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## Article

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## The Brazilian exports of labor-intensive goods in the 2000s: An analysis using the Constant Market Share Method

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### Abstract

This paper aims at analyzing international trade in labor-intensive sectors in the 2000s, with a special reference to the Brazilian case. Therefore, we use the constant market share analysis to compare several countries' export performance. It was observed that Asian countries emerged strengthened from this period. Brazil had a mediocre performance, losing market-share in global markets. Moreover, competition from Asian economies and even from the small Central American countries, such as Guatemala and El Salvador, has undermined the penetration of Brazilian exports in its major trade partners, which are North America and South America.

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### Resumo

O objetivo deste artigo é investigar a evolução do comércio internacional de produtos intensivos em trabalho na década de 2000 e qual foi o desempenho do Brasil neste mercado. Para tanto, comparam-se as performances das exportações de vários países e utiliza-se o método do *Constant Market Share* para decompor a variação do valor das suas exportações. Observou-se que quem saiu fortalecido desse período foram os países asiáticos. O Brasil apresentou uma performance medíocre e perdeu muito espaço no mercado internacional. Em dois dos seus principais mercados, América do Norte e América do Sul, há uma presença crescente e ameaçadora dos competidores da Ásia e até mesmo de pequenos países da América Central, como Guatemala e El Salvador.

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*Palavras chave:* Indústria; Exportação; Intensivo em trabalho; Constant Market Share; Competitividade

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## 1. Introduction

The first decade of the 21st century has witnessed structural transformations in the world economy, among them, changes in trade patterns deserve special attention. Asian countries, and specially China, have consolidated their position as major producers and exporters of manufactured goods and, also, as importers of raw materials, intermediate products and machinery. Its high competitiveness, led in great part by its low labor force costs, has been displacing many traditional producers, often jeopardizing the survival of industrial sectors and companies in third countries. Brazil has not been an exception in this scenario. For different reasons firms and governments have not adequately adapted to this new competitive environment,<sup>1</sup> particularly the producers and exporters of labor-intensive goods. As a consequence, competitors from Asia and Central America have displaced the Brazilian firms in markets previously dominated by Brazilian exporters.

In this context, this paper aims at analyzing international trade in labor-intensive sectors in the 2000s, with special attention to measuring the market share losses of Brazilian exporters. We use the constant market share analysis to compare several countries' export performance. This methodology allows us to decompose the variation of their exports' values, in order to identify which countries have emerged as the main competitors in labor-intensive products' international markets. As a consequence, we offer a broader picture of winners and losers as well as possible explanations for the divergence in trade patterns. In doing so, the current paper seeks to contribute in two ways: (i) we have tried to improve previous methodological efforts to classify industrial products following Pavitt's (1984) seminal contribution, and (ii) we provide new evidence on the competitiveness of Brazilian exports of labor-intensive products.

The remainder of this paper is organized as follows. Section 2 explores industrial goods' classification, in order to identify the products to be appraised as labor-intensive goods. The section is based in the well known Pavitt (1984) taxonomy, with the further adaptations of Guerrieri (1991, 1998). Section 3 evaluates the structural changes in the international markets of labor-intensive products in the 2000s, while the Section 4 assesses the gains and losses of Brazilian products in those markets. Section 5 analyzes the competitiveness of Brazilian exports, while Section 6 compares the performance of selected countries, including Brazil. Arguments and evidence are summarized in Section 7.

## 2. The classification of industrial goods: fundamentals and methods

The well known Pavitt taxonomy has its origins in the famous article (Pavitt, 1984) which proposes a modification in relation to the previous patterns of industrial goods classification, especially on what concerns the empirical studies. The previous classifications were characterized by being based in non-dynamic market structures, unable to consider the endogenous changes that competition built on innovative strategies and in technical progress could generate (Possas, 2003). Therefore, the categorization was led by a classification such as the traditional neoclassical or by others that were critics to the neoclassical and, eventually, pointed to the technical progress matter, but did not contemplate it entirely. This was the case, for instance, of Sylos-Labini (1956), which as early as the 1950s shed light to the technical progress issue. Since the early 1970s, the emergence of a new technological paradigm – microelectronic, in substitution to the electromechanical – has generated structural changes, where technical progress and the innovation turned out to become essential elements in the dynamics of competition. The previous taxonomies lost functionality and explanation power as a result of the changes in the competitive environment, granting room to new ways of categorizing different industrial activities, hereinafter always considering the innovation and technical progress matter.

Pavitt (1984) initially classified industrial goods in three main groups: Supplier Dominated, Production Intensive, and Science Based. The second group was divided in two subgroups: Scale Intensive and Specialized Suppliers. In this first approach, he suggests an opening of the groups to two digits, hence with a restrict specification.

Guerrieri (1991) states to be based in Pavitt (1984) while enunciates four industrial goods groups, and also has the Production Intensive group divided in two (however, besides these four groups, he includes the food industry and three groups of non-industrial goods):

- (1) Science Based;
- (2) Specialized Suppliers;

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<sup>1</sup> For a broader analysis see, among others, Canuto et al. (2013). See, also, Footnote 5.

- (3) Scale Intensive;
- (4) Supplier Dominated.

In the appendix of his article, Guerrieri relates the products of the four groups in accordance with the *Servizi Informativi per L'Estero* (SIE – World Trade) database, but the title of the Supplier Dominated group is already different than in the article itself. It now becomes Traditional or Supplier Dominated (76 products groups), which includes textiles, clothing accessories, leather manufactures, footwear, wooden manufactures, furniture, paper and edited products, ceramic articles, glass products, miscellaneous metal products (structures, tools, cutlery, and others), jewelry, musical instruments, sporting goods, toys and games, and others. In the tables and graphics in the end of the article the denomination becomes only Traditionals.

Guerrieri (1998) creates an additional group, the Resource Intensive, which is composed of 18 products previously belonging to the Scale Intensive group. The other groups do not change in relation to Guerrieri (1991), including the Traditional or Supplier Dominated, with the same 76 products and accordingly described (p. 6):

[...] the group of 'supplier-dominated' (traditional) sectors encompasses the more traditional consumer and non-consumer goods industries such as *textiles, clothing, furniture, leather and shoes, ceramics, the simplest metal products*. Both sectors are net purchasers of process innovations and innovative intermediate inputs from other suppliers of productive equipment and materials [...], in these sectors technology is easily accessible, firms' competitiveness is notably sensitive to price factors, although in a few traditional sectors it is also influenced by 'non price factors' as product design and quality, and factor endowments have a major influence on the generation of comparative advantages.

In the tables by the end of Guerrieri (1998), the denomination of the group becomes Traditional industries.

In Brazil, several studies<sup>2</sup> have been using the Pavitt/Guerrieri taxonomy and some of them have adapted it to 11 groups, which are:

- Primary Agricultural Products
- Primary Mineral Products
- Primary Energetic Products
- Agro-alimentary Industry
- Agricultural-resources-intensive Industry
- Mineral-resources-intensive Industry
- Energetic-resources-intensive Industry
- Labor-intensive Industry
- Scale-intensive Industry
- Specialized Suppliers
- Research and Development (R&D)-intensive Industry

This can be interpreted and expanded following Guerrieri (1991, 1998), because: the first three groups correspond to the three groups of non-industrial goods of Guerrieri (1991), the Agro-alimentary Industry group corresponds to the Food Industry group, the three Resource-intensive groups represent subdivisions of the Resource Intensive group in Guerrieri (1998), the Labor-intensive Industry group represents the Traditional of Supplier Dominated group, the Scale-intensive Industry group represents the Scale Intensive group, and the R&D-intensive Industry group corresponds to the Science based group.

There is little concern in explaining how the adaptation in the taxonomy took place. Taking into consideration the Holland and Xavier (2005) case, the authors write in Annex 2 (p. 107): “[...] the typology proposed and developed originally by Pavitt (1985) and Guerrieri (1994) was adopted as the criteria for data aggregation”.<sup>3</sup> When they list the 11 groups in a table in the same Annex, the column is described as “Classification according to Pavitt (1985)”. But

<sup>2</sup> Among them, it is noteworthy mentioning Laplane et al. (2001), Holland and Xavier (2005), Xavier et al. (2008) and Hermida and Xavier (2011).

<sup>3</sup> Free translation of the authors from the original text: “[...] adotou-se como critério de agregação dos dados a tipologia elaborada e desenvolvida originalmente pelos seguintes autores: Pavitt (1985) e Guerrieri (1994).”

Pavitt – in 1984, actual year of his paper – actually only proposed four groups, and not eleven as mentioned in [Holland and Xavier \(2005\)](#). The authors also inform they use the same algorithm to adapt the taxonomy as in [Laplane et al. \(2001\)](#), but this paper does not mention the origin of the algorithm, only presents results in tables with the information already organized in 11 groups, which are called “products”.

Taking into account such differences, this section provides the methodological and empirical fundamentals in order to study the Brazilian exports of labor-intensive industrial goods, which correspond to the Supplier Dominated product group, according to the original work of [Pavitt \(1984\)](#), or Traditional/Supplier Dominated, according to [Guerrieri \(1998\)](#). This group is composed by nondurable goods and some intermediate goods (industrial raw materials). As the designation of the group suggests, it is incapable of generate its own technological inputs. Therefore, technology must be acquired from other groups, particularly from the Scale-intensive Industry and R&D-intensive Industry groups, which grant the technical progress. The price is the main competition element, although design and quality may also result in differential advantages. Therefore, the acquisition of raw materials and equipments, which grant cost reduction and flexibility to product and process variations, are crucial for the success of entrepreneurship strategies. When evaluating international competition, factor endowments exert great influence in the competitiveness of a given country or region.

Considering the previous discussion, we suggest here that the Labor-intensive Industry group is composed, essentially, by the following products, according to the National Classification of Economic Activities (CNAE),<sup>4</sup> version 1.0, with a 3 digits level of aggregation:

- Leather
- Footwear
- Leather Products
- Textiles
- Furniture
- Ceramic Products
- Guns, Ammunition and Military Equipment
- Garment
- Cutlery, Locksmiths, and manual tools
- Rubber goods
- Jewelry and costume jewelry
- Instruments and appliances for medical, dentistry, laboratorial and orthopedic use
- Glass and glass products
- Toys, games and sporting goods
- Edition

### 3. Structural changes in the international market of labor-intensive industries<sup>5</sup>

Global trade experienced significant growth during the 2000s, strongly influenced by the expansion in Asian economies, especially China and India. Between 2000 and 2010, the global exports rose from US\$6.2 trillion to US\$14.7 trillion, accounting for a 137 per cent increase. In the same period, the global exports of labor-intensive industries (LII) almost doubled, with an amount that rose from US\$742 billion to US\$1451 billion. However, the expansion rate was higher in the first five-year period, when the yearly growth rate was of 7.8 per cent, in the subsequent five years, exports grew 6.1 per cent ([Table 1](#)). Thus, in 2000 the LII aggregate represented 12 per cent of global exports, while in 2010 its share was reduced to 10 per cent.

<sup>4</sup> We use the Brazilian system of classification (CNAE) at 3 digits level, which is mainly a translation of the Standard International Trade Classification (SITC).

<sup>5</sup> The analysis that follows emphasizes trade data. For a broader discussion on production and productivity see, among others, [Unido \(2013\)](#). Data on labor-productivity is available on [Conference Board \(2014\)](#). The Brazilian Central Bank database informs that labor unit cost rose 154 per cent between 2003 and 2010 in Brazil ([Banco Central do Brasil, 2014](#)).

Table 1  
Global exports of the labor-intensive industry by product from 2000 to 2010.

Product	Exports (in US\$ billion)			Share (in %)			Ranking		Average yearly growth (in %)	
	2000	2005	2010	2000	2005	2010	2000	2010	2000–2005	2005–2010
Garment	173	247	314	23.3	22.9	21.6	2nd	1st	7.4	4.9
Textile	174	236	294	23.5	21.9	20.3	1st	2nd	6.3	4.5
Furniture	56	90	118	7.5	8.3	8.1	3rd	3rd	9.9	5.6
Footwear	47	67	98	6.3	6.2	6.8	4th	4th	7.5	7.9
Toys, games, etc.	44	60	82	5.9	5.5	5.6	5th	5th	6.5	6.5
Jewelry	23	41	75	3.1	3.8	5.2	6th	6th	11.8	13.1
Leather Products	18	27	44	2.5	2.5	3.1	7th	7th	8.2	10.3
Ceramic Products	18	27	33	2.4	2.5	2.3	8th	8th	8.4	4.7
Leather	16	20	20	2.1	1.8	1.4	9th	9th	4.9	−0.2
Others	173	267	373	23.4	24.7	25.7			9.0	6.9
Total	742	1081	1451	100.0	100.0	100.0			7.8	6.1

Source of raw data: COMTRADE.

The fact that the nine main products exported by the LII remained the same during the analyzed decade and represented around 75 per cent of the total exports of this industry should be highlighted. The current paper will focus only in the analysis of the changes that occurred in these nine main products.<sup>6</sup>

The international ranking of the labor-intensive exporting industries had few changes in the 2000 decade – there was only a shift between the first and the second positions. In 2000, by a small margin, the textile industry was the largest global exporter of labor-intensive goods, however, since 2005 the garment industry outnumbered the exports of the textile industry. In 2010, the garment industry exported US\$314.2 billion, accounting for a share of 21.6 per cent of the LII exports. Nevertheless, even though it became the main exporting industry, the garment industry lost participation in the share of the LII, since its growth was below the average of the other industries, especially between 2005 and 2010, when the growth of the global exports of the LII averaged 6.1 per cent.

The world exports of the furniture industry, placed third in the ranking, more than doubled from 2000 to 2010, having reached US\$117.7 billion in the last year, particularly due to its 9.9 per cent yearly growth in the first five years. The fourth industry is the footwear industry, which nearly doubled its value between 2000 and 2010, having reached US\$98 billion in the last year. The leather exports, despite being the main input for the manufacturing of footwear products, did not share the same dynamism as footwear, since its export value in 2010 was the same than that of 2005.

Three products had a larger average of their exports yearly growth in the second half of the decade, regardless of the global financial crisis: footwear, jewelry and costume jewelry, and leather products – the last two products with yearly growth rates over 10 per cent.

Owing to the well known advantages of abundance and cost of the labor-force, the main exporters of labor-intensive products are Asian countries (Table 2). The export's growth above average between 2000 and 2010 provided the continent an increase of 10 percentage points in its market share. Asia became the region with the largest growth between 2005 and 2010, when the consequences of the global crisis were provoking a cooling down of world trade in other regions. Asia's performance is impressive to the extent that in 2000 its share was larger than that of the second and third places of the ranking together, however, in 2005 it was already larger than the summing up of the first three places and, in 2010, the continent accounted for more than half of the global trade of labor-intensive industries.

Between 2000 and 2005, East Europe's boomed, the region's exports averaged 13 per cent yearly and it became third in the global ranking, displacing North America. However, unlike Asian countries, East Europe was not immune to the effects of the financial crisis and its exports growth rate decreased substantially after the crisis. Similarly to Asia, African countries also seemed not to be negatively affected by the crisis, since its average yearly growth was higher in the second half of the decade than in the first half, helping the region to sustain the fifth place in the ranking.

<sup>6</sup> Products that represent less than 1 per cent of the world exports of LII, such as guns and ammunitions, cutlery, glass products and rubber products will not be analyzed in this paper. The tables and graphics of this paper from this point on will not consider such products; therefore, the values of world exports from Table 2 are lower than that value reported in Table 1.

Table 2  
World exports of the labor-intensive industry by continent of origin between 2000 and 2010.

Continent	Exports (in US\$ billion)			Share (in %)			Ranking		Average yearly growth (in %)	
	2000	2005	2010	2000	2005	2010	2000	2010	2000–2005	2005–2010
Asia	257	387	593	45.2	47.6	55.0	1st	1st	8.6	8.9
Europe	180	251	290	31.7	30.8	26.9	2nd	2nd	6.9	2.9
East Europe	37	69	82	6.5	8.4	7.6	4th	3rd	13.3	3.5
North America	60	61	61	10.6	7.5	5.6	3rd	4th	0.2	0.0
Africa	10	13	16	1.8	1.6	1.5	5th	5th	4.1	5.0
South America	9	13	13	1.6	1.6	1.2	6th	6th	7.8	0.2
Central America and Caribbean	7	11	13	1.2	1.3	1.2	7th	7th	8.5	3.6
Middle East	5	7	9	0.9	0.9	0.8	8th	8th	6.6	4.2
Oceania	3	3	3	0.5	0.4	0.3	9th	9th	2.0	–2.9
Total	568	814	1079	100.0	100.0	100.0			7.5	5.8

Source of raw data: COMTRADE.

Table 3  
World exports of the labor-intensive industry by selected countries between 2000 and 2010.

Country	Exports (in US\$ million)			Share (in %)			Ranking			Average yearly growth (in %)	
	2000	2005	2010	2000	2005	2010	2000	2005	2010	2000–2005	2005–2010
China	84,185	186,204	345,105	14.8	22.9	32.0	1st	1st	1st	17.2	13.1
Italy	55,458	70,364	72,604	9.8	8.6	6.7	3rd	3rd	2nd	4.9	0.6
Hong Kong	66,932	71,736	65,733	11.8	8.8	6.1	2nd	2nd	3rd	1.4	–1.7
Germany	28,185	44,335	56,058	5.0	5.4	5.2	5th	4th	4th	9.5	4.8
United States	32,340	33,485	39,008	5.7	4.1	3.6	4th	5th	5th	0.7	3.1
India	13,882	23,443	37,134	2.4	2.9	3.4	10th	7th	6th	11.0	9.6
Vietnam	5,124	13,432	30,545	0.9	1.6	2.8	26th	14th	7th	21.3	17.9
Turkey	11,025	21,543	25,901	1.9	2.6	2.4	15th	8th	9th	14.3	3.8
Bangladesh	5778	9218	18,605	1.0	1.1	1.7	21th	22th	13th	9.8	15.1
Poland	5451	10,351	14,382	1.0	1.3	1.3	22th	20th	16th	13.7	6.8
South Korea	20,537	14,661	14,323	3.6	1.8	1.3	6th	13th	17th	–6.5	–0.5
Mexico	16,819	16,202	13,820	3.0	2.0	1.3	8th	12th	19th	–0.7	–3.1
Brazil	4395	6828	5978	0.8	0.8	0.6	28th	28th	30th	9.2	–2.6
El Salvador	174	1855	2016	0.0	0.2	0.2	88th	48th	47th	60.6	1.7
Guatemala	159	1816	1602	0.0	0.2	0.1	90th	49th	53th	62.8	–2.5
Total	568,379	814,188	1,078,621	100.0	100.0	100.0				7.5	5.8

Source of raw data: COMTRADE.

The exports of North America, which include Mexico, remained virtually constant around US\$60 billion during the entire decade, which was responsible for a decrease in its share to 5.6 per cent in 2010, close to half of its share in 2000. The exports of South American countries in 2010 were US\$13 billion, very similar to the amount registered five years before. Brazilian exports' poor performance in the second half of the decade had considerable influence in the performance of the region as a whole, since Brazil accounts for nearly half of the region's exports. The difference between the performances of South America and Central America and the Caribbean, especially in the second half of the decade, threatens South America's sixth position in the ranking.

The analysis of the export performance through selected countries reveals interesting features (Table 3). The first one is the evident Chinese leadership. China doubled its market share during the analyzed period. Chinese exports grew 310 per cent in the decade and, regardless of having reduced its growth level in the second half of the decade, still grow at an impressive yearly average of 13.1 per cent. As a consequence, the competitiveness gap between China and its main competitors had apparently widened.

Another country which deserves special attention is Vietnam, which had a 496 per cent increase in its LII exports in the decade and, within the relevant countries of the world ranking, was the country with the largest growth in the second five-year period (17.9 per cent). This performance moved took the country from the 26th position in 2000 to



the 7th position in 2010. As pointed out by the literature, in the last few years, part of the Chinese labor-intensive production and exports have shifted to neighboring countries, including Vietnam, seeking for still more favorable labor-cost conditions (Roberts, 2010).<sup>7</sup> The performance of India also deserves special attention, since it advanced four positions in the ranking, achieving the 6th position in 2010 with a cumulative growth rate of 168 per cent in the decade. Still in Asia, Bangladesh also had a remarkable evolution, having grown 222 per cent in the ten-year period and catching up eight positions in the ranking (placed 13th in 2010). Vietnam and Bangladesh seemed not to be negatively affected by the financial crisis in the second half of the decade, since their yearly export growth averages were 17.9 per cent and 15.1 per cent respectively, far above the world average (5.8 per cent).

Outside Asia, other countries also had remarkable performances. Turkey and Poland expanded their labor-intensive exports by 135 per cent and 164 per cent, respectively, gaining several positions in the ranking.

Apart from Asian countries, the performance of Central American and Caribbean countries will have special attention in this paper. In the region, El Salvador and Guatemala, despite their negligible participation in global trade, have had a remarkable LII export performance in the 2000s. More specifically, they experienced growth rates of 1060 per cent and 910 per cent, respectively, which helped them to advance several positions in the world ranking, especially during the first half of the decade.

In the last few years, Brazilian companies have increased their economic interest in Central America and the Caribbean.<sup>8</sup> The Brazilian press has registered the displacement of labor-intensive industries from Brazil to several Central American countries, seeking tax, logistic, and labor-cost advantages – especially when the exports are destined to the United States (Bueno, 2010, 2011; Bueno and Koike, 2012). Considering the regional differences and advantages that determine foreign direct investment, some Brazilian companies also have been displacing their production sites to Asia, especially to China. This reallocation seems to correspond to a second step of a former movement, initiated still in the 1990s, of displacement between regions within Brazil. At that time, attracted by similar advantage factors, Brazilian companies from richer regions displaced their production sites to the poorer states in the Northeast part of the country seeking competitiveness gains. These companies enjoyed the donation of land and the building of infrastructure by state governments. This movement was particularly intense in the footwear industry, known as the “nomad industry”, precisely due to its historical tendency of displacements (Costa and Fligenspan, 2013).

Going back to the information in Table 3, it is possible to envisage that South Korea and Mexico had negative growth rates in the 2000s, losing several positions in the ranking. The reasons for such results must have been different for both countries, it seems that South Korea has lost interest in disputing the international market of products with low value added, given its good performance in the high technology products, while Mexico was not able to sustain its competitiveness.

#### 4. Brazilian exports of labor-intensive goods

Brazilian exports of labor-intensive goods grew 36 per cent in the 2000s (Table 4). However that growth was very unequal during the period – positive in the first half of the decade and negative in the second half, when global trade was negatively affected by the global financial crisis and the subsequent “great recession” (Cynamon et al., 2013).<sup>9</sup>

<sup>7</sup> Menon (2009, p. 7) states that foreign capital companies were responsible for more than 75 per cent of the footwear exports in Vietnam in 2005 and for 35 per cent of the textile and garments exports. Menon and Melendez (2011, pp. 17–18) suggest that the exports of clothing and footwear accounted for 2 per cent of the total exports of Vietnam in 1990 and increased up to 27 per cent in 2008. According to the World Economic Forum (2012, p. 39): “Finding countries with a labor-cost advantage is increasingly difficult. Luxury handbag-maker Coach announced in January that it would reduce its reliance on China in favor of increased production in Vietnam and India.”

<sup>8</sup> See Garcia (2011).

<sup>9</sup> President Lula da Silva (2003–2010) launched two industrial policy plans: the “Política Industrial, Tecnológica e de Comércio Exterior – PITCE (2003–2007)”; and the “Política de Desenvolvimento Produtivo – PDP (2008–2010)”. Both were framed to cope with the challenges in creating a favorable environment for the manufacturing sector. Following similar goals, President Dilma Rousseff (2011–present) has tried to boost the industrial competitiveness. The new industrial policy, the so-called “Plano Brasil Maior (2011–2014)” emphasizes the reduction of labor and capital costs, the development of productive chains, the exports promotion, and the commercial defense. Tax reductions have benefited sectors that have suffered more with competitive pressures, such as labor-intensive industries like garments and footwear. This is a very important action to compensate for the recent rise in unit labor costs. Additionally, state owned banks, particularly the National Development Bank (BNDES), have offered new credit lines with the reduction of interest rates in order to stimulate investments. Despite the central government efforts, it is far from clear how robust are the outcomes of those policies (Brasil Maior, 2011).



Table 4  
Brazilian exports of labor-intensive industry by product between 2000 and 2010.

Product	Exports (in US\$ million)			Share (in %)		Average yearly growth (in %)		Market share (in %)			RSCA		
	2000	2005	2010	2000	2010	2000–2005	2005–2010	2000	2005	2010	2000	2005	2010
Leather	757	1394	1732	17.2	29.0	13.0	4.4	4.8	7.0	8.8	0.69	0.71	0.73
Footwear	1618	1984	1632	36.8	27.3	4.2	−3.8	3.5	3.0	1.7	0.59	0.43	0.11
Textile	854	1255	1053	19.4	17.6	8.0	−3.4	0.5	0.5	0.4	−0.29	−0.38	−0.58
Furniture	486	992	742	11.1	12.4	15.4	−5.6	0.9	1.1	0.6	−0.01	−0.03	−0.36
Ceramic Products	256	536	367	5.8	6.1	15.9	−7.3	1.4	2.0	1.1	0.24	0.26	−0.10
Garments	269	361	174	6.1	2.9	6.1	−13.5	0.2	0.1	0.1	−0.70	−0.78	−0.92
Jewelry	82	141	166	1.9	2.8	11.6	3.3	0.4	0.3	0.2	−0.43	−0.54	−0.72
Leather Products	44	125	75	1.0	1.3	23.4	−9.7	0.2	0.5	0.2	−0.58	−0.44	−0.78
Toys, games, etc.	30	39	38	0.7	0.6	5.4	−0.9	0.1	0.1	0.0	−0.85	−0.89	−0.93
Total	4395	6828	5978	100.0	100.0	9.2	−2.6						

Source of raw data: COMTRADE.

It is noteworthy that there is a high concentration of exports in the four main products that encompass the largest participation in the country's LII exports – leather, footwear, textiles and furniture. These products uphold 85 per cent of the exports during the analyzed period, notwithstanding the significant modifications in the participation of the two first products.

Within the Brazilian exports of LII, the exports of leather had a good performance, in the analyzed period, the product grew 129 per cent, owing to an increase in the share of the labor-intensive industry's exports from 17 per cent to 29 per cent from 2000 to 2010 and becoming the main export product in the LII. Leather was the only Brazilian product able to increase its participation in global exports nearly doubling its market share, which was expanded from 4.8 per cent to 8.8 per cent. Moreover, it was the only product that increased its index of Revealed Symmetric Comparative Advantage (RSCA)<sup>10</sup> among all LII's products. It is important to observe that among the main products, only leather was able to keep the average yearly growth rate positive in the second half of the 2000s (4.4 per cent), despite the decrease in relation to the first half (13 per cent). It is noteworthy that it was exactly the product with the lowest value added, closer to the primary activity, and therefore belonging to an initial stage in the industrial transformation process, that had best performance in the decade. Furthermore, we should bear in mind that the Brazilian leather exports are mainly of low developed items – the phase known as wet blue corresponded to approximately one third of the exports in 2010 – and that the increase in exports of leather have been closely tied to the growth of the Chinese demand for the product.<sup>11</sup>

Another product group with a good performance was jewelry and costume jewelry, which accounted for: (i) a 103 per cent expansion in the studied period, and (ii) a positive yearly growth average in the second half of the decade.

On the other hand, footwear, textiles and garments feature negative performances, holding export growth rates in the analyzed period of 1 per cent, 23 per cent and −35 per cent respectively – all of which had negative rates in the second half of the decade. Such bad performance resulted in significant decreases in their participation in the export composition's share of labor-intensive goods. The most concerning situation, due to its share in the exports of the LII, is that of footwear, whose export value in 2010 was US\$1.6 billion, similar to the value in 2000. Therefore, there was a remarkable loss in its share in global trade, from 3.5 per cent in 2000 to 1.7 per cent in 2010, which explains the decrease of the RSCA index, from 0.59 to 0.11.

<sup>10</sup> The Revealed Symmetric Comparative Advantage index (RSCA) is determined by the formulation originally proposed by Balassa (1965):  $VCR = (X_{ij}/X_{wj})/(X_i/X_w)$ , in other means, the participation of the exports of product  $j$  of country  $i$  in world exports,  $w$ , of the same product  $j$  in relation to the participation of the total exports of country  $i$  to the total amount of world exports. To solve a problem of asymmetry of the RCA, the RSCA introduces the results in a variation gap from  $-1$  to  $+1$  (Laursen, 1998). A result of  $-1$  suggests the absence of comparative advantages and of  $+1$  that the country holds comparative advantages. Generally, a result of more than zero indicates that the country holds a surplus in the analyzed product.

<sup>11</sup> Regarding the Chinese demand for natural resources and its impacts over distinct markets and sectors see, among others, Moran (2010), Coates and Luu (2012) and Rosales and Kuwayama (2012).

Table 5  
Brazilian exports of labor-intensive industry by continent of destiny between 2000 and 2010.

Continent	Exports (in US\$ million)			Share (in %)		Average yearly growth (in %)		Market share (in %)		
	2000	2005	2010	2000	2010	2000–2005	2005–2010	2000	2005	2010
Europe	1054	1601	1604	24.0	26.8	8.7	0.0	0.5	0.5	0.4
South America	1032	1221	1596	23.5	26.7	3.4	5.5	12.7	13.0	6.3
North America	1841	2747	1208	41.9	20.2	8.3	–15.2	1.2	1.4	0.5
Asia	293	762	940	6.7	15.7	21.1	4.3	0.3	0.5	0.4
Africa	36	134	201	0.8	3.4	30.5	8.4	0.3	0.7	0.6
Central America and Caribbean	78	181	191	1.8	3.2	18.2	1.1	0.7	1.5	1.2
East Europe	18	64	140	0.4	2.3	29.6	16.8	0.1	0.1	0.2
Middle East	16	73	61	0.4	1.0	35.1	–3.6	0.1	0.3	0.1
Oceania	27	44	39	0.6	0.6	10.0	–2.3	0.4	0.4	0.2
Total	4395	6828	5978	100.0	100.0	9.2	–2.6			

Source of raw data: COMTRADE.

Garments was the product group with the worse performance, particularly due to the significant negative yearly growth rate average in the second half of the decade (–13.5 per cent), being the only case for which the absolute value of the exports in 2010 was lower than in 2000. Therefore, the RSCA experienced a noteworthy decrease coming close to the extreme value –1.

The product group furniture had a special performance, with a substantial increase in exports in the first half of the decade and a decrease in the second half. As a result, this product group had a slight increase in its share in the Brazilian exports basket, a decrease in its the international market share, and decrease in the RSCA index.

The evidence so far allow us to suggest that the performance of the Brazilian exports of labor-intensive goods in the decade was negative. Only leather had good results, holding both an increase in its market share and in the RSCA index. The other eight products analyzed in this paper suffered with the effects of the financial crisis in the second half of the decade, losing participation in the international market and having their RSCA indexes decreased – as previously stated, only jewelry and costume jewelry had a positive yearly growth average in the period.

The analysis of the Brazilian exports of labor-intensive goods divided by continent of destination (Table 5) reveals a rather important modification in the 2000–2010 time-frame.

North America lost more than 20 percentage points in the share of Brazilian exports due to a substantial decrease in the value of the exports from 2005 to 2010. During this period, the average yearly growth rate of exports was –15 per cent,<sup>12</sup> making North America the only destination to experience a decrease of exports in the decade. Therefore, this region shifted from being the main Brazilian trade partner in the first half of the decade to the third position in 2010. Brazil lost more than half of the market share it detained in North America, a decrease from 1.2 per cent to 0.5 per cent in 10 years. The gap left by North America in the Brazilian export basket was occupied mainly by Asia, which held an increase of 9 percentage points – 221 per cent of exports increase – and, to a lesser extent, by Europe, South America, Africa, and Central America and the Caribbean.

Another noteworthy point is the Brazilian products' market share decline in South America, traditional buyer of Brazilian manufactured goods. Such market share loss was significant, decreasing from 12.7 per cent in 2000 to 6.3 per cent in 2010.

These two previously stated facts, which involve market losses in North and South America, are related with the expansion of Asian exports to these markets – especially those originated in China – and, to a lesser extent, with the presence of new competitors from Central America and the Caribbean, mainly in the North American market.<sup>13</sup> Table 6 illustrates this point. The expansion of Chinese labor-intensive goods in the international market was remarkable during the 2000s, particularly in North America, South America, and Africa with increases of 25, 29, and 31 percentage points

<sup>12</sup> The most important losses occurred in footwear, the main product of the export basket to North America (decrease in 19 per cent per year, in average), furniture (–24 per cent per year), ceramic products (–23 per cent per year) and garments (–29 per cent per year).

<sup>13</sup> See: Cepal (2011) and Rosales and Kuwayama (2012).

Table 6  
Chinese exports of labor-intensive industry by continent of destiny between 2000 and 2010.

Continent	Exports (in US\$ million)			Share (in %)		Average yearly growth (in %)		Market share (in %)		
	2000	2005	2010	2000	2010	2000–2005	2005–2010	2000	2005	2010
Asia	40,566	68,443	110,288	48.2	32.0	11.0	10.0	35.1	43.8	49.5
North America	20,763	49,158	86,334	24.7	25.0	18.8	11.9	13.2	24.6	38.6
Europe	10,832	32,760	72,322	12.9	21.0	24.8	17.2	5.1	10.4	18.0
East Europe	3517	12,855	19,721	4.2	5.7	29.6	8.9	11.5	20.3	21.9
Middle East	2255	7250	16,740	2.7	4.9	26.3	18.2	15.5	27.8	34.5
Africa	1948	6279	15,379	2.3	4.5	26.4	19.6	16.3	33.4	47.0
South America	1154	2843	11,007	1.4	3.2	19.8	31.1	14.2	30.3	43.2
Oceania	1819	3986	7739	2.2	2.2	17.0	14.2	23.9	35.8	48.4
Central America and Caribbean	1332	2630	5575	1.6	1.6	14.6	16.2	12.0	22.3	36.3
Total	84,185	186,204	345,105	100.0	100.0	17.2	13.1			

Source of raw data: COMTRADE.

of market share, respectively. Therefore, the relation between the Brazilian loss of markets and the simultaneous market gains by China is clear.<sup>14</sup>

Nevertheless, it was not only China that achieved market share increases in markets previously served by Brazilian exports. Vietnam also had remarkable participation increases in the Americas, especially in North America, where it accounted for only 0.2 per cent of the world exports of labor-intensive goods in 2000 and 5.3 per cent in 2010. It is noteworthy that Brazil's participation was six fold that of Vietnam in 2000 and turned out to have only one tenth of its market share in 2010 (from 1.2 per cent to 0.5 per cent).<sup>15</sup> The reorientation of Vietnamese products to the North American market is clear when analyzing the share of this market in the total exports of Vietnam: the share went from 6 per cent in 2000 to 39 per cent in 2010. Apart from North America, Vietnam's exports also had an expansion in South America, where it accounted for 0.5 per cent of the total exports in 2000 and reached 1.9 per cent of the share in 2010.

The new competitors from Central America and the Caribbean had a substantial expansion in the North American market. El Salvador and Guatemala are good examples, from a virtually inexistent participation in the market in 2000, their market share increased to 0.7 per cent and 0.8 per cent of the North American market, respectively, in 2005. Both countries suffered the consequences of the financial crisis in the second half of the decade, but it happened in different ways: while Guatemala had a slight decrease in its share (to 0.5 per cent), El Salvador stopped its expansion, but was able to keep the same share. North America became the main destination for these two small countries' exports: in 2000, one third of their total exports went to that region, in 2010 this share increased to 75 per cent to 80 per cent. It is noteworthy that in comparison with the Brazilian participation in the North American market, the time-frame analyzed in the paper was enough to create a reallocation of positions, since Brazil accounted for 1.2 per cent of the market in the beginning of the decade and only 0.5 per cent in 2010, the same percentage as Guatemala and less than El Salvador.

On the other hand, the Brazilian labor-intensive products have increased their market share in new markets due to a new policy of international trade reorientation in recent years, especially to Asia, East Europe, Africa and Middle East. Taking into account the destinies of world exports, three of these four regions were characterized by above average absorption of products from world exports in the 2000s. Middle East had an increase of 233 per cent, East Europe of 194 per cent and Africa of 174 per cent.<sup>16</sup> In absolute values, the gains in these four markets in the decade (US\$979 million) were superior than the losses suffered by North America (US\$633 million), however, the reduction of exports to an important region constitute a bad result, especially when we take into account an environment of growing global trade.

<sup>14</sup> Not only Brazil had a market share decrease in North America. Mexico, which nearly directs all of its labor-intensive exports to the region, due to trade agreements, had a share of 10.1 per cent in 2000 and decreased to 5.7 per cent in 2010, with an absolute reduction of the export values from US\$15.9 billion to US\$12.8 billion.

<sup>15</sup> It is noteworthy that India and Bangladesh increased their share to North America from 2.6 per cent to 3.4 per cent and from 1.6 per cent to 2.4 per cent between 2000 and 2010, respectively. However, the sum of the two participations in 2010 (5.8 per cent) is slightly superior to that of Vietnam (5.3 per cent), whose market expansion rhythm is remarkable.

<sup>16</sup> South America grew 215 per cent, but in this region Brazil itself is the largest absorber of world exports.

Table 7

Decomposition of the variation of Brazilian exports of labor-intensive industry between 2000 and 2010.

	Period	Export variation	Reasons of the export variation			
			World trade	Export composition	Market distribution	Competitiveness
In US\$ million	2000–2005	2434	1901	–60	–702	1295
	2005–2010	–850	2218	–243	1177	–4002
Average yearly rates (in %)	2000–2005	9.2	7.2	–0.2	–2.7	4.9
	2005–2010	–2.6	6.8	–0.8	3.6	–12.4

Source of raw data: COMTRADE.

## 5. The competitiveness of Brazilian exports of labor-intensive goods

The following analysis is based on the Constant Market Share method.<sup>17</sup> This method evaluates the competitiveness of the exports of a given country using the growth of world exports as a benchmark. In other words, if the share in world exports of the analyzed country does not change within a specific time-frame, the country is neither losing nor gaining competitiveness. This methodology allows decomposing a given country's performance in relation to the world's performance according to the following points: (i) world trade effect, (ii) export composition effect, (iii) market distribution effect, and (iv) competitiveness effect. The first effect identifies the share of export growth that was due to a growth of the world trade. The second effect is related to the share of export growth that was due to the specialization of the country's export basket in dynamic products in world trade. This effect reflects the income elasticity and the price elasticity of the demand for products the country is specialized in. The third effect isolates the impact caused by the performance of the export destination countries. Through this component it is possible to verify the consequence of the commercial policies of the country and the growth of the exports by destination market. Finally, the competitiveness effect<sup>18</sup> is related to variables such as exchange rate, infrastructure, credit availability, education background, entrepreneurship, increasing returns to scale, among others.

The decomposition of the variation of Brazilian exports of labor-intensive goods in the 2000s sheds light to significant differences between the first and second half of the decade, the first with a good performance and the second affected by the consequences of the financial crisis, as stated previously. In the first five-year period, Brazilian exports increased in value and had a growth rate even larger than the world average. A substantial share of this expansion was led by the growth of world trade (Table 7), still booming at the time. However, Brazilian enterprises (and policy-makers) did not make the best choices regarding the composition of its export basket and the destination markets, to the extent that both generated negative values on the constant market share decomposition.

Nevertheless, the country still had a positive competitiveness-effect, helping to draw a positive picture in the beginning of the decade. On the other hand, the second five-year period had a reduction of US\$850 million in the export value of labor-intensive products, suggesting that Brazilian competitiveness experienced deterioration.

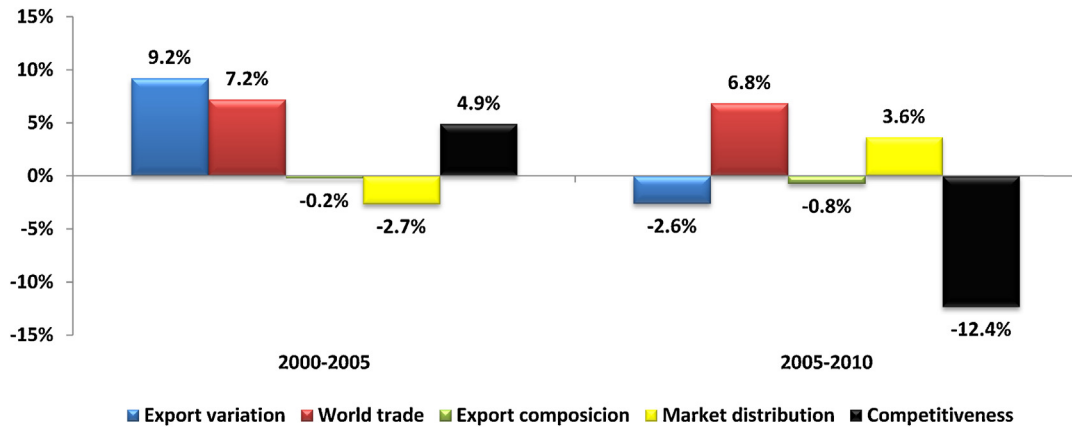
For an easier visual observation of the decomposition of Brazilian's labor-intensive exports variation in the 2000s, Graphic 1 illustrates the average yearly growth rates of each item of Table 7.

In order to present a more detailed assessment of the competitiveness gains and losses of Brazilian LII products in various markets during the 2000s decade, an evaluation of the competitiveness effect was made, measured in million dollars to selected products in specific markets (continents). Table 8 ranks such information considering the values in its last column, which depicts values from the largest lost to the largest gain in the last five-year period.

A first noteworthy observation is that two facts previously separately mentioned: (i) the bad performance of the Brazilian footwear exports and (ii) the loss of Brazilian participation in the North American market, are combined

<sup>17</sup> The classic reference for the analysis of Constant Market Share is Tyszynski (1951); for further details of the method, see Leamer and Stern (1970), Richardson (1971), Merkies and Van der Meer (1988). For references on the application of the method, see Simonis (2000), Mahmood and Akhtar (1996), Memedovic and Lapadre (2009) and Batista and Azevedo (2002).

<sup>18</sup> On what regards the competitiveness effect, the interpretation of the results generated by the CMS method is more limited, since it is a residual result, which consists of a wide array of factors. Scholars have suggested the CMS method should be complemented by the application of other quantitative methods, in order to reach a deeper investigation of the international competitiveness of countries. Further details and references in Ahmadi-Esfahani (2006).



Graphic 1. Decomposition of Brazilian exports of labor-intensive industry variation (average yearly growth rates, in per cent from 2000 to 2010).

Table 8  
Competitiveness effect of Brazilian labor-intensive exports by selected products in selected continents between 2000 and 2010.

Product	Continent	Exports (in US\$ million)			Average yearly growth (in %)		Competitiveness (in US\$ million)	
		2000	2005	2010	2000–2005	2005–2010	2000–2005	2005–2010
Footwear	North America	1133.6	1080.2	384.5	−1.0	−18.7	−151.0	−973.1
Textile	South America	437.0	577.3	610.7	5.7	1.1	27.0	−820.1
Footwear	South America	226.6	271.5	408.9	3.7	8.5	−62.4	−398.0
Furniture	North America	129.4	444.8	109.8	28.0	−24.4	258.8	−396.4
Textile	North America	206.1	434.3	265.5	16.1	−9.4	160.9	−223.0
Garments	South America	114.8	89.3	76.7	−4.9	−3.0	−39.9	−189.0
Ceramic Products	North America	110.5	284.4	76.0	20.8	−23.2	141.6	−178.8
Furniture	Europe	216.9	336.6	247.9	9.2	−5.9	−21.2	−154.0
Garments	North America	106.2	138.7	24.9	5.5	−29.1	3.9	−121.0
Ceramic Products	South America	81.7	95.2	161.6	3.1	11.2	2.3	−99.9
Garments	Europe	32.5	97.9	34.3	24.6	−18.9	46.2	−91.9
Textile	Europe	124.1	137.1	68.3	2.0	−13.0	−23.3	−88.5
Leather Products	North America	38.3	101.8	55.3	21.6	−11.5	49.0	−82.1
Furniture	South America	120.6	123.0	264.9	0.4	16.6	4.7	−77.0
Footwear	Central America and Caribbean	9.8	41.7	39.1	33.7	−1.2	28.5	−71.1
Furniture	East Europe	1.0	3.3	5.8	25.9	11.9	1.0	1.0
Garments	Ásia	5.7	8.8	15.0	9.1	11.2	1.8	3.2
Leather	South America	19.6	20.8	23.1	1.2	2.1	6.6	3.5
Footwear	East Europe	8.4	28.1	51.8	27.2	13.0	9.5	3.6
Footwear	Ásia	20.9	33.9	69.7	10.2	15.5	2.4	14.3
Leather	Central America and Caribbean	2.4	3.7	20.3	8.5	40.9	−1.7	16.7
Leather	East Europe	3.5	14.0	66.0	32.2	36.3	8.8	49.2
Leather	Europe	421.3	463.8	551.9	1.9	3.5	−5.8	64.0
Leather	North America	83.1	202.5	240.5	19.5	3.5	124.7	103.9
Leather	Ásia	210.9	663.8	795.1	25.8	3.7	358.8	154.4

Source of raw data: COMTRADE.

to determine the competitiveness effect with the largest negative value. The market loss of the footwear industry in North America was of 66 per cent in absolute values, corresponding to a competitiveness effect of −US\$1.12 billion. Even though the product group has had an absolute value export increase in South America, it also had a negative competitiveness effect of US\$460 million.

Textile products also had a negative competitiveness effect in Brazil's main markets, North and South America, especially in the second half of the decade. If Europe is added to the equation, the result for the decade is –US\$967 million, despite an increase of US\$177 million in the absolute values of the exports in these three markets.

As previously stated, garments was the only product group with an absolute value reduction in Brazilian exports in the analyzed decade. The competitiveness effects in its three main markets – South America, North America and Europe – amounted –US\$382 million, while the reduction of the export value was of –US\$118 million.

The previous section has already identified distinct performances in the furniture product group in the two halves of the decade, a positive trade performance in the first half and a negative performance in the second half. The evaluation of the competitiveness effect in the three main markets confirms the same behavior. For North and South America there was firstly a positive performance succeeded by a negative one, while in Europe the performance was negative during all the analyzed period. The total amount of the effects to the three markets in the decade was –US\$385 million.

Leather was the only product with a positive competitiveness effect in the analyzed period (US\$883 million), highlighting the fact that the international financial crisis was not able to create negative results in all product group. The excellent performance of this good is mainly related to the expansion of its exports to the Asian market, where the exports grew from US\$211 million in 2000 to US\$795 in 2010. It is noteworthy that the increase of US\$584 million in ten years corresponds to 90 per cent of the increase of Brazilian labor-intensive exports to the region (US\$647 million).<sup>19</sup> The competitiveness effect of the Brazilian leather exports to all studied regions in [Table 8](#) amounted US\$883 million, with the predominance in Asia and, to a lesser extent, in North America.

## 6. The competitiveness of selected countries' exports

As done for the Brazilian case in the previous section, the paper will now introduce ([Table 9](#)) the decomposition of the labor-intensive exports variation for selected countries.

The first noteworthy observation is that there are four countries, all from Asia, which had an expansion of the absolute exports value in the analyzed period. The expansion was higher in the second half of the decade and their market size effects and competitiveness effects were both positive and with increasing value during the studied years. Following an order of magnitude, the list starts with China, followed by Vietnam, India and Bangladesh. All these countries had small specific losses in at least one five-year period on what regards the composition of the basket and/or market distribution. China increased its labor-intensive goods market by US\$261 billion in the decade, US\$97 billion of which coming from the market size effect and US\$161 billion from the competitiveness effect.

A second bloc of countries is composed by those that were affected by the consequences of the depressed international trade, with smaller export growth in the second five-year group. Poland stands out due to the fact the country was able to keep its competitiveness effect positive in the second half of the decade, even though in a lesser extent than in the first half of the decade. Turkey, El Salvador, Guatemala, and Peru had a positive value for the competitiveness effect in the first five-year period and a negative value in the second period.

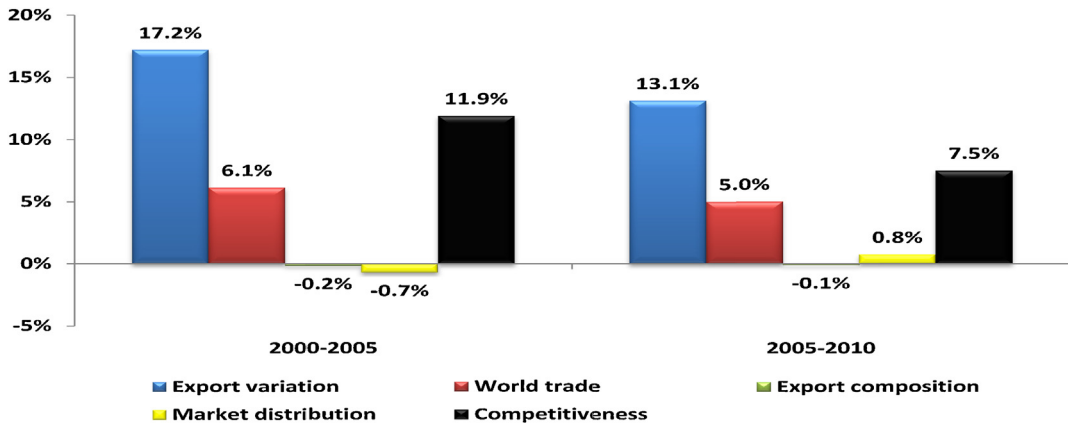
The last bloc of countries, composed by Italy, United States and Mexico, had negative values for the competitiveness effect during the whole decade, accounting for losses of US\$36 billion, US\$15 billion and US\$10 billion, respectively. The case of Mexico is the most serious one because, as previously stated, the country suffered a reduction of US\$3 billion in the exports of labor-intensive goods and a negative market distribution effect of nearly US\$6 billion.

Resembling [Graphic 1](#), which decomposed labor-intensive exports' variation for the Brazilian case in the 2000s (average yearly growth rates), [Graphics 2–4](#) show our results for China, Turkey, and Mexico, respectively. These three countries represent the three previously analyzed situations: countries such as China, which had few losses with the crisis, countries that had some losses, such as Turkey, and countries such as Mexico, which had substantial losses in the decade, especially on what concerns competitiveness.

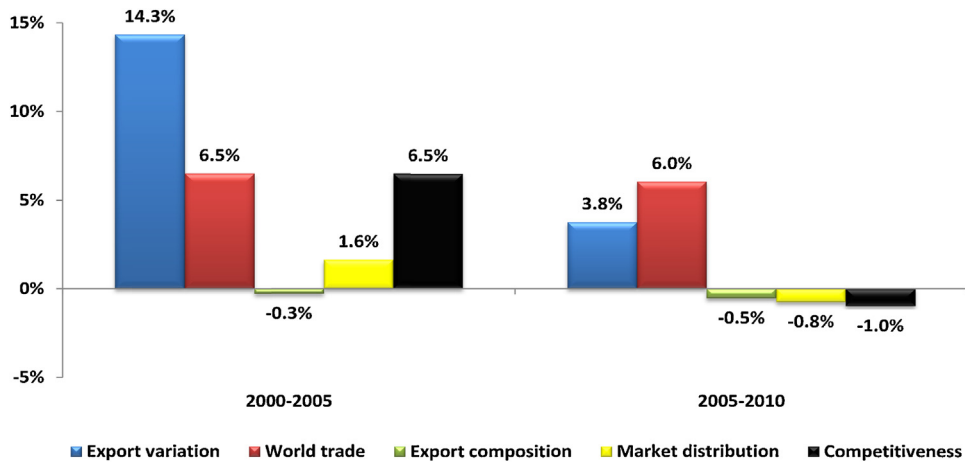
Let us consider China performance from the first to the second five-year period. [Graphic 2](#) depicts an increase in exports in absolute values and a positive contribution in the market size effect (“world trade”) and in the competitiveness. Nevertheless, when the growth rates are evaluated, there are reductions due to the rhythm break in international trade.

<sup>19</sup> Through a broader comparison, it is possible to say that the expansion of leather exports to Asia in the 2000s corresponds to 37 per cent of the total increase of Brazilian exports of labor-intensive goods.

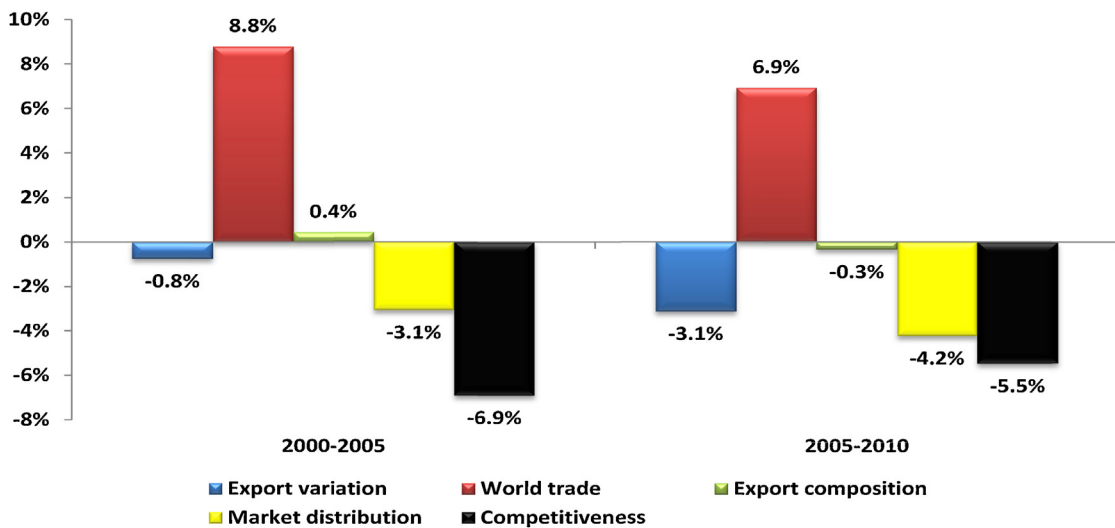




Graphic 2. Decomposition of Chinese exports of labor-intensive goods variation (average yearly growth rates, in per cent from 2000 to 2010).



Graphic 3. Decomposition of Turkish exports of labor-intensive goods variation (average yearly growth rates, in per cent from 2000 to 2010).



Graphic 4. Decomposition of Mexican exports of labor-intensive goods variation (average yearly growth rates, in per cent from 2000 to 2010).

Table 9

Decomposition of the labor-intensive exports' variation of selected countries in US\$ million between 2000 and 2010.

Country	Period	Exports variation	Reason of the exports' variation			
			Market size	Basket composition	Market distribution	Competitiveness
China	2000–2005	102,019	36,408	–895	–4139	70,645
	2005–2010	158,902	60,476	–1245	9091	90,580
Italy	2000–2005	14,906	23,984	1622	3701	–14,401
	2005–2010	2240	22,853	806	187	–21,606
United States	2000–2005	1145	13,986	311	–4621	–8531
	2005–2010	5523	10,875	1214	–585	–5982
India	2000–2005	9561	6004	–193	512	3239
	2005–2010	13,690	7614	990	–88	5174
Vietnam	2000–2005	8307	2216	61	281	5749
	2005–2010	17,113	4362	534	–850	13,067
Turkey	2000–2005	10,517	4768	–204	1192	4761
	2005–2010	4359	6997	–632	–873	–1133
Bangladesh	2000–2005	3440	2499	–128	–33	1102
	2005–2010	9387	2994	–595	–637	7625
Poland	2000–2005	4900	2357	289	693	1560
	2005–2010	4031	3362	–250	–335	1255
Mexico	2000–2005	–617	7274	367	–2533	–5725
	2005–2010	–2382	5262	–260	–3220	–4164
El Salvador	2000–2005	1681	75	–5	–27	1637
	2005–2010	161	602	–104	–301	–37
Guatemala	2000–2005	1657	69	0	–19	1608
	2005–2010	–214	590	–77	–336	–390
Peru	2000–2005	668	328	–3	–104	447
	2005–2010	302	463	–22	98	–237

Source of raw data: COMTRADE.

Turkey, on the other hand, had more intense decreases in its export growth rate, led by a negative competitiveness effect. Mexico, in turn, had a very bad performance, whose only positive effect was the expansion in the world market.

## 7. Summary and conclusion

The current paper sought to contribute to the previous literature by providing some fresh evidence on the analysis of the Brazilian exports competitiveness, particularly in the labor-intensive products, in a global environment characterized, among other things, by the rise of new economic powers.

In doing so, we have attempted to improve the methodological criterion to aggregate the labor-intensive goods, through the seminal contribution of Pavitt (1984) and later developments and adaptations to the structural productive features of the Brazilian international trade. Furthermore, the main indicators of the evolution of international trade were mapped and the Constant Market Share methodology was used in order to assess the competitiveness of Brazilian exports. Insofar, we were able to measure and compare the country's position in the international trade scenario.

The beginning of the twentieth first century brought about remarkable changes to the global economy. World exports increased 137 per cent and the exports of the labor-intensive industry nearly doubled between 2000 and 2010. In this period, Asia broadened its participation in the labor-intensive products' market, achieving more than half of the world exports in 2010. China is a noteworthy case, since it has more than doubled its market share and reached nearly one third of the world labor-intensive goods' trade. But it was not only China that had such an impressive expansion, Vietnam, India and Bangladesh similarly showed excellent performances. Outside of Asia, the Central American countries, still under-represented in the international trade, enjoyed high growth rates in the decade.

The overall picture was not positive for Brazil, since its labor-intensive exports increased only 36 per cent in the analyzed decade and only one product group – leather – showed a good exports performance and participation expansion in world trade. Footwear, an important product for the Brazilian export basket, suffered substantial losses. The analysis of Brazilian exports by destination country showed decreases in participation in North and South America,

traditional buyers of the country's manufactures. Simultaneously to the losses in Brazil, products from Asia – especially from China – and from small Central American countries increased their market share substantially. El Salvador and Guatemala, for instance, significantly expanded their participation in the North American market, ending up with at least the same participation as Brazil.

The decomposition of the variation of the Brazilian exports of the labor-intensive industry between 2000 and 2010 shows the clear negative impact of the second half of the decade. During this period, the features that determined the competitiveness generated a negative effect large enough to justify even a fall in the value of exports. While associating the products and destination regions of the Brazilian exports in the decade, the competitiveness effect was generally negative, with an exception for the leather exports to most of its markets. Asia showed to be the major destination for the Brazilian exports of leather, and to a lesser extent, North America. It is not a surprise to conclude that the product which is closer to the primary activities is exactly the one that had the best competitiveness performance among all the studied industrial products.

The decomposition of the exports of other countries showed three different patterns of performance: (i) countries which practically were not negatively affected by the effects of the crisis in the second half of the decade, mainly from Asia, having China as a noteworthy case, (ii) countries which felt the negative consequences of the financial crisis and had big reductions in their export rates, including some with negative competitiveness effects, such as Turkey, and finally (iii) a third group of countries which had negative competitiveness effects during the whole of the analyzed period, undermining their overall trade performance – the most serious situation is that of Mexico, which had even a decrease in the absolute values of its exports.

Overall, on what concerns the international market of labor-intensive products, mainly the countries from Asia overcame the financial crisis with a good export performance. Brazil had a mediocre performance and experienced a decrease in its share of the international trade. In two of its main markets, North and South America, there is a growing and threatening presence of competitor countries from Asia and even small Central American countries, such as Guatemala and El Salvador.

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