent of the structural breakdown with respect to the order in which the geographic and sectoral dimensions are taken into account. Furthermore, it allows the significance of the effects measured to be assessed. This method is an adaptation of the weighted variance analysis put forward by Jayet (1993)[3], providing a statistical foundation to the geographical structural analysis. The growth rates of bilateral sectoral exports g_{ijk} are regressed on the indicators of the exporting *i* and importing *j* country, and on product *k*. The estimation is carried out using the weighted ordinary least squares for initial trade level V_{ijk}^{0} : $g_{ijk} = \alpha_i + \beta_j + \gamma_k + \varepsilon_{ijk}$.

The export effect α_i measures the performance of the exporting country *i*. The β_j and γ_k effects respectively measure the dynamic trends of each importing country *j* and sector *k*.

The growth of exports for a country i is equal to its performance effect plus the geographic/sectoral demand effects calculated as the weighted average (by initial exports of *i*) of the fixed importing country/product effects.

The model identifies the intrinsic growth of each exporting, importing country or sector. The performance of an exporting country (α_i) is the growth which can be attributed to it directly, once the more or less dynamic nature of the export market is taken into account. Similarly, the dynamic trend of a sector (γ_k) is evaluated by neutralising the performance effects of countries participating in trade. Thus, the dynamism assessed for clothing is less than the growth observed for it, as part of this growth is attributed to the trade dynamism of the emerging countries specialised in this sector.

The "competitiveness" of each country can be determined by subtracting geographic/sectoral adaptations (the sum of the products of market share variations and the importing country/product effects) from the performance effects.

[1] The data are taken from the CEPII's BACI database: http://www.cepii.fr/anglaisgraph/reseach/mbdci/baci.htm.

[2] The industries are those given in theISIC 3rd revision, apart from the mining sector (energy and other raw materials) for which price fluctuations are very pronounced.

[3] H. Jayet (1993), *Analyse spatiale quantitative, une introduction*, Economica, Paris.

and a performance effect (see Box). Countries have no influence on the structural effects, which result from the growth in the markets to which they export, given their original geographical and sectoral specialisation. In contrast, the performance effect indicates the degree to which the exporting country was able to gain (or lose) market shares. This performance effect can in part be attributed to the capacity of the country to adapt its sectoral and geographical specialisations. Otherwise, the performance effect depends on other types of competitiveness (price, quality *etc.*). To simplify, "competitiveness" is defined here as the residual component of performance.

Grouping the countries into large zones shows that the increased market shares of the "South" have mainly come from the Central and East European Countries along with Turkey on the one hand, and the emerging Asian countries on the other hand. These gains are mainly explained by the competitiveness of these countries, which largely compensates disadvantages linked to their specialisation at the start of the period (sectoral demand effect). In Latin America, the sectoral specialisation is a major handicap, which is only just offset by competitiveness effects. As for countries in Africa and the Middle East, they accumulate both unfavourable geographic and sectoral specialisations, as well as a poor adaptation to markets in evolution. Their competitive gains are insufficient to prevent a pronounced decline in trade.

The geographic effects are generally less important than sectoral effects. They result from the fact that regional trade –which may be a crucial vector to trade development– and their intensification is situated in an environment that is more or less dynamic. As a result, all countries in East and South-East Asia, beginning with China, experienced a negative geographical demand effect due to the regional consequences of the 1997-98 financial crisis and the chronic weakness of Japanese demand. Similary, given the weakness of import demand, the dependency with respect to European outlets is a major handicap for countries in the Europe-Africa region. But this regional orientation has not prevented, rather favoured the integration of certain countries, especially among the CEECs and Turkey, into international trade. As for countries in North America, they benefit from the intensification of regional trade within the NAFTA.

Table 2 – Changes (in %) in volume terms of market shares and their components, by major zone, 1995-2002

	Growth in market share	Demand effects		Performance			
				Total	Adaptation		Competitiveness
		geographical	sectoral		geographical	sectoral	
	1	2	3	4=1-2-3	5	6	7=4-5-6
Developed countries	-5.2	-0.6	-1.4	-3.2	-1.6	-0.1	-1.5
CEEC-Turkey	31.4	0.9	-11.2	41.7	-4.1	1.0	44.8
Developing Asia	22.3	-6.7	-12.4	41.4	-0.4	1.2	40.7
Latin America	-0.9	1.3	-20.1	17.9	-1.3	0.7	18.4
Africa, Mid. East	-21.5	-1.2	-22.7	2.4	-4.1	-3.4	9.8

Note: The figures for each zone are the average results for the countries. For each item, the weighted sum of the country adds up to zero: the gains and losses of market shares, as well as their various components, compensate each other at the world level. But to be representative of the situation in the various countries in a region, the zone averages given here are simple averages: they do not sum at the world level.
Source: BACI, authors' calculations.

Sectoral Effects and Trade Performance

The sectoral pattern of growth in import demand has only favoured a small number of countries. During this period, world growth was driven by investment in information and communication technologies and by household consumption in the United States. Sectors like automobiles, chemicals and pharmaceuticals, electronics, telecommunications equipment as well as computers and

transport equipment benefited from stronger demand. In contrast, food and agriculture, together with other basic industries (metals, paper, leather *etc.*) have experienced weak demand[5]. In the textile and clothing sectors, the South has already acquired a major share of Northern markets, so these sectors are less marked by increasing markets than by a redistribution of market shares among exporters.

Overall, these sectoral trends have favoured Northern countries and have handicapped Southern countries specialised in low technology consumer goods. But looking beyond exporters' competitiveness, for both the North and the South the static and dynamic correspondence between specialisations and international demand is a very significant source for explaining differences in results.

Among developed countries, Singapore and Japan profited the most from their favourable sectoral trade specialisations, and they saw their respective market shares rise by 13% and 10% throughout the period. In contrast, New Zealand, Australia and Greece, which are largely specialised in food and agriculture (F&A), along with Portugal that is specialised in F&A and textiles, all recorded negative sectoral effects (-11% for Portugal, -15% to -17% for the three other countries). The best performance in terms of adapting to changing sectoral demand during the period was shown by Ireland (+6%) and Finland (+5%).

In the South, the sectoral effect was positive in only four cases: Malaysia (+6%), the Philippines (+3.5%), Mexico and Korea (+2%). The three Asian countries, well placed to benefit from the dynamic growth of the IT sector, were exposed to the weakening of the textiles and clothing sectors. Nevertheless, these countries experienced positive sectoral adaptation, as did Mexico, which saw its initial specialisation in automobiles reinforced as it managed to pull out of heavy industries and agriculture.

While the sectoral effect was indeed negative for all the other countries of the South, its impact was very varied, so that the divergence of performances worsened. China, Indonesia, Poland, Hungary and Slovakia experienced the least negative sectoral effect: their strong competitiveness gains and their adaptation to demand were largely enough to outweigh their initial handicaps. Other countries, which generally were in a worse sectoral position to begin with, were unable to reorient their exports towards the most dynamic sectors. This was particularly the case for countries specialised in textiles and clothing (Bangladesh and Pakistan, Morocco and Tunisia). Their trade performance suffered significantly due to sectoral effects. This was even more true for Sub-Saharan African countries that mainly export primary goods (simple manufactured and agricultural products) whose demand and prices were falling.

The various effects statistically distinguished herein are not independent. A good geographical and sectoral specialisation –whose direct impact on market share gains was identified– may have a negative, indirect impact on performance. By insuring "automatic" gains in market share, it may limit incentives to improve competitiveness. In fact, it can be shown[6] that the indirect effects of a good geographical specialisation (or a good adaptation) are quite negative while a good initial sectoral specialisation may have an impact on competitiveness (in the case of Southern countries) which is at best neutral. In contrast, there is a positive link between the adaptation of sectoral specialisation and competitiveness: the capacity to "seek out" growth in dynamic market segments and the capacity for increasing market share in all export markets go together.

The dynamic behaviour of markets increases the importance of the successful capacity to adapt, though making the latter difficult to maintain over time. The changes which occurred during the years 1995-2002 illustrate this point. At the start of the period, imports by the North (especially by the United States) were very dynamic. Given their scale, they accounted for 87% of the growth in world imports and so "pulled along" Southern exports (Table 3). During the next three years, the slowing down of imports by the North did not stop the South's exports from developing. But what is remarkable during this period is that the South was no longer just a supplier to the North (China often being described as the "workshop of the world"), but its imports too expanded very strongly (the annual average growth rate

Table 3 – Conditions of growth in the volume of world trade, as expressed as a % of such growth
Exports in rows and imports in columns

in %	1995-1998			1999-2002		
	North	South	World	North	South	World
North	61	8	69	20	28	47
South	27	4	31	38	15	53
World	87	13	100	57	43	100

Source: BACI, authors' calculations.

5. See the box for a definition of sector dynamics.

6. The export growth is regressed against its various components resulting from the shift-share analysis, leaving aside competitiveness. The analysis conducted up to now involves imposing a unitary coefficient on each of the structural and adaptation effects. These constraints are rejected: the impact of sectoral demand is found to have a coefficient close to unity for Southern countries, but it is not statistically different from 0 for the North. The sectoral adaptation effect is significantly greater than 1 (about 4 for the South, and 3 for the North). The geographic demand and adaptation effects are negative though not significant. The results are then checked to see whether they are qualitatively unchanged if the observations are weighted by initial export levels or if per capita GDP growth and the real effective exchange rate are incorporated into the regression analysis, as these two variables may explain gains in competitiveness.

rose from 3.4% to 9.3%), as their contribution to international trade growth virtually increased fourfold.

This displacement in the location of dynamic markets is partly linked to the business cycle. But it is also symptomatic of changes which could affect the international environment in the medium term: the correction of US macroeconomic imbalances, the renewal of products and technologies, pressures on primary products prices due to Chinese demand and the exhaustion of certain resources, *etc.* Such changes will modify the sectoral composition of demand and will affect the relative performance of exporting countries.

The EU leads in the North

The EU recorded the best performance in the North, compared to the United States and Japan. Facing the emergence of Southern exporters, European competitiveness permitted the Union to maintain its market shares[7], more or less (see Table 4). In contrast, competitiveness losses by the US and Japan are significant and of about the same magnitude. The strong growth of the US economy was not capable of offsetting losses in price competitiveness linked to the rise of the dollar up to 2002. For Japan, on the other hand, weak growth may have weighed down on non-price competitiveness, affecting the quality and the variety of its export supplies as well as its commercial dynamism. For both countries, however, such sluggish competitiveness was compensated by other factors: the US's geographical advantages and Japan's sectoral advantages. Overall, Japan recorded the largest fall in its market share.

Within the euro area, the differences recorded by the main exporters, France and Germany, were quite limited during the period. Both countries recorded a small change in their market shares: negative for France, positive for Germany. France is relatively disadvantaged by demand effects, whereas geographical specialisation favours Germany, which benefited especially from strong market shares in the CEECs. The initial sectoral specialisation also played a part, favouring Germany. In contrast, France was more able to reorient its exports to dynamic sectors than Germany: pharmaceutical products, automobiles, other transport equipment and telecommunications. However, it is the competitiveness effect which is more clearly unfavourable for France, as of 1999. German exporters increased their export volumes by cutting prices strongly in their main export markets, whereas their French competitors increased their margins[8] by passing on less of the gains accrued through the depreciation of the euro. As a result, differences in price-fixing behaviour explain the main divergences in export volumes. In value terms, Germany and France are very close: -8.4% compared to -9% respectively (with -5.8% and -8% in market shares).

Since February 2002, the appreciation of the euro against the dollar has reversed the price-competitive conditions. When expressed in euros, exports from both countries in 2003 fell for France, and slowed down for Germany. However, their value expressed in dollars has risen at a rapid rate, clearly much above that of US exports.

Table 4 – Trends in volume market shares and their components, for the three main developed zones 1995-2002 (*in %*)

	Growth in market share	Demand effects		Performance			
				Total	Adaptation		Competitiveness
		geographical	sectoral		geographical	sectoral	
	1	2	3	4=1-2-3	5	6	7=4-5-6
United States	-9.5	9.3	4.5	-23.3	9.7	-0.8	-32.2
Japan	-20.1	-2.2	10.1	-28.0	-0.2	-2.7	-25.1
EU	-1.4	0.6	0.1	-2.1	0.2	-2.5	0.3
France	-2.6	1.8	1.4	-5.8	-3,0	0.6	-3.4
Germany	3.7	2.7	2.4	-1.4	-1.8	-0.4	0.8

Source: BACI, authors' calculations.

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7. While the rise of the dollar during the period reduced the volume market share of the United States, it also tends to raise the market share expressed in dollars, relative to other zones, especially the European Union which mainly trades outside the dollar zone. Thus, at current prices and exchange rates, even though EU competitiveness is greater than that of the US, the latter recorded a smaller fall in its market share (-5.2%) compared to the EU (-10%).
8. The margins of French exporters also benefited from the fall in unit production costs, so that French cost competitiveness improved by about 30% during the period, as opposed to 10% for Germany (see DREE, Dossiers, *Le commerce de la France en 2002*, www.dree.org/economie).

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