China's Exports: What Products Are Sophisticated?*

Enrico Marvasi†

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Abstract

According to a number of studies, China's exports bundle is relatively sophisticated. This paper investigates some factors that can help explaining this finding. As processing and assembly activities represent a large part of China's trade, we take into account the link between imports and exports. China's imports are actually more sophisticated than exports, and highly sophisticated with respect to other countries. First, controlling for imports sophistication, as well as for income and human capital, we find that China is not sophisticated in Consumption goods and shows particularly high exports sophistication only in Intermediate products, while its sophistication is relatively low in Capital products. Second, quality is taken into account. Despite being relatively sophisticated China's exports show low quality according to different measures based on unit values. Once we split the market into price segments we see that China's exports sophistication is exceptional only for low priced Intermediate and Capital products.

Keywords: export sophistication, vertical differentiation, specialization, China
JEL classification: F10, F14, F43

*Preliminary version. Comments are welcome.

†Manlio Masi Foundation and University of Rome Tor Vergata.
Contact: enrico.marvasi@uniroma2.it

1 Introduction

Since '80s China has been growing rapidly without being particularly affected by cycles nor by the financial crisis. Yet its exports growth has been stronger than the GDP growth and China is now the world first exporter, ahead of Germany. Its huge current account surplus is largely compensating the USA deficit (figure 1). During last 30 years GDP annual growth was about 15%, while export growth was 20% on average, therefore exports GDP share has been raising from 10% up to 40% (figure 2).

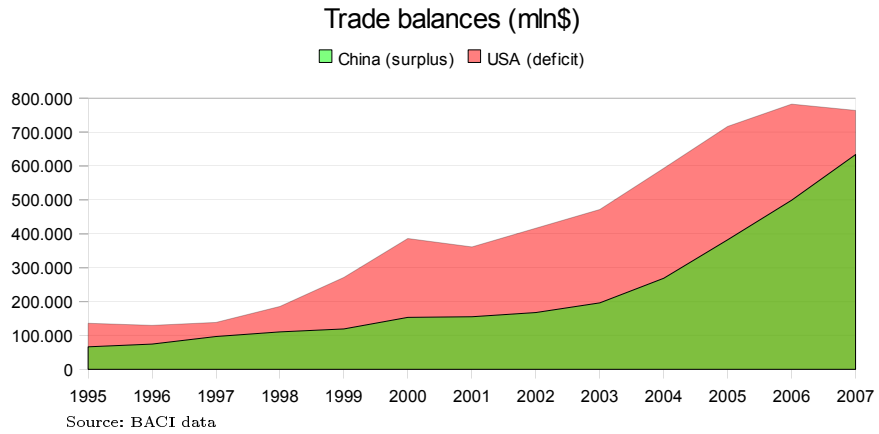


Figure 1: Trade Balances: China and USA

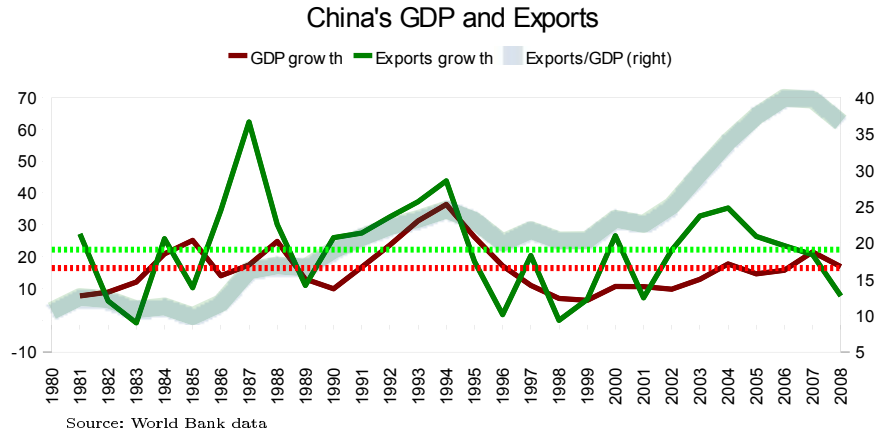


Figure 2: China's GDP and Exports

However what is really striking about China's trade growth is the pace at which exports structure has been modifying over time. At a sectoral level, there has been a rapid shift from labour intensive industries (i.e. Apparel, Textile and Footwear) to more capital intensive and hi-tech ones, as Mechanical, Electronics and ICT (figure 3).[1] This trend is also found at the product level.

[1]Industries are aggregated from HS2 sectors as described in the appendix in table 6.

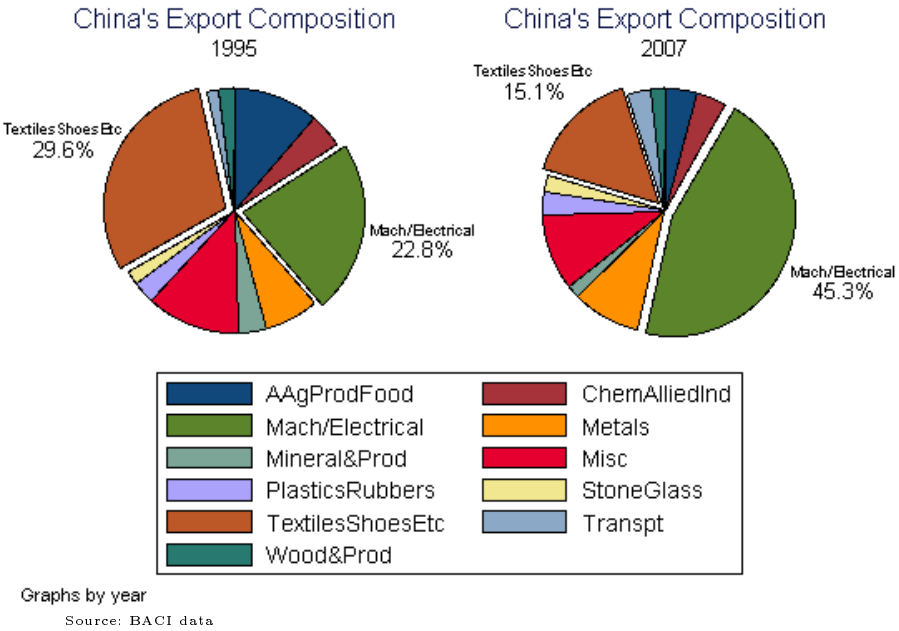


Figure 3: China's Exports Composition

This finding is known as the *sophistication* of China's exports; as reported in the seminal works of Rodrik (2006) and Schott (2008), China's exports are relatively sophisticated with respect to countries with similar level of development. In other words China is "special" as its exports changed so dramatically that they are now similar to those of developed economies, while per capita GDP and other country characteristics are those of an emerging economy.

This result, which Yao (2009) calls the "Rodrik's paradox" in analogy with the famous Leontief paradox[2], started a line of research. Many authors highlight production fragmentation, outsourcing and FDIs (for instance Amiti-Freund (2010), Wang-Wei (2008), Dean-Fung-Wang (2008), Branstetter-Lardy (2006), Gilboy (2004)). Trade data show that intra-industry trade, particularly of intermediate products, and the presence of foreign firms, owned or controlled, are very important in China. Moreover China has a preferential fiscal policy for the s.c. *processing trade*, that is imports of goods, parts and component that are incorporated into exports.[3] This policy together with the low labour cost is likely to have had a positive impact on processing and assembly activities within China. If we take into account this fact, then it may well be that the observed shift in exports composition is mainly the result of the intensification in the vertical chain, a process already described in Balassa (1967) and Findlay

[2]The Leontief paradox, Leontief (1953), was the finding that USA imports were more capital intensive than exports. The paradox lies in the fact that USA were considered capital abundant, so that it should specialize and export capital intensive goods according to the standard trade theory (i.e. Heckscher-Ohlin model). Leontief's paper pushed empirical research on testing trade theory and on how to measure factor intensities.

[3]For a description of China's regulatory regime on processing trade see Feenstra-Hanson (2005) and Fernandes-Tang (2010).

(1978). Thus the internal production structure may not completely match the exports structure, and China's exports sophistication might partly be due to imports of sophisticated intermediate and capital goods.

However the evidence is not clear. A number of studies claim that FDIs and processing trade indeed had an important impact on exports structure (Xu-Lu (2009), Amiti-Freund (2010), Dean-Fung-Wang (2008), Lemoine-Ünal-Kesenci (2004))); on the other hand some do not find strong evidence for these variables, while skill upgrading and human capital may also be relevant (Wang-Wei (2008)).

2 China's Exports Sophistication and Possible Determinants

The change in China's export composition at the industry level (figure 3) is mirrored at a product level by the exports sophistication result. In this paper exports sophistication is measured as in Rodrik (2006) and Hausman-Hwang-Rodrik (2007). Similar results can be obtained with export similarity or overlap indexes with advanced countries as in Schott (2008), who uses the Finger-Kreinin (1979) index, or as in Wang-Wei (2008), who use a dissimilarity index.[4]

Rodrik's sophistication index is computed in two steps. First, we compute a productivity/income index at a product level, which allows us to sort goods by sophistication level; second, results are aggregated by country in order to have a synthetic number for the overall level of sophistication.

The first step index, called *prody*, is a cross country average of real per capita GDPs with weights equal to countries exports share in a given product; alternatively weights can be written in terms of Balassa's (1965) revealed comparative advantage index, RCA.[5]

Its formulation is the following:

$$prody_p = \sum_c \frac{x_{c,p}/\sum_p x_{c,p}}{\sum_c \left(x_{c,p}/\sum_p x_{c,p} \right)} y_c \tag{2}$$

$$= \sum_c \frac{RCA_{c,p}}{\sum_c RCA_{c,p}} y_c \tag{3}$$

where x is export, y is income, c and p are respectively country and product subscripts.

[4] Wang-Wei's exports dissimilarity index is a simple transformation of the Finger-Kreinin index, thus there are not actual methodological differences with Schott (2008). Notice that there are other indexes similar to sophistication index or similarity/dissimilarity indexes, for instance a sophistication index was developed in Michealy (1984) and similarity indexes are in Michealy (1963), Grubel-Lloyd (1975) and others. More recently Van Assche-Gangnes (2010) and Lall-Weiss-Zhang (2006) proposed other sophistication measures.

[5] Recall Balassa's RCA index is given by the relative country exports share of a given product/sector (c and p are country and product subscripts):

$$RCA_{c,p} = \frac{x_{c,p}/\sum_p x_{c,p}}{\sum_c x_{c,p}/\sum_c \sum_p x_{c,p}} \tag{1}$$

The *prody* index is meant to capture product sophistication by measuring the income level of exported products under the assumption that rich countries tend to produce/export relatively sophisticated goods. A big advantage of the *prody* index is that it allows us to sort goods without the need of inputs or factors intensities data nor of product level R&D data, which is unavailable. Anyway the index is positively correlated with R&D/GDP ratio both at the industry and country level, as noted in Xu (2010).

The second step index, called *expy*, is a weighted average by country of the product level *prody* indexes, were weights are simply product export shares. In this way the more country's exports bundle is concentrated on products with a high income level, that is on relatively sophisticated goods, the higher the index. The *expy* is written as:

$$expy_c = \sum_p \frac{x_{c,p}}{\sum_p x_{c,p}} prody_p \tag{4}$$

The *expy* index is correlated with per capita GDP, which means that there are on average rich countries products and poor countries products. That is the fundamental reason why we get similar results with similarity indexes. The Rodrik's paradox is synthesized in figure 4, where we plot countries' exports sophistication against per capita GDP. China is clearly relatively more sophisticated than its income implied (a similar result is obtained with exports similarity index with OECD).

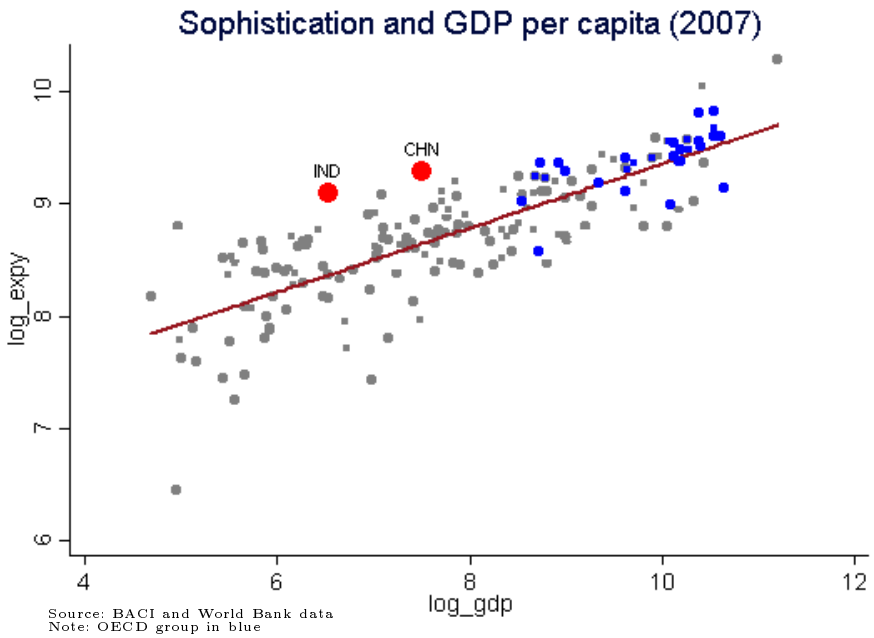


Figure 4: Exports Sophistication and GDP per capita

The finding that China is exporting more sophisticated goods than it is expected is something that requires an explanation. Above we simply observed that income and measured sophistication are positively correlated and that

China happens to be an outlier. However we must observe that the direction of causality is unclear and reverse causality is likely.

On the one hand, the positive correlation is in line with trade theory predictions: rich countries, which tend to be relatively well endowed with capital and technology, can produce more efficiently and therefore export relatively sophisticated goods (the causality goes from endowments/income to sophistication). On the other hand, specialization patterns might still be undetermined or not mechanically determined by initial endowments. In fact, as pointed out in Hausmann-Hwang-Rodrik (2007), there can exist spillovers such that "what you export matters" for economic growth. In that sense exports structure might be a predictor for economic growth. Rich countries may be those who discovered growth enhancing products. Investing in such a discovery process, i.e. diversifying specialization, and imitating rich countries' production/export structure, i.e. using their information, can have a positive impact on growth (the causality goes from sophistication to growth).[6]

China's relatively high sophistication is at odds with what expected according to the standard trade theory. China is thought to be relatively abundant in unskilled labour and, although there can have been a skill upgrading as reported in Wang-Wei (2008), yet we would expect it to specialize in labour intensive activities. Moreover a number of studies find that human capital is not the main factor in explaining the level of sophistication, for instance Amiti-Freund (2010) claim that "the skill content of China's manufacturing exports remained unchanged, once processing trade is excluded". So the question remains: what accounts for China's sophistication?

If instead we accept Hausmann-Hwang-Rodrik's (2007) hypothesis that sophistication may have an impact on subsequent development, then the initial level of sophistication may be undetermined since sophisticated products have to be discovered first. In this situation imitating rich countries, who already discovered some, is a good policy as well as subsidizing initial entrants in new activities. Then may we wonder if China's growth can be explained in this terms also considering the particular fiscal regime for the processing trade. But before doing this we still must understand what factors account for China's sophistication. Roughly speaking, if China is growing because of sophistication, then how did it manage to become sophisticated?

Different author's investigated factors that can account for the result. Some focused on processing trade and assembly activities, on the import content of exports and on FDIs (Amiti-Freund (2010), Xu-Lu (2009), Van Assche-Gangnes (2010), Van Assche-Hong-Slootmaekers (2008), Lemoine-Ünal-Kesenci (2004)); others on the income gap between exporting and non-exporting regions within China, which is particularly wide (Yao (2009), Xu (2010)). Many pointed out that Chinese products are sold at a lower price and show lower quality on average, so we must take it into account before claiming that China is special (Yao (2009), Xu (2010), Rodrik (2006), Schott (2008)). Finally, some authors focused on the possible bias of the *expy* index (Kumakura (2007)).

Following this literature we are going to consider some of the possible determinants of China's exports sophistication. In particular we focus on:

[6] There are some papers investigating the relationship between diversification or specialization patterns and growth; for instance De Benedictis (2006), Imbs-Wacziarg (2003); see also Klinger-Lederman (2010).

1. China's Imports content of export, intra-industry trade, sophisticated imported inputs.
2. Country dimension and export overlap.
3. Skill and human capital
4. Within-product sophistication or quality differentiation of goods.

In what follows we take into account these factors and try to see what is their impact on the baseline result that China's sophistication is "too" high. In particular the question we want to address is: *in what class of products is China special?* We think that shedding light on that issue can help further research on the determinants of exports sophistication.

3 The link between Imports and Exports

As stressed in many studies, China's exporting capacity heavily relies on processing and assembly trade. This implies a relatively high imports content of exports and, if assembly trade is relevant, we should observe both imports and export of similar products within industries, where imports tend to serve as inputs. China's exports show an increasing and particularly high imports content in technological products, figure 5 (see also figure 13 in the appendix).

We take this as an approximative evidence that imports of sophisticated goods might be relevant. Importing sophisticated goods and inputs may partly explain exports sophistication. Therefore the first aspect we want to analyse is the link between imports and exports at different levels of aggregation, then we decompose imports into Intermediate, Capital and Consumption goods and try to measure imports sophistication.

As first step for analysing the import-export relationship we look at the general picture. Aggregate imports composition does not seem to show a strong similarity to that of exports. Machinery and Electrical industry used to play a major role in 1995 and they still do; Textiles-Shoes and Agricultural-Food imports reduced their share, while Mineral products import share got bigger reflecting the China's increasing needs (figure 6). At this level of disaggregation there has not been a significant shift in China's import composition towards sophisticated products.

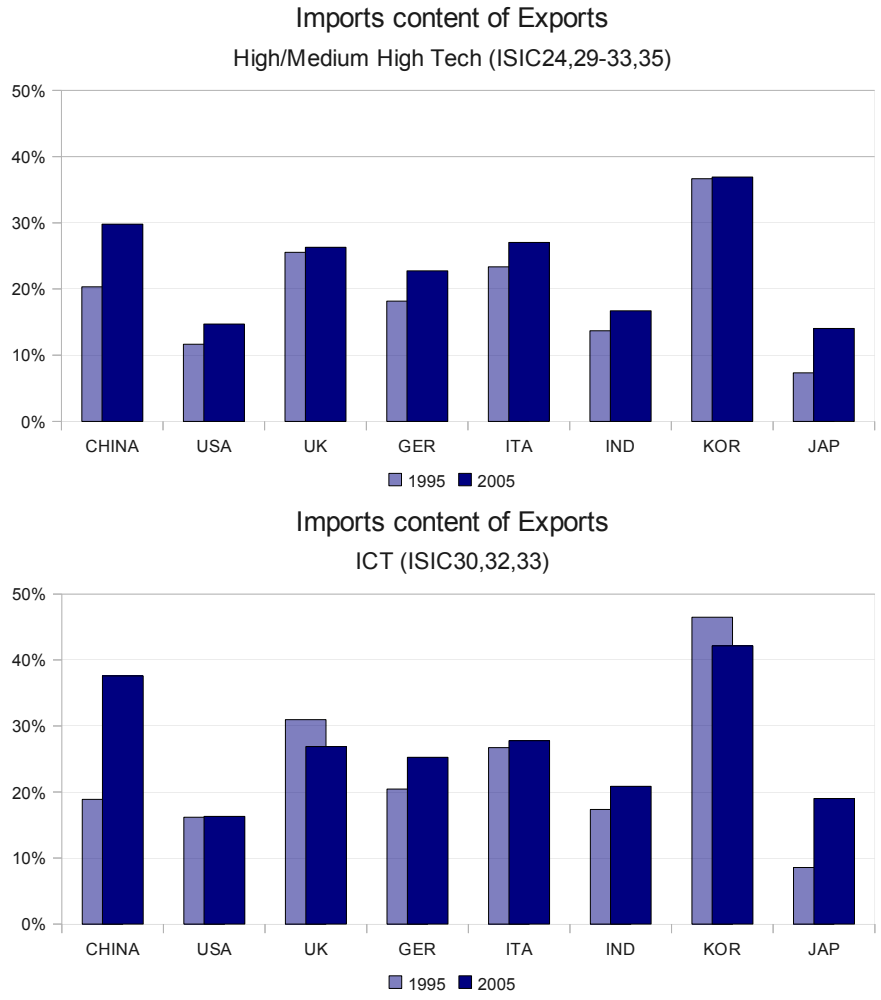
However a link between imports and exports emerges if we analyse the exchange of products within industries, or the intra-industry trade (IIT).

We started measuring IIT by the standard Grubel-Lloyd (1975) index calculated at *6-digits* product level for every country in the dataset.[7] We find that China's overall IIT trade share goes from 26.7% in 1995 to 28.7% in 2007, which is lower than the OECD and Euro Area average, but higher than many developing countries. Indeed China's IIT is high in relative terms: if we control for per capita income, which earlier studies found out to be positively correlated with

[7] The Grubel-Lloyd index measures import-export overlap. The country aggregate index is defined as:

$$GL_c = 1 - \frac{\sum_p |x_{c,p} - m_{c,p}|}{\sum_p x_{c,p} + m_{c,p}} \tag{5}$$

where p are products traded by country c. GL takes values between 0 and 1.



Note: imports content of exports is calculated using Input-Output tables as in Hummels-Ishii-Yi (2001)
Source: OECD data

Figure 5: Imports Content of Exports for some Countries

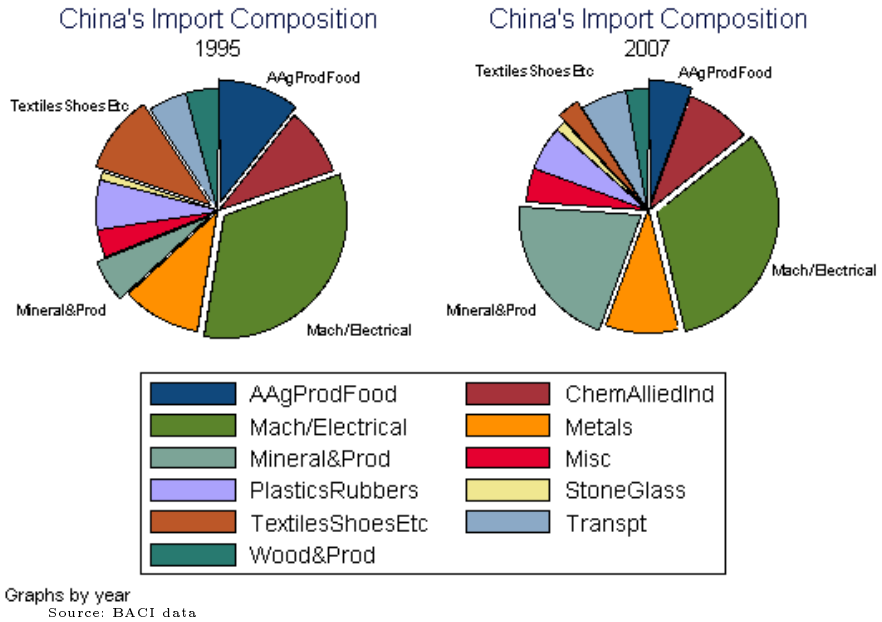


Figure 6: China's Exports Composition

IIT, China appears to be above the average. In figure 7 we plot the IIT index and GDP per capita (real); since the GL index takes values between 0 and 1, we used a logit transformation.[8]

Our results are in line with other studies on China's IIT (see Dettmer *et al.* (2009), Xing (2007), Hu-Ma (1999), Hellvin (1996)). All these studies found that China's IIT significantly varies across trade partners and it is relevant not only with developing, but with developed countries as well, in particular with Japan, UK, Germany, Italy and USA. They also found that IIT is very important in relatively advanced sectors such as Electronics, Machinery and Chemicals; and that China's exports tend to be of lower quality than imports, where quality is measured with UVs and with human capital and R&D intensity.

The evidence on IIT is supportive of the idea that China's exports are quite imports dependant. However the GL index, while giving useful synthetic information, does not give us all the information about the IIT or the link between imports and exports, specially in the case of China with its huge trade unbalance. We are not referring to the supposed bias of the GL index, which we think is not very important, but to the logic behind the index.[9] In fact the GL index measures import-export overlap and we know that in the case of China

[8] We used the following transformation $\tilde{GL} = log[GL/(1-GL)]$, which takes values from $-\infty$ to $+\infty$. The logit transformation does not change the results, but it allows us to get a clearer picture and to perform better regressions. Hellvin (1996) uses the same transformation.

[9] The GL index is said to be downward biased in case of unbalanced trade because in that case it can never reach the value of 1. This happens because even though every product can show balanced trade, and therefore the maximum level of IIT, there will be at least one product where trade is unbalanced (in this case the product unbalance will be exactly the overall unbalance). We do not believe this is a real bias since, being the GL index an overlap measure, it correctly tells us that the import-export overlap is not perfect.

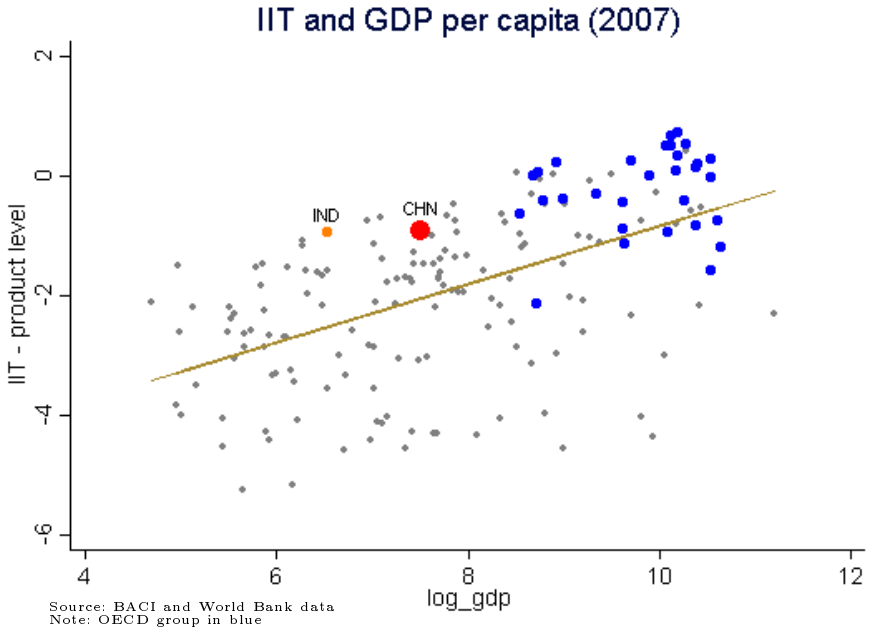


Figure 7: IIT and GDP per capita (2007)

this overlap is relatively low because exports tend to be greater than imports. However the concept of IIT does not directly refer to the value of imports and exports, but rather to the existence of two-way trade within sectors or product categories. Because of this we also analysed China's IIT and the link between import and export performing regressions at different levels of disaggregation. Notice that export-import regressions with a constant term allow for a greater degree of freedom than the GL index, in fact even in the case of a perfect fit and a positive slope, yet the GL index will not take its maximum value unless the regression line goes through the origin and its slope is 1. However we would claim that a perfect fit between export and import at product level is a strong evidence of IIT. In this sense the R^2 of the regression might be a good indicator, given a significant positive slope.

The correlation between China's imports and exports is found to be statistically significant not only at industry level, but also at product level and at country-product level. China not only tends to import and export within the same industries, but also within the same product category and with the same countries. Furthermore the import-export correlation becomes stronger over time. In 2007 the exports elasticity to imports is 0.54 at country level, 0.42 at sectoral level, 0.37 at product level, 0.34 at country-sector level and 0.26 at country-product level (table 1). Trade flows for which both imports and exports take non-zero nor missing values represent almost all China's trade.

The positive correlation between imports and exports is robust and remains also performing regressions by sector at product and country-product level: almost all sectors have a positive coefficient. We also run regressions by country at a product level: positive correlation is found with many Asian and Western countries, while negative correlation mainly regards natural resources abundant

countries (details in the appendix, tables 8, 9, 10).[10]

log(export)	OLS 1995	2000	2007
Country			
log(import)	0,53 ***	0,50 ***	0,54 ***
constant	6,05 ***	7,18 ***	7,25 ***
R2	0,65	0,57	0,69
N	162	174	181
trade share	99%	99%	98%
Sector (HS2)			
log(import)	0,36 ***	0,38 ***	0,42 ***
constant	8,99 ***	8,96 ***	9,11 ***
R2	0,22	0,21	0,27
N	96	96	96
trade share	100%	100%	100%
Product (HS6)			
log(import)	0,29 ***	0,30 ***	0,37 ***
constant	6,17 ***	6,47 ***	7,07 ***
R2	0,09	0,10	0,16
N	4899	4878	4746
trade share	100%	100%	100%
Country-Sector			
log(import)	0,36 ***	0,29 ***	0,34 ***
constant	5,56 ***	6,17 ***	6,87 ***
R2	0,18	0,15	0,18
N	4106	5263	6674
trade share	96%	96%	96%
Country-Product			
log(import)	0,22 ***	0,19 ***	0,26 ***
constant	4,11 ***	4,36 ***	5,24 ***
R2	0,05	0,05	0,07
N	43037	62950	84692
trade share	76%	82%	80%

Robust s.e. Significance *0,1 **0,05 ***0,01

Source: BACI and World Bank data

Table 1: China's Exports-Imports Correlation

Imports and exports are actually correlated at any level of aggregation and China's exports appear to be quite imports dependant. If we further divide products by type, we clearly see that exports and imports, although belonging

[10] Many countries show no significant correlation between imports and exports, but this is due to the fact that trade regards relatively few countries: for many countries there are very few observations or no data at all. In 1995 the number of countries with whom China both imported and exported more than 1000 HS6-products simultaneously (there are about 5000 HS6 codes) was only 16 (in 2000 it was 24; 33 in 2007) and those few countries represented more than 73% of its overall trade (78,6% in 2000; 76,5% in 2007). If we just consider simultaneous import-export, then that share is raised to almost 96% in 1995 (96,2% in 2000; 96,6% in 2007). Only 36 countries both imported from and exported to China more than 100 products (47 in 2000; 69 in 2007), 46 traded more than 50 products (59 in 2000; 84 in 2007), 63 more than 10 products (94 in 2000; 122 in 2007). See appendix, table 10.

to the same industry/product and positively correlated, are actually different as regarding their destination.[11] While China primarily exports Consumption and Intermediate goods, it imports Intermediate and Capital goods. Imports of Consumption goods are relatively negligible. Intermediate goods exchange is basically in balance and that of Capital goods shows just a little surplus, which underlines the importance of imported inputs. The huge China's trade surplus is due to Consumption goods (figure 8).

Now the geographical dimension looks more relevant. Trade is more or less in balance with Asia, from which China imports many Intermediate goods, while there is a big surplus with USA and Europe, towards whom it exports a large share of Consumption goods. In figure 14, 15 and 16 in the appendix we take as an example Japan, Korea, USA, UK and the Euro area.

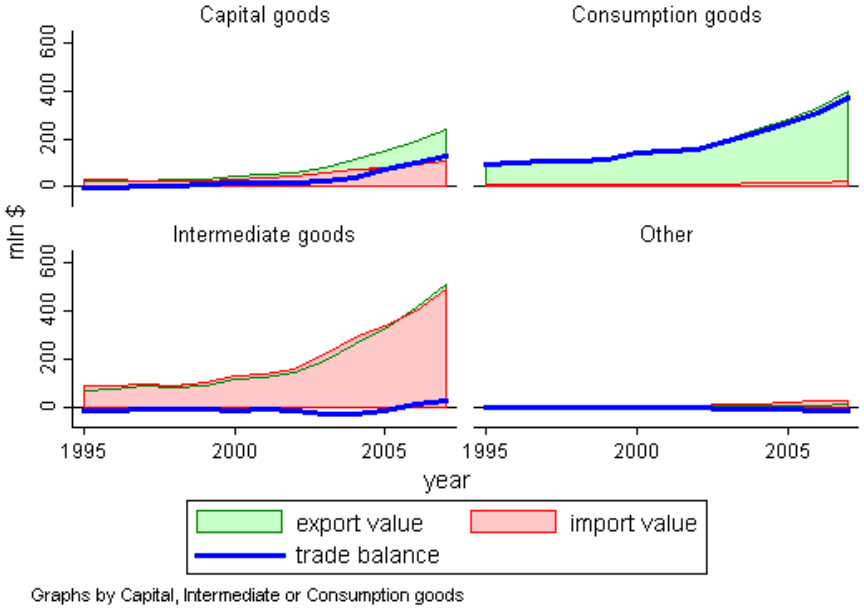


Figure 8: China's Trade by Product Type

[11] HS6-products have been divided into Consumption, Capital, Intermediate and Other goods by using the BEC classification. Details in the appendix.

4 Imports sophistication

The evidence above shows that China's export and imports are closely related, in particular for Intermediate and Capital products, and that the import content of exports is quite high, specially in technological products. This is in line with many other studies. Therefore we now investigate whether China imports sophisticated products.

In order to address this issue we calculated an index of imports sophistication that we called *impy*. The formulation of the *impy* index is similar to that of the exports sophistication index and it is calculated in two steps. The first step is exactly the *prody* index discussed above, which captures product sophistication, while the second step actually uses imports data. The *impy* index is calculated as:

$$impy_c = \sum_p \frac{m_{c,p}}{\sum_p m_{c,p}} prody_p \tag{6}$$

The choice of using the *prody* index, which is based on exports, serves to have a common classification of products by level of sophistication. If we had computed an index analogue to the *prody* using import data, we would have sorted products differently for imports and exports. We believe this would be inconsistent, since the same product could be sophisticated when exported and non-sophisticated when imported.

The interpretation of our imports sophistication index is intuitive. If a country tends to import sophisticated products, i.e. goods that on average are exported by rich countries, then its imports are relatively sophisticated according to our index. If our measure says that China is importing sophisticated goods, it means that it imports the same kind of goods that are produced/exported by rich countries. We think this is exactly what we need.[12]

As with exports sophistication, our measure of imports sophistication is positively correlated with per capita GDP (real). However the relation looks flatter and there is less dispersion than in the case of exports sophistication (figures 9 and 10). China's imports sophistication is very high in relative and absolute terms, and indeed in line with advanced countries like USA and Germany. Notice that exports sophistication instead, although high in relative terms, was still below those of most advanced economies. In particular, China's imports sophistication is greater than its exports sophistication. This finding is partially expected and common to developing countries. What is relevant is that China's sophistication is exceptionally high both in terms of import and export: this makes the relatively high exports sophistication a bit less surprising. China is importing very sophisticated products and is exporting very sophisticated products, but exports are still less sophisticated than imports. In other words, China tends to export and import product categories that are exported by developed

[12] An index calculated only with imports data would have a slightly different interpretation. In that case sophisticated products would be no more those exported by rich countries, but those that are imported by them. Therefore if a country imports products that are imported by rich countries its imports will result relatively sophisticated. We do not think this is the right measure, at least to our task. Note that Cui-Syed (2007) measure imports sophistication in this way and get similar aggregate results. Roughly speaking, we believe this is due to the fact that IIT is quite high for developed countries, therefore their imports and their exports are relatively similar, which implies that importing products that rich countries export tends to be the same as importing products that rich countries import.

countries; which is consistent with what we have seen in the previous section about IIT, where we found imports and exports to be positively correlated.

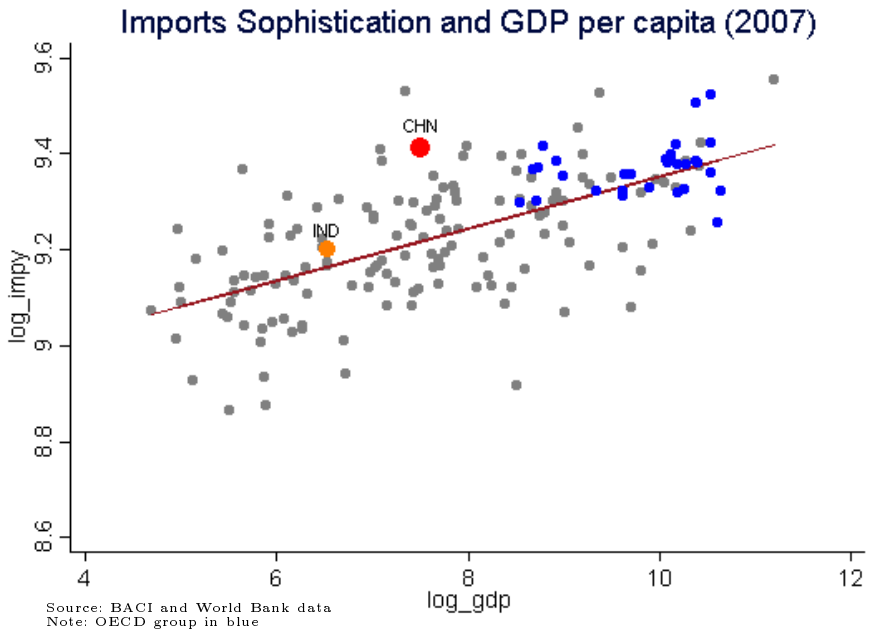


Figure 9: Imports Sophistication and GDP per capita (2007)

In figure 11 we compare China's imports and exports sophistication over time.[13] As noted China's imports are more sophisticated than exports, but the gap between them is closing over time. In order to have deeper evidence, we further decompose trade into Consumption, Capital and Intermediate products. For Intermediate products only the distance between imports and exports sophistication is diminishing. In particular after 2004 imported Intermediate goods became less sophisticated than Intermediate exports (and also less sophisticated than Consumption exports). Therefore the overall trend is mainly determined by Intermediated products, whose export looks more and more sophisticated with respect to import. This fact can be due to a possible de-link between imports and exports and a result of increased China's internal production capabilities, as noted in Cui-Syed (2007). In general however China is still importing highly sophisticated inputs and we can not ignore imports sophistication.

[13] The figure gives some useful hints on the dynamics, however we must warn that the time comparison is improper: our sophistication measures allow a cross-country comparison, while time trends in the sophistication levels can partially reflect income growth, especially for exports which tend to be less diversified than imports. This point is discussed later in section 7.

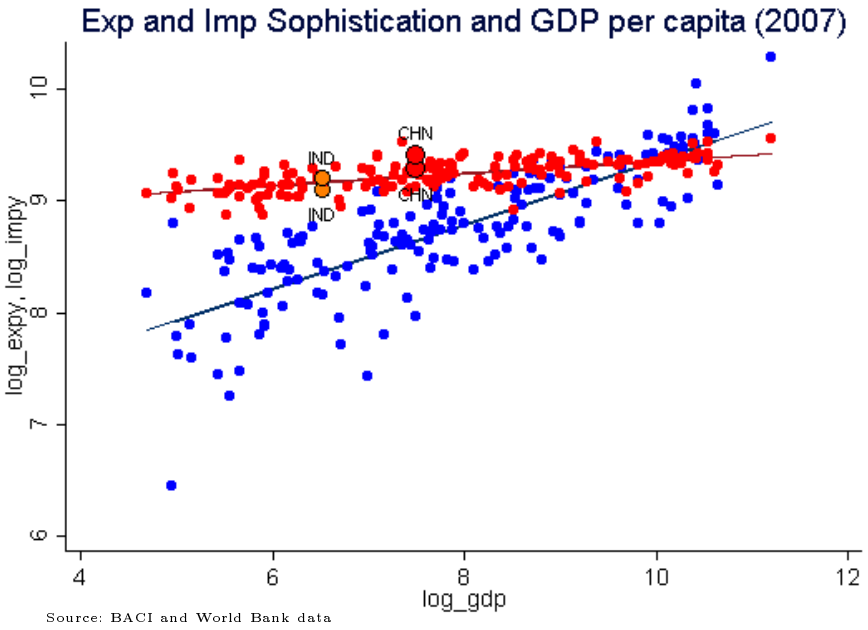


Figure 10: Exports and Imports Sophistication and GDP per capita (2007)

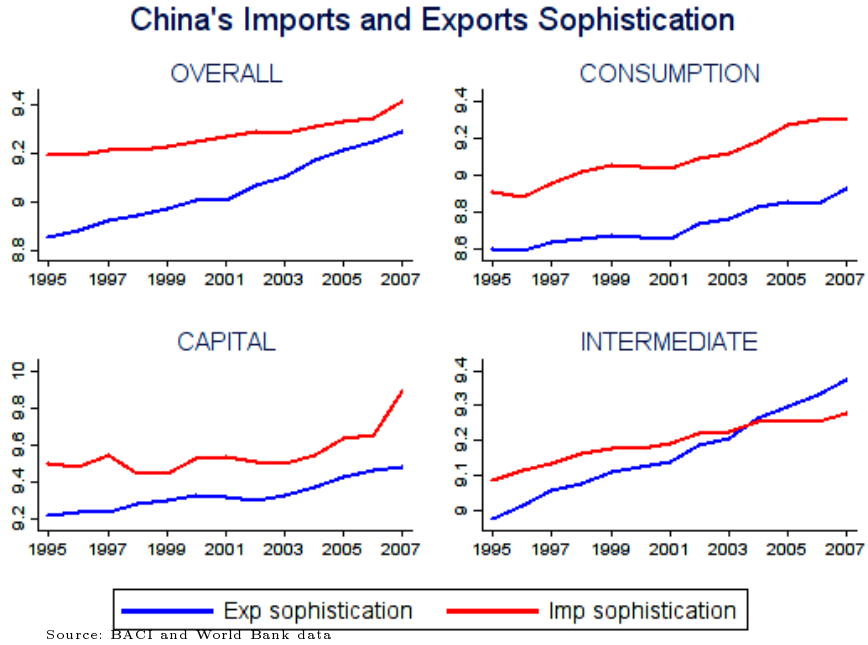


Figure 11: China's Exports and Imports Sophistication

5 China's Prices

The evidence above suggests that sophistication is not homogeneous across classes of products. In this section we want to increase the detail from product classes to single products and analyse within-product sophistication. In fact even if a product may be generally sophisticated, it can come in different varieties, which can be vertically differentiated. Think of MP3 players: basic models come without any display, radio or other capabilities; advanced models support multi-touch HD displays, radio, video recording etc.: even though belonging to the same product category, they are very differentiated and actually sell at a different price.[14] Thus, in order to better understand where China is relatively sophisticated we must consider prices. Different studies find that China's exports are relatively low priced (i.e. Schott (2008), Xu (2010) etc.). Therefore China might be exporting low priced varieties of relatively sophisticated products.

Working with trade data, prices are proxied by unit values (UVs), which are defined as a value-quantity ratio and represent an average price weighted by quantity.[15] Let us define relative UV as $r = UV_c/UV_w$, so that $r = 1$ on average. Then we run export and import price regressions in order to see whether China's prices are relatively high or relatively low. We have about 5000 products and more than 4.5 millions observations: regression analysis is a simple way to synthesize information. We added product-year fixed effects and used robust standard errors with clustering at the country level. The China-year dummy indicates if China tends to be above or below the conditional mean. Results are displayed in table 2.[16]

Prices are positively correlated with per capita income (real), which is a standard result. On the export side, this finding supports the idea that more developed economies tend to specialize in high-end varieties; on the import side, this can be interpreted as an approximative evidence that the demand for quality increases with income. China is indeed exporting low priced products and prices are decreasing over time. The same pattern is found also within the main sectors and within product classes (results are shown in the appendix, table 11). Export and import prices are positively correlated and controlling for import prices makes China's exports even relatively cheaper. On the other hand China's imports prices are relatively high, even though there is a decreasing trend. So China is importing high priced products and exporting low priced products; and both prices have been decreasing over time. We may wonder if the decline in import prices can be explained by a possible de-link between imports and exports as already noted comparing imports and exports sophistication: is China improving its production capability and thus reducing imports of sophisticated and/or high priced products as a consequence? Addressing this question is not

[14] Notice that we do not even have such a detail in custom HS6 trade statistics, we rather have something like *"Sound apparatus... Using magnetic, optical or semiconductor media"* (851981).

[15] $UV = X/Q = \sum_k p_k q_k / Q$ where capital letters indicate the product category total, small letters indicate (unobserved) within-product varieties indexed by k.

[16] Notice that in our dataset both import and export values are expressed in f.o.b. prices, which allows a consistent comparison between them. A possible limitation is that our data are in US dollars, therefore we can not exclude that exchange rates dynamics are partially reflected into UVs. We can reasonably say that being our analysis quite detailed and covering 13 years our results are not determined by exchange rates only. See data description in appendix for details.

the aim of our analysis, however our results seem to be in line with this hypothesis.

	log(r_export)	log(r_export)	log(r_import)
log(GDPpc)	0.117 ***	0.101 ***	0.071 ***
	(0.0179)	(0.0175)	(0.0107)
China 95-99	0.111 ***	-0.009	0.504 ***
	(0.0366)	(0.0359)	(0.0243)
China 00-03	-0.198 ***	-0.254 ***	0.228 ***
	(0.0352)	(0.0333)	(0.0249)
China 04-07	-0.322 ***	-0.350 ***	0.141 ***
	(0.0283)	(0.0271)	(0.0188)
log(r_import)		0.189 ***	
		(0.0119)	
constant	-0.649 ***	-0.572 ***	-0.274 ***
	(0.1437)	(0.1403)	(0.0885)
R2	0.19	0.20	0.26
product-year fixed effects	yes	yes	yes
countries	179	179	179
products	4763	4762	4762
years	95-07	95-07	95-07
N	4,812,467	4,579,707	4,654,384

Robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 2: Import and Export Prices

Looking only at prices is not sufficient for determining what kind of products a country is exporting. Even though prices can be high for the majority of products, yet export could be concentrated in low priced products, and vice versa. To control for this possibility we computed high priced export shares, that is the export share of products that are sold at $r > 1$. In addition to this we also computed the share of products that are both high priced and show a revealed comparative advantage (RCA>1). Interestingly, the majority of high priced products tend to be also specialization products for almost all countries (of course the opposite does not hold). Product quality might be a reasonable explanation for this finding: high quality products are likely to sell relatively more than others and/or to show relatively high prices. Results for a group of countries are shown in figure 12. The bottom part of the figure shows high priced products import shares.[17] This evidence is quite in line with price regressions: China's high priced export share is low and has decreased, high priced import share is higher and has decreased as well, developed countries tend to have higher export shares, while import shares are more homogeneous.

[17] In this case the RCA index is understood as relative import share, indicating that a country import is relatively concentrated in some products with respect to world.

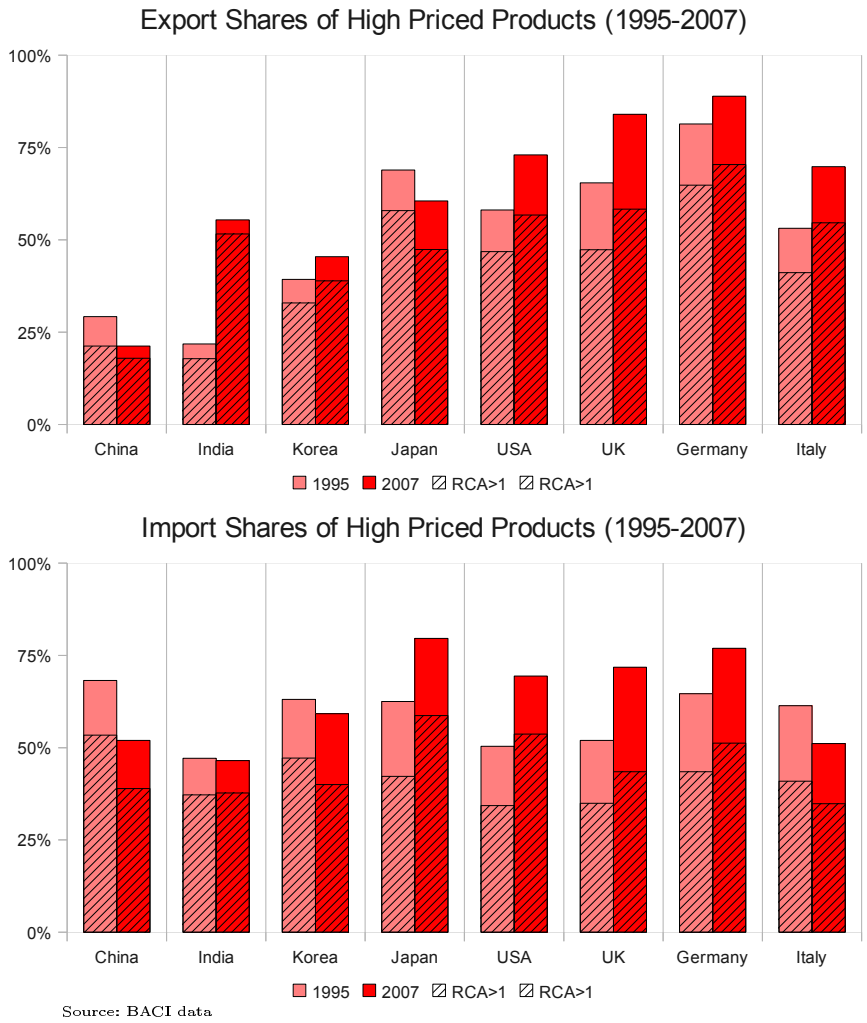


Figure 12: Export and Import Shares of High Priced Products

6 China's Sophisticated Products

In this section we want to characterize more precisely China's exports sophistication by considering altogether the factors we discussed above. Is sophistication still high after controlling for those factors, what factors are more important and for what products?

We try addressing this issue by performing a regression analysis which includes imports sophistication and other control variables that we think are important. We run regressions for the whole trade as well as for Consumption, Capital and Intermediate products. Moreover we split the market into price segments in order to keep track of within-product vertical differentiation.

6.1 Main factors

The factors we control for are stage of development, size and human capital as proxied by real per capita income, real GDP or population and education (see appendix for data description). Imports sophistication is measured by our *impy* index.

Per capita income. Per capita income is naturally correlated with *expy*, as graphically shown before, thus we surely must control for this variable. Rodrik (2006) computes the *prody* index for 2000 only and then applies it in the computation of *expy* of all years. While this implies that country sophistication levels are comparable over time, it does not allow a proper cross country comparison. In fact, as noted in Kumakura (2007), this generates a possible bias leading to an overestimated sophistication level with respect to income for economies that have been growing rapidly in subsequent years: those countries would appear relatively sophisticated even if their export structure did not change over time. This bias is higher the lower the exports overlap. In order to avoid this problem we computed all indexes yearly.[18]

GDP and population. Country size is another important variable to consider. Rodrik (2006) proposes an intuitively appealing explanation: large countries have more entrepreneurs and thus more chances of being successfully in the discovery process of growth enhancing sophisticated products. Many other explanations are possible, however a more prosaic reason for controlling for country size is that large countries tend to export more products, which means having a higher degree of exports overlap with developed economies, which turns into a higher sophistication level. This is fine as long as export similarity with developed countries is a measure of sophistication, and Schott (2008) uses this measure. However since we would not want to get that China's export is sophisticated just because China is big, we must control for country size.

Education. An important factor that we expect to be correlated with sophistication is human capital or skill abundance. As discussed above, the evidence for this variable is mixed. As regarding to China we know that it is relatively labour abundant and skill scarce, however improvements in human capital might help

[18] In the numerical example of table 4 in Kumakura (2007), in which each country completely specializes in one product (no export overlap), this would imply that $expy/income = 1$ for every country independently of income. In this case relative sophistication can only change with export structure, i.e. export overlap. Notice however that *absolute* sophistication levels are now not perfectly comparable over time since the increase in the measured sophistication partially (or completely in the case of complete specialization) reflects the increase in income: controlling for income and adding year fixed effects solves the problem.

explaining exports sophistication. We measure education by secondary school enrolment. Schott (2008), using a similar measure of education, finds a positive correlation for all manufacturing (he measures sophistication by export similarity with OECD). Finally we must note that human capital might be inversely correlated with imports, at least for some products, and with processing imports and imports sophistication. This may be due to a substitution effect: relatively sophisticated imports might be substituted by local production once the skill level allows it.

Imports sophistication. We already described our measure of import sophistication. We have seen that imports sophistication tends to be higher than exports sophistication for less developed countries and that the cross country relationship looks flatter than that of exports. This findings are as expected since imports tend to be more diversified than exports. What really matters is the relative cross-country sophistication: China appears to be an outlier both for imports and exports. Including this variable we want to test in what measure it correlates with exports sophistication and for what products. Finally we would like to gather approximative evidence for the presence of a possible substitution effect with human capital: roughly speaking, if imported sophisticated products can be substituted by locally produced sophisticated products (assuming that human capital can measure production capabilities), we should find that where human capital plays a big role, imports sophistication does not and vice versa.

6.2 Market segments

As vertical differentiation is partially reflected by price differentiation, we can use information on UVs to infer something about what kind of varieties are traded. We want to test if high-end products behave somewhat differently than low-end products. As China exports the majority of products at relatively low price, we expect it to be sophisticated in those products, however we should look at the other side of the market as well.

Xu (2010) uses a price adjusted sophistication index finding that China is not so special or not special at all, depending on how strong is the price adjustment. However the right degree of price adjustment is ambiguous. Here we do something similar, but we decided to consider price or quality by splitting the market into three segments: high-end, middle-end and low-end. In doing this we follow Fontagné *et al.* (2008) who define market shares as a smooth function of relative prices such that the higher the price the higher the export share that is assigned to the high-end segment, the opposite holds for the low-end segment, while the middle-end share is maximum if $r = 1$ (details in the appendix). As a robustness check we also split the marked using a simpler methodology: we assigned the entire export flow to the high-end segment if $r > 1.25$, to the low-end segment if $r < 1/1.25$ and to the middle-end if r is in between those values.[19]

Once we divided trade into market segments we run regressions for each of them in order to see how high-end/low-end sophisticated exports are correlated with per capita income, GDP, education and imports sophistication for all trade

[19] We also tried dividing the market into two segments according to $r < 1$ or $r > 1$. Results are quite similar, however we preferred to report the three segments version which is more informative and easier to compare with the Fontagné *et al.* (2008) methodology.

and for Consumption, Capital and Intermediate products and for what products China is actually sophisticated.

6.3 Results

Regression results are displayed in table 3, where we did not split the market into price segments. Robust standard errors adjusted for clustering at the country level are reported below each coefficient. Using population instead of GDP we get virtually the same output. All regressors are individually correlated with overall exports sophistication, however when we do consider together GDP and education, imports sophistication becomes insignificant for overall trade. This implies that if imports sophistication is correlated with exports sophistication this is a second order effect that can emerge only at a greater detail. The China variable is a country-year dummy measuring how much China's exports sophistication deviates from the predicted value. Since variables are in logs, we can interpret coefficients as percent deviations. China is generally more sophisticated than expected by more than 25%.

In the last three columns we increase the detail by considering Consumption, Capital and Intermediate products separately. China is not really an outlier for Consumption goods nor Capital products; while its sophistication is unexpectedly high for Intermediate products. Education happens to be negatively correlated with exports sophistication of Consumption goods and not significant for Capital products. On the contrary it is highly significant for Intermediate products. Imports sophistication is strongly correlated with exports sophistication of Capital products, but not particularly significant elsewhere.

At this level of analysis the main finding is that China's exports sophistication is not particular in Consumption nor in Capital goods, but rather in Intermediate products. Education seems to be an important factor for Intermediate products, while imports sophistication only plays a secondary role.

In tables 4 and 5 we report results for the high-end segment and for the low-end segment. Middle-end segment results are somewhat in between and are reported in the appendix together with the regressions using the simpler methodology as a robustness check.[20]

In the high-end segment per capita income and imports sophistication are always strongly correlated with exports sophistication, while GDP and education do not play a big role. Education coefficient is again negative for Consumption goods and positive for Intermediate products, which again do not show a strong correlation with imports sophistication. On the contrary exports sophistication in Consumption and Capital goods strongly correlates with imports sophistication of Capital and Intermediate products. In the high-end segment China is actually even less sophisticated than expected for Consumption and Capital goods.[21] In Intermediate products it appears relatively sophisticated up to 2003,

[20] See table 12 for the middle-end, tables 13, 14 and 15 for high/low/middle-end under the alternative methodology. We also checked if the Xu (2010) methodology was in accordance to our results. Using a low degree of price adjustment results are quite in line with the overall regressions, while with a strong price adjustment they are more in line with the high/medium-end segment regressions.

[21] Notice that China dummy coefficients can be interpreted directly as percent deviation only if small. Otherwise the approximation error can not be ignored. For instance, for High-end Consumption goods the China 04-07 coefficient is -1.5; this means that China's exports sophistication is lower than expected by approximatively 78% ($e^{-1.5} - 1$).

expy	all	all	all	consum.	capital	interm.
GDPpc	0.230 ***	0.214 ***	0.180 ***	0.193 ***	0.041 ***	0.212 ***
	(0.0196)	(0.0244)	(0.0248)	(0.0257)	(0.0109)	(0.0265)
GDP	0.048 ***		0.061 ***	0.050 ***	0.018 ***	0.063 ***
	(0.0115)		(0.0113)	(0.0134)	(0.0052)	(0.0127)
EDU		0.115 **	0.133 **	-0.115 **	-0.006	0.247 ***
		(0.0561)	(0.0517)	(0.0553)	(0.0253)	(0.0580)
impy	0.440 **	0.657 ***	0.205			
	(0.2167)	(0.1901)	(0.2089)			
impy_consumption				0.363 *	0.060	-0.049
				(0.1857)	(0.0631)	(0.1650)
impy_capital				-0.012	0.346 ***	0.139
				(0.1329)	(0.0922)	(0.1265)
impy_intermediate				-0.177	0.013	-0.127
				(0.1868)	(0.0839)	(0.2302)
impy_other				0.008	-0.022	-0.265 **
				(0.0936)	(0.0367)	(0.1263)
China 95-99	0.376 ***	0.526 ***	0.283 ***	0.076	-0.058 **	0.463 ***
	(0.0608)	(0.0481)	(0.0657)	(0.0638)	(0.0245)	(0.0748)
China 00-03	0.300 ***	0.481 ***	0.231 ***	0.036	-0.030	0.427 ***
	(0.0616)	(0.0483)	(0.0644)	(0.0600)	(0.0253)	(0.0739)
China 04-07	0.317 ***	0.475 ***	0.243 ***	-0.083	-0.099 ***	0.420 ***
	(0.0607)	(0.0462)	(0.0643)	(0.0702)	(0.0340)	(0.0779)
Constant	1.709	0.499	3.388 *	4.800 *	4.854 ***	7.158 ***
	(1.7908)	(1.6775)	(1.7751)	(2.6419)	(1.3383)	(2.3393)
R2	0.73	0.71	0.75	0.59	0.36	0.73
R2 adjusted	0.72	0.71	0.75	0.58	0.35	0.73
year f.e.	yes	yes	yes	yes	yes	yes
years	95-07	95-07	95-07	95-07	95-07	95-07
countries	179	179	179	179	179	179
N	2266	1615	1615	1615	1615	1615

Variables in logs; robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 3: Export Sophistication Regressions

HIGH-END SEGMENT						
expy	all	all	all	consum.	capital	interm.
GDPpc	0.290 ***	0.278 ***	0.256 ***	0.271 ***	0.108 ***	0.229 ***
	(0.0380)	(0.0479)	(0.0566)	(0.0494)	(0.0283)	(0.0687)
GDP	0.019		0.023	0.038 *	0.015	0.013
	(0.0197)		(0.0196)	(0.0198)	(0.0103)	(0.0246)
EDU		0.092	0.097	-0.303 ***	-0.061	0.277 **
		(0.0978)	(0.0990)	(0.0936)	(0.0601)	(0.1250)
impy	0.366 ***	0.475 ***	0.485 ***			
	(0.1046)	(0.1351)	(0.1357)			
impy_consumption				0.238 **	-0.118 **	0.225 *
				(0.0940)	(0.0560)	(0.1153)
impy_capital				0.174 **	0.408 ***	0.057
				(0.0819)	(0.1010)	(0.0813)
impy_intermediate				0.316 ***	0.300 ***	0.249
				(0.1137)	(0.0820)	(0.1760)
impy_other				-0.012	0.008	-0.037 **
				(0.0174)	(0.0125)	(0.0179)
China 95-99	0.133	0.154	0.030	-0.626 ***	-1.070 ***	0.612 ***
	(0.1354)	(0.1048)	(0.1602)	(0.1433)	(0.0947)	(0.2037)
China 00-03	0.233	0.261 **	0.131	-0.611 ***	-0.724 ***	0.643 ***
	(0.1420)	(0.1050)	(0.1635)	(0.1351)	(0.0799)	(0.1960)
China 04-07	-0.865 ***	-0.843 ***	-0.966 ***	-1.511 ***	-1.454 ***	-1.006 ***
	(0.1337)	(0.0939)	(0.1495)	(0.1480)	(0.1051)	(0.1872)
Constant	1.738 **	1.036	0.564	-0.146	2.368 ***	0.152
	(0.8527)	(1.0026)	(1.1106)	(1.0125)	(0.6722)	(1.4260)
R2	0.37	0.41	0.41	0.46	0.32	0.38
R2 adjusted	0.36	0.40	0.41	0.45	0.31	0.37
year f.e.	yes	yes	yes	yes	yes	yes
years	95-07	95-07	95-07	95-07	95-07	95-07
countries	179	179	179	179	179	179
N	2266	1615	1615	1610	1609	1610

Variables in logs; robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 4: Export Sophistication Regressions: High-End Segment

while for 2004-2007 the coefficient changes its sign. This is possibly due to the undervaluation of the renmimbi with respect to the dollar, so it is something that we should further investigate also considering exchange rates.

LOW-END SEGMENT						
expy	all	all	all	consum.	capital	interm.
GDPpc	0.150 ***	0.107 **	-0.001	-0.023	-0.061	0.089
	(0.0368)	(0.0453)	(0.0508)	(0.0591)	(0.0468)	(0.0629)
GDP	0.102 ***		0.115 ***	0.135 ***	0.070 ***	0.102 ***
	(0.0253)		(0.0267)	(0.0348)	(0.0250)	(0.0322)
EDU		0.386 ***	0.412 ***	0.217 *	0.193 **	0.538 ***
		(0.1021)	(0.1000)	(0.1130)	(0.0806)	(0.1206)
impy	0.395 ***	0.466 ***	0.436 ***			
	(0.1146)	(0.1101)	(0.1117)			
impy_consumption				0.300 **	0.254 ***	0.228 **
				(0.1277)	(0.0838)	(0.1021)
impy_capital				0.045	0.248 ***	0.072
				(0.0552)	(0.0782)	(0.0613)
impy_intermediate				0.442 ***	0.203 *	0.239 *
				(0.0968)	(0.1078)	(0.1308)
impy_other				0.031	0.033 *	-0.011
				(0.0189)	(0.0196)	(0.0223)
China 95-99	1.024 ***	1.351 ***	0.752 ***	0.337 *	0.849 ***	1.037 ***
	(0.1518)	(0.0928)	(0.1649)	(0.1987)	(0.1581)	(0.1868)
China 00-03	0.898 ***	1.363 ***	0.729 ***	0.433 **	1.018 ***	0.788 ***
	(0.1502)	(0.1002)	(0.1599)	(0.2053)	(0.1675)	(0.1825)
China 04-07	1.143 ***	1.509 ***	0.903 ***	0.020	0.594 ***	1.459 ***
	(0.1443)	(0.0953)	(0.1598)	(0.1957)	(0.1852)	(0.2103)
Constant	0.434	1.016	-0.709	-3.009 **	0.052	-2.477 *
	(1.1224)	(1.0086)	(1.1364)	(1.1809)	(0.8702)	(1.3433)
R2	0.22	0.23	0.29	0.27	0.25	0.29
R2 adjusted	0.22	0.22	0.28	0.26	0.24	0.28
year f.e.	yes	yes	yes	yes	yes	yes
years	95-07	95-07	95-07	95-07	95-07	95-07
countries	179	179	179	179	179	179
N	2266	1615	1615	1614	1609	1614

Variables in logs; robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 5: Export Sophistication Regressions: Low-End Segment

The low-end segment looks very different. Now per capita income is slightly significant, while GDP and education are strongly correlated with exports sophistication. Import sophistication looks very important as well. Exports sophistication of Consumption goods does correlate with imports sophistication of Intermediate products, while the correlation with education is weak. On the contrary exports sophistication of Capital and Intermediate products is slightly correlated with imports sophistication of Intermediates, while education is significant, specially for exports sophistication of Intermediate goods. China results relatively sophisticated in the low-end segment, in particular for Intermediate and Capital products, while for Consumption goods the coefficient becomes insignificant after 2004.

7 Conclusion

This paper investigates China's position in the world trade. The finding that China's export has become highly sophisticated is analysed in order to gather evidence on its possible determinants and in order to identify what Chinese product are actually sophisticated.

Consistently with other author's findings, country level of development (which can also be interpreted as an implicit measure of capital abundance) is a key determinant of exports sophistication. However it can not explain China's sophistication alone. Country size is a factor that significantly improves our understanding of exports structure. Large countries are more likely to export a greater number of products (and developed countries are among the largest). Particularly in the case of China, country dimension helps explaining why its export is relatively overlapped with that of developed economies.

Human capital and imports are also considered as the production process of sophisticated products may require relatively skilled workers and sophisticated inputs. Results indicate that human capital is an important factor in explaining overall level of exports sophistication, while imports of sophisticated products plays a secondary role. This result, which we establish for a large panel of countries, is consistent with that of Wang-Wei (2008), who focus on China using more detailed data from China Customs. Interestingly we also find that the skill level is strongly positively correlated with exports sophistication of Intermediate products, but not with Consumption nor Capital goods. Exporting sophisticated Intermediate products seems to require local production capabilities, while exports of Consumption and Capital goods can more easily rely on imported inputs.

In fact when we increase the detail by considering within-product sophistication a role for imports emerges together with further evidence. Importing sophisticated inputs indeed has an important role in explaining export sophistication of Consumption and Capital goods, specially for high-end varieties. On the contrary imports sophistication is not significant for Intermediate products, while again the skill level is an important factor.

Export sophistication of high priced varieties seems to be explained by level of development (or capital abundance), while that of low priced varieties is better explained by country size and human capital.

As regarding to China, consistently with Schott (2008), we find that exports sophistication of Consumption and Capital goods is not exceptional once we account for level of development and country size. On the contrary we find out that exports of Intermediate products are unexpectedly sophisticated. We also showed that there is a constant gap between imports and exports sophistication for Consumption and Capital goods, while the gap reduced for Intermediate products, and it even reversed in 2004, so that exports of Intermediate products are now more sophisticated than imports. This finding is novel as China is thought to be sophisticated in Consumption goods. This result could be a sign of a possible de-link between imports and exports due to China's increased production capabilities, which is in line with Cui-Syed (2007).

Considering within-product sophistication, we confirm that China is sophisticated mainly in low-end varieties. In particular export sophistication is higher than expected for low-end Intermediate and Capital goods and it is relatively high also for low/middle-end Consumption goods.

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Appendix

Dataset Description

Trade data used in this paper are taken from the BACI dataset from CEPII, which is built from the UN-COMTRADE database. The dataset reports HS *6-digit* bilateral trade flows of all available countries from 1995 to 2007. The main advantage of BACI is that it reconciles the declarations of the exporter and the importer, in particular both import and export are in f.o.b. prices, which enables a proper comparison of UVs. For a complete description of the dataset see Gaulier-Zignago (2010), *BACI: International Trade Database at the Product-level. The 1994-2007 Version* and `www.cepii.fr`. Data on real per capita income, real GDP, population and school enrolment are from the World Bank. Real per capita GDP and real GDP are expressed in dollars at 2000 constant prices. Secondary school enrolment (gross) is the share of total enrolment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Data on the import content of exports are taken from the OECD.

Market Price Segments

The methodology we adopted to split the market into price segments is taken from Fontagné *et al.* (2008). The idea behind it is that there exists a continuum of vertically differentiated varieties. Product UV is therefore an average of the prices of these varieties. A product with a relative UV (r) that is just above 1 must include within it a lower share of high priced varieties than a product with a much greater UV. Following this idea each single trade flow is split into price segments according to the following scheme:

$$r \leq 1 \Rightarrow \begin{cases} \text{low-end} & = 1 - r^{\alpha} \\ \text{middle-end} & = r^{\alpha} \end{cases}$$

$$r > 1 \Rightarrow \begin{cases} \text{middle-end} & = 1/r^{\alpha} \\ \text{high-end} & = 1 - 1/r^{\alpha} \end{cases}$$

where following Fontagné *et al.* (2008), who use the same data, we set $\alpha = 4$. In practice we get three price/quality indexes going from 0 to 1 such that the trade share assigned to high-end segment increases with UVs, that assigned to low-end segment decreases with UVs and that assigned to middle-end segment increases up to $r = 1$ and decreases thereafter.

As a robustness check we used a simpler methodology. We just set a threshold for relative UV and then assign each single trade flow as a whole to the respective segment as follows:

$$r < \frac{1}{1+\alpha} \Rightarrow \text{low-end}$$

$$\frac{1}{1+\alpha} \leq r \leq 1+\alpha \Rightarrow \text{middle-end}$$

$$r > 1+\alpha \Rightarrow \text{high-end}$$

where we used $\alpha = 0.25$, meaning that if UVs differ from the world average by more than 25% we assign the trade flow to the high or low-end segment. This

methodology is employed also in Fontagné-Freudenberg (1997), *Intra-Industry Trade: Methodological Issues Reconsidered*, CEPII.

The sophistication indexes for each price segment are computed as described in the paper on the trade flows that have been assigned to the respective segment.

Tables and Figures

Industry Aggregation		
2-digits HS	Industry	Abbreviation
01-24, 41-43	Animal and Agricaltural Products and Foodstuffs	AagProdFood
25-27	Mineral Products	Mineral&Prod
28-38	Chemicals & Allied Industries	ChemAlliedInd
39-40	Plastics/Rubbers	PlasticsRubbers
44-49	Wood & Wood Products	Wood&Prod
50-67	Textiles, Footwear and Headgear	TextileShoesEtc
68-71	Stone/Glass	StoneGlass
72-83	Metals	Metals
84-85	Machinery, Electrical Machinery and Parts	Mach/Electrical
86-89	Transportation	Transp
90-97	Miscellaneous	Misc
98-99	Services	Services

Source: Yao (2009)

Table 6: Industry Aggregation

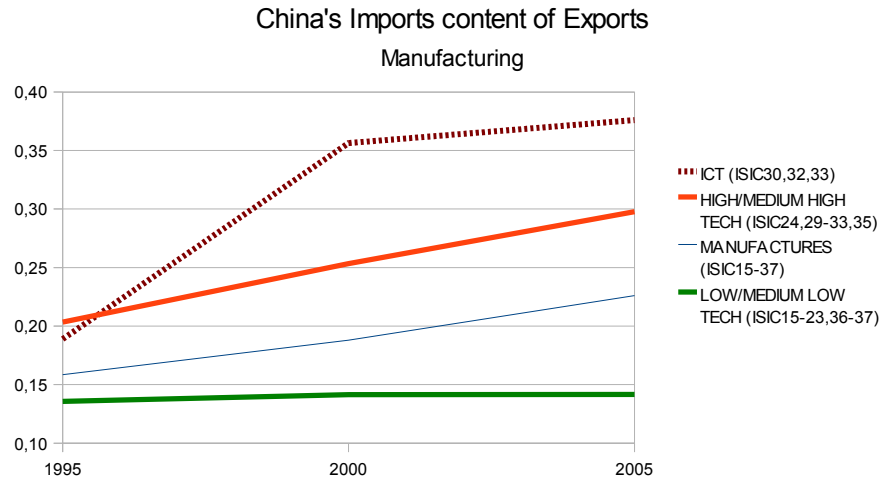


Figure 13: China's Imports Content of Exports

Product type Aggregation		
SNA Basic Class	BEC code	Description
Capital goods		
	41*	Capital goods (except transport equipment)
	521*	Transport equipment, industrial
Intermediate goods		
	111*	Food and beverages, primary, mainly for industry
	121*	Food and beverages, processed, mainly for industry
	21*	Industrial supplies not elsewhere specified, primary
	22*	Industrial supplies not elsewhere specified, processed
	31*	Fuels and lubricants, primary
	322*	Fuels and lubricants, processed (other than motor spirit)
	42*	Parts and accessories of capital goods (except transport equipment)
	53*	Parts and accessories of transport equipment
Consumption goods		
	112*	Food and beverages, primary, mainly for household consumption
	122*	Food and beverages, processed, mainly for household consumption
	522*	Transport equipment, non industrial
	61*	Consumer goods not elsewhere specified, durable
	62*	Consumer goods not elsewhere specified, semi-durable
	63*	Consumer goods not elsewhere specified, non-durable
Other		
	321*	Motor spirit
	51*	Passenger motor cars
	7*	Goods not elsewhere specified

Source: United Nations Statistics Division

Table 7: Product Type Aggregation

(a)

HS2-Sector		OLS coefficient*		
		1995	2000	2007
97	Works of art, antiques	0,386	0,397	0,699
50	Silk	0,367	0,513	0,640
65	Headgear and parts		0,232	0,547
61	Apparel, knit/crochet	0,426	0,296	0,472
62	Apparel, not knit/crochet	0,499	0,353	0,464
21	Misc. Edible prep.	0,538	0,436	0,454
49	Printed books etc.	0,429	0,394	0,440
88	Aircraft, spacecraft	0,307	0,608	0,436
42	Articles of leather etc.	0,515	0,205	0,425
94	Furniture etc.	0,422	0,326	0,424
78	Lead and articles			0,423
85	Electricals/electronics	0,361	0,351	0,415
51	Wool etc.	0,276	0,285	0,405
02	Meat and edible meat		0,291	0,401
83	Articles of base metal	0,358	0,289	0,378
05	Prod. of animal origin	0,318	0,207	0,377
95	Toys, games, sports	0,417	0,304	0,375
33	Perfumes, cosmetics	0,444	0,323	0,373
60	Fabric knit of crochet	0,296	0,294	0,368
90	Optical, photo, medical	0,235	0,305	0,365
58	Fabrics special, tapestry	0,445	0,277	0,361
06	Live trees, plants	0,318	0,366	0,353
56	Wadding, felt, yarns etc.	0,279	0,266	0,349
57	Carpets etc.	0,242	0,163	0,348
19	Cerela, flour, milk prod.	0,366	0,344	0,342
80	Tin and articles			0,341
73	Articles of iron and steel	0,244	0,262	0,335
66	Umbrellas, sticks etc.			0,330
71	Precious stones etc.	0,326	0,261	0,327
16	Meat and fish prep. nes	0,316	0,340	0,325
70	Glass and glassware	0,295	0,217	0,317
91	Clocks and watches	0,326	0,130	0,313
52	Cotton	0,441	0,345	0,312
89	Ships, boats etc.	0,520	0,433	0,308
59	Fabric impregnated etc.	0,365	0,247	0,306
96	Misc. Manuf. Articles	0,323	0,262	0,306
32	Tanning, pigments etc.	0,286	0,248	0,303
82	Cutlery, tools etc.	0,217	0,182	0,300
13	Reisings, gums etc. nes		0,225	0,300
84	Machinery, reactors	0,224	0,250	0,296
54	Manmade filaments	0,289	0,216	0,290

(continued)

*Regressions by sector at country/HS6-product level;
all show n coefficients are significant at 1% level w ith robust s.e.

Source: BACI data

Table 8: China's Exports-Imports Correlations by Sector (a)

(b)

HS2-Sector		OLS coefficient* 1995	2000	2007
	(continued)			
92	Musical inst. and parts	0,190	0,289	0,290
81	Other base metals		0,245	0,289
38	Misc. Chemical prod.	0,175	0,244	0,288
75	Nickel and articles	0,290	0,195	0,284
28	Inorganic chemicals etc.	0,208	0,192	0,284
76	Aluminium and articles	0,339	0,366	0,283
35	Glues, enzymes etc.	0,367	0,224	0,274
03	Fish, molluscs etc.	0,262	0,309	0,273
34	Soaps, lubricants atc.	0,269	0,193	0,269
41	Raw hides, leather	0,478	0,282	0,264
64	Footwear	0,293	0,281	0,256
27	Mineral fuel, oils etc.	0,351	0,266	0,251
55	Manmade staple fibers	0,262	0,232	0,249
69	Ceramic products		0,106	0,243
39	Plastics and articles	0,229	0,172	0,236
43	Furskins and artificial fur	0,258	0,278	0,235
09	Coffee, tea			0,231
53	Vegetable textile fibres	0,502	0,332	0,228
17	Sugars	0,365	0,276	0,221
63	Other textile articles	0,481	0,234	0,220
37	Photo Cinema goods	0,391	0,361	0,216
68	Stone, cement etc.	0,290	0,205	0,208
18	Cocoa			0,202
74	Copper and articles	0,369	0,238	0,200
23	Wastes of food industry	0,345		0,198
48	Paper	0,205	0,163	0,184
87	Vehicles	0,213	0,133	0,178
40	Rubber	0,242	0,187	0,149
29	Organic chemicals	0,108	0,110	0,147
72	Iron and steel	0,166	0,103	0,146
15	Fats and oils	0,249		0,144
08	Edible fruits	0,187	0,139	0,144
22	Beverages, spirits	0,322	0,288	0,136
25	Salt etc.	0,182	0,090	0,132
30	Pharmaceutics	0,229	0,134	0,116
44	Wood and articles	0,126		0,112
47	Pulp of wood etc.			-0,148
45	Cork and articles		0,247	
12	Oil seed etc. nes	0,296	0,229	
79	Zinc and articles		0,176	
	(continued)			

*Regressions by sector at country/HS6-product level;
all show n coefficients are significant at 1% level w ith robust s.e.

Source: BACI data

Table 8: China's Exports-Imports Correlations by Sector (b)

(c)

HS2-Sector		OLS coefficient*		
		1995	2000	2007
	(continued)			
67	Feathers, human air etc.		0,172	
07	Edible roots and tubers	0,390		
20	Veg., fruit, nut prep.	0,296		
11	Milling prod. Etc.	0,201		
	N coefficients	71	73	78
	Min N HS6-countries	55	78	51
	Max N HS6-countries	5629	7774	11713

*Regressions by sector at country/HS6-product level;
all show n coefficients are significant at 1% level w ith robust s.e.

Source: BACI data

Table 8: China's Exports-Imports Correlations by Sector (c)

(a)

Country		OLS coefficient*		
		1995	2000	2007
344	Hong Kong	0,474	0,509	0,525
446	Macao	0,353	0,435	0,520
348	Hungary		0,159	0,396
410	South Korea	0,159	0,217	0,330
702	Singapore	0,209	0,214	0,295
788	Tunisia			0,295
484	Mexico	-0,165	0,124	0,266
381	Italy		0,060	0,265
764	Thailand	0,118	0,178	0,262
842	USA	0,065	0,128	0,261
458	Malaysia	0,158	0,194	0,242
699	India	0,162	0,168	0,218
276	Germany		0,088	0,212
203	Czech Rep.			0,211
703	Slovakia			0,202
757	Switzerland		0,054	0,199
372	Ireland		0,195	0,193
251	France	-0,094	0,046	0,190
705	Slovenia			0,186
616	Poland			0,182
392	Japan		0,041	0,179
826	United Kingdom		0,052	0,173
608	Philippines		0,097	0,171
50	Bangladesh			0,169
233	Estonia			0,168
208	Denmark			0,166
528	Netherlands			0,163
376	Israel			0,159
246	Finland			0,146
704	Viet Nam		0,095	0,141
124	Canada			0,139
642	Romania			0,129
792	Turky			0,126
360	Indonesia	0,096	0,092	0,123
724	Spain			0,117
579	Norway			0,101
40	Austria	-0,093		0,100
752	Sweden			0,097
76	Brazil			0,087
36	Australia			0,086
58	Belgium-Lux.			0,081

(continued)

*Regresions by country at HS6-product level;
all show n coefficients are significant at 1% level w ith robust s.e.

Source: BACI data

Table 9: China's Exports-Imports Correlations by Country (a)

(b)

	Country	OLS coefficient* 1995	2000	2007
	(continued)			
818	Egypt		-0,221	-0,125
643	Russia		-0,066	-0,137
32	Argentina			-0,149
682	Saudi Arabia	-0,180	-0,170	-0,149
152	Chile		-0,191	-0,163
398	Kazakistan			-0,208
364	Iran			-0,232
586	Pakistan			-0,240
400	Jordan			-0,351
408	North Korea	0,154	0,267	
784	United Arab Emirates		-0,199	
	N coefficients	14	26	50
	Min N HS6-products	118	83	79
	Max N HS6-products	4205	4219	3895

*Regresions by country at HS6-product level;
all show n coefficients are significant at 1% level w ith robust s.e.

Source: BACI data

Table 9: China's Exports-Imports Correlations by Country (b)

(a) 2007

2007 – China's partners trading more than 1000 HS6-products				
	country	N exp goods	N imp goods	N exp-imp goods
842	USA	4158	4198	3895
392	Japan	4085	4033	3768
344	Hong Kong	4111	3839	3665
410	Korea	4111	3734	3574
276	Germany	3843	3740	3388
381	Italy	3729	3376	3097
826	United Kingdom	3805	3316	3043
251	France	3643	3362	2969
702	Singapore	3920	2814	2660
764	Thailand	3963	2704	2559
458	Malaysia	4219	2571	2448
528	Netherlands	3518	2721	2385
36	Australia	3760	2648	2363
124	Canada	3869	2546	2321
724	Spain	3559	2539	2296
699	India	3875	2482	2274
58	Belgium-Lux.	3372	2485	2108
360	Indonesia	3992	2259	2058
757	Switzerland	2657	2437	1880
752	Sweden	2773	2046	1651
40	Austria	2830	1982	1618
208	Denmark	2805	1840	1521
704	Viet Nam	3942	1536	1401
792	Turkey	3410	1334	1213
608	Philippines	3727	1310	1181
246	Finland	2701	1430	1167
616	Poland	3235	1284	1156
484	Mexico	3425	1263	1132
76	Brazil	3242	1357	1125
643	Russia	3539	1294	1076
203	Czech Rep.	2966	1214	1067
446	Macao	2606	1117	1024
554	New Zealand	3268	1195	1002
total	33 countries	116658	78006	70085

Source: BACI data

Table 10: China's top trading partners by number of goods (2007)

(b) 2000

2000 – China's partners trading more than 1000 HS6-products				
	country	N exp goods	N imp goods	N exp-imp goods
344	Hong Kong	4435	4464	4219
392	Japan	4166	4359	3837
842	USA	4103	4389	3775
410	Korea	4036	3972	3501
276	Germany	3451	3931	3010
702	Singapore	3725	3159	2732
826	United Kingdom	3325	3438	2618
381	Italy	3179	3383	2570
251	France	3083	3453	2460
36	Australia	3476	2850	2250
764	Thailand	3504	2535	2139
458	Malaysia	3605	2422	2103
124	Canada	3490	2405	1953
360	Indonesia	3627	2141	1808
528	Netherlands	2888	2537	1752
724	Spain	2813	2225	1605
58	Belgium-Lux.	2624	2274	1487
757	Switzerland	2074	2376	1316
699	India	2943	1666	1273
752	Sweden	1980	2136	1245
40	Austria	2060	1742	1073
208	Denmark	1948	1740	1065
608	Philippines	3127	1263	1058
446	Macao	2325	1272	1011
total	24 countries	75987	66132	51860

Source: BACI data

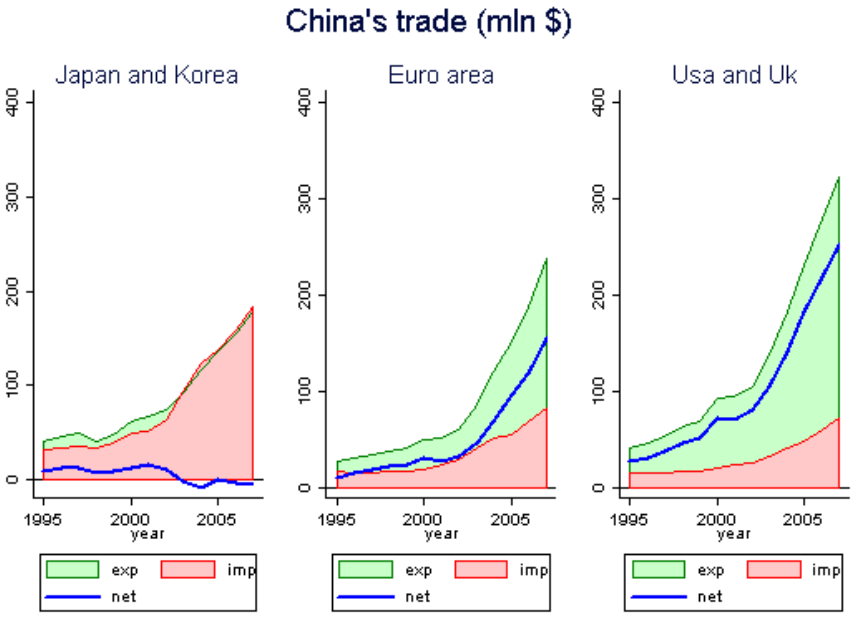
Table 10: China's top trading partners by number of goods (2000)

(c) 1995

1995 – China's partners trading more than 1000 HS6-products				
	country	N exp goods	N imp goods	N exp-imp goods
344	Hong Kong	4416	4549	4205
392	Japan	4077	4342	3692
842	USA	3805	4187	3346
410	Korea	3565	3812	2983
702	Singapore	3570	3058	2527
276	Germany	3156	3358	2337
826	United Kingdom	2771	2911	1859
381	Italy	2728	2823	1831
251	France	2756	2559	1645
458	Malaysia	3285	2035	1645
764	Thailand	3079	2095	1620
36	Australia	3051	2318	1606
446	Macao	2314	1766	1310
124	Canada	2926	1935	1291
528	Netherlands	2413	1854	1085
360	Indonesia	2959	1454	1037
total	16 countries	50871	45056	34019

Source: BACI data

Table 10: China's top trading partners by number of goods (1995)



Source: BACI data

Figure 14: China's Trade with some Countries

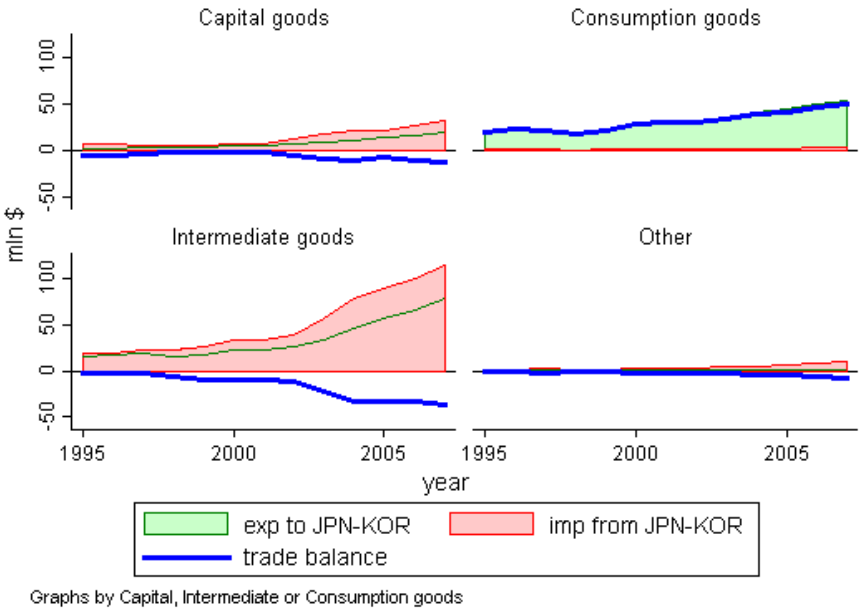


Figure 15: China's Trade by Product Type with Japan and Korea

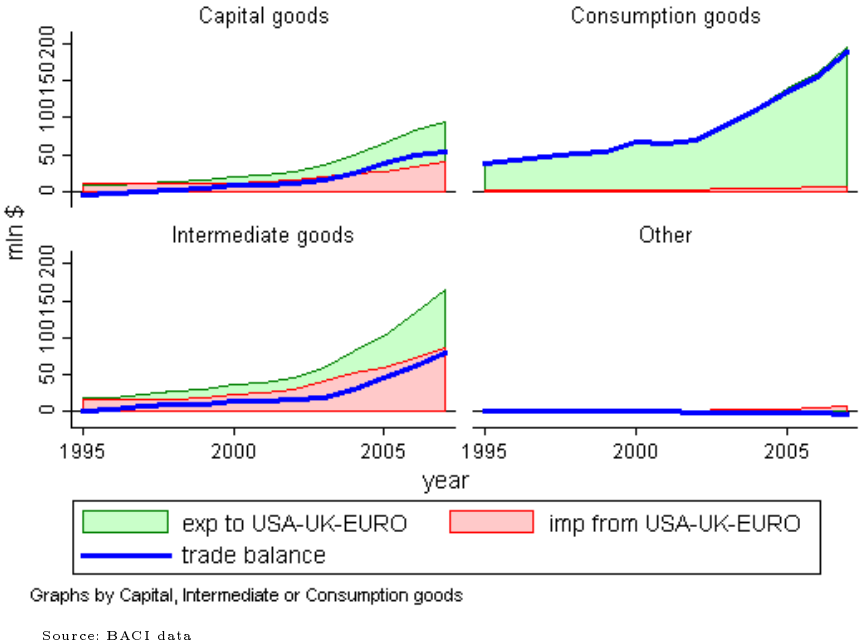


Figure 16: China's Trade by Product Type with USA, UK and Euro Area

EXPORT PRICES

log(r)	consum.	capital	interm.	Mach/Electr. (84-85)	TextileShoes (50-67)	ChemAllied (28-38)	Misc (90-97)
log(GDPpc)	0.151***	0.148***	0.091***	0.132***	0.176***	0.072***	0.146***
	(0,0205)	(0,0196)	(0,0183)	(0,0207)	(0,0255)	(0,0229)	(0,0238)
China 95-99	0.016	-0.253***	0.202***	-0.245***	0.139***	0.238***	-0.452***
	(0,0407)	(0,0434)	(0,0389)	(0,0451)	(0,0478)	(0,0511)	(0,0456)
China 00-03	-0.274***	-0.447***	-0.132***	-0.521***	-0.143***	-0.132**	-0.696***
	(0,0389)	(0,0468))	(0,0374)	(0,0466)	(0,0446)	(0,0499)	(0.0565)
China 04-07	-0.331***	-0.231***	-0.348***	-0.374***	-0.177***	-0.375***	-0.787***
	(0,0322)	(0,0346)	(0,0307)	(0,0352)	(0,0397)	(0,0409)	(0,0403)
constant	-0.967***	-1.024***	-0.373**	-0.831***	-1.213***	-0.229	-0.763***
	(0,1631)	(0,1619)	(0,1476)	(0,1699)	(0,2034)	(0,1863)	(0,1877)
R2	0.158	0.275	0.174	0.274	0.143	0.146	0.266
product-year f.e.	yes	yes	yes	yes	yes	yes	yes
countries	179	179	179	179	179	179	179
products	1181	613	2941	714	857	732	376
years	95-07	95-07	95-07	95-07	95-07	95-07	95-07
N	1375057	684654	2725610	835775	893506	586268	378722

IMPORT PRICES

log(r)	consum.	capital	interm.	Mach/Electr. (84-85)	TextileShoes (50-67)	ChemAllied (28-38)	Misc (90-97)
log(GDPpc)	0.114***	0.096***	0.414***	0.091***	0.113***	0.029**	0.139***
	(0,0135)	(0,0141)	(0,0107)	(0,0135)	(0,0150)	(0,0127)	(0,0186)
China 95-99	0.361***	0.575***	0.518***	0.533***	0.273***	0.439***	0.701***
	(0,0329)	(0,0338)	(0,0242)	(0,0315)	(0,0329)	(0,0343)	(0,0454)
China 00-03	0.113***	0.621***	0.168***	0.448***	-0.111***	0.245***	0.499***
	(0,0323)	(0,0347)	(0,0248)	(0,0328)	(0,0322)	(0,0332)	(0,0527)
China 04-07	0.207***	0.379***	0.048**	0.308***	0.122***	0.107***	0.401***
	(0,0251)	(0,0262)	(0,0205)	(0,0231)	(0,0268)	(0,0258)	(0,0362)
constant	-0.764***	-0.405***	0.0321	-0.332***	-0.750***	-0.047	-0.759***
	(0,1147)	(0,1195)	(0,0874)	(0,1131)	(0,1265)	(0,108)	(0,1593)
R2	0.187	0.401	0.255	0.424	0.155	0.199	0.367
product-year f.e.	yes	yes	yes	yes	yes	yes	yes
countries	179	179	179	179	179	179	179
products	1181	613	2940	714	857	732	375
years	95-07	95-07	95-07	95-07	95-07	95-07	95-07
N	1316401	680582	2630762	836686	856059	577931	378437

Robust s.e. adjusted for country clustering in parentheses; significance *0,1 **0,05 ***0,01

Source: BACI and World Bank data

Table 11: Import and Export Prices by Product Class and Main Sectors

MIDDLE-END SEGMENT						
expy	all	all	all	consum.	capital	interm.
GDPpc	0.183 ***	0.203 ***	0.151 ***	0.190 ***	0.014	0.141 ***
	(0.0223)	(0.0311)	(0.0326)	(0.0406)	(0.0299)	(0.0403)
GDP	0.083 ***		0.093 ***	0.060 ***	0.094 ***	0.116 ***
	(0.0135)		(0.0151)	(0.0156)	(0.0183)	(0.0220)
EDU		-0.009	0.034	-0.137 **	-0.014	0.138
		(0,0768)	(0.0716)	(0.0674)	(0.0616)	(0.0902)
impy	0.308 ***	0.679 ***	0.346 ***			
	(0.0900)	(0.0919)	(0.0960)			
impy_consumption				0.271 **	0.121	0.197 **
				(0.1231)	(0.0839)	(0.0844)
impy_capital				0.056	0.265 ***	0.037
				(0.0470)	(0.0895)	(0.0613)
impy_intermediate				0.109	0.105	0.085
				(0.1019)	(0.1307)	(0.1439)
impy_other				-0.009	-0.013	-0.013
				(0.0186)	(0.0256)	(0.0220)
China 95-99	-0.018	0.365 ***	-0.069	0.116	-0.305 ***	0.041
	(0.0716)	(0.0531)	(0.0823)	(0.0865)	(0.0955)	(0.1103)
China 00-03	-0.036	0.336 ***	-0.121	0.175 *	0.073	-0.173
	(0.0740)	(0.0451)	(0.0833)	(0.0900)	(0.0987)	(0.1151)
China 04-07	0.078	0.343 ***	0.031	0.346 ***	-0.060	-0.152
	(0.0692)	(0.0572)	(0.0765)	(0.0827)	(0.0991)	(0.0947)
Constant	1.768 ***	0.632	1.331 **	1.764 **	1.467 *	0.758
	(0.5929)	(0.6198)	(0.5802)	(0.8764)	(0.7891)	(0.8836)
R2	0.52	0.52	0.57	0.45	0.33	0.53
R2 adjusted	0.52	0.51	0.57	0.44	0.32	0.52
year f.e.	yes	yes	yes	yes	yes	yes
years	95-07	95-07	95-07	95-07	95-07	95-07
countries	179	179	179	179	179	179
N	2266	1615	1615	1615	1615	1615

Variables in logs; robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 12: Export Sophistication Regressions: Middle-End Segment

HIGH-END SEGMENT (r>1.25)						
expy	all	all	all	consum.	capital	interm.
GDPpc	0.315 ***	0.280 ***	0.260 ***	0.280 ***	0.092 ***	0.176 *
	(0.0449)	(0.0616)	(0.0736)	(0.0528)	(0.0294)	(0.0929)
GDP	0.014		0.021	0.045 **	0.026 **	0.016
	(0.0245)		(0.0256)	(0.0218)	(0.0118)	(0.0351)
EDU		0.169	0.174	-0.293 ***	-0.028	0.441 ***
		(0.1297)	(0.1316)	(0.0974)	(0.0641)	(0.1636)
impy	0.194	0.294 **	0.303 **			
	(0.1219)	(0.1309)	(0.1337)			
impy_consumption				0.184 **	-0.097 *	0.289 **
				(0.0897)	(0.0555)	(0.1217)
impy_capital				0.144	0.283 ***	0.058
				(0.0922)	(0.0706)	(0.0835)
impy_intermediate				0.318 ***	0.354 ***	0.155
				(0.1162)	(0.0882)	(0.1853)
impy_other				-0.011	0.011	-0.016
				(0.0109)	(0.0087)	(0.0174)
China 95-99	0.398 **	0.351 ***	0.238	-0.544 ***	-1.051 ***	0.687 ***
	(0.1705)	(0.1121)	(0.1947)	(0.1598)	(0.0984)	(0.2550)
China 00-03	0.431 **	0.416 ***	0.298	-0.640 ***	-0.780 ***	0.694 ***
	(0.1733)	(0.1129)	(0.1965)	(0.1509)	(0.0840)	(0.2468)
China 04-07	-0.852 ***	-0.978 ***	-1.091 ***	-1.922 ***	-1.810 ***	-1.257 ***
	(0.1680)	(0.1074)	(0.1836)	(0.1721)	(0.1097)	(0.2601)
Constant	2.898 ***	2.019 *	1.590	0.182	2.550 ***	-0.303
	(1.0582)	(1.0286)	(1.1962)	(1.0769)	(0.6833)	(1.6445)
R2	0.28	0.32	0.33	0.40	0.30	0.31
R2 adjusted	0.28	0.32	0.32	0.40	0.29	0.30
year f.e.	yes	yes	yes	yes	yes	yes
years	95-07	95-07	95-07	95-07	95-07	95-07
countries	179	179	179	179	179	179
N	2266	1615	1615	1601	1600	1601

Variables in logs; robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 13: Export Sophistication Regressions: High-End Segment (alternative)

LOW-END SEGMENT (r<1/1.25)						
expy	all	all	all	consum.	capital	interm.
GDPpc	0.106 **	0.017	-0.079	-0.032	-0.084 *	-0.008
	(0.0478)	(0.0564)	(0.0643)	(0.0639)	(0.0495)	(0.0843)
GDP	0.108 ***		0.111 ***	0.153 ***	0.072 ***	0.105 ***
	(0.0306)		(0.0316)	(0.0363)	(0.0271)	(0.0392)
EDU		0.517 ***	0.535 ***	0.216 *	0.288 ***	0.757 ***
		(0.1199)	(0.1182)	(0.1216)	(0.0856)	(0.1512)
impy	0.273 **	0.280 **	0.290 **			
	(0.1123)	(0.1096)	(0.1195)			
impy_consumption				0.274 ***	0.299 ***	0.200 **
				(0.0951)	(0.0799)	(0.0981)
impy_capital				0.042	0.226 ***	0.092
				(0.0625)	(0.0673)	(0.0732)
impy_intermediate				0.485 ***	0.137	0.026
				(0.0919)	(0.0946)	(0.1529)
impy_other				0.037 **	0.015	-0.004
				(0.0157)	(0.0150)	(0.0192)
China 95-99	1.158 ***	1.442 ***	0.883 ***	0.438 **	0.842 ***	1.176 ***
	(0.1839)	(0.1006)	(0.1931)	(0.1997)	(0.1721)	(0.2281)
China 00-03	0.965 ***	1.375 ***	0.786 ***	0.449 **	0.944 ***	0.863 ***
	(0.1780)	(0.1073)	(0.1908)	(0.1897)	(0.1713)	(0.2421)
China 04-07	1.344 ***	1.618 ***	1.059 ***	-0.043	0.736 ***	1.707 ***
	(0.1814)	(0.1324)	(0.2004)	(0.2340)	(0.2281)	(0.3000)
Constant	1.350	2.429 **	0.429	-3.524 ***	0.241	-1.303
	(1.1822)	(1.0318)	(1.2915)	(1.0780)	(0.9747)	(1.5024)
R2	0.12	0.15	0.20	0.25	0.23	0.22
R2 adjusted	0.12	0.14	0.19	0.24	0.22	0.21
year f.e.	yes	yes	yes	yes	yes	yes
years	95-07	95-07	95-07	95-07	95-07	95-07
countries	179	179	179	179	179	179
N	2266	1615	1615	1592	1586	1593

Variables in logs; robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 14: Export Sophistication Regressions: Low-End Segment (alternative)

MIDDLE-END SEGMENT (1/1.25≤r≤1.25)						
expy	all	all	all	consum.	capital	interm.
GDPpc	0.197 ***	0.232 ***	0.161 ***	0.162 ***	-0.050	0.265 ***
	(0.0251)	(0.0402)	(0.0418)	(0.0547)	(0.0525)	(0.0346)
GDP	0.099 ***		0.113 ***	0.087 ***	0.160 ***	0.040 **
	(0.0146)		(0.0180)	(0.0234)	(0.0410)	(0.0174)
EDU		-0.003	0.047	-0.002	0.014	0.181 **
		(0.0912)	(0.0849)	(0.0882)	(0.1096)	(0.0767)
impy	0.242 ***	0.549 ***	0.245 ***			
	(0.0742)	(0.0970)	(0.0826)			
impy_consumption				0.152	0.140 *	0.039
				(0.1358)	(0.0774)	(0.0504)
impy_capital				0.051	0.354 ***	-0.067 **
				(0.0578)	(0.0785)	(0.0258)
impy_intermediate				0.176	0.113	0.013
				(0.1196)	(0.1186)	(0.0723)
impy_other				0.010	-0.005	0.004
				(0.0097)	(0.0162)	(0.0067)
China 95-99	-0.117	0.341 ***	-0.199 **	-0.073	-0.614 ***	0.475 ***
	(0.0809)	(0.0606)	(0.0998)	(0.1255)	(0.2242)	(0.1024)
China 00-03	0.053	0.510 ***	-0.051	0.216	-0.025	0.499 ***
	(0.0822)	(0.0563)	(0.1039)	(0.1304)	(0.1902)	(0.1044)
China 04-07	0.144 *	0.556 ***	0.135	0.453 ***	-0.224	-0.296 ***
	(0.0747)	(0.0742)	(0.0873)	(0.1154)	(0.1943)	(0.0932)
Constant	1.828 ***	1.434 **	1.569 ***	1.010	-0.880	4.997 ***
	(0.5066)	(0.6936)	(0.5517)	(0.9856)	(0.9866)	(0.4695)
R2	0.39	0.38	0.42	0.33	0.22	0.59
R2 adjusted	0.39	0.37	0.42	0.32	0.21	0.58
year f.e.	yes	yes	yes	yes	yes	yes
years	95-07	95-07	95-07	95-07	95-07	95-07
countries	179	179	179	179	179	179
N	2247	1608	1608	1591	1589	1591

Variables in logs; robust s.e. adjusted for country clustering in parentheses; significance *0.1 **0.05 ***0.01

Source: BACI and World Bank data

Table 15: Export Sophistication Regressions: Middle-End Segment (alternative)