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Scanning the Ups and Downs of China's Trade Imbalances

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SCANNING THE UPS AND DOWNS OF CHINA'S TRADE IMBALANCES

Françoise Lemoine & Deniz Ünal

NON-TECHNICAL SUMMARY

During the second half of the 2000s, China played a major part in the rise of global imbalances. The country accumulated huge current account surpluses derived mainly from its trade with the US and with the EU. Since 2007, international trade has slowed down and the scale of global imbalances has been reduced. This paper analyses the evolution of China's foreign trade before the global crisis and afterwards. The analysis emphasizes the role of the different customs regimes. China's processing trade and ordinary trade have evolved differently and the distinction is helpful to understand the rise and fall of its trade imbalances.

Since the global crisis erupted in 2007, China has considerably reduced its trade surplus. China's exports have slowed down, its imports have rebounded rapidly, and the deterioration of its terms of trade has accelerated the trade rebalancing. The crisis has put an end to export-led growth in China, but its presence in world markets has continued to increase.

Bilateral trade imbalances have remained large. On the one hand, China's surpluses with Europe and the U.S. have hardly diminished. On the other hand, its deficits have deepened with countries in Asia, in the Middle East and in Africa. China's structural deficits with Asia derive from processing trade, as China imports components from its neighbors for assembly and re-export. Moreover, Asian countries have also significantly increased their share in China's domestic market (*ordinary* imports). China's deficits with Africa and the Middle East have stemmed from its growing needs of imported energy and raw materials and from the rise in prices. For many emerging economies, exports to China have now become of paramount importance.

By contrast, the dependence of the US as well of the European economies on the Chinese market appears still very limited. While the US share in China's imports has shrunk dramatically, the EU has strengthened its position, especially in consumption goods, which have been the most dynamic sector of China's import demand in recent years. This reflects the purchasing power of the most affluent Chinese households. The evolution of private

consumption in this country will thus have an impact on its foreign trade balances. Over the past ten years investment has been the principal engine of China's growth. The transition to a new development model, based on mass consumption, is taking time and needs to be supported by far-reaching reforms of its economic and social system.

ABSTRACT

Since 2007 China has considerably reduced its external global imbalances. Its bilateral trade surpluses with the EU and the US have persisted because the rise of China's import demand has mainly benefited its Asian neighbors and the resource rich countries. The rapid growth of China's imports of consumption goods from advanced economies, especially from Europe, suggests that they would benefit from a reorientation of China's domestic demand towards household consumption.

JEL Classification: F2; F1; F15; F23; 053

Key Words: China; Growth model; FDI; Foreign trade; Domestic market



RADIOGRAPHIE DES HAUTS ET BAS DE LA BALANCE COMMERCIALE CHINOISE

Françoise Lemoine & Deniz Ünal

RÉSUMÉ NON TECHNIQUE

Dans la deuxième moitié des années 2000, la Chine a joué un rôle majeur dans la montée des déséquilibres mondiaux. Elle a accumulé des excédents courants massifs, provenant essentiellement de ses échanges avec les Etats-Unis et l'Union européenne. Depuis l'éclatement de la crise globale en 2007, le commerce international a ralenti et les déséquilibres globaux se sont réduits. Cette étude analyse l'évolution du commerce extérieur chinois avant et après la crise globale. Elle met l'accent sur le rôle des différents régimes douaniers. Le commerce de *processing* et le commerce *ordinaire* de la Chine ont évolué différemment et cette distinction aide à comprendre les hauts et les bas de la balance commerciale.

Depuis l'éclatement de la crise globale en 2007, la Chine a considérablement réduit son excédent commercial. Ses exportations se sont ralenties, ses importations ont rapidement rebondi, et la détérioration de ses termes de l'échange a accéléré le rééquilibrage commercial. Si la crise globale a mis fin en Chine à un régime de croissance tirée par l'exportation, sur les marchés mondiaux la présence chinoise s'est encore renforcée.

Les déséquilibres commerciaux bilatéraux demeurent importants. D'un côté, les excédents de la Chine sur l'Europe et les Etats-Unis n'ont guère diminué ; de l'autre, ses déficits se sont creusés avec les pays d'Asie, du Moyen-Orient et d'Afrique. Le déficit structurel chinois avec l'Asie découle du commerce de *processing*, où la Chine assemble pour la réexportation des composants importés de ses voisins ; cependant ces derniers ont aussi contribué à creuser ce déficit en augmentant leur place sur le marché intérieur chinois (importations *ordinaires*). Les déficits avec l'Afrique et le Moyen-Orient sont liés aux besoins croissants de la Chine en matières premières ainsi qu'à la hausse des cours. Pour nombre d'économies émergentes désormais, les exportations vers la Chine sont primordiales.

En revanche, la dépendance des Etats-Unis et de l'Europe à l'égard du marché chinois apparaît encore très faible (à l'exception du cas de l'Allemagne). Alors que les Etats-Unis ont vu s'effondrer leur part de marché, l'Union européenne a conservé de bonnes positions, notamment dans les biens de consommation qui ont constitué ces dernières années le secteur le plus dynamique de la demande chinoise d'importation. Ce dynamisme reflète celui de la demande des ménages chinois les plus aisés. L'évolution de la consommation des ménages dans ce pays aura donc des conséquences sur l'équilibre de son commerce extérieur. Au cours des dix dernières années, l'investissement a été le principal moteur de la croissance chinoise ; la transition engagée vers un nouveau mode de croissance, basé sur une consommation de masse, prendra du temps et nécessitera des réformes importantes du système économique et social.

RÉSUMÉ COURT

Depuis 2007, la Chine a considérablement réduit son excédent commercial global, mais ses déséquilibres bilatéraux avec l'Union européenne et les Etats-Unis sont restés massifs. Sa demande d'importation a bénéficié surtout à ses voisins asiatiques et aux pays riches en ressources naturelles. La croissance rapide des importations chinoises de biens de consommation en provenance des pays développés, en particulier d'Europe, suggère que ceux-ci pourraient tirer parti d'une réorientation de la demande intérieure chinoise vers la consommation des ménages.

Classification JEL : F2; F1; F15; F23; 053

Mots-clefs : Chine ; Modèle de croissance ; IDE ; Commerce extérieur ; Marché intérieur

SCANNING THE UPS AND DOWNS OF CHINA'S TRADE IMBALANCES

Françoise Lemoine & Deniz Ünal*

INTRODUCTION

China played a major part in the rise of global imbalances. In the mid-2000s, its current account surpluses soared while the US current deficit deepened and China-US bilateral trade relations have epitomized global imbalances. A lot of studies have been devoted to the analysis of these global and bilateral imbalances. This paper does not review the literature about the roots of their expansion and the ways of reducing them. Be it sufficient to mention that reducing global imbalances has been at the top of the G20 agenda. Its meeting in Paris in 2011 agreed on a procedure aimed at identifying the causes of such imbalances and at recommending corrective actions (Eichengreen 2011).

Since 2007, the global crisis has ended the global growth pattern which had been based on the strong demand in advanced economies and especially in the US. International trade has now slowed down and the scale of global imbalances has been reduced. The paper examines the evolution of China's global and bilateral trade flows before the global crisis and afterwards.

The paper intends to emphasize China's different foreign trade regimes. The distinction between the two main customs regimes, i.e. processing and ordinary trade is now a well-known feature of China's trade. It is one of the reasons why China is "so special" in its way of integrating with the world economy (Rodrik 2006; Amiti and Freund 2010; Poncet and Jarreau 2012). *Ordinary trade* encompasses exports mainly based on local inputs and imports aimed at domestic use; *processing trade* corresponds to the duty-free imports of goods to be assembled for re-export and the related exports. These trade flows have evolved differently and the distinction is helpful to understand the rise and fall of China's trade imbalances.

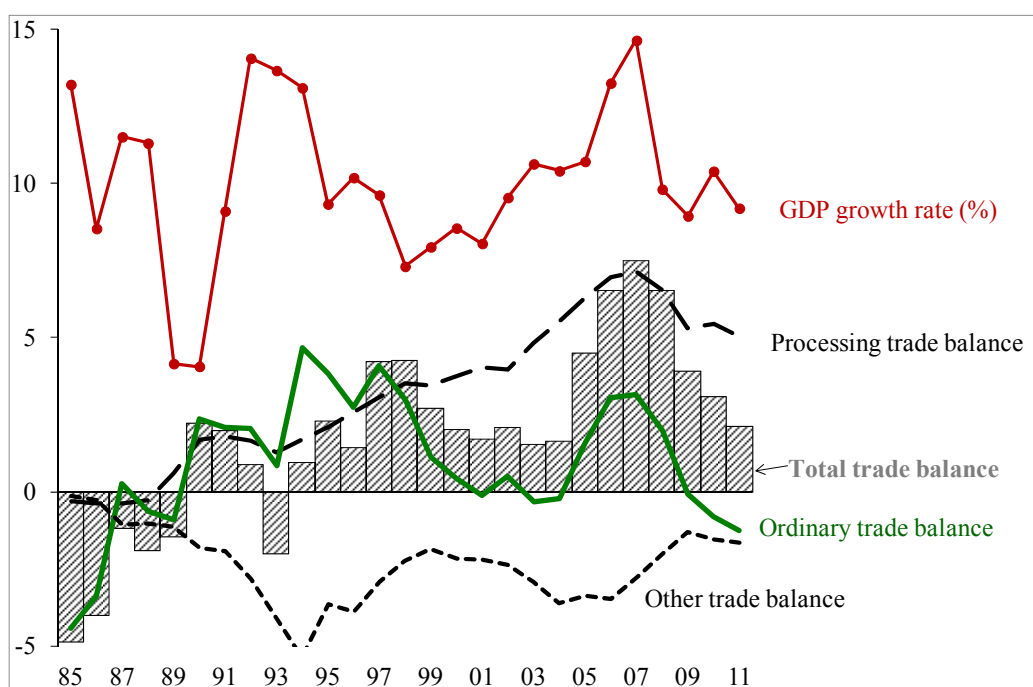
The paper is organized as follows. A first section sketches the evolution of China's foreign trade imbalances in a long term perspective (1981-2007); a second section analyzes the process and scope of foreign trade adjustment since 2007; a third; section examines the trade links between China and its partners, pointing out those who have taken advantage of China's import demand; the fourth section discusses the issue of domestic rebalancing towards household consumption.

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1. CHINA'S TRADE BALANCES IN A LONG TERM PERSPECTIVE (1985-2007)

From the early 1980s to 2007, China's foreign trade increased much faster than its domestic production and faster also than international trade. China's economy opened up, its foreign trade (exports and imports) rose from 15 percent of GDP in 1981 to 62 percent in 2007; its share in world trade increased from 1 percent to 8 percent.

Figure 1: China's trade balance (in percent of GDP)



Source: China Statistical Yearbooks and Customs Statistics.

When looking at China's trade imbalances in this long term perspective, it stands out that the surge of the trade surplus is a recent phenomenon that occurred between 2004 and 2007 (Figure 1). As underlined by Yu (2007), Huang and Tao (2010) and Yao (2011), up to the early 2000s, China's economic growth could be explained by the domestic reforms, and only its more recent and faster growth was mainly driven by exports. Two different periods are thus to be distinguished: from the early 1980s to the mid-2000s, and from 2004 to 2007.

1.1. A balanced foreign trade (1985-2003)

China's current balance is mainly determined by trade in goods, which makes up four fifths of its total trade. The two other components of the current account consist of trade in services, which show a deficit, and other current income which shows a surplus. From the early 1990s to the early 2000s, trade in goods displayed a surplus which remained relatively modest and

never exceeded 4% of GDP. During this period, China's balance of payment surpluses never exceeded 4 percent of GDP.

There are two major components in China's foreign trade, which contributed in different ways to the evolution of trade balances. First, ordinary trade balances fluctuated: deficits up to the end of the 1990s, then rising surpluses up to 1997, followed by a quasi equilibrium from 2001 to 2004. Second, processing trade displayed a steadily growing surplus. This was due partly to the rapid expansion of processing activities which had taken off in the late 1990s and culminated at 55 percent of total exports in 2004. This was also partly due to the increase in the local content of processed exports, which rose from 20 percent to 32 percent between 1992 and 2004. This rise of the local content can be explained by two phenomena: the building up of upstream production capacities in China (intermediate goods, parts & components) and the shift of processing activities from textile to electronics which incorporate more value-added. Finally "other trade regimes" corresponds, at the beginning of the period, mainly to imports of investment goods by foreign firm affiliates and, more recently, to *entrepot* trade.

1.2. Soaring trade surpluses (2004-2007)

From 2004 to 2007, China's current account surplus soared to exceptional levels, reaching 10 percent of GDP in 2007. China became a major player in global imbalances. The underlying factor was the foreign trade surplus which jumped from 2 percent of GDP to more than 7 percent. China's exchanges of services were in deficit and other current payments in surplus. What were the factors behind the ballooning trade surplus: domestic conditions or international environment? This has been a debated question. Some analysts have argued that the surge in the demand of the western economies had boosted imports of Chinese goods, while others have argued that China had developed excess production capacities which were exported abroad into global markets (Anderson 2009; Goldstein and Lardy 2009).

Analyzing the evolution of China's foreign trade along its different customs regimes helps to disentangle the effects of external and internal factors. In fact, the overall trade surplus surged under the combined effects of an outstanding expansion of processing trade surpluses and of the switch of ordinary trade from small deficits to large surpluses (Figure 1).

Foreign firms have set up export platforms in China which carry out the bulk of processing trade. From 2004 to 2007, its surplus soared, accounting for almost half the total increase in trade surplus. The expansion of processed exports during this period was mainly due to new firms entering the export markets thanks to low entry costs in processing trade (Upward *et alii*, 2010). They developed globalized production sites, weakly integrated into the domestic economy, but closely linked to the external demand of electronic products and to a lesser extent of textiles and wearing apparel. The local content of processed exports continued to increase (from 32 percent to 40 percent). While China's accession to WTO did not provide any new specific encouragement to processing activities, it did improve the investment climate and raised the confidence of foreign investors. In that sense WTO accession has

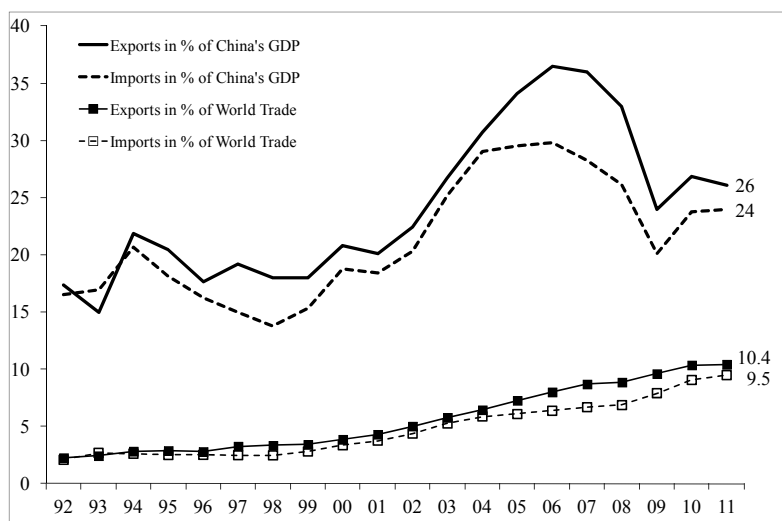
marked a turning point in China's foreign trade. As noted by Yao (2011), WTO allowed China to integrate into the world system and to take full advantage of its huge increase of labor force to develop its manufacturing industry.

China's "ordinary trade", which had recorded a small deficit in 2003 and 2004, reversed to a rapidly increasing surplus between 2004 and 2007. Chinese private firms were responsible for this new trend and they accounted for 42 percent of the total increase in trade surplus (Gaulier *et alii*, 2011). While the 'Textile' sector has remained the major source of surplus, two heavy industrial sectors, 'Machinery' and 'Basic Metals', China have switched from a position of net importer to that of a net exporter. In the steel industry this switch was clearly the result of government policies which encouraged domestic producers through various taxes and tariffs, providing them with access to large supply of low-priced materials and ensuring them large profit margins (Heiden, 2001).

In an accounting sense, both external demand and China's import-substitution policies thus contributed to the surge in trade imbalances. During this period, external demand became an engine of China's economy, adding between two and three percentage points to GDP growth which was propped up above 10 percent. Beyond this accounting viewpoint, the overall contribution of exports to China's economic growth is more difficult to assess. According to Yao (2011) the actual contribution of exports was even greater due to backward and forward links; but according to other experts, the actual importance of export-related activities for the economy is less than the export to GDP ratio suggests because processing activities have a relatively small local content (Dean *et alii* 2008; Hummels *et alii* 2001; Koopman and Wang 2008; Upward *et alii* 2010).

2. THE END OF THE EXPORT-LED GROWTH SINCE 2007

At the end of 2008, the global economy entered into recession and international trade collapsed; both began to recover in early 2009. However, only in the second quarter of 2011 did world exports attain the peak level they had three years before. The slump in international demand put an end to the Chinese export-led growth. The contribution of external demand to GDP growth disappeared. In autumn 2008, the government launched an ambitious package of measures to stimulate domestic demand. GDP growth which had slowed in late 2008 and early 2009, recovered in 2010 (10.3%) and remained strong in 2011 (above 9.2 percent).

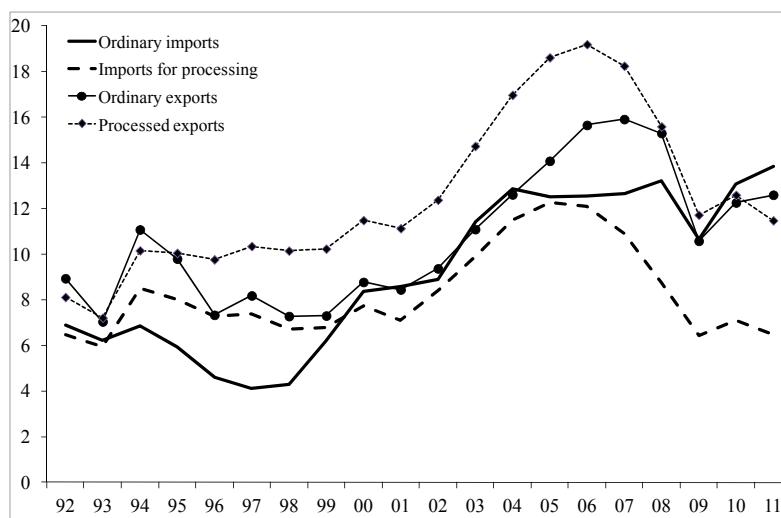
Figure 2: China's foreign trade in percent of China's GDP and of World Trade

Source: China Statistical Yearbooks and Customs Statistics; WTO.

China's current account surplus (in current dollars) shrunk in 2009 and has since remained below its 2008 level. Foreign trade accounted for most of the adjustment and its share declined from 7 percent of GDP in 2007 to 3 percent in 2010 and to 2 percent in 2011 (Figure 2). The impact of the global crisis on foreign trade was extremely severe. In 2009, both exports and imports declined in value terms, and although they rebounded in 2010 and 2011, their share in GDP plummeted: exports from 36 percent in 2006 to 26 percent in 2011 and imports from 30 percent to 24 percent. Foreign trade has come back to the relative importance it had for China's economy in 2003, before the rise of global imbalances.

2.1. A rapidly shrinking trade surplus

The shrinking of the overall trade surplus was due to the slowing down of processing activities that followed the collapse in international demand and to the shift of ordinary trade from a surplus to a deficit. This was the symmetric pattern of what happened when China's surplus soared from 2004 to 2007.

Figure 3: China's ordinary and processing trade in percent of GDP

Source: China Statistical Yearbooks and Customs Statistics.

Both ordinary and processed exports were hit by the global crisis (Figure 3). In a first phase, in 2008 and 2009, processing exports resisted better because of their integration in the international production networks, but in 2011, ordinary exports which are more oriented towards emerging markets outperformed processed exports (Gaulier *et alii*, 2011).

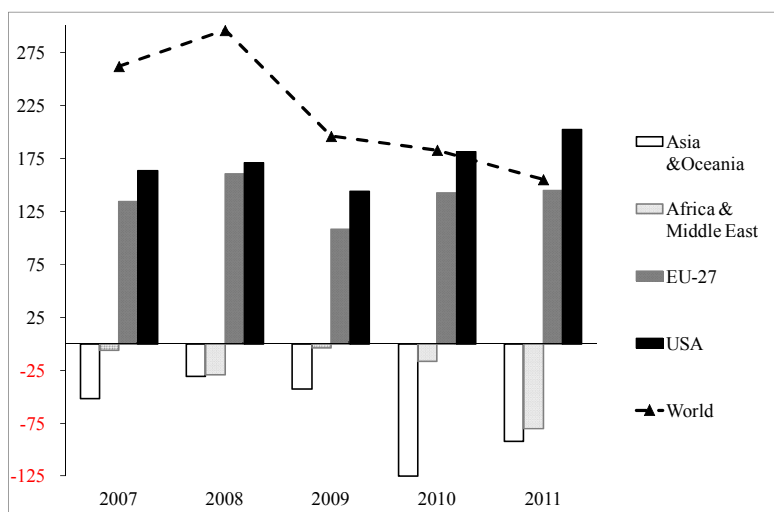
Imports for processing have been durably affected by the slump in international demand. By contrast, ordinary imports have recovered quickly since 2010. The strong domestic demand, together with rising costs of energy and commodities, has pushed up their share of GDP to 14 percent in 2011. As an indicator of economic openness, this is the highest ratio ever recorded in China and it is slightly above that of the US (where the ratio stands at 13 percent) or Japan (12 percent).

China's external rebalancing has been accelerated by terms of trade effects. Between 2007 and 2011, indeed China's imports increased in volume (+40 percent) faster than its exports (+34 percent), but moreover import prices also rose much faster (+30 percent) than export prices (+16 percent).

2.2. The resilience of bilateral trade imbalances

China's global trade surplus has been substantially reduced, but its bilateral trade imbalances have remained large (Figure 4). On the one hand, China's trade surplus with the US narrowed in 2009 but widened again in 2010 and in 2011 came back to its 2007 level. The surplus with the EU was almost stable, although it turned to a deficit with Germany, while the surpluses increased with almost all other EU countries (see Figure A1 in Appendix). On the other hand, China's deficits widened with Asian countries as well as with the Middle East and Africa.

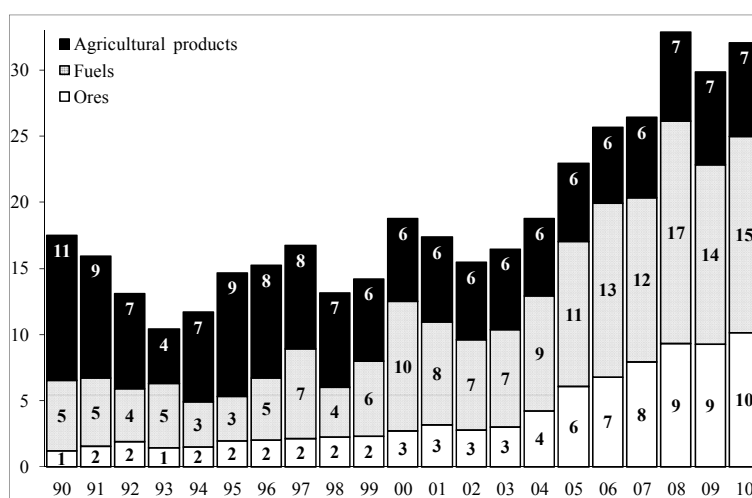
Figure 4: China's trade balances by main regions (US\$ bn)



Source: China's Customs Statistics.

China's structural trade deficits with Asia derive from the organization of industrial production in the region where China is an assembler of imported components from its neighbors. Moreover, Asian economies have also been successful in supplying China's domestic demand (see section 4 below). Deficits with Africa and the Middle-East have stemmed from China's growing needs of imported energy and raw materials together with their rise in price. The share of fuels and other raw materials increased from 26 percent of imports 2006 to 32 percent in 2010 (Figure 5). The geography of China's imports has changed in favor of developing economies.

Figure 5: Share of primary products in China's imports (%)



Source: CEPII, CHELEM-International trade database.

2.3. China's reliance on external demand

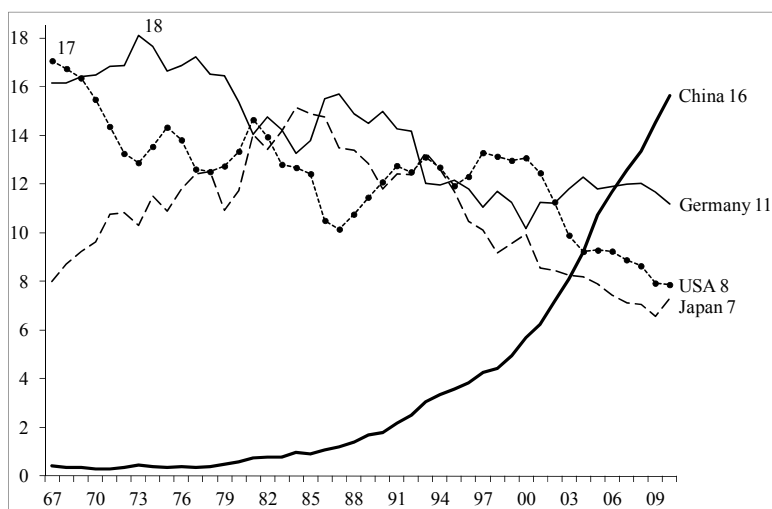
The reliance of China's economy on exports has diminished since 2007, but its dependence on advanced economy markets is still relatively high (Table 1). China has much stronger trade links with the Big Three (The US, the EU27 and Japan) than Brazil and India have. Although this dependence is diminishing steadily, 44 percent of China's global exports, or 11 percent of its GDP, was directed to these markets in 2011. A deterioration of the economic situation in the EU and the US would have a significant negative impact on China (IMF 2012). This seems to happen in early 2012. In the first quarter of this year, China's total exports decelerated markedly (+6.9% year on year, against 26.5% in first quarter 2011) and its exports to the EU dwindled (-1.8% year on year). This has contributed to weaken China's economic growth, down to 8.1% (year on year).

Moreover the effect of a faltering demand in OECD on China's exports may be amplified by a second adverse effect of a faltering demand in oil and raw material exporting countries due to slower commodity prices (World Bank 2012).

Table 1: Exports to major developed economies (2010)

	USA	Japan	EU27	Big Three
	In percent of each country exports			
Brazil	12	4	20	36
Russia	6	4	49	59
India	12	2	19	34
China	21	9	22	53
	In percent of each country's GDP			
Brazil	1	0	2	3
Russia	2	1	13	16
India	2	0	2	4
China	6	2	6	14

Source: CEPII, CHELEM- International trade-GDP databases.

Figure 6: Leading exporters of manufactured goods: share in world trade (%)

Source: CEPII, CHELEM-International trade database.

More generally, China's presence in world markets is already prominent and it may be difficult to further increase it. Since the global crisis erupted, China's trade has kept growing faster than international trade and its positions in world markets have continued to strengthen causing trade frictions. Its share in the value of world exports rose from 8.8 percent to 10.4 percent between 2007 and 2011 (see Figure 2 above). Considering trade in manufactured goods, the export performance of China is even more remarkable as its share reached 16 percent in 2010, which is close to that of leading exporters when they peaked (US in 1967, Germany in 1973, Japan in 1985, Figure 6). The question is thus now whether there is still room for a further increase in Chinese exports. The World Bank (2012) estimates that China's exports could encompass 20 percent of the global market in 2030. This share would be larger than that ever achieved by any major exporter in the past.

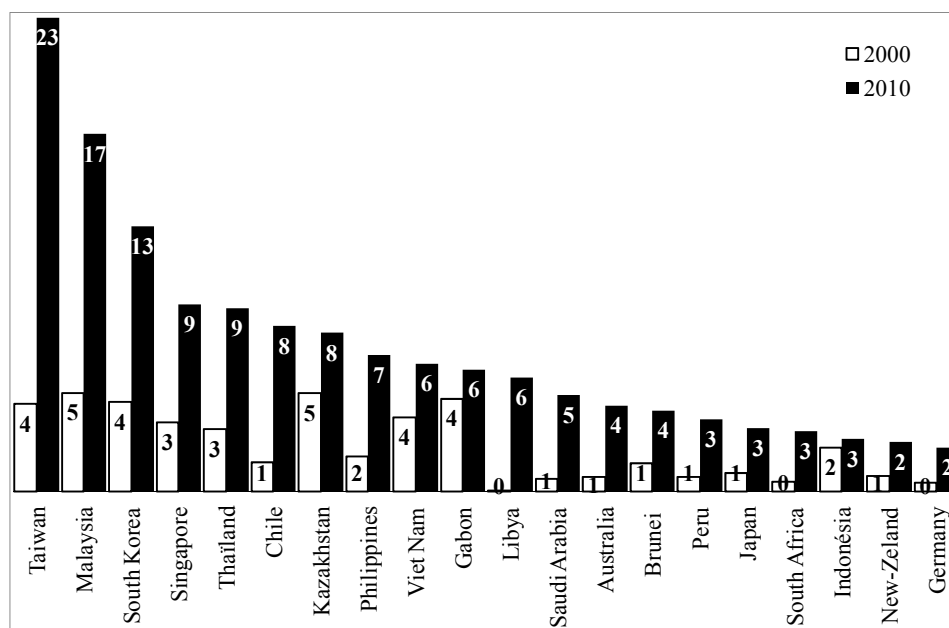
3. TRADE LINKS

3.1. The importance of China's demand for its partners

China has contributed more and more to global economic growth. From 2000 to 2010 it accounted for between 20 and 30 percent of the world GDP growth (depending on whether GDP is measured in current dollars or at Purchasing Power Parity). But beyond this mechanical impact, the question is whether China is the engine for economic growth in the rest of the world. The global crisis has exacerbated the anxiety in Western countries about the negative role of China's exports on domestic industries and employment (Autor *et alii* 2011). At the same time, the resilience of the Chinese economy has raised the expectation that it could stimulate world demand and help to pull the developed economies out of their current sluggishness.

The studies which have addressed this issue have concluded that China's demand has a positive impact mainly on Asian economies, although it cannot completely compensate for the effects of the global slowdown. China's demand is also positively affecting the commodity and energy producers, but the spillovers on advanced economies are relatively limited (World Bank 2011b; IMF 2011).

Figure 7: Exports to China as percent of each country's GDP



Source: CEPII, CHELEM-International trade-GDP databases.

Trade is the major channel through which China's growth has an impact on the rest of the world. China is an increasingly important source of world demand as it accounted for almost 10 percent of world imports in 2011 against 3.5 percent ten years ago. How the different countries take advantage of China's expanding demand can be guessed by looking at the importance of their exports to China. In Figure 7, countries are ranked according to the share of exports to China's in their GDP in 2010. It shows that in many Asian economies as well as many natural-resource rich countries, this share has increased tremendously over the past decade and reached significant levels.

In East Asian countries as a whole, but excluding Japan, exports to China accounted for 11 percent of GDP in 2010 (against 4 percent in 2000). This ratio was as high as 23 percent in Taiwan, 17 percent in Malaysia, 13 percent in South-Korea, and stands around 10 percent in Singapore and Thailand. China has considerably increased its importance in Asian countries' trade. In 2010 36% of Taiwan's exports went to China (against 9% in 2000); the proportion was up to 28% in the case of South-Korea (13% in 2000), to 19% in that of Malaysia (4% in 2000), to 22% in that of Philippines (3% in 2000), and 22% in the case of Japan (9% in 2000).

Electronic goods account for a large proportion of these trade flows (see Tables A1-A4 in Appendix).

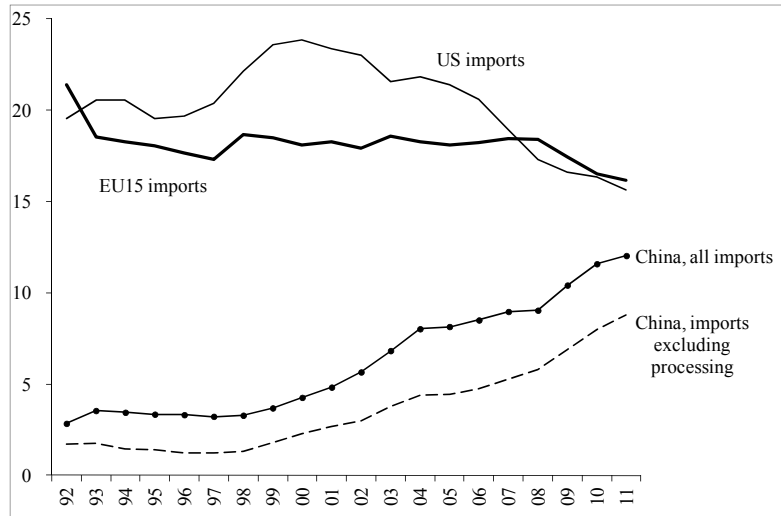
A number of economies in Central Asia (Kazakhstan), Latin America (Chile), Africa (Gabon) and Middle East (Libya, Saudi Arabia) have also reached significant levels of economic dependence on China's (exports to this country represented more than 5 percent of their GDP). China is the second oil importer in the world and has become a major driver in metal demand and prices with a share that has reached 41 percent of world metal demand against 5 percent in 1990. In 2010, one fourth of Chile's total exports and of Australia's exports was directed to China (against respectively 6% and 5% in 2000). The share of China in Kazakhstan exports reached 22%, and in Peruvian exports 18% (see Tables A5-A8 in Appendix for more details).

China has stimulated Asian growth through its demand of manufactured goods and Latin America's growth through its imports of raw materials.

By contrast, the dependence of Europe and of the US on China's demand is still low as exports to this market represented about 0.6 percent of their GDP, although this share is on the rise. Within the EU, only German exports to China have reached 2 percent of GDP. Although this market is becoming crucially important for some of the largest European corporations, it is still marginal at the macroeconomic level.

3.2. Composition of China's imports for the domestic market

According to the World Bank (2011b) China is on course to surpass the EU as the second largest importer. Indeed, in 2011, China accounted to 12 percent of world imports, while the share of the EU and that of the US had declined to 16 percent (Figure 8). However, in order to assess China's actual importance as a source of international demand, it is more appropriate to consider only its ordinary imports. Excluding imports for processing, China accounts for 9 percent of world imports in 2010-2011, and is still well behind the EU and the US, but the gap has been closing since 2007. The present contribution of China to international demand is only slightly smaller than its contribution to global production (9.2 percent of world GDP at current prices).

Figure 8: Major importers: share in world imports (excluding intra-EU trade, %)

Source: WTO and China's Customs Statistics, Authors calculations.

Since the end of the 1990s and excepting the period 2004-2007, China's imports for the domestic market have increased faster than its overall imports and also faster than international trade. This resulted from China's rapidly expanding domestic demand and from the reduction in tariff and non-tariff barriers associated with its WTO accession in 2001. Given their increasing importance, it is worth looking at the structural characteristics of these ordinary imports. Using a data set which covers the decade before the global crisis (1997-2007), the analysis shows quite clear-cut trends in their geographic orientation as well as in their sectoral composition.

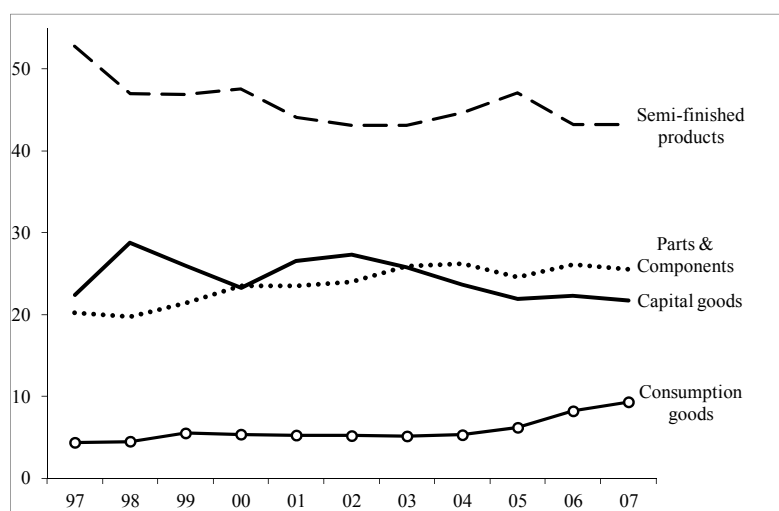
The most important change in the commodity composition was the increasing weight of primary products, which jumped from around 20 percent to 40 percent of total, so that the producers of energy and raw materials were the major winners of China's rapidly growing domestic demand (as shown by the increasing share of the "Rest of the world" in Table 2).

Table 2: Geographic origin of China's total ordinary imports (%)

	1997	2007
Advanced Asia	29	33
Japan	14	12
South-Korea	6	7
Taiwan	2	4
Kong-Kong	2	1
Developing Asia	8	9
Europe	20	18
Germany	7	7
France	3	2
Italy	2	1
UK	2	1
NAFTA	21	11
USA	17	8
Rest of the World	23	30
World	100	100

Source: Gaulier, Lemoine & Ünal (2011) from China's Customs Statistics.

Focusing on ordinary imports of manufactured goods, the analysis distinguishes four categories of products, according to their stage of production: consumption goods, investment goods, semi-finished products, parts & components (Figure 9). During this decade, semi-finished goods remained the most important product category (43 percent in 2007), although in decline. Parts & components were the most dynamic import category (reaching 26 percent) and thus overtaking Capital goods (22 percent); consumption goods imports increased fast, from a low level (from 4 percent to 9 percent), a trend which reflected the rising purchasing power of the most affluent Chinese households.

Figure 9: Composition of China's ordinary imports in manufactured goods (%)

Source: Gaulier, Lemoine & Ünal (2011) from China's Customs Statistics.

Table 3: China's ordinary imports of manufactured goods, by region of origin and stage of production

	Semi-Finished. Goods	Parts & Components	Consumption Goods	Capital Goods	All Stages
Breakdown in 2007 (%)					
Advanced Asia	19.3	12.8	2.7	9.5	44.3
Developing Asia	4.3	2.1	0.9	0.8	8.1
Europe	6.8	8.0	3.8	8.0	26.7
NAFTA	5.6	2.2	1.5	3.2	12.5
Others	7.3	0.4	0.5	0.2	8.4
World	43.3	25.6	9.3	21.8	100.0
Change 1997-2007 (point of %)					
Advanced Asia	+1.1	+5.7	+1.5	+3.8	+12.1
Developing Asia	-0.5	+1.9	+0.1	+0.7	+2.2
Europe	+1.3	+0.3	+2.6	-1.8	+2.3
NAFTA	-4.5	-2.4	+0.7	-2.7	-8.8
Others	-7.0	-0.3	+0.1	-0.5	-7.8
World	-9.6	+5.3	+5.0	-0.6	0.0

Source: Gaulier, Lemoine & Ünal (2011) from China's Customs Statistics.

Asian countries (mainly South-Korea and Taiwan) considerably strengthened their position in China's ordinary imports, from 37 percent in 1997 to 42 percent in 2007 (Table 2). Considering only imports of manufactured goods (Table 3), their performance was even more impressive, going from 38 percent to 52 percent. They gained in all categories of products but especially in P&C and capital goods, where they accounted for respectively 58% and 47% of China's imports in 2007. Asian countries are thus playing a crucial part in China's industrial production processes as well as in development and modernization of its production capacities. Asian suppliers had overtaken European suppliers in China's imports of capital goods for domestic use.

NAFTA's position in China's market was almost halved in ten years. North-American exporters lost ground in all categories of products except for consumption goods.

Europe has succeeded in keeping up with China's strong demand and consolidated its position in China's ordinary imports of manufactured goods (with a share rising from 24.4 to 26.7 percent). The European suppliers have got the advantage over the Asian suppliers in the fast rising consumption good imports. This indicates the strengths of European producers of high-end consumer goods. Germany was responsible for most of the EU advance in China's market, not only in capital goods but also in consumer goods (Gaulier *et alii* 2012). Since 2007, consumption goods have been China's fastest import category and the EU has continued to enlarge its market share.

Compared to other large emerging economies such as Brazil and Russia, which have a structure of imports where consumption goods occupy an important place, China's imports of consumption goods are still low. But this is progressively changing. According to the World Bank (2011b), the rebalancing of China's economy towards household consumption would have a significant positive impact of East Asian countries' trade balance with China's. This is all the more true in the case of Europe. China's transition to a new growth model that takes advantage of its potentially huge domestic market is thus of crucial importance for its major partners.

4. WHAT IS HOLDING BACK HOUSEHOLD CONSUMPTION?

For the past twenty years China's growth pattern has been based on low wages, capital accumulation and strong price competitiveness. The global crisis has highlighted its vulnerability to external shocks. It had been recognized already well before the crisis that this growth pattern was too dependent on exports, on investment, on industrial production, and was unsustainable in the long run (Yu2007). The 11th five-year plan (2006-2010) had already underscored the risks of such an unbalanced growth and had advocated a development more centered on services, on the domestic demand, and on household consumption. Nevertheless, it failed to reverse the trend and imbalances worsened. In the wake of the global crisis, the stimulus package succeeded in boosting domestic demand, but investment has been much more dynamic than household consumption which has remained the weak link in China's economy. The 12th FYP (2011-2015) again sets the aim of improving the standard

of living through enhancing the welfare system, raising low wages and upgrading public services.

4.1. Demographic and institutional factors

Since the early 2000s, consumption has lagged far behind economic growth in China and its share in GDP has continued so far to plummet. Consumption dropped from 62 percent of GDP in 2000 to 49 percent in 2007 and 47 percent in 2010. The share of private consumption fell from 46 percent to 36 percent and 34 percent of GDP, which is a record low (see Figure A2 in Appendix). Why China's household consumption has fallen so low is a debated topic (CEQ 2009; Lardy 2012). There are demographic reasons but also institutional factors. The arguments can be summarized as follows.

First, the income accruing to households has not increased as fast as other income categories and during the 2000s, its share in GDP shrunk by about 10 percentage points. This decline was related mainly to wages. Between 1980 and 2010, the working age population increased considerably and there were large transfers of labor force from agriculture to industry. This "double transition" created an almost unlimited supply of labor and put pressure on wages (Yao 2011). The institutional context has also contributed to squeeze wages. In a period of industrialization, the distribution of income is expected to change in favor of capital as the ratio of capital to labor increases. Moreover, China has implemented a partial market liberalization which has created cost distortions. The prices of factors of production have been kept artificially low; labor has been underpaid (wages increase lagged behind productivity gains) and capital has remained cheap which has led to a bias in favor of investment and against consumption (Huang and Tao 2010).

Other institutional factors have also come into play. Social transfers (pensions, welfare allowances) have lagged behind economic growth; the cap on interest rate on bank deposits has minimized income from savings. (Ma and Yi 2010; Lardy, 2012).

Second, the saving rate of the Chinese households has increased and stands at an exceptionally high level (30 percent in 2009, against 19 percent in the mid 1990s). Again, this can be explained by demographic factors, such as the decline in the dependency rate; but also by institutional conditions: the lack of a safety net has stimulated the precautionary savings of households and the growing inequality in income distribution has favored the high-income households which save more. Migrant workers who account for almost half industrial workers are not integrated in urban areas; they have a particularly high saving rate. The low level of interest rates seems to have increased the precautionary savings of households and also to have encouraged them to buy real estate residential assets, leading to the rise in the prices of housing.

Are domestic imbalances properly measured?

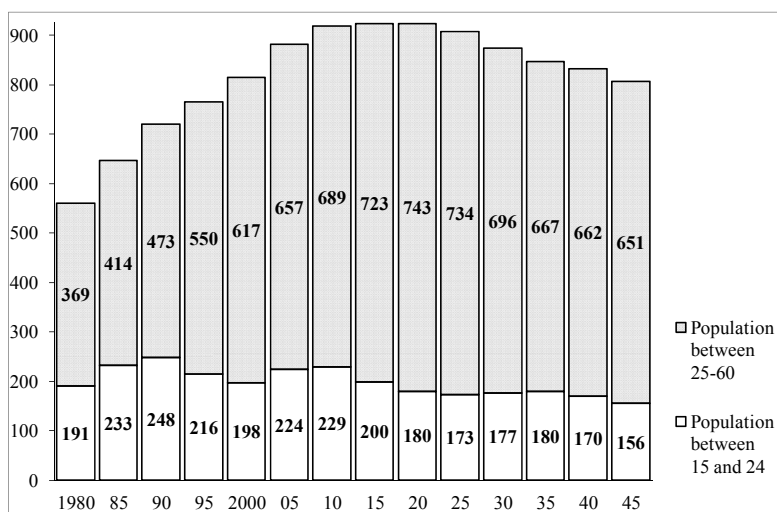
Another hypothesis has been recently put forward, according to which the National accounts do not provide an accurate measure of domestic imbalances because the data on expenditure and income of households are seriously flawed (CEQ 2009; Lardy 2012). Changes in the accounting methods would explain half of the contraction of labor income in GDP. Other reasons suggest that the actual household income is understated: official statistics do not record grey income (land transactions, gifts and corruption, monopoly profits) neither other undeclared income (sales of property, rents and capital gains). According to Wang and Woo (2011) the actual household income could be 60 percent higher than recorded by the official data. Consumption expenditures are also understated because the actual costs of services (especially of health, education) are much higher than officially reported. Moreover the level of their current expenses for housing is also under-recorded because the data do not include imputed rents for the households who own their dwellings, as is the case in international accounting practices.

Symmetrically, the official data overestimate investment. For instance, the figures on investment in fixed assets include mergers and acquisitions as well as the value of land transactions, which do not represent an increase in capital (but only a change in ownership).

Domestic imbalances are thus presumably less pronounced as they seem to be. Given the inadequate data, it is difficult to determine whether an adjustment in favor of private consumption has recently taken place or not. According to OECD (2012), the economic imbalances have ceased to increase and rebalancing has started in 2011. However there is a great uncertainty about how fast China will carry out a new development model.

4.2. How fast can China change its growth pattern?

Indeed, the Chinese demographic situation is changing dramatically. The working age population (15-64) is stagnating and is set to diminish starting in 2015. The young working age population has already started to diminish (Figure 10). However, there is no consensus yet over the major issue whether China has already reached the demographic turning point, when the reserve of labor force is no more unlimited (Lewis turning point). Cai (2012) argues that this turning point was reached some years ago and that there is now a shortage of labor which pushes up wages and fringe benefits. Indeed, the wages of unqualified (mostly migrant) workers, which had remained almost stagnant from the mid 1990s have started to increase since 2004, a trend that was interrupted by the crisis but which has resumed since.

Figure 10: China: trends in the working age population, 1980-2045 (millions)

Source: United Nations, WDI database.

However, other economists consider that China has not yet depleted its reserve of labor because there are still many potential migrants in the countryside (80 million). In this context, the export-led growth may continue for another 15-20 years (Yao 2011). Recent increases in wages have not reflected a macroeconomic phenomenon but only local shortages of labor in the coastal provinces, which are dependent on migrant workers from the inland provinces. The strong economic growth in these provinces has slowed the emigrations.

In 2010 and 2011, the Chinese authorities have raised the levels of minimum wages which were frozen in 2009 because of the crisis. However, there is no evidence that labor costs are rising faster than labor productivity and endanger the competitiveness of China's industry. Indications are pointing to different directions. Some enterprises in labor intensive sectors are moving outside China to reduce their production costs, other firms move to inland provinces, others invest in capital equipment to boost productivity and maintain their competitiveness (Lardy 2012; SCB2012). Demographic changes alone do not seem sufficient to propel a new growth model.

Over the past decades, the downward pressure on household income has resulted not only from demographic conditions but also from institutional factors. The shift towards a new growth model must be supported by domestic policies that enhance the purchasing power of households. The pace of transformation will depend on the economic and social policies that will be implemented (Yu 2010; World Bank 2011a; World Bank and DRC 2012). Urbanization will increase household income and consumption spending, provided that the new urban workers benefit from the social safety net and the social services of the cities. Up to now the process of urbanization has been "incomplete", as one third of urban residents are outside the urban consumer economy (CEQ 2011). A more inclusive form of urbanization will be needed if a rising middle-class is to be the main factor of China's growth in the future.

Indeed, government programs are underway to extend social protection (pensions, health) to the migrants and to the rural population. Rapid progress has been made and there is still room for improvement as China social spending is still relatively lower than other large middle-income economies', such as Brazil and Turkey (World Bank & DRC, 2012).

More generally, many consider that China has to launch another wave of far-reaching reforms, including the liberalization of the financial sector, the reform of the state-owned firms (which would contribute to reduce corporate savings), in order to make its growth sustainable in the long run. Changes may be accelerated under pressure of international environment, because a prolonged slump in international demand would require another domestic stimulus.

CONCLUSION

Since 2007, China has considerably reduced its global trade surplus. This external rebalancing has been at least partly due to a deterioration of its terms of trade and the exporters of raw materials and energy have benefited from China's strong demand. Asian countries and, in Europe, Germany, have also taken advantage of China's demand for manufactured products. Nevertheless, China's bilateral surpluses with the US and with most EU countries have remained large. Moreover, China's share of world market has continued to increase, which is a source of tensions with many partners.

Since 2007, domestic demand has become the growth engine of China's economy. but investment, and not household consumption, has taken the lead. According to available data, up to 2010, private consumption has contributed less than investment to GDP growth. The shift to a mass-consumption driven economy, which is the condition for China's sustained growth, will require far-reaching changes in its economic and social policies.

In 2012, China's domestic demand weakened. The cooling down of the property bubble has led to a slowdown in investment and investment-related production. On the external side, sluggish global demand, especially in Europe, has severely hit China's export sectors. To maintain the pace of economic growth above the target set by the government (7.5%), the authorities have to take stimulus measures. The challenge is to boost domestic demand while avoiding to revive real estate speculation. An expansionary fiscal policy could involve tax exemptions for SMEs and households, higher spending on education, health care, pensions and social housing. While the stimulus package launched in late 2008 relied on investment programs funded by bank loans, this new round could make more room to consumption and public spending.

REFERENCES

- AMITI M. & C. FREUND (2010), "The Anatomy of China's Export Growth", in *China's Growing Role in World Trade*, edited by Robert C. Feenstra and Shang-Jin Wei, pp. 35-56, National Bureau of Economic Research, Inc..
- ANDERSON, J. (2009), "The Myth of Chinese Savings", *Far Eastern Economic Review*, November, pp. 24-30.
- ANDERSON J. (2009), "The Myth of Chinese savings", *Far Eastern Economic Review* 172(9): 24-30.
- AUTOR D.H., D. DORN & G.H. HANSON (2011), "The China Syndrome: Local Labour Market Effects of Import Competition in the United States", *MIT Working Paper* August.
- CAI F. (2012), "The Coming Demographic Impact on China's Growth: The Age Factor in the Middle-Income Trap", *Asian Economic Papers*, Volume 11 Number 1, 2012.
- CHEN B. & Y. YAO (2011), "The Cursed Virtue: Government Infrastructural Investment and Household Consumption in Chinese Provinces", *Oxford Bulletin of Economics and Statistics*, 73(6): 856–877.
- CEQ (China Economic Quarterly) (2009), *Rebalancing growth* 13(4).
- CEQ (China Economic Quarterly) (2011), *Urban China Congested, ugly and gray* 15 (4).
- DEAN J., K.C. FUNG & Z. WANG (2008), "How Vertically Specialized is Chinese Trade?" *USITC Working Paper* 2008-09-D.
- EICHENGREEN B. (2011), *The G20 and Global Imbalances*, The German Marshall Fund of the United States, May 26.
- GAULIER G., F. LEMOINE & D. ÜNAL (2011), "China's Foreign Trade in the Perspective of a More Balanced Economic Growth", *CEPII Working Paper* 2011-03, March.
- GAULIER G., F. LEMOINE & D. ÜNAL (2012), "The rise of emerging economies in the EU15 trade", *The European Journal of Comparative Economics*, 9(1).
- GOLDSTEIN M. & N.R. LARDY (2009), "The Future of China's Exchange Rate Policy" *Policy Analyses in International Economics* 87, Peterson Institute For International Economics.
- HEIDEN, P.T. in der (2011), "Chinese Sectoral Industrial Policy Shaping International Trade and Investment Patterns- Evidence from the Iron and Steel Industry", *Duisburg Working paper on East Asian Studies*, N°88.

HUANG Y. & K. TAO (2010), "Factor Market Distortion and the Current Account Surplus in China", *Asian Economic Papers* 9(3): 1-36.

HUANG Y. (2011), "Misinterpreting China's Economy", *The Wall Street Journal*, 25 August.

HUMMELS D., J. ISHII & K.M. YI (2001), "The Nature and Growth of Vertical Specialization in World Trade", *Journal of International Economics* 54(1): 75-96, Elsevier.

INTERNATIONAL MONETARY FUND (2012), *China Economic Outlook*, February 6th.

INTERNATIONAL MONETARY FUND (2011), "People's Republic of China", *IMF Country Report* 11/192, July.

KOOPMAN R., Z. WANG & S.J. WEI (2008), "How Much of Chinese Exports is Really Made in China? Assessing Domestic Value-Added When Processing Trade is Pervasive", *NBER Working Paper*, 14109.

LARDY N. (2012). *Sustaining China's Economic Growth After the Global Financial Crisis*, Peterson Institute for International Economics, Washington D.C.

MA G. & W. YI (2010), "China's High Saving Rate: Myth And Reality", *BIS Working Paper* 312, June.

OECD (2012). *China in Focus: Lessons and Challenges*. OECD. Paris.

PONCET S. & J. JARREAU (2012), "Export Sophistication and Economic Performance: Evidence from Chinese Provinces", *Journal of Development Economics*, 97: 281-292.

RODRIK D. (2006), "What's So Special about China's Exports?" *China & World Economy*, 14 (5): 1-19, Institute of World Economics and Politics, Chinese Academy of Social Sciences.

SCB (STANDARD CHARTERED BANK) (2012), "China: More than 200 clients talk wages in the PRD", *Global Research, On the Ground*, March 5th.

UPWARD R., Z. WANG & J. ZHENG (2010), "Weighing China's Export Basket: an Account of the Chinese Export Boom, 2000-2007", *University of Nottingham Research Paper Series - China and the World Economy*, Research Paper 2010/14.

WANG X. & W.T. WOO. (2011), "The Size and Distribution of Hidden Household Income in China", *Asian Economic Papers*, 10(1): 1-26.

WORLD BANK (2012), "Uncertainties and Vulnerabilities", *Global Economic Prospects-4*.

WORLD BANK (2011a), "Securing the Present, Shaping the Future. East Asia and Pacific",
WORLD BANK (2011b), "Navigating Turbulence, Sustaining Growth", *East Asia and Pacific Economic Update 2011-2*.

WORLD BANK & DRC (DEVELOPMENT RESEARCH CENTER OF THE STATE COUNCIL, THE PEOPLE'S REPUBLIC OF CHINA) (2012), *China 2030: Building a Modern, Harmonious, and Creative High-Income Society*, Conference Edition, Washington.

YAO Y. (2011), "The Relationship between China's Export-led Growth and Its Double Transition of Demographic Change and Industrialization", *Asian Economic Papers*, 10 (2): 52-76.

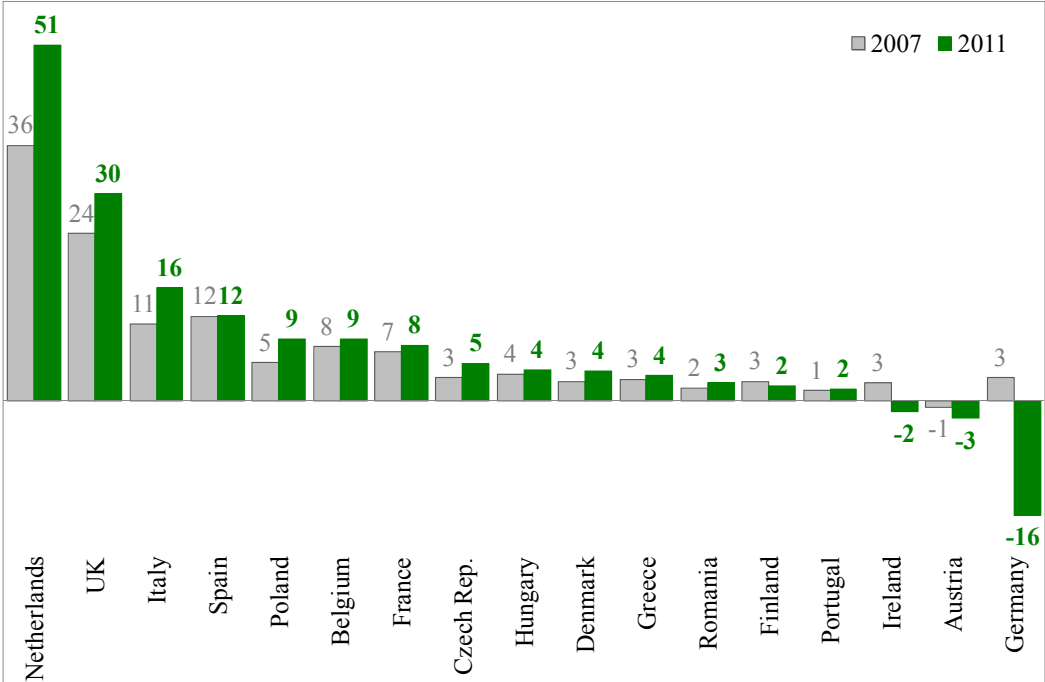
YU Y. (2007), "Global Imbalances and China", *Australian Economic Review*, 40: 3-23.

YU Y. (2010), "A Different Road Forward", *The China Daily*, 23 December.

APPENDIX

DETAILED FIGURES AND TABLES

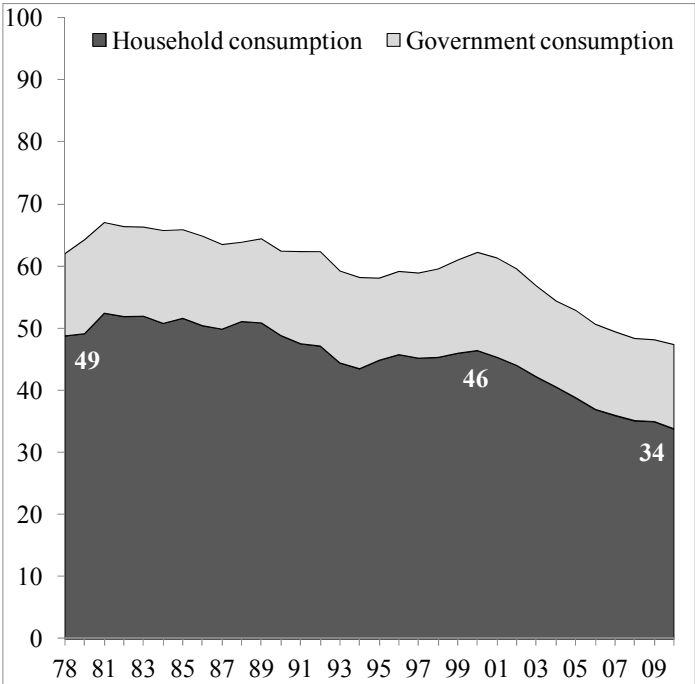
Figure A.1: China's trade balance with selected EU countries* (US\$bn)



*Countries with a surplus or a deficit over one billion dollars

Source: China's Statistical Yearbooks.

Figure A.2: China, consumption in percent of GDP, 1978-2010



Source: China's Statistical Yearbooks.

**Table A.1: Share of China in percent of the country total exports*:
Asian countries & Germany, 2010**

	Taiwan	Malaysia	South Korea	Singapore	Thailand	Philippines	Viet Nam	Japan	Indonesia	Germany
Total products	36	19	28	11	15	22	9	22	11	6
SECTORS										
Energy	0	2	2	3	1	0	3	0	4	0
Food & agriculture	0	2	0	0	2	1	2	0	2	0
Textiles	1	0	1	0	0	0	1	0	0	0
Wood & paper	1	0	0	0	0	0	0	1	1	0
Chemicals	8	2	5	1	3	1	1	3	1	1
Iron & steel	1	0	1	0	0	0	0	1	0	0
Non ferrous	1	1	1	0	0	2	0	1	1	0
Machinery	3	0	3	0	0	0	0	5	0	2
Vehicles	0	0	1	0	0	0	0	2	0	1
Electrical material	3	1	2	0	1	2	1	2	0	1
Electronics	18	11	12	6	7	16	1	5	1	0
PRODUCTION STAGES										
Primary	0	2	0	0	3	2	5	0	6	0
Basic manufacturing	5	1	4	0	1	1	0	3	1	0
Intermediate goods	13	10	8	5	3	9	1	6	1	1
Equipment goods	6	3	7	2	6	9	2	7	1	2
Mixed products	4	3	4	4	2	1	1	2	2	0
Consumption goods	7	0	6	0	0	1	0	2	0	1
n.e.s.	0	0	0	0	0	0	0	1	0	0

Example: in 2010, exports of Electronics to China accounted for 18% of Taiwan's total exports.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

**Table A.2: Share of China in percent of the country total exports*:
Asian countries & Germany, 2000**

	Taiwan	Malaysia	South Korea	Singapore	Thailand	Philippines	Viet Nam	Japan	Indonesia	Germany
Total products	9	4	13	4	6	3	8	9	5	2
SECTORS										
Energy	0	0	1	1	1	0	6	0	2	0
Food & agriculture	0	1	0	0	1	0	1	0	1	0
Textiles	2	0	3	0	0	0	0	1	0	0
Wood & paper	0	0	1	0	0	0	0	0	1	0
Chemicals	2	1	3	0	1	0	0	1	1	0
Iron & steel	0	0	1	0	0	0	0	1	0	0
Non ferrous	0	0	0	0	0	0	0	0	0	0
Machinery	1	0	1	0	0	0	0	1	0	1
Vehicles	0	0	0	0	0	0	0	0	0	0
Electrical material	1	0	1	0	0	0	0	1	0	0
Electronics	3	2	3	2	2	2	0	2	0	0
PRODUCTION STAGES										
Primary	0	1	0	0	1	0	6	0	2	0
Basic manufacturing	1	0	2	0	0	0	0	1	0	0
Intermediate goods	4	2	5	1	1	1	0	3	2	0
Equipment goods	2	1	2	1	1	1	0	3	0	1
Mixed products	2	1	3	1	1	0	0	1	1	0
Consumption goods	1	0	1	0	0	0	0	1	0	0
Non elsewhere specified	0	0	0	0	0	0	0	0	0	0

Example: in 2000, exports of Electronics to China accounted for 3% of Taiwan's total exports.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

**Table A.3: Share of China in percent of country exports in each sector*:
Asian countries & Germany, 2010**

	Taiwan	Malaysia	South Korea	Singapore	Thailand	Philippines	Viet Nam	Japan	Indonesia	Germany
Total products	36	19	28	11	15	22	9	22	11	6
SECTORS										
Energy	6	9	23	10	15	15	22	16	14	1
Food & agriculture	10	18	14	13	15	7	12	13	13	1
Textiles	32	3	26	1	6	3	3	45	3	1
Wood & paper	12	2	18	4	5	6	2	23	9	1
Chemicals	48	23	39	14	24	20	14	25	15	3
Iron & steel	20	14	17	13	9	14	16	23	21	3
Non ferrous	48	36	36	2	8	38	31	37	14	6
Machinery	26	7	14	6	5	4	3	21	3	10
Vehicles	5	9	9	15	0	3	4	10	2	9
Electrical material	35	13	41	10	13	18	11	32	8	9
Electronics	46	27	41	12	26	30	14	29	9	5
PRODUCTION STAGES										
Primary	16	13	28	12	27	24	21	45	15	4
Basic manufacturing	45	15	34	7	22	26	13	26	13	4
Intermediate goods	37	37	31	14	16	22	13	25	10	6
Equipment goods	28	14	21	8	20	30	11	24	8	9
Mixed products	29	14	31	11	15	14	3	29	11	2
Consumption goods	47	5	28	8	3	6	1	12	3	5
Non elsewhere specified	7	1	13	1	2	0	5	17	0	3

Example: in 2010, 46% of Taiwan's exports of Electronics went to China.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

**Table A.4: Share of China in percent of country exports in each sector*:
Asian countries & Germany, 2000**

	Taiwan	Malaysia	South Korea	Singapore	Thailand	Philippines	Viet Nam	Japan	Indonesia	Germany
Total products	9	4	13	4	6	3	8	9	5	2
SECTORS										
Energy	2	4	20	5	21	18	23	15	6	0
Food & agriculture	3	10	7	2	6	4	3	9	7	1
Textiles	14	2	23	0	2	0	0	43	2	0
Wood & paper	5	6	20	3	6	2	0	9	11	1
Chemicals	25	10	31	7	12	5	7	14	10	1
Iron & steel	14	10	22	5	12	0	7	20	2	1
Non ferrous	20	13	31	7	9	24	21	17	1	2
Machinery	6	4	8	3	5	3	1	7	1	3
Vehicles	4	2	1	7	0	0	0	2	1	1
Electrical material	9	5	12	5	4	3	1	12	3	2
Electronics	6	3	8	3	5	3	1	8	2	2
PRODUCTION STAGES										
Primary	6	6	23	11	16	8	18	27	7	3
Basic manufacturing	19	11	31	4	8	21	7	17	9	1
Intermediate goods	11	5	15	3	7	3	4	10	10	1
Equipment goods	6	4	8	3	5	3	1	9	3	3
Mixed products	18	7	27	5	7	4	1	22	4	1
Consumption goods	5	1	4	4	1	0	0	4	1	0
Non elsewhere specified	3	1	2	2	0	0	18	4	0	2

Example: in 2000, 6% of Taiwan's exports of Electronics went to China.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

**Table A.5: Share of China in percent of the country total exports*:
Natural resource-rich countries, 2010**

	Chile	Kazakhstan	Gabon	Libya	Saudi Arabia	Australia	Brunei	Peru	South Africa	New Zealand
Total products	26	22	13	9	7	25	6	18	14	12
SECTORS										
Energy	0	11	3	9	6	3	5	0	1	0
Food & agriculture	1	0	5	0	0	2	0	3	0	10
Textiles	0	0	0	0	0	0	0	0	0	0
Wood & paper	1	0	0	0	0	0	0	0	0	1
Chemicals	0	2	0	0	1	0	0	0	1	0
Iron & steel	1	3	0	0	0	15	0	2	5	0
Non ferrous	22	5	5	0	0	3	0	13	4	0
Machinery	0	0	0	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0	0	0	0
Electrical material	0	0	0	0	0	0	0	0	0	0
Electronics	0	0	0	0	0	0	0	0	0	0
PRODUCTION STAGES										
Primary	8	14	13	9	6	22	5	13	7	4
Basic manufacturing	16	7	0	0	1	1	0	2	3	0
Intermediate goods	1	0	0	0	0	0	0	0	0	1
Equipment goods	0	0	0	0	0	0	0	0	0	0
Mixed products	0	1	0	0	0	0	0	2	0	6
Consumption goods	0	0	0	0	0	0	0	0	0	1
nes	0	0	0	0	0	2	0	0	3	0

Example: in 2010, exports of Non-ferrous metals to China made up 22% of Chile's exports.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

**Table A.6: Share of China in percent of the country total exports*:
Natural resource-rich countries, 2000**

	Chile	Kazakhstan	Gabon	Libya	Saudi Arabia	Australia	Brunei	Peru	South Africa	New Zealand
Total products	6	8	7	0	1	5	2	7	2	3
SECTORS										
Energy	0	1	2	0	1	1	2	0	0	0
Food & agriculture	0	0	4	0	0	2	0	5	0	2
Textiles	0	0	0	0	0	0	0	0	0	0
Wood & paper	1	0	0	0	0	0	0	0	0	0
Chemicals	0	0	0	0	0	0	0	0	0	0
Iron & steel	0	4	0	0	0	1	0	1	1	0
Non ferrous	5	3	0	0	0	1	0	1	0	0
Machinery	0	0	0	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0	0	0	0
Electrical material	0	0	0	0	0	0	0	0	0	0
Electronics	0	0	0	0	0	0	0	0	0	0
PRODUCTION STAGES										
Primary	2	4	7	0	1	4	2	2	1	1
Basic manufacturing	3	4	0	0	0	0	0	0	0	0
Intermediate goods	1	0	0	0	0	0	0	0	0	0
Equipment goods	0	0	0	0	0	0	0	0	0	0
Mixed products	0	0	0	0	0	0	0	5	0	1
Consumption goods	0	0	0	0	0	0	0	0	0	0
nes	0	0	0	0	0	0	0	0	1	0

Example: in 2000, exports of Non-ferrous metals made up 5% of Chile's total exports.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

**Table A.7: Share of China in percent of country exports in each sector*:
Natural resource-rich countries, 2010**

	Chile	Kazakhstan	Gabon	Libya	Saudi Arabia	Australia	Brunei	Peru	South Africa	New Zealand
Total products	26	22	13	9	7	25	6	18	14	12
SECTORS										
Energy	1	17	4	9	7	13	6	1	8	0
Food & agriculture	5	1	53	1	0	15	6	15	3	15
Textiles	1	24	0	0	3	9	1	0	1	3
Wood & paper	17	5	0	0	0	10	40	0	4	13
Chemicals	7	46	0	3	15	9	33	3	6	6
Iron & steel	47	32	0	6	0	70	0	78	35	7
Non ferrous	36	46	43	0	6	26	3	28	19	5
Machinery	2	1	0	0	0	7	1	0	2	2
Vehicles	2	0	0	0	0	4	6	1	0	2
Electrical material	5	0	0	0	4	6	0	0	1	2
Electronics	0	1	0	0	0	4	0	0	1	4
PRODUCTION STAGES										
Primary	23	20	15	10	7	38	6	28	29	20
Basic manufacturing	39	38	0	4	21	13	34	13	12	4
Intermediate goods	13	5	0	0	1	9	13	2	2	9
Equipment goods	2	1	0	0	1	7	0	0	1	2
Mixed products	6	10	0	0	4	6	18	16	3	13
Consumption goods	2	0	0	0	0	6	2	3	1	5
nes	0	0	0	0	0	9	0	0	18	6

Example: in 2010, 36% of Chile's Non ferrous metal exports were directed to China.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

**Table A.8: Share of China in percent of country exports in each sector*:
Natural resource-rich countries, 2000**

	Chile	Kazakhstan	Gabon	Libya	Saudi Arabia	Australia	Brunei	Peru	South Africa	New Zealand
Total products	6	8	7	0	1	5	2	7	2	3
SECTORS										
Energy	0	2	3	0	1	3	3	0	0	2
Food & agriculture	1	4	37	0	0	7	0	18	1	4
Textiles	0	0	0	0	0	4	0	0	0	3
Wood & paper	8	47	0	0	0	4	2	0	1	5
Chemicals	3	3	0	0	4	4	0	0	2	2
Iron & steel	0	26	0	0	0	22	0	32	7	2
Non ferrous	11	20	11	0	1	4	0	3	1	2
Machinery	0	4	0	0	0	3	0	2	2	0
Vehicles	0	2	0	0	0	0	0	0	0	0
Electrical material	0	1	0	0	0	2	0	0	0	1
Electronics	0	0	0	0	0	2	0	0	0	1
PRODUCTION STAGES										
Primary	6	5	7	0	1	8	3	7	4	6
Basic manufacturing	11	20	0	0	3	3	0	1	2	2
Intermediate goods	6	6	0	0	0	4	0	1	1	3
Equipment goods	0	3	0	0	0	2	0	2	0	1
Mixed products	1	1	1	0	1	2	0	21	1	3
Consumption goods	0	4	0	0	0	1	0	0	0	0
nes	0	0	0	0	0	0	0	0	3	6

Example: in 2000, 11% of Chile's Non ferrous metal exports were directed to China.

* Selected countries: those for which exports to China account for more than 2% of GDP in 2010.

Source: CEPII-CHELEM-INT database.

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