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Africa’s rising commodity export dependency on China

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Abstract

China has played a decisive role in facilitating South-South cooperation, marking a clear departure from traditional North-South dominance. Nothing reflects this shift more clearly than bilateral trade flows. Trade has grown exponentially between Africa and China but, notwithstanding the continent's commodity abundance, the region may have already accrued a trade deficit with China. Moreover, exports to China are remarkably concentrated around a limited number of products, all of which are classified as commodities. The nature of bilateral trade flows raises some alarms. China's growth momentum has begun to dwindle and, more importantly, the growth model is being geared from investment towards consumption. For this reason, it is unlikely that the pace of growth in bilateral trade can continue, at least as concerns Chinese commodity imports from Africa. The extent to which a slowdown in bilateral trade will impact African exports depends on how vulnerable these commodities are to shifts in Chinese demand. To measure this, we have deployed an export dependency index for the major countries in Africa. Our index reveals that commodity dependence has increased overboard in Africa between 2005 and 2015. Looking at commodity dependence on China in absolute terms, it is apparent that the story in Africa is really about Angola, and Zambia, while on a commodity basis, dependence is largest in the case of mineral fuels. This increase in dependency has three major implications for Africa: 1) Trade dependency on China may have played a role in reducing the potential for interregional trade; 2) African countries need to develop policies that boost manufacturing and downstream processing capacity, and 3) Value retention also lies ahead as a big challenge for trade relations between Africa and China unless good policies are put in place.

Keywords: China, Africa, trade, commodity dependence, international relations

JEL: D51, F02, F14.

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1 Introduction

China has gone from being a supporter of fringe Maoist regimes in the 1960s to providing more financial assistance to the region than the World Bank (Cheng, 2015). But the idea that China would be crucial to African development is neither new nor accidental. In fact, Chinese policymakers have been aware of this notion for quite some time. China's Ya-Fei-La Strategy, literally meaning "Asia-Africa-Latin America", was conceived during the Maoist era in the 1960s (Myers, 2012) in an attempt to promote the advancement of developing country goals in a new world order. Since then, China has played an active role in promoting South-South cooperation, being Africa – China cooperation an important part of that equation.

While the economic relationship between Africa and China has been characterized by many aspects in the past years, bilateral trade is perhaps the one area that has garnered the most attention; and understandably so. China's double-digit growth rates and thirst for natural resources drove it into relatively unexplored frontiers in search for natural resources, a quest of Homeric proportions which helped to fuel trade with commodity exporters in Africa and beyond (Casanova et al, 2015). As a result of this expansion, trade between China and Africa surged to USD 207 billion in 2013, growing by an average of approximately 30% per year compared to a decade earlier. The "Chinese engine of growth", as it has come to be known amongst commodity exporters in the emerging world, provided a much-needed spare wheel at a time when traditional sources of demand faltered, as the developed world was struggling to get to grips with a financial crisis. However, China has started to slow down as a result of its rebalancing towards a more sustainable direction, which involves shifting away from investments and towards domestic consumption. Inevitably, this will have consequences for African exporters. A slowing China, particularly in the context of its economic rebalancing, will lead to a fall in demand for much valued African commodities such as copper, iron ore and oil – vital inputs in the construction of China's gleaming new airports, railway stations, bourgeoning housing complexes and boundless highways.

But will this drop in demand affect all countries in the region equally? Not necessarily. Countries which benefited the most from China's expansion should, logically, feel the impact more strongly; whereas countries which have not increased their trade links with China as much should be less affected. The basis of this relationship may seem obvious, but quantifying this impact is not a straight forward task. In order to prove which countries will be affected the most by a slowdown in China, it is important to understand bilateral trade links in the context of Africa's trade dependency on China. In other words, the implications of a slowdown will be felt most strongly among those countries and commodities which are more dependent on China and/or have seen the fastest increases in recent years.

Consequently, in this chapter we will analyze the implications of rising Africa's commodity export dependency on China. The structure of this chapter is as follows: In the first section, we analyze the historical backdrop of China-Africa trade links. In the second section, we look at the development of bilateral trade ties to date in more detail. In the third section, we will elaborate on our definition of commodity export dependency and examine the levels of dependency of African commodity exports to China, focusing on a number of key commodities. In the fourth section, we look at the implications of increased dependency on China; and lastly, we will offer some conclusions and policy implications in the fifth section of this chapter.

A final note of caution before we delve deeper into this topic: Bilateral trade may have played a pivotal role in defining economic relations between China and Africa, but these are by no means the only significant flows. In addition to being a key trading partner, China has risen very quickly to become one of Africa's largest sources of development assistance (Brautigam 2011) foreign direct investment (Chen 2015) and financing (Gutman et al, 2015). Having said that, these flows are many orders of magnitude smaller than bilateral trade, so while they do constitute a welcome addition to the region's economic development, it is unlikely that growth in this area will be sufficiently robust to substitute for trade as a major revenue source in the short term. This is especially worrisome for African governments which depend on incomes from commodity exports, but which have not done enough to build up their fiscal buffers over the years, as falling demand from China could escalate the risk of a full-fledged fiscal crisis taking place.

2 Changing dynamics: China-Africa trade links

China has maintained contact with the African continent since antiquity, with the first records of bilateral ties between Africa and China dating back to the Tang Dynasty (618-907). During the Song Dynasty (960-1279), the transit of Chinese vessels across all corners of the Indian Ocean intensified remarkably, which explains why Chinese objects of this period can nowadays be found in regions from Somalia to Mozambique. But it wasn't until the 12th century that recognized naval routes for the trade of ivory, precious woods, myrrh and tortoise shell were established between the East Coast of Africa and the South Coast of China. Between 1417 and 1431, various emperors of the Ming Dynasty (1368-1644) sent trade missions to East Africa, which returned to China with cargoes of exotic gifts, including a number of mythological creatures – in reality giraffes, zebras, lions and other African wildlife – which were offered to the Ming court as proof of the empire's "celestial sovereignty" (Rotberg 2008).

China's modern economic relations with Africa started shortly after the founding of the People's Republic of China in 1949. During this period, China pursued the advancement of Chinese-style communism in the region by supporting independent movements in Africa, primarily by providing military equipment and training (Brautigam, 2008). Later on, China also sent doctors, nurses and technicians to provide assistance to African nations and funded numerous infrastructure projects, including the draconian 1860km Tanzania-Zambia railway, which is now considered a monument to China-Africa friendship (Yu, 2011). What's more, at first most of this aid was granted for free. Many considered this free aid to have come at a great cost for China (He, 2006), especially during the 1960s, when the country was experiencing a famine and domestic turmoil (Peng, 1987). However these efforts paid off, as they enabled China to garner the support of African nations in multilateral forums. Let's not forget that the support from African nations was instrumental in granting China a permanent seat at the United Nations (UN) General Assembly in 1971 – 26 of the 76 votes in favor (Chau, 2014).

Contrary to popular belief, political ideology per se was never a consideration for China when dealing with Africa, or any of its emerging market peers for that sake. On the contrary, Beijing has readily engaged with both rightist and leftist regimes in the past. Taiwan, on the other hand, played a decisive role in defining relations. For example, Seko Mobutu, who ruled the Democratic Republic of Congo from 1965 to 1997, shifted his allegiance from Taipei to Beijing in 1972 upon receiving USD 100 million in technical aid from Beijing. This was in spite of opposing China at the UN a year earlier, and notwithstanding his strong reservations towards Beijing. These reservations were understandable, given that China's support of Maoist rebels during the Simba Rebellion in 1964 (Leslie, 1993).

Taipei and Beijing have been competing for the allegiance of the small states that sustain diplomatic relations with Taiwan to date. They do this by providing substantial grants and technical assistance as well as in a stratagem that has been referred to as "checkbook diplomacy"[3]. While this is still an important constituent of relations between China and other emerging markets such as Latin America and the Caribbean, checkbook diplomacy has lost some of its weight in Africa. Only three of the 22 countries that still have full diplomatic relations with Taiwan are in Africa; namely Burkina Faso, Sao Tome and Principe and Swaziland. Notwithstanding these caveats, as the incentive to compete with Taiwan for the allegiance of African nations dwindled, relations evolved to satisfy the pragmatic economic interests of both sides (Meidan, 2006).

3: Checkbook diplomacy was put on hold after Taiwanese President Ma Ying-jeou was elected in 2008, following his announcement of Taiwan's "no reunification, no independence, and no war" strategy. It is unclear whether the results of the recent Presidential election in Taiwan will worsen cross-strait relations, in turn reigniting the incentives to engage in checkbook diplomacy.

With the “opening and reform” led by Deng Xiaoping starting in 1978, the tone of China’s economic policy shifted in a more pragmatic direction. As a result, relations with Africa were put on a second plane, as Chinese foreign diplomacy focused on redeploying efforts towards advanced economies. This would quickly change following the diplomatic vacuum left by the Tiananmen Square Protests of 1989, which drove China to seek political support from its African allies in multi-lateral forums, as well as of course, alternative market opportunities. This new direction is exemplified by Jiang Zemin’s “Five Points Proposal” for the development of a long term relationship between China and African Nations, which was announced during an address to the Organization of African Unity in 1996 (Sithara, 2007). It was following this address that China’s relations with Africa took a markedly commercial twist. Diplomatic efforts focused on bilateral trade while moving away from interest rate free loans. Development aid and assistance also developed a commercial focus, by enabling bilateral trade links through, for example, better infrastructure and technological know-how, thereby generating “win-win” opportunities for African exporters and China. This turning point constitutes a very clear break from its strategy in the 1960s.

This trend was further reinforced by China’s “going-out policy”, an initiative established in 1999 by the Chinese government to promote the expansion of Chinese enterprises internationally. Going abroad was seen as a priority for China as it would enable it to tap into new opportunities; securing access to resources to fuel its investment boom, but also creating new markets for its manufactured goods and services overseas. This led to a surge in Chinese foreign direct investments (FDI) in Africa, which increased from USD 1.5 billion in 2001 to USD 26 billion in 2013 according to official statistics compiled by China’s Ministry of Commerce (MOFCOM, 2014).

China’s “going-out” coincided with a new period of unprecedented development in China, particularly during 2000- 2013, with GDP grew by an average annual rate of 10% per year (National Bureau of Statistics, 2013). During this time, economic relationships with Africa intensified tremendously, as rising demand for resources drove China into relatively unexplored frontiers. Going back to the point on checkbook diplomacy, whatever attractiveness diplomatic relations with Taiwan still had, were quickly eroded by the appeal of China’s double-digit growth rates and soaring demand for commodities.

This new approach suited the strategic interests of China in Africa and so has prevailed, arguably, until not so long ago. However, China’s economy has started to slow, exposing some of the uglier aspects of the surge in bilateral trade links, as we shall explore in the following section of this chapter.

3 Delving deeper: burgeoning bilateral trade links remain unbalanced

China's demand for resources took off a decade ago, as the country's economic model shifted toward heavy industrial production, the private property market exploded, and wealthier citizens demanded a richer diet. As a result, bilateral trade between China and Africa grew exponentially during this period. Trade between China and Africa reached USD 207.0 billion in 2013 (UN COMTRADE, 2014) and China now accounts for almost 20% of Africa's total bilateral trade flows, although this figure can be much higher for some countries (Angola 40%, Republic of Congo 41%, and Sierra Leone 53%). Trade flows with China are an important vital source for Africa, especially if we consider that total bilateral trade with the world accounts for approximately 50% of Africa's GDP. In other words, the continent's relatively small GDP (USD 2.30Tn in 2013) relative to its trade openness; make it quite vulnerable to shifts in external demand. China, being one of the largest partners, is an important strategic priority for Africa.

Table 1
China has become the largest trading partner of numerous countries in Africa

Country	Trade with China as a % of total trade	Trade with the U.S. as a % of total trade
South Africa	12.8	3.6
Djibouti	26.1	2.8
Algeria	8.3	6.2
Angola	40.2	8.6
Burundi	7.7	1.3
Cameroon	20.6	3.8
Cabo Verde	5.9	1.0
Central African Rep.	6.0	6.4
Chad	10.7	52.6
Comoros	14.5	1.8
Congo, Rep.	40.5	4.9
Congo, Dem. Rep.	30.0	2.5
Benin	8.2	5.0
Equatorial Guinea	24.1	6.3
Ethiopia	19.0	10.5
Gabon	14.4	8.8
Gambia	31.7	3.5
Ghana	20.8	5.7
Guinea-Bissau	8.7	0.4
Guinea	13.8	1.7
Cote d'Ivoire	4.7	6.2
Kenya	11.9	9.7
Liberia	15.8	2.0
Libya	8.4	2.2

Continued on the next page

Table 1 (cont.)

China has become the largest trading partner of numerous countries in Africa

Country	Trade with China as a % of total trade	Trade with the U.S. as a % of total trade
Madagascar	15.6	4.1
Malawi	7.5	4.3
Mali	8.8	1.0
Mauritania	29.0	3.9
Mauritius	11.1	4.5
Morocco	5.4	5.9
Mozambique	20.8	2.9
Niger	13.6	2.8
Nigeria	12.2	6.3
Reunion	0.0	0.0
Zimbabwe	15.8	1.5
Rwanda	10.8	3.1
Sao Tome & Principe	4.8	1.6
Seychelles	2.8	1.0
Senegal	5.9	1.9
Sierra Leone	52.6	3.7
Somalia	7.8	1.2
Sudan	0.0	0.4
Tanzania	23.9	2.1
Togo	21.3	4.6
Tunisia	3.8	3.4
Uganda	9.7	2.0
Burkina Faso	6.8	2.4
Zambia	8.7	1.0

Source: Haver and BBVA Research

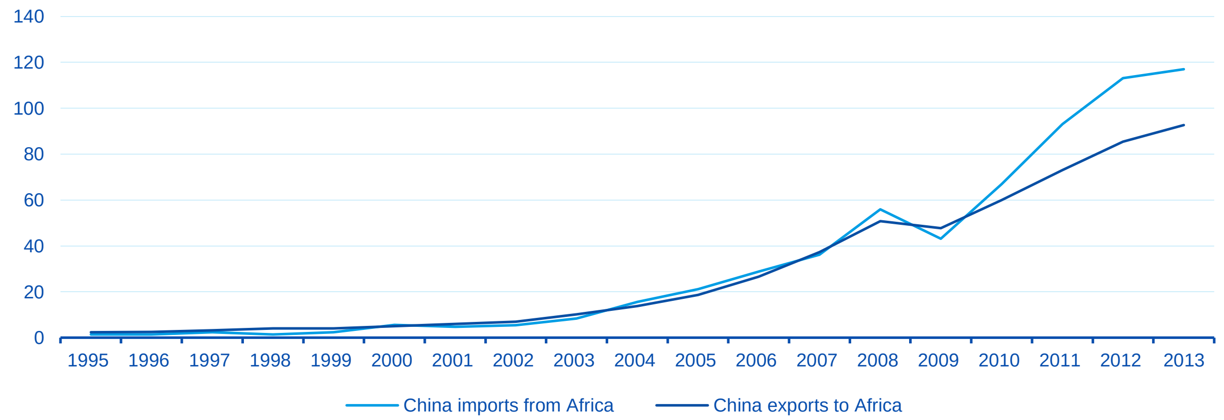
To some extent, this is also true for China. Trade is also an important growth driver for the Asian giant's economy (43% of its GDP in 2013). However, Africa only accounts for a reduced proportion of the country's total trade with the world, equivalent to approximately 10% (Garcia-Herrero and Casanova, 2014).

The asymmetries don't stop here. Many African countries have already accrued trade deficits with China, while the region as a whole had a questionable trade surplus with China in 2013[4] (Figure 1). This pattern may be explained by different relative comparative advantages and Purchasing Power Parity (PPP) of both regions. Many African countries enjoy rich natural resource endowments, which grant the continent a certain competitive advantage in what refers to commodity exports. On the other hand, cheap Chinese imports may be more adequate for the purchasing power of emerging economies in Africa compared to imports from other regions. For example, Chinese apparel is now commonplace in African markets and it is not unusual to see them being sold at a discount compared to second hand clothes originating from Europe and North America. In addition, anybody who has visited the region will be aware of the important contribution that Chinese-made (as well as Indian) vehicles and bikes have made to improving mobility in the region, with huge gains for its economic development.

4: Africa would have a trade deficit with China if we exclude South Africa's exports of unclassified goods to China. It is unclear what these goods are, as they appear reported by the China Customs side but not by South Africa's customs. For the second part of this chapter, we will use trade flows as reported by China to the United Nations Commerce and Trade Database. These constitute actual flows according to this methodology, meaning Africa still has a surplus with China on an aggregate level.

Having said that, this message may be bad news for Africa as it points towards a significant degree of import substitution. In other words, cheap Chinese imports of manufactured goods are used to substitute for (less competitive) domestic manufactures. In fact, excluding exports of unclassified goods from South Africa, trade data reveals that a "substitution effect" may have already started to take place in Africa, particularly amongst the more advanced economies, despite having lower PPP levels than other emerging markets in Asia and Latin America (Garcia-Herrero and Casanova, 2014).

Figure 1
Bilateral trade links

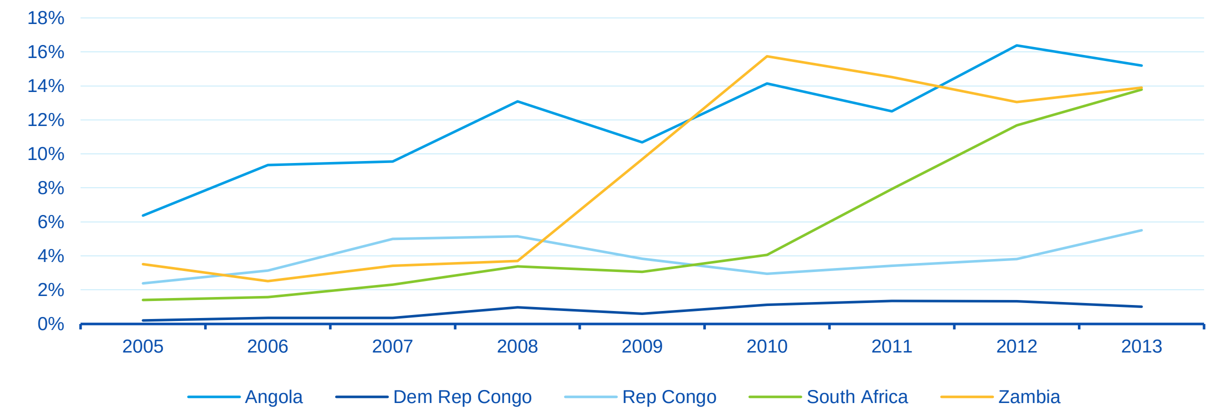


Source: Haver and BBVA Research

This is not favorable for countries trying to build up their manufacturing capacity. It is especially worrisome for resource-rich economies, as it increases the risks of "Dutch Disease" (Zafar, 2007). The Dutch Disease refers to a mechanism by which increases in revenues from natural resources make an economy's currency stronger, resulting in the nation's other exports becoming more expensive and imports becoming cheaper. The consequences include a less competitive manufacturing sector and increased exposure to commodity price volatility.

Trade relations with China are skewed both on a market and product basis, particularly in what concerns Africa's exports to China. For instance, a reduced number of countries account for the bulk of total exports to China. These are led by Angola, South Africa and Republic of Congo. The situation is even more pronounced if we look at exports as a percentage of GDP, where it is in fact the smaller, export-oriented economies that are the most exposed to China. The most prominent examples are Angola and Zambia (Figure 2).

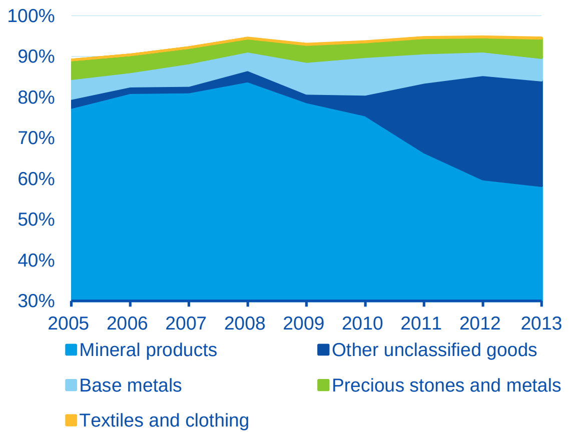
Figure 2
Exports to China as a percentage of GDP for key African countries



Source: Haver and BBVA Research

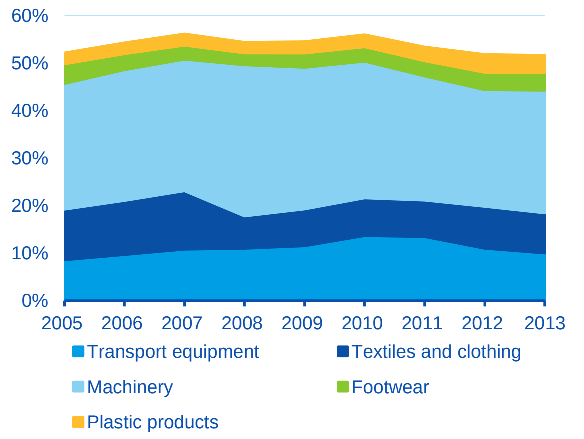
Moreover, exports to China are remarkably concentrated around a limited number of products, all of which are classified as commodities according to the Organization for Economic Cooperation and Development (OECD) database. In line with the extractive nature of China's trade links with Africa and Latin America, mineral products and base metals feature most prominently. Mineral products and base metals account for approximately 65% of total exports to China, with crude oil accounting for a bigger chunk than base metals. Iron ores follow in third place (tralac, 2013). In addition to mineral products and base metals, other unclassified goods accounted for 26% of Africa's exports to China in 2013.

Figure 3A
Exports by commodity



Source: Tralac and BBVA Research

Figure 3B
Imports by product



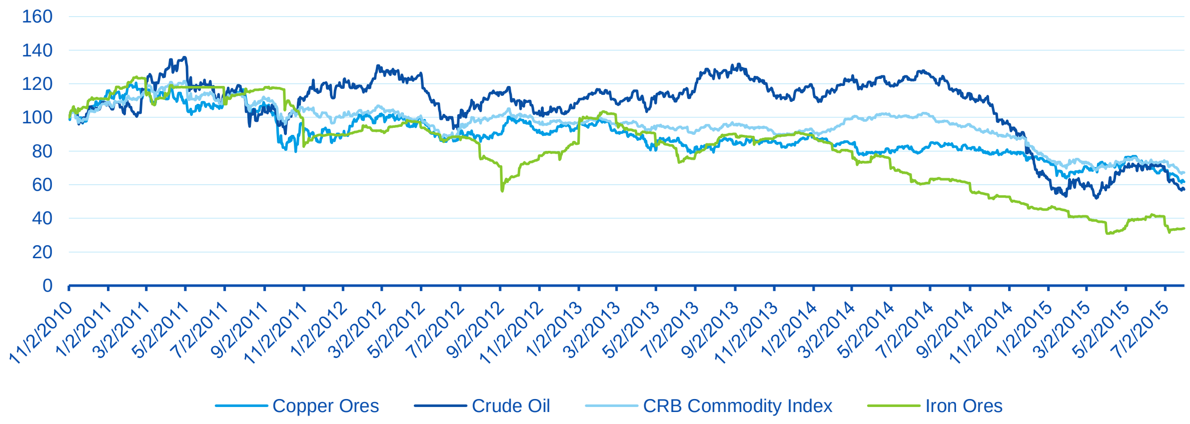
Source: Tralac and BBVA Research

In stark contrast to exports, African imports from China are somewhat more diversified on a country and product basis. Five countries accounted for 50% of all imports from China in 2013, led by South Africa, Nigeria, Algeria, Angola and Kenya. Meanwhile, on the product front, transportation equipment, textiles and clothing, machinery, footwear and plastics accounted for just over 50% of Africa's total imports from China. All of these products fall into the manufacturing category (tralac, 2013). In other words, Chinese exports into Africa are much more diversified than those of Africa into China, which means that bilateral trade between the two remains very unbalanced. As of today, there is little hope that this can be corrected very soon.

This detail reveals an important underlying theme in trade relations between China and Africa: China imports primarily raw materials from Africa and exports manufactured goods. One could, thus, argue that Africa's growth resilience during the global crisis put the continent in a position to act as a limited – but still welcome – spare wheel for China's huge export capacity. At the same time, it also benefited from China's huge stimulus package, intended to buffer the economy from an ailing external demand during the global crisis. The resulting investment-led growth model helped to fuel a commodity super-cycle, which inexorably favored exports from Africa.

However, the nature of bilateral trade flows raises some alarms. At this juncture, China's growth momentum has begun to dwindle and, more importantly, the growth model is being geared from investment towards consumption. For this reason, it is unlikely that the pace of growth in bilateral trade can continue, at least as concerns Chinese commodity imports from Africa. In fact, this may have already started. Bilateral trade links between China and Africa fell -2.9% on the year in 2013, the second time trade links between both regions experienced negative growth since 1990 – the first time being during the aftermath of the global financial crisis in 2009. Falling trade volumes in combination with lower commodity prices (Figure 4) are bad news for many African commodity exporters. In addition to lower government revenues, these economies could experience a deterioration of their terms of trade, leading to widening trade deficits with China unless imports of Chinese manufactured goods can be substituted with local alternatives, which takes time and investments. But which economies are most vulnerable?

Figure 4
Commodity price index



Source: Bloomberg and BBVA Research

4 Increasing dependency: How to define it?

The extent to which a slowdown in bilateral trade will impact African exports depends on how vulnerable these commodities are to shifts in Chinese demand. To measure this, the authors of this chapter have deployed an export dependency index for the major countries in Africa (García-Herrero and Casanova, 2014). The Index measures the relative exposure of Latin American exporters to shifts in demand from China and is scaled from 0 to 1 (the higher the score, the more exposed an exporter is to disruptions of trade with China):

$$Index_{x,y} = \sqrt[3]{\frac{EXP_{x,y}}{EXP_y} \times \frac{EXP\ to\ China_{x,y}}{EXP_{x,y}} \times avg\left[\frac{IMP_{x\ China}}{IMP_x} \times \left(1 - \frac{EXP_{x,y}}{EXP_x}\right)\right]}$$

Whereby:

$$\frac{EXP_{x,y}}{EXP_y}$$

Refers to country y's exports of commodity x as a share of its total exports. This shows how concentrated are a country exports into one commodity (x);

$$\frac{EXP\ to\ China_{x,y}}{EXP_{x,y}}$$

Refers to country y's exports of commodity x to China divided by its total export of that commodity. This shows how dependent the world is on China to sell a particular commodity relative to other export markets. And;

$$avg\left[\frac{IMP_{x,China}}{IMP_x} \times \left(1 - \frac{EXP_{x,y}}{EXP_x}\right)\right]$$

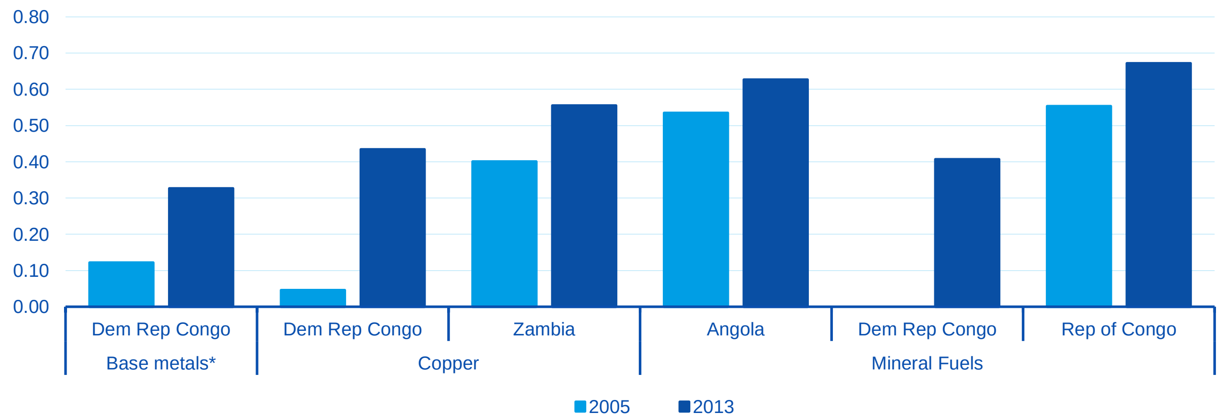
Is the average of two components: The first half refers to the share of China's imports of commodity x in the global market, while the second half is 1 minus country y's export market share of commodity x. This provides a measure of China's strength as a buyer or pricing power compared to the exporting country's strength as a seller.

To determine the sample, we identified the top five exporters to China and then selected the products that constituted circa 90% of these countries total exports to China respectively. These included Angola (mineral fuels), Democratic Republic of Congo (mineral fuels, copper and base metals), Republic of Congo (mineral fuels), South Africa (unclassified) and Zambia (copper).

It is important to stress that dependency in the context of this chapter is a relative term, defined as the degree to which the exports of a certain commodity for a particular country will be affected provided there is a shift in demand from China. In other words, the index is a relative measure of export dependence on China for each particular commodity and is therefore not reflective of the impact that a unit shift in demand from China will incur on the economy as a whole. In other words, the higher the score of our commodity index, the more vulnerable any export of a particular commodity will be to a potential disruption of trade with China.

After running our Index using aggregates from the United Nations Commerce and Trade Database (UN Comtrade), we discovered that commodity dependence has increased overboard in Africa between 2005 and 2015 (Figure 5). This result is not surprising given China's size and fast pace of growth. Intuitively, in the context of booming bilateral trade links, export dependency on Chinese demand should increase as China takes up a much larger share of total trade.

Figure 5
Commodity dependence increases in Africa



Source: UN Comtrade and BBVA Research

Looking at commodity dependence on China in absolute terms, it is apparent that the story in Africa is really about Angola, and Zambia, which makes sense given that both countries are amongst the most important commercial partners of China in the region, and have been so for quite some time. For Example, Sinopec was the first Chinese company to enter the African energy market in 2004, after securing a deal to exploit Angola's Block 18 offshore field in partnership with Sonagol, just months after Beijing approved a USD 2 billion loan to Angola (Levkowitz et al, 2009). However, the largest increases in dependence between 2005 and 2013 can be observed in Democratic Republic of Congo's, copper, base metals and mineral fuel exports. Again, this makes sense intuitively. China has greatly increased its economic exposure to the Democratic Republic of Congo and is now a significant source of financing as well as final demand. For example, 2008 saw the announcement of a multi-billion dollar project to grant Sicomines, a consortium of Chinese companies, mineral concessions in Democratic Republic of Congo's Katanga province in exchange for infrastructure investments, funded by China EX-IM bank (Jansson et al, 2009). China takes pride in maintaining a "non-interference" policy with its commercial partners. Given that the country is not favored by international investors for political risk and humanitarian reasons, this dependence is not surprising.

On a commodity basis, dependence is largest in the case of mineral fuels. China is a huge importer of fuels and minerals, with some authors estimating that the Asian giant accounted for approximately 40% of the world's total market growth since 1995 (Winters and Yusuf, 2007). In fact, according to the US Energy Information Administration (EIA), China overtook the US as the world's largest oil importer in 2013 (EIA, 2014). But China's imports of this commodity are heavily concentrated among relatively few countries in Africa, which include primarily Sudan, Congo, Angola, Zambia and South Africa (Oyejide, 2009). This concentration is also reflected in the different commodity export dependency levels of the countries in our sample. In the case of Angola – the main mineral fuel exporter – mineral fuels accounted for a very significant proportion of the countries' total exports in 2013, or approximately 98%. Furthermore, China has a significant market share of Angolan mineral exports, roughly 50% on the same year. China's sheer size and the fact that Angola focuses so much on one type of commodity export have translated as high dependency levels (Figure 5). Democratic Republic of Congo is a different story. Mineral fuels account for a much more modest 15% of its total exports, which makes sense as the country (unlike Angola) is not an established producer. However, as we mentioned previously, China is Democratic Republic of Congo's top buyer, accounting for 90% total mineral fuel exports, which explains the high dependence.

Zambia stands out for the case of copper. Zambia one of Africa's largest copper producers and copper exports account for a large chunk of the country's total exports, equivalent to 60% in 2013. In addition, the metal is an important source of government revenue and foreign exchange earnings for Zambia, underpinning the importance of Copper for the region. China buys approximately 40% of Zambia's copper exports, a significantly large market share. Inevitably, this has translated as a very large dependency on Chinese demand, which isn't surprising given the role that China has played in Zambia in the past. While Zambia benefitted greatly from China's economic expansion, it now faces the double constraints of lower exports and worsening terms of trade from falling copper prices. All of this bodes badly for the country if political uncertainty intensifies ahead of the general elections in 2016.

5 Implications of Africa's export dependency on China

Bilateral trade links reveal the unbalanced nature of China-Africa trade relations. China is importing raw commodities and exporting manufactured goods. Furthermore, the dependence on Chinese demand for these exports has increased, making the growing trade deficit harder to reverse. This may have three important implications, which we will analyze in more detail below:

5.1 Manufacturing substitution

One of the most worrisome implications is that of manufacturing substitution, or the degree to which cheaper Chinese manufactures are displacing local production. A simple measure of import penetration can be used to gauge the incidence of Chinese imports in apparent consumption (Melguizo et al, 2015):

$$I_{it}^{j} = \frac{M_{it}^{jc}}{AC_{it}^{j}} * 100$$

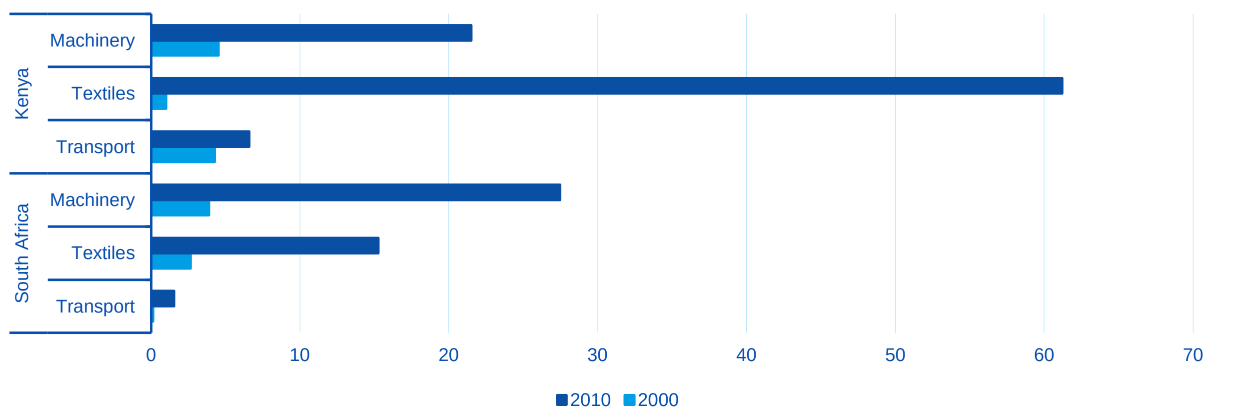
Whereby I = import penetration of commodity j in country i; M = country i's imports of commodity j from China; and AC = Apparent consumption of commodity j in country i. Apparent consumption is defined as:

$$AC_{it}^{x} = NS_{it}^{j} + M_{it}^{j} - X_{it}^{j}$$

Whereby NS = country i's national supply of commodity j; M = country i's imports of commodity j from the world; and X = country i's exports of commodity j to the world.

From figure 6 below, we can see that import penetration increased considerably between 2000 and 2010 for China's main export markets in Africa[5]. Machinery, textiles and transportation equipment, which together accounted for approximately 50% of Africa's imports from China all experienced increases, meaning that local manufactures were being substituted by cheap Chinese imports, particularly in the lower value segment. This is in line with Africa's increasing commodity export dependency on China.

Figure 6
Chinese import penetration



Source: UNIDO, UN Comtrade and BBVA Research

5: Our calculations are based on data from UNCOMTRADE and UNIDO. China's largest export markets in Africa were South Africa, Nigeria, Algeria and Kenya in 2013. However, the UNIDO database does not contain comprehensive data for Nigeria and Algeria, so our analysis is confined to two countries.

In the absence of policies that generate employment, import substitution could lead to higher income inequality and social unrest. Extractive sectors are less labor intensive than manufacturing, which benefits capital at the expense of labor. During a commodity boom, a commodity exporter will see its terms of trade improve, exerting upward pressure on the country's currency and relative wages. Skilled workers, or those employed in the extractive sectors, benefit from higher wages and cheaper imports. However, as is the case in many African commodity exporters, a preponderance of unskilled workers will find it hard to find a job as the labor-intensive sectors of the economy struggle to absorb the excess employment.

This situation may be sustainable during the good years, but a turn of the tide could really through the system into turmoil. As commodity prices relapse, exporters will see their terms of trade worsen, putting downward pressure on the exchange rate and wages. Given that manufacturing capacity is something that can't be built overnight, this would leave the country with a vast pool of unskilled and unemployed workers with an eroded purchasing power. To make things worse, as the price elasticity of consumer goods is very high, commodity exporters which have experienced significant increases in manufacturing substitution would have to continue importing manufactured products which are more expensive in relative terms, leading to a widening of the trade deficit and a worsening of the current account. Given Africa's relatively low industrial base, there is room to develop policies that boost manufacturing and downstream processing capacity, but this is something that requires proactive policymaking it might be harder to overturn the trade deficit with China.

5.2 The need to boost interregional trade

One of the main implications of trade dependency on China is that it may have played a role in reducing the potential for interregional trade. Interregional trade as a percentage of total trade is much lower in Africa compared to other emerging economies (Table 2), a trend which can be explained by inadequate infrastructure levels in the continent. For example, while Latin America is by no means the poster child of connectivity, it does enjoy better overall infrastructure levels than Africa, which may have facilitated closer trade links within the region but also with the United States, which makes sense given Latin America's geographic proximity to the United States. Dependence on demand from the United States may have therefore played a role in muting the impacts of growth in Chinese demand. Likewise, in the case of Africa, in the absence of a trade hegemon like China, the region may have otherwise been forced to invest in projects that enable better links within the region but also with neighboring markets in the European Union. Improved regional trade patterns may play a role in limiting a country's dependence on China.

Table 2
Intraregional exports and imports as a percentage of total exports and imports

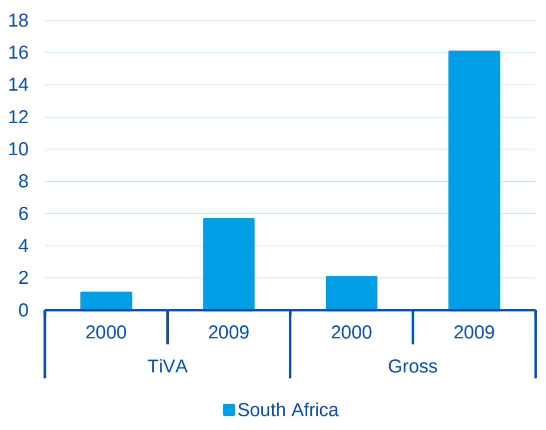
	Exports			Imports		
	1996-2000	2001-2006	2007-2011	1996-2000	2001-2006	2007-2011
Developing Africa	9.7	9.8	10.9	13.3	13.5	12.7
Eastern Africa	12.4	14.1	13.9	8.8	9.3	7.1
Middle Africa	1.2	1	1.3	2.6	2.5	3.1
Northern Africa	3.2	2.9	3.9	2.8	3.7	3.8
Southern Africa	4.4	2.1	2.1	11.9	10.7	7.9
Western Africa	10.2	10	9	11.3	12.5	10.2
Developing America	19.1	17.6	20.6	17.6	19	21.1
Developing Asia	41.5	45.1	50.1	40.6	49.3	53
Developing Oceania	1.3	3	3.3	0.9	2.3	2.7
Europe	67.3	71.4	70	68.3	67	64.4

Source: UNCTAD Statistical Database and BBVA Research

5.3 Diversification of exports in order to capture a larger share of value added

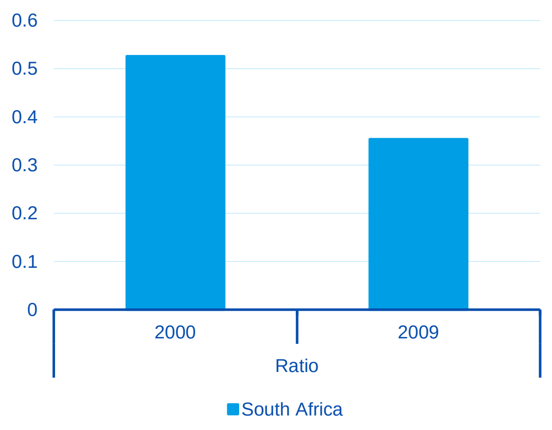
Trade in Value-Added[6] (TiVA) describes a statistical approach developed by the OECD in conjunction with the WTO that is used to estimate the source of value that is added in producing goods and services for export and import. As can be observed from Figure 7 below, both trade in nominal terms and trade in value added terms have grown significantly between 2000 and 2009. However, growth rates seem smaller when looking at value added data than raw data, indicating that bilateral trade flows may have been overestimated. In addition, notwithstanding fast growth patterns in nominal terms and somewhat humble growth rates in TiVA, the ratio of exported value added relative to gross exports is lower in 2009 compared to 2000 (Figure 8). This hints towards a more complex pattern, namely that China has shifted from importing commodities to meet domestic demand, to exporting value added via global value chains.

Figure 7
TiVA has not grown as fast as gross trade



Source: OECD and BBVA Research

Figure 8
The ratio of TiVA/Gross fell significantly



Source: OECD and BBVA Research

6: Currently, the OECD TiVA database only reports data for South Africa.

Value retention lies ahead as a big challenge for trade relations between Africa and China unless good policies are put in place. The good news is that China's rebalancing towards consumption and away from investment (Pettis, 2015) could spur the inflow of much needed Chinese investments, particularly in sectors with overcapacity. These include low value-added manufacturing such as textiles and apparel, but also basic processing of natural resources, Non-metallic mineral products, smelting and processing of ferrous metals, smelting and pressing of non-ferrous metals and raw chemical materials are amongst the sectors with the most significant overcapacity concerns in China (Casanova et al., 2015).

An example of how China can export low value-added manufacturing in sectors with overcapacity can be seen in Africa's textile industry. This industry remains very fragmented and has experienced significant losses stemming from intense competition from cheaper Chinese manufactures. However, there is recent evidence that points towards an inflow of Chinese investment into the sector, as Chinese companies try to take advantage of preferential trade agreements between Africa and the United States and Europe, such as AGOA and the European Neighborhood Policy (ENP) (Tang, 2014).

6 Conclusions

China is seen by ally regimes of both ends of the spectrum as an emerging power in the South and therefore closer to the problems of the South. While booming trade links have definitely contributed to the fast growth of Africa in the past decade, shielding the continent from a collapse of traditional sources of demand stemming from the Global Financial Crisis, this trend has started to slow.

African commodity exports are very dependent on China. This dependency has increased overboard since 2005, which is not surprising given the size of China's economy as well as rapid growth in the past decade. China's thirst for natural resources enabled it to become a key "engine of growth" for emerging commodity exporters in Africa and beyond, elevating South-South trade links to a new level. Not surprisingly, this dependency was more striking amongst traditional trade partners in the continent.

As China's economy starts to slow, following its restructuring away from investments towards more domestic consumption, we expect the pace of bilateral trade with Africa will moderate, on the back of falling commodity exports. This will impact African countries tremendously, particularly those with a high exposure to China (higher dependence) and those where growth is more reliant on external. On a commodity basis, dependency on China increased overboard for the three major exports to China; iron ore, copper and oil. Having said that, the impact of a Chinese deceleration will be felt most strongly amongst exporters of metals (not so much mineral fuels or agricultural commodities), as increases in these flows have been for the most part associated with China's investment binge.

Furthermore, bilateral trade patterns are becoming increasingly unbalanced. China imports raw materials and exports manufactured goods to Africa. In addition, we have evidence pointing towards a substitution effect of African manufacturing with cheap Chinese substitutes, which will make the trade deficit that many nations already have with China more difficult to reverse. As Africa's average income levels increase, it is likely that the trend will be exacerbated and the extent to which this scenario is sustainable in the midterm remains unclear.

In order to avert further commodity dependency increases, African economies need to do more to boost their exports to other regions as well as within the continent. This could be done via implementing policies that facilitate the integration of regional trade, for example by increasing investments in transportation infrastructure. African economies could also leverage their preferential geopolitical position by boosting their share of exports to the developed world via AGOA and the ENP. Another option would be to implement policies that enable the region to move up the global value chains (GVCs) by retaining more value added and promoting downstream refining and processing capacity.

All in all, China remains a strategic priority for Africa. While the story will continue to center around the region's exposure to a Chinese deceleration, the Asian giant's rebalancing towards consumption also offers some opportunities. Specifically, Africa could be strategically positioned to benefit from the offshoring of this excess capacity from China. It could also benefit from China's demand for other products that enable it to diversify its export basket. FDI and lending are picking up, providing a different and welcome dimension to China-Africa economic relations, particularly if they help the region to become more globally integrated. However, some pain in the short term may be inevitable for countries that haven't developed fiscal buffers over the years.

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