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International trade in sporting goods

(final revised version)

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Academic economists have not yet investigated very much the area of international trade in sporting goods. Although data is available at a macroeconomic level in developed countries, neither the old economic theory of international division of labour (Ricardo) and international specialisation (Heckscher-Ohlin-Samuelson - HOS), nor the new international economics (Krugman-Helpman), focusing on intra-industry trade, have been seriously tested as regards to international trade in the sport goods industry. They have hardly been used or referred to in this context (two exceptions are Andreff, 1989 and Harvey & Saint-Germain, 2001). One problem is that international trade in sporting goods can only be depicted in using the most detailed SITC classification for which data are not available or are unpublished in many countries, namely in developing countries. Another hindrance is that, including with the most detailed figures, a same country often appears to be both importer and exporter of the same sporting good, for a number of SITC categories, so that one faces intra-product trade within an overall intra-industry trade. Moreover, due to widespread subcontracting with outward-processing trade and foreign direct investment in the sport goods industry, a share of international trade is simply an intra-firm transfer of products. The scarcity of microeconomic studies about such transfers operated within transnational corporations (TNCs), such as Nike, Adidas, Reebok, etc., does not provide an overall view of intra-firm trade in this industry. Since no macro- and micro-economic database covering the global trade in sporting goods has been set so far, researchers can basically rely on domestic statistics that do not allow extensive comparison between different countries. Thus, the whole topic has remained unheeded until now. It is one of the most promising avenues for further research in the economics of sports. The present article gathers the little non-systematic knowledge existing in the literature.

Global trade in sporting goods

An overview of the world trade in sporting goods results from a research by Harvey & Saint-Germain (2001) based on the data coverage of 28 countries whose detailed SITC figures are available in the UN world trade statistics, from 1974 to 1994. These countries represent 75% of global trade in sporting goods and encompass the three NAFTA countries (Canada, Mexico, and USA), the fifteen EU countries (as of

1995, after the fourth enlargement) and ten south-eastern Asian countries (China, Hong-Kong, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand). The 25% missing share of global trade is concentrated in Switzerland, Eastern Europe, some Asian countries (Pakistan, India, Vietnam), Maghreb (Morocco, Tunisia) and Latin American (Argentina, Brazil) countries. Among the sampled countries, in 1994, the ten major exporters of sporting goods were the USA, China, Hong-Kong, France, Austria, South Korea, Japan, Italy, Germany and Canada; the ten major importers were the USA, Japan, Germany, Hong-Kong, Canada, France, the UK, Italy, Netherlands and Spain.

Table 1 – Global trade in sporting goods by trading blocs *

Trading bloc	Year	Trading bloc				Total
		NAFTA	EU	Asia ten	Other countries	
NAFTA	1974	40.6	21.9	26.1	11.5	100
	1984	56.4	13.4	21.2	9.1	100
	1994	57.2	9.5	27.9	5.4	100
EU	1974	20.0	49.5	10.7	19.8	100
	1984	16.0	52.4	16.9	14.8	100
	1994	11.8	50.2	20.7	17.2	100
Asia ten	1974	51.9	19.3	18.5	10.2	100
	1984	28.9	14.5	50.4	6.2	100
	1994	31.0	12.1	50.0	6.8	100

* $(X+M)/2$ %; X = export; M = import

Source: Harvey & Saint-Germain (2001).

The concentration of global trade in sporting goods by trading areas (Table 1) exhibits a tendency of developed (NAFTA and EU) countries to primarily develop mutual trade together. About two-thirds of NAFTA sporting goods trade is with other NAFTA and EU countries; nearly two-thirds of EU sporting goods trade is with other EU and NAFTA countries. Thus, trade in sporting goods displays a geographic *concentration on developed countries* just like most of manufactured products whose global trade concentrates, in the range of two-thirds, on North-North trade. The new international economics emerged in view of explaining such a trade. The same contention can be extended to the ten sampled Asian countries since some of them are developed (Japan) or newly industrialised countries. However, the share of trade with NAFTA and EU in their overall sporting goods trade decreased from 1974 to 1994, because intra-area trade across Asian countries has skyrocketed meanwhile. In 1994, the intra-area trade was 50% of overall trade in sporting goods in Asia (50.2% in EU and 57.4% in NAFTA). The share of the intra-area trade in sporting goods has not significantly changed in EU while it has increased in NAFTA. In 1994, 69.1% of Canadian and 82.8% of Mexican sporting goods trade were with NAFTA (only 19.6% in the US case); on the other hand, 52.8% of Italian, 41.8% of the UK, 40.8% of German and 35.2% of French sporting goods trade were carried out with EU countries. Therefore, the second tendency is one of *'regionalisation' of the sporting goods trade* into continental blocs.

Foreign trade of major countries in the sports goods industry

Calculating an export to import ratio $r = [X/M].100$ shows whether a country is a net exporter ($r > 100$) or a net importer ($r < 100$) of sporting goods. In 1990, among the ten European countries sampled in a study for the Council of Europe (Andreff *et al.*, 1994), only Italy was a significant net exporter while Belgium, Finland, France, Germany, Hungary, Portugal, Sweden and the UK were net importers of sporting goods. Table 2 confirms that developed countries were net importers rather than net exporters of sporting goods, and this is partly due to the relocation of the sports goods industry in some developing countries (see below). All NAFTA countries were net importers in 1974-1994 whereas only five out of fifteen EU countries were net exporters, the most successful being Austria - one of the strongest exporters of winter sports goods -, together with Switzerland. On the other hand, Belgium, Sweden and the U.K. were net exporters in 1974 but ceased it to be later on. Finland, France, Ireland and Italy still were net exporters in 1994. Within NAFTA, the USA accentuated her net importer position while Canada and Mexico reduced their position as net importers.

Table 2 - Ratio of sporting goods export to import, major trade partners

Country	1974	1989	1994	Average 1974-94
Canada	44.7	49.9	61.7	51.3
Mexico	13.1	54.7	91.9	95.8
USA	57.9	42.8	43.3	48.4
NAFTA	38.6	49.1	65.6	65.2
Austria	384.0	390.3	301.1	381.1
Belgium-Lux.	130.1	56.1	47.0	74.7
Denmark	36.9	72.0	86.7	58.6
Finland	195.1	113.4	174.0	196.4
France	340.0	109.4	130.2	182.6
Germany	71.3	67.7	50.8	66.5
Greece	17.4	2.5	5.7	6.8
Ireland	118.6	151.9	194.7	157.4
Italy	95.2	67.7	141.2	109.1
Netherlands	25.4	45.9	39.6	41.3
Portugal	13.8	55.2	23.6	50.7
Spain	76.1	34.7	40.2	71.0
Sweden	137.7	63.5	59.3	83.5
United Kingdom	158.6	54.1	52.8	91.6
EU	128.6	91.7	96.2	112.2
China	n.a.	696.5	799.0	747.8
Hong Kong	99.2	109.1	124.8	101.9
Indonesia	7.5*	72.2	2082.1	540.9
Japan	94.5	28.7	23.2	63.0
Malaysia	5.4	78.4	104.8	47.8

Philippines	67.9*	132.3	248.2	213.3
Singapore	18.9	57.5	67.4	45.5
South Korea	831.4	1100.2	326.4	844.6
Taiwan	n.a.	n.a.	n.a.	n.a.
Thailand	21.3	156.9	570.0	153.5
<i>Asia nine</i>	<i>178.5</i>	<i>270.2</i>	<i>482.9</i>	<i>260.0</i>

* In 1979

Source: Harvey & Saint-Germain (2001).

All Asian countries were net exporters, except Japan, Malaysia and Singapore, including those non-sampled countries such as Pakistan, India, Sri Lanka, Vietnam (according to scattered information). The very high value of the export/import ratio in South Korea, Indonesia, China, Thailand and Philippines was the other side of the coin with regards to the relocation of the sports goods industry from developed countries. Maghreb countries were net exporters as well, since they were a privileged location for outward-processing trade in the textile-clothing and footwear-leather industries, including as far as the production of sportswear and sporting footwear is concerned.

'Equipment-intensive' versus 'trite' sporting goods trade

When it comes to international specialisation in sporting goods trade, one can only notice the absence of inter-country comparative studies. Since the crux of the matter is to analyse how countries specialise in the intra-industry trade – all the listed twenty-eight countries are both importing and exporting sporting goods –, the issue is to go deeper into the most detailed SITC product classification. Then, it is crystal clear that, for a country, the advantage of exporting (importing) winter sports goods on the one hand, and balls or sportswear on the other hand, has not the same economic value and the same impact on its trade balance. Looking at their unit value in foreign trade, skis, ski boots, sailing boats, windsurfs or golf equipment cannot be categorised as the same sort of sporting goods as, say, sportswear, tracksuits, balls, swimsuits, sporting footwear. The former group contains goods with a high unit value, due to a significant value added in the production process, a rather sophisticated and evolving technology and know how whereas the latter group consists in cheaper goods (per unit) with a lower value added, which are produced with a mature technology and an easily transferable know how. Moreover, high unit value sporting goods are usually required for the practice of specialised equipment-intensive sports such as, for instance, sailing, winter sports, surfing, motor sports or golf. Let us coin these sporting goods *'equipment-intensive'*. Low unit value sporting goods are less specialised and can be used in a wider range of sport practices (gymnastics, walking, body building, keep fit, team sports and track and fields) or even on leisure time without any sport practice (ex.: sportswear, tracksuits, sporting footwear). Let us classify them as *'trite' sporting goods* (Andreff, 1989). With this categorisation in mind, one can switch to a more detailed

qualification of product specialisation within the international intra-industry trade in sporting goods. Unfortunately, until now, such a detailed research has only been done at a country level, examining the foreign trade in sporting goods of one country, without international comparison.

International specialisation in the sporting goods trade

The differentiation of sporting goods in the intra-industry trade has been studied in detail in the French case. Inter- or intra-product specialisation is assessed with the export to import ratio, product by product, and with the calculation of an intra-industry trade index for each detailed product. Several indexes are available in the literature, the simplest one being the Balassa index :

$$Bi = [(Xi - Mi) / (Xi + Mi)].100,$$

where usually *i* stands for an industry. Here *i* will stand for one product or a product group smaller than the entire sports goods industry. When $Bi = 100$, a country is exclusively exporter and when $Bi = -100$ it is exclusively importer of the sporting good *i*. This product is typically a ‘pure’ *Heckscher-Ohlinian good* and the country exhibits an inter-product specialisation as regards to this good in the sports goods industry. When $Bi = 0$, a country exports exactly as much as it imports of a sport good *i*; one can coin it a ‘pure’ *Balassa good* and the country shows a Krugmanian intra-product specialisation as regards to this good in the sports goods industry. Economists usually conclude, when $-30 < Bi < +30$, that one observes an intra-industry (here intra-product) trade, corresponding to the international specialisation across developed countries on imperfect markets with increasing returns (a Krugmanian specialisation). When $Bi < -30$ and $Bi > +30$, trade is considered as inter-industry (here inter-product), in tune with a traditional HOS international specialisation.

Table 3 - International specialisation in the sporting goods industry: France, 1981-2001

Some major products	19 81		19 86		19 92		19 99		200 1	
	X/M	Bi	X/M	Bi	X/M	Bi	X/M	Bi	X/M	Bi
<i>Equipment intensive goods</i>										
sailing boats, yachts	436	63	717	76	185	30	430	62	456	64
skis & accessories	496	76	897	80	742	76	598	71	440	63
ski boots	n.a	n.a.	409	61	231	40	114	6	104	2
windsurfs & accessories	184	30	114	6	*	*	*	*	*	*
golf equipment	19	(-68)	10	(-81)			51	(-33)	66	(-20)
Gymn. & sport. equipment	7	(-87)	27	(-58)	26	(-59)	102	1	95	2
<i>Trite sporting goods</i>										
Swimsuits	268	46	108	4	84	(-9)	57	(-27)	57	(-27)
Sports footwear	79	(-12)	68	(-19)	44	(-39)	29	(-55)	19	(-69)
Skates	44	(-39)	15	(-73)	46	(-37)	58	(-26)	55	(-29)

* Included in sailing boats; X/M: ratio of export to import; Bi: Balassa index.

Sources: Andreff (1989), STAT-Info (Ministry for Sports).

Table 3 shows that, in the long run, France is specialised as an exporter of 'equipment-intensive' sporting goods such as sailing boats, yachts, windsurfs, skis and accessories, and (less and less) ski boots. She improves its net importer position in gymnastics and other sports equipment and in golf equipment. On the other hand, at least since 1981, France is a net importer of 'trite' sporting goods such as skates and, increasingly, sports footwear while she has switched from a net exporting to a net importing position in swimsuits (as well as in other sportswear, not in the table). A conclusion can be derived, to the extent that France is representative, which is that developed countries tend to be net exporters of high value added and high-tech 'equipment-intensive' sports goods whereas they are net importers of 'trite' sports goods. The next question is: where from? The second conclusion arising from Table 3 is that French trade in various sporting goods exhibits an inter-product specialisation, in particular in 'trite' goods such as sports footwear and skates. However, in 'equipment-intensive' goods, an intra-product trade is observed for ski boots and golf equipment, in the recent years; whether France is a net exporter or importer of these products, she imports a significant volume of these items from other developed countries (since developing countries produce nearly no ski boots and golf equipment). French trade in 'equipment-intensive' sporting goods is rather representative of North-North intra-industry and intra-product trade in high value-added manufactured goods, which grows in a context of imperfect (oligopolistic) competition. The size and the large world market share of French firms such as Salomon and Rossignol in ski and ski boot production or Bénéteau in the production of sailing boats are in tune with previous observations.

In order to complete the analysis of a country's international specialisation in sporting goods trade, some information is needed about where exports are flowing to and where imports are coming from. In the case of France, the major trade partners are:

- . The USA, Japan, Germany, Italy, Switzerland, Belgium, Sweden, Canada, Austria, the UK as regards to major exports of 'equipment-intensive' sporting goods;
- . Italy, Austria, Switzerland as regards to major imports of 'equipment-intensive' sporting goods;
- . Eastern and Southern European, South Asian and Maghreb countries as regards to major imports of 'trite' sporting goods, namely Morocco, Tunisia, China, Thailand, Pakistan, South Korea, Hong Kong, Taiwan, Indonesia, Philippines, Malaysia, Hungary, Poland, the Czech Republic, Romania, Croatia, as well as Italy, Spain, and Portugal;
- . French exports of 'trite' sporting goods are geared towards European developed markets, namely Germany, Italy, Belgium, and the UK.

The outflow of market-seeking exports crosses the inflow of market-seeking imports in ‘equipment-intensive’ sporting goods. On the other hand, most of imported ‘trite’ sporting goods come from countries with a lower unit labour cost, and they are backed by an efficiency-seeking (or cost-reducing) rationale, sometimes linked to production relocation in the Third World and Eastern and Southern Europe. However, this specialisation comes out with an overall French trade deficit in sporting goods, since the late nineties, insofar as the net export of ‘equipment-intensive’ goods now is lower than the net import of ‘trite’ goods. For the same reason, in 1990, different European developed countries exhibited a trade deficit in sporting goods (Andreff *et al.*, 1994) such as Germany (PPP\$ 1,065 million), the UK (PPP\$ 536 million), Sweden (PPP\$ 72 million), Belgium (PPP\$ 69) and Finland (PPP\$ 29 million) while Italy had a trade surplus (PPP\$ 468 million), being a net exporter of both ‘equipment intensive’ and ‘trite’ sporting goods. Another consequence of this specialisation pattern is that imported products have crowded out a number of sports goods, such as balls, sportswear, sporting footwear, bikes and rackets, which were produced in France in the 1960s and the 1970s. For instance, in sporting footwear, the ratio of import to domestic demand has increased from 50% to over 80% in the late 1980s, while the French domestic production has halved. Thus, France was allowed by the European Community to restrict, from 1988 on, the imported sporting footwear from South Korea (a 2,773,000 quota of sport shoes pairs in 1991) and Taiwan (a 778,000 quota in 1991), after she argued that Korean and Taiwanese sport shoes imports were accountable for 14,000 redundancies in the French industry.

Production relocation: outward-processing trade and foreign direct investment

Facing competition from developing and newly industrialising countries that enjoy lower unit labour costs in the production of ‘trite’ sports goods, North American and European firms embarked on relocating their production in the Third World and Eastern and Southern Europe. For an American or European firm, it is worth relocating its production when:

$$w_h / q_h - w_f / q_f > c_i + c_j + t_i + t_j + g - e$$

where w_h stands for the wage cost in the firm’s home country, q_h for the labour productivity in the home country (so that w_h / q_h is the unit labour cost in the home country), w_f / q_f for the unit labour cost in a foreign subsidiary (or subcontractor) in a Third World country, c_i for the transportation cost of inputs manufactured in country h to the country f , c_j for the transportation cost of the relocated output from country f to country h (or any other developed customer country), t_i and t_j for the tariffs paid on the previous international flows of input and output, g for the governance costs of the subsidiary (or subcontractor) located abroad, and e for the transaction costs saved on the firm’s exports substituted by the relocated production.

The first strategy, adopted by Nike and Reebok, was one of subcontracting with local producers and trading inputs and output under the benefit of outward-processing trade regulation. This strategy sometimes had gone so far that Nike became a hollow corporation with no longer any production unit in the USA. The second strategy is foreign direct investment with setting up subsidiaries in low unit labour cost countries. As a result, nearly all the global production of foot balls concentrated in Pakistan, India and Taiwan, most of the global bike wires production was relocated in Malaysia, 90% of the global sporting footwear, 80% of all tennis rackets and over 90% of tennis balls were manufactured in South Korea and Taiwan while the great bulk of sportswear was produced in Italy, Portugal, Eastern Europe, and Third World countries. All these products then started to be imported by developed countries, either in the framework of outward-processing trade or in the intra-firm trade of major TNCs of the sports goods industry that had settled subsidiaries in developing countries. All the Nike and Reebok sporting footwear now is manufactured by Asian subcontractors, as well as 80% of Mizuno sport shoes, whereas Adidas has relocated 70% of its sporting footwear production in Asia, Tunisia and Hungary. In a second wave of production relocation, Asian producers of sports goods have in turn relocated their plants in lower labour cost Asian countries such as the Taiwanese Kunnan (Kennex) in Thailand, the Korean Tae Hwa in Indonesia, and others in China, Philippines, Sri Lanka and Vietnam. Therefore, there is an obvious *globalisation of the sporting goods industry in both trade and production*. For instance, in 1998, 41% of Nike's global sales were carried out outside the USA while 45% of Adidas' global sales were outside Europe (Bourg & Gouguet, 2001).

Child labour in the relocated sports goods industry

Relocating production in cheap labour countries is not without its problem to TNCs. The major issue is child labour in the factories where the production of 'trite' sporting goods is relocated, either in a TNC's foreign subsidiary or more often in a local subcontractor's plant. A well-known example is Nike. In Indonesia, 160,000 workers were involved in the production of sporting footwear for the Nike trademark. In the Bogor plant (Indonesia), the daily wage was half a dollar and a glass of milk in 1998 while the thirteen members of the Nike's board of directors were earning an annual income over \$5 million each (not including their stock options), twice the amount of the overall wage bill of 6,600 workers employed to produce for the Nike trade mark in the Djakarta area. On each pair of shoes sold in developed countries, the Nike's subcontractor worker got 10 cents of a dollar (0.2% of the selling price) while each shareholder got 40 cents. Nike's subcontractors in Indonesia are located in special (closed) trade zones where waged-

armed guards supervise them and trade unions are not allowed. The Sialkot assembly line of soccer balls in Pakistan was sadly infamous and publicised for resorting to mass child labour (Riddle, 1997).

After such a negative advertising for its industry, the World Federation of Sporting Goods Industry (WFSGI) was so much concerned with phasing out child labour that it convened a conference to look at the economic and social accountability of the sporting goods industry in developing countries where final products are manufactured and assembled. A task force on global manufacturing practices worked out an assessment of the extent and scope of child labour in the soccer ball industry. A meeting with ILO (International Labour Organisation) and lasting negotiations with Pakistani producers (subcontractors) came out with an industry-wide programme to eliminate child labour in soccer ball stitching. The problem is that this programme is voluntary, not compulsory. ILO intends to prolong practical action to phase out child labour in this industry (Tucker, 1997). Finally, the WFSGI adopted, by end of 1997, a Model Code of Conduct for global business practices that addresses working conditions (child labour, forced labour, wages, the length of the working day, the right of unionisation, etc.). It is a gentleman agreement or a moral code rather than a demanding economic regulation. However, due to the bad global image created by child labour, most TNCs in the sporting goods industry now claim their zero tolerance and have taken actual initiatives against this practice in developing countries.

The scarcity of microeconomic data: transnational corporations in the sports goods industry

There is no detailed database about TNCs in the sporting goods industry and, until now, researchers can only rely on case studies. However, in many sporting goods industry the global market structure is typically a ‘fringed’ oligopoly with a handful of big TNCs and, in each developed country, a number of competing small and medium enterprises¹. The global strategy of a sporting goods TNC means (Andreff, 2003) that it has a world outlook of competition, it has a good knowledge about its oligopolistic competitors, it concentrates its activity on the Triad countries (North America, Europe and Japan), it behaves as a global player of the world economy, it looks for innovation on a global scale, it locates its operations where they are the most profitable according to the comparative advantages of different host countries, it co-ordinates the network of all its subsidiaries, plants, laboratories with the help of the new information and communication technologies (global networking). In addition, a global TNC in the sports goods industry includes in its strategy transborder mergers and acquisitions. A TNC strategy more specific to this industry is global sponsoring²: Adidas, Nike, Reebok are sponsors of a number of international

¹ See ‘The sports goods industry’ in this chapter.

² See also “ Sponsorship ” in this volume.

sport events, national teams, and famous high level athletes (advertising and communication expenditures reach about 13% of Adidas sales). The global market for sport sponsorship was estimated at Euro15 billion, in 1998.

Conclusion

International trade in sporting goods and the role of transnational corporations in their production remain among the most unheeded areas of research in the economics of sports. These topics deserve and require more empirical investigation that could be used as a rocket pad for a more elaborated economic analysis.

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