

# Can steel revive Europe's industrial policy?

By [Sarah Guillou](#)

The situation of the European steel industry was on the agenda of the European Council's Competitiveness session held on Monday, 29 February 2016. One of the Council's conclusions was to issue a demand to speed up the anti-dumping investigations by two months. This demand follows a letter sent on 5 February to the European Commission by ministers from seven European countries, including France, Germany, Italy and the United Kingdom, urging it to take measures to protect the steel sector vis-à-vis what was deemed unfair competition from China and Russia.

The steel industry, which successively pushed forward Europe's industrial development and then European cohesion through the European Coal and Steel Community (ECSC), subsequently became a theatre for the violent winds of globalization and a symbol of Europe's industrial decline – will it now be the sector that leads a revival of Europe's industrial policy?

In retrospect, a question arises as to whether the difficulties facing the European steel industry, which is subject both to the fussy oversight of the European Competition Commission and to low-cost Chinese imports, are partly a symptom of failings in Europe's industrial policy, which is wedged between a very active competition policy and a timid trade policy?

The history of Europe's steel industry does in fact fall closely in line with the history of Europe's industrial policy: from a central and highly sectoral industry at the time of the ECSC, with a great deal of state aid going to the sector under various exemptions, it then became primarily

horizontal and subject to competition policy. The sector only found its way by means of trade policy in response to increased competition from emerging countries. No steps have been taken in the steel industry towards European alliances or regroupings since the 1980s, and there have been no Europe-wide plans to rationalize production capacity so as to hold down the decline in jobs in the industry. This decline went hand in glove with the development of the continent's specialization in high-tech steel products. But today even those jobs are under threat. Could a different industrial policy save them?

### **The state of the industry in Europe**

Steel now accounts for 360,000 jobs in the European Union. The European sector has lost nearly a quarter of its workforce since 2009, with job losses accelerating: 3,000 jobs lost in the last 6 months.

In terms of production, the steel industry generates a turnover of 180 billion euros, with an output of 170 million tons from 500 production sites in 23 Member States. If countries are ranked individually in terms of international steel producers, Germany comes in 7th place, Italy 11th and France 15th. The sector is dependent on the import of iron ore, alumina and coal. Fortunately, the decline in steel prices has gone hand in hand with lower prices for these commodities. The industry is highly capital-intensive, requiring major investments. At the same time, the transport of steel coils and flat products is inexpensive, making it easier to import them.

The 2008 economic crisis cascaded through the sector, as steel products constitute intermediate consumption for many other industrial sectors as well as for construction. Steelmakers in Europe also face stricter environmental constraints than elsewhere. The steel industry is a major source of CO<sub>2</sub> emissions, and is very sensitive to carbon prices and to

regulatory changes. It is also a key player in the EU's emissions trading system (ETS) for greenhouse gas quotas, and while the crisis has enabled the industry to make profits from the sale of surplus emissions rights, steelmakers who are currently experiencing problems vis-à-vis their non-European competitors will be very sensitive to the forthcoming reform of the system for the 2020-2030 period.

Some companies are now in real trouble, such as Arcelor Mittal, which announced a record loss for 2015 (nearly 8 billion euros), partly due to the need to depreciate its mines and steel stocks. The company, which is heavily in debt because of its many acquisitions in Europe, plans to close some plants. Tata Steel, for its part, has closed sites in Britain. In Japan, Nippon Steel, which just acquired an interest in the capital of the French firm Vallourec and is preparing to buy the Japanese Nisshin Steel, is doing better.

The difficulties facing a sector that built up excess capacity during the crisis have been aggravated by the economic downturn in China. Thus, 2015 was the first year to experience a decline (-3%) in global production (1,622 million tons), after 5 years of growth. Global production did not adjust immediately to falling demand, with prices initially acting as the adjustment variable. The decline in production was the signal for the closures of steel factories and mining operations. This has marked the end of a cycle of rising Chinese production that strongly destabilized the market.

### **The Chinese tornado**

Chinese production doubled in volume between 2000 and 2014, and on its own now accounts for more than twice the combined output of the next four major producing countries, Japan, India, Russia and the United States. This performance is the result of several factors: massive government support; dynamic growth in construction, in infrastructure investment, and in the Chinese market's production of cars and machinery; and

favourable access to iron ore. China produces nearly 50% of the world's steel, i.e. approximately 800 million tons of steel. The second-largest producer is Japan, with 100 million tons. India and the United States are contending for third place, at around 5% of global production. If we count the Europe-28 as a single entity, then it would take second place with 10% (Source: [World Steel Association](#)). But the slowdown in the Chinese economy and the strong inertia characterizing production capacity in the steel industry have created substantial excess capacity, which the authorities are now trying to reduce. Domestically, China needs only about half of its output, so it exports the other half.

The 400 million tons China exports represent twice Europe's output. The price of the Chinese offer is therefore likely to greatly upset the balances in other countries. Any excess capacity is directed onto foreign markets to be gotten rid of at low prices, as Chinese exporters are not going to fail to sell off their steel products. Hence China's exports to Europe rose from 45 million tons in 2014 to 97 million tons in 2015, which exceeds the 43 million tons produced by Germany.

China is also likely to experience a significant decline in its workforce, and some production sites, drowning in massive debt, have already closed. Chinese steelmakers are losing money, and small units are going bankrupt. Large units, however, are often state property, and are weathering the storm (at the cost of heavy indebtedness) and becoming aggressive predators, in terms not only of price but also of acquisition capabilities. The weak position of Europe's firms is also leaving them vulnerable to foreign takeovers. China Hebei Iron and Steel Group is, for instance, about to acquire a Serbian steelmaker, which would be yet another means of entering Europe.

### **The policy response**

The public authorities have long been heavily involved in the

steel sector. It was a strategic sector for post-war economic development, and was the source of European economic construction at a time when the “small steps” policy of Robert Schuman led to putting the coal and steel production of France and Germany under a common authority, later joined by other countries. For a long time the sector then benefited from various public aid measures and subsidies that kept up excess capacity relative to demand, now estimated at 10-15% of output. The sector then was gradually freed from public tutelage, and in the mid-1990s was excluded from the list of sectors in difficulty that were eligible for aid for restructurings and bailouts. Nevertheless, state support never disappeared completely, but today, the European Commission, through the Competition Commission, is relatively strict about applying the market investor principle to assess the legality of public support.

While tracking distortions in competition on the market, the European Commission recently opened an investigation into Italy’s support for the steelmaker Ilva (2 billion euros), and demanded that Belgium repay 211 million euros of aid paid to the steelmaker Duferco. In 2013, the Commission opened an investigation into aid awarded by “Belgian Foreign Strategic Investments Holding” (FSIH), a body created in 2003 by the Walloon management and investment company Sogepa to invest in the steel industry. This aid, paid between 2006 and 2011 by the Walloon government [a Belgian regional government], was considered to constitute unfair competition on the European market. Indeed, for the Commission, private investors would not have voluntarily made such investments.

These subsidies by the Walloon government therefore constituted aid that put competitors at a disadvantage. The Commission recognized that there is very strong foreign competition, but it considered that the best way to cope with this is to have strong, independent European players. It noted that despite the government aid, the Duferco group wound down

all its activities in Belgium, meaning that the aid merely postponed the departure of a company that was not viable. The Commission is currently supporting the retraining of workers in the Walloon region through the European Globalisation Adjustment Fund. The point is to combat the recourse to public funding in Europe, which would ultimately be detrimental to the sector.

At the same time, so-called “anti-dumping” trade retaliation measures were implemented by the European Commission. In May 2014, following a complaint from Eurofer (the European steel association), the Commission imposed temporary anti-dumping duties of up to 25.2% on imports of certain steel products from the People’s Republic of China and duties of up to 12% on imports from Taiwan. The EC investigation ultimately concluded that China and Taiwan were selling at dumping prices. More recently, Cecilia Malmström, the head of trade policy at the European Commission, wrote to her Chinese counterparts warning them that she was launching three anti-dumping investigations against Chinese exporters (February 2015) in the field of seamless pipes, heavy plates and hot-rolled steels. Provisional anti-dumping duties (of between 13% and 26%) were also set on 12 February 2016 (complaints in 2015) with respect to China and Russia.

Some thirty anti-dumping measures protect the European steel industry, but the Member States where steel has been hit particularly hard by Chinese competition are calling for stronger measures. Politicians are railing against China’s loss-making exports and demanding that Europe take steps. They envy the US, which has acted more quickly and not skimped on the level of the duties it’s enacted, i.e. up to 236%. But the nature of these measures depends on the economic status accorded to China. Anti-dumping measures are not defined in the same way. As long as China is not a market economy, it is assumed that it provides strong support for its economic sectors, and that its prices are thus not market prices. Italy

is struggling in Europe to prevent China from being granted this status, while the United Kingdom is supporting China at the WTO (even though the industry is also in trouble in Britain). The Commission has postponed its decision until summer.

### **What policy for tomorrow?**

Should we allow the production of steel to disappear in Europe? It still represents more than 300,000 jobs there, though this is of course out of more than 35 million jobs in manufacturing in 2014. The sector is symbolic of heavy industry, and a supplier of the transportation and defence industries as well as construction – its disappearance would definitively turn a new page in European industry.

Do we need to recognize that, according to the theory of comparative advantage, it is better to buy cheaper Chinese steel and use the revenue freed up for other, more profitable uses? For example, shouldn't it be used to upskill employees? In theory yes, but the revenue freed up goes to the purchasers of steel, so it is they who should supply the European conversion fund. What about taxing the consumption of the now cheaper steel? The flaw in the reasoning shows up when you realize that what is true with respect to macroeconomic balances is difficult to reconcile with microeconomic imbalances: those who are losing their jobs today are not the consumers who are benefitting. Ultimately, the microeconomic articulations can unsettle the macroeconomic balances.

The loss of know-how is indeed the main challenge, as it is here that resources are really wasted. In so far as skills are a competitive factor, difficulties related to a lack of demand should be considered transitional problems that need to be managed as well as possible. Neither contributions of foreign capital nor government support should be excluded. What justifies these investments are the returns expected from the use of human capital. To deal with these challenges, alliances

on market segments that are not in trouble might be possible, even if they confer excessive market power, so long as they allow margins that make it possible to maintain the business during cyclical difficulties.

This is why competition policy has to be opened up to considerations of industrial policy (which is concerned about expertise) and trade policy (which appreciates the cyclical and / or unfair character of competition).

European actors need to be brought around a table – they are already grouped in Eurofer – and together with the European Commission develop a European plan for managing excess capacity and forging alliances. The Competition Directorate of the European Commission needs to relax its intellectual rigidity and adapt its reading of competition to the nature of contemporary globalization. Although it is based on an indisputable logic in the name of the single market, the approach of the Competition Directorate is sometimes no longer suited to the way that competition is unfolding on the global value chain today, which has no precedent on the 20th century European market. Who would believe that the market power resulting from a European merger would not be challenged very quickly by foreign forces if the new enterprise began to take advantage of its market power? The limits on market power are much stronger in the 21st century, with low inflation and depressed commodity prices an illustration of this. The risk that multinationals might abuse their power is posed less in terms of excessive prices than excesses in the capture of customers and in tax avoidance. This last point seems to have been understood clearly by the European Commission. In addition to this, there is the added competition from new applications driven by the digital industry, which manufacturers cannot escape. In other words, competition is no longer what it used to be: companies' excessive power is no longer expressed much in prices or restrictions on quantities.

Competition policy, industrial policy and trade policy need to



be developed in coordination, with a strengthened Competition Directorate that includes an element of industrial policy and trade policy. While strict controls on competition were a clear priority during the period of forging the single market when competition was essentially focused between the developed countries, today it is urgent to review the linkages between these three policy fields in order to consolidate the future of industry in Europe.

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## Should we be worried about the slowdown in China?

By [Eric Heyer](#)

China's growth is slowing. This does not really come as a surprise: the slowdown was announced by the Chinese authorities; it can be seen in the national accounts; and it was predicted in all the medium-term scenarios of the major international organizations. It corresponds to a new phase in China's economic and social development, towards growth that the authorities want to be more "qualitative, inclusive and innovative".

However, many analysts and experts believe that the Chinese economy has slowed down more than [is reflected in the country's national accounts](#). According to a survey conducted in 2015 by Bank of America Merrill Lynch, 75% of investors are convinced that the real growth rate of the Chinese economy was less than 6% in the second quarter of 2015 on an annualized basis. For some, the overestimation of growth is due to an underestimation of inflation, particularly in the service sector. For others, China's GDP growth rate needs to be

correlated with the rate for electricity generation and be in line with freight by road, rail, sea or air. However, all these values have experienced  $\square\square$  a significant decline since the start of 2014, and the stable relationship between GDP and these elements tends to indicate lower annual growth for the Chinese economy, of [around 2% in early 2015 according to Artus](#), which is more in line with the observed fall in imports. This steeper slowdown would have a violent impact on the global economy, endangering the shoots of recovery in the developed economies.

[In a recent article](#), we estimated the link between Chinese GDP and different economic variables not taken from the national accounts, using an error correction model (ECM) to evaluate the slowdown, before giving an evaluation of its impact on the GDP of the major developed countries.

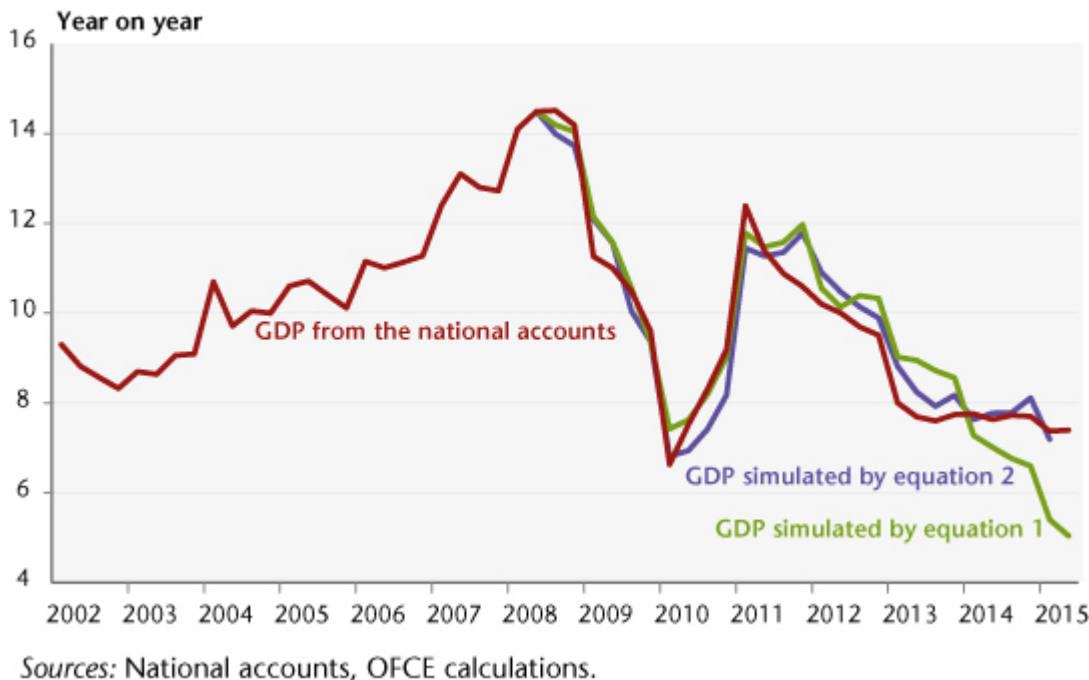
### **Just how much is the Chinese economy slowing down?**

Drawing on the Li Keqiang index, we estimated China's GDP from variables for freight and the production of electricity and cement. While our results confirm that the Chinese economy has been slowing down since 2011, from a yoy rate of 12% to less than 8% in early 2013, the stabilization of the growth rate observed since then in the national accounts is not re-traced in this simulation, which indicates instead a continued slowdown in Chinese growth (Figure 1, equation 1).

However, this modelling of GDP does not take into account the major transformation of the Chinese economic model towards a new growth model, which began three years ago and which involves high indebtedness of domestic agents and an orientation towards more services. An enhanced analysis of variables that also draw on the labour market situation (wages, jobs) confirms the slowdown in the Chinese economy as traced by the national accounts, reflecting the difficulty of the transition between the two growth models, and not the beginnings of a slide into recession (Figure 1, equation 2).

On the other hand, the country's "industrial" part should continue to decelerate, thwarting any significant rebound in Chinese imports.

**Figure. Simulated and observed growth rate of China's GDP**



**What impact will the slowdown have on the developed countries?**

Three channels for the transmission of the slowdown of the Chinese economy to the developed countries can be identified:

1. **Direct and indirect effects via the trade channel:** Given China's weight in world trade, the sharp slowdown in its output, particularly in industry, is significantly reducing the country's imports (through intermediate consumption and household consumption) and is consequently cutting demand for the rest of the world's goods. To this direct effect can be added an indirect effect due to the slowdown in partner countries affected by the reduced demand;
2. **Effects via the financial channel:** The Chinese slowdown may hit direct investment in the developed countries; conversely, the withdrawal of capital from China might be an occasion for reallocating it to other developed

countries;

3. **Effects via the channel of raw materials prices:** As China buys more than half of all metals traded in the world and accounts for two-thirds of the increase in global oil consumption, the slowdown of its economy is hurting the prices of raw materials, especially oil, thereby causing a transfer of income from the countries producing commodities to the countries consuming them.

Looking only at the first transmission channel, trade, our results are as follows: Japan and Germany are the countries most affected by the slowdown in China. The cumulative impact from 2014 to 2017 will amount to more than 2 percentage points of GDP. The impact on Japan is due to its significant exposure to Chinese trade (3% of exports to China compared with 2.4% for Germany), whereas the impact on the German economy is due more to its degree of openness (39.1% against 14.6% for Japan). Next come the United Kingdom, Italy and France, with a cumulative impact of close to 1 GDP point. Spain and the United States are least affected, with a cumulative impact of around 0.5 GDP point: the United States has a low exposure (0.7%) and a low degree of openness (8.2%). Finally, the annual peak for the impact of China's slowdown would hit in 2015, and knock 0.8 GDP point off the German economy and 0.9 GDP point off the Japanese economy.

**Table. Impact of China's slowdown on the GDP of the major developed countries through the trade channel**

In GDP points

	2014	2015*	2016*	2017*	Effet cumulé 2014-2017
<b>DEU</b>	<b>-0.4</b>	<b>-0.8</b>	<b>-0.5</b>	<b>-0.4</b>	<b>-2.1</b>
Direct effect	-0.3	-0.7	-0.4	-0.3	-1.7
Indirect effect	-0.1	-0.1	-0.1	-0.1	-0.3
<b>FRA</b>	<b>-0.1</b>	<b>-0.3</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.8</b>
Direct effect	-0.1	-0.2	-0.1	-0.1	-0.5
Indirect effect	-0.1	-0.1	-0.1	-0.1	-0.3
<b>ITA</b>	<b>-0.2</b>	<b>-0.4</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.9</b>
Direct effect	-0.1	-0.3	-0.1	-0.1	-0.6
Indirect effect	-0.1	-0.1	-0.1	-0.1	-0.3
<b>ESP</b>	<b>-0.1</b>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.5</b>
Direct effect	0.0	-0.1	0.0	0.0	-0.2
Indirect effect	-0.1	-0.1	-0.1	-0.1	-0.3
<b>GBR</b>	<b>-0.2</b>	<b>-0.4</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-1.1</b>
Direct effect	-0.1	-0.3	-0.2	-0.2	-0.8
Indirect effect	0.0	-0.1	-0.1	0.0	-0.2
<b>USA</b>	<b>-0.1</b>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.6</b>
Direct effect	-0.1	-0.2	-0.1	-0.1	-0.5
Indirect effect	0.0	0.0	0.0	0.0	-0.1
<b>JPN</b>	<b>-0.4</b>	<b>-0.9</b>	<b>-0.5</b>	<b>-0.4</b>	<b>-2.2</b>
Direct effect	-0.4	-0.9	-0.5	-0.4	-2.1
Indirect effect	0.0	0.0	0.0	0.0	-0.1

\* Forecasts.

Sources: National accounts, Eric Heyer's calculations.

# Solar power is cooling Sino-European relations

By [Sarah Guillou](#)

In early July 2013, yet another company in the solar industry, Conergy, declared bankruptcy. The departure of this German company, established in 1998, marks the end of a cycle for the solar industry. This bankruptcy adds to a series of closures and liquidations across every country that have highlighted the rising trade tension over solar panels between the United States and Europe on the one hand and China on the other (see

[OFCE Note 32: “The twilight of the solar industry, the darling of governments”, from 6 September 2013](#)). As this tension peaked, in May, the European Commission decided to threaten China with a customs duty of over 45%. A trade war has thus concluded a decade of government involvement, as if this were a matter of saving the public money invested. But what it signifies most is the industrial failure of a non-cooperative global energy policy.

### **A promising, but chaotic, industrial start**

Government worship of solar power, which took off in the early 2000s on both sides of the Atlantic, but also in the emerging economies (and especially China), has undoubtedly propelled solar energy to the forefront of renewable energies, but it has also fueled a number of market imbalances and serious industrial turmoil. With the price of oil rising constantly from 2000 to 2010, the need to accelerate the energy transition along with the commitments of the Kyoto Protocol led governments to support the production of renewable energy, with solar energy being the great beneficiary. The global industry experienced a tremendous boom, with growth of more than 600% from 2004 to 2011.

Public support, together with private investment, sparked massive market entries that destabilized the price of the main resource, silicon, the amount of which could not adjust as quickly. Fluctuations in the price of silicon due to imbalances in the market for photovoltaic panels created great instability in its supply, which was exacerbated by technological uncertainties facing companies trying to innovate in the field (such as the American firm, Solyndra, which finally filed for bankruptcy in 2013).

### **The trade war for a star**

The intensification of Chinese domination of the industry has in turn affected the competitive uncertainty. China is now the

world's largest market, and the involvement of the Chinese government in the industry's development is unparalleled. Today ranked third in terms of installed capacity (after Germany and Italy), China is also the world's largest producer of solar panels. It now accounts for half of the world's output of panels, whereas it produced only 6% in 2005. Chinese producers have received massive support from central and local government, which has also helped to saturate the Chinese market.

In addition to this public support, China also enjoys a distinct advantage in labour costs, which makes the business of manufacturing solar panels very competitive – the more technologically-intensive steps are upstream in the industry, at the level of the crystallization and slicing of the silicon. In addition to this competitive advantage, Chinese producers have also been accused of dumping, *i.e.* selling below the cost of production. Their competitiveness is thus unrivalled ... but increasingly under challenge. In October 2012, the United States decided to impose tariffs on imports of Chinese cells and modules, with anti-dumping duties varying from 18.3% to 250% (for new entrants), depending on the company.

Europe, which imports many more photovoltaic components from China than does the United States, initially opted for the approach of imposing anti-dumping duties, and launched an investigation in September 2012, triggered by a complaint from EU ProSun – a trade association of 25 European manufacturers of solar modules – on imports of panels and modules from China. In June 2013, the Commission finally decided to impose a customs duty of 11.2% on solar panels, while threatening to push this up to 47% if China does not change its position on pricing by August 6<sup>th</sup>.

### **The Empire counter-attacks**

The counter-attack was not long in coming: in July 2013, China

decided to apply anti-dumping duties on imports of silicon from the United States and South Korea. A serious threat is also hanging over the head of Europe's firms, as China is one of the largest markets for the continent's silicon exporters (870 million dollars in 2011).

This trade war essentially reflects a defensive position taken by China's industrial rivals in the face of a support policy that they consider disproportionate and unfair, during a period when China has been nibbling away at the industrial jobs of its competitors for ten years. But one could question the industrial logic underlying this trade policy.

First, this policy contradicts previous government policies promoting solar energy. The trade-off between climate change goals (developing low-cost energy transition tools) and the profitability and sustainability of the industry seems to have been decided in favour of the latter. Second, while this now provides producers direct support, it could handicap installers, engineering firms involved in pre-installation work, and manufacturers of panels using Chinese components. Finally, this is leading to serious exposure to potentially costly trade retaliation, which could mean exporters of polycrystalline silicon or machinery used in the solar industry, or other industries such as wine or luxury cars.

Out of fear of a probable lack of approval by a majority of EU members or in order to "slay other dragons" more freely (the coming telecoms conflict), the [agreement reached in late July](#) by Commissioner Karel De Gucht and approved by the European Commission on August 2<sup>nd</sup> should not lead to trade retaliation nor disturb market supply too much. It commits nearly 90 Chinese producers not to sell below 56 cents per watt of power. This price is a compromise between what is considered consistent with the cost of Chinese production and the current average price on the market on the one hand and what is acceptable to European competitors on the other.



Finally, over the decade from 2002 to 2012 the solar photovoltaic industry has undeniably become global and highly competitive, despite clear-cut government interventionism. In reality, even the governments competed. Now they are settling their disputes by playing with international trade rules. Costly state support has propelled the growth of the sector beyond all expectations: by creating excess supply, the price of solar panels dropped sharply and accelerated the incredible boom in solar power. In 2013, solar power represented more than 2% of the electricity consumed in the European Union. This breakthrough by solar energy was accompanied by numerous entries and exits from the market, without so far giving rise to a significant business concentration. The choice of a public pull-back in favour of trade policy represents a new page in the history of this industry, which is no longer being driven so much by energy policy or even by industrial policy. There is obviously no dusk without a future dawn. But tomorrow's dawn will certainly see the rise of a different "solar". Europe's future in the manufacture of solar panels will involve technological innovation aimed not so much at reducing costs as at improving performance.

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# **Inequality and Global Imbalances: reconsidering old ideas to address new problems**

by [Jean-Luc Gaffard](#) and [Francesco Vona](#)

The main challenge of the Bretton Woods agreements was to reconcile social justice and full employment to be achieved through domestic policies with an international discipline and

progress toward trade liberalization (Rodrick 2011). After more than six decades, such division of objectives between international and domestic policies has been questioned by the current economic crisis, characterized by high debt levels, remarkable global imbalances and low global demand. It can hence be useful to reopen an old debate by reconsidering ideas that were discarded in the past, such as the proposal of Keynes to create global demand stabilizers. Our suggestion is that a global stabilizer that prescribes surplus countries to gradually increase their wages can have both a direct positive effect on global demand, without increasing public debts, and an indirect one by favouring a reduction in income disparities.

The structural lack of global demand represents unquestionably the key constraint to exit from the great recession. Worldwide, sluggish demand appears as the resultant of two quite independent factors, a *constraint* and a *political choice*. The choice is of those countries, especially emerging ones plus Germany, that build up their wealth on export-lead growth using a mix of wage moderation and clever firms' industrial strategies. The public debt constraint, instead, impacts upon the possibility to expand demand of the majority of developed countries. As these countries should enforce restrictive fiscal policies to prevent default, their only chance to expand demand impinges on redistribution in favour of poorer households who consume a larger fraction of their incomes.

The current debate on this matter is misleadingly at best, oscillating between the usual Scylla and Charybdis of more or less state intervention. From a standard Keynesian viewpoint, the bottleneck in global demand is the consequence of neo-liberal policies, which in Europe are worsened by the opposition of Nordic countries against large scale public funded EU programs, possibly financed with EU bonds. From an orthodox viewpoint, which relies upon the belief in a trickle-

down mechanism (increase the wealth of the rich eventually benefit all), the crisis represents an opportunity to remove the last barriers to a full liberalization of labor and goods markets. These barriers would prevent EU economies to raise their competitiveness with respect to their new emerging competitors, the BRICS (Brazil- Russia- India-China- South Africa). While Keynesians are overoptimistic in their belief that more public expenditures will succeed in ensuring a fresh start to our feeble economies, orthodox economics neglects by assumption the problem of global demand. In particular, it ignores that a race for competitiveness based on further wage moderation and welfare state cuts would only amplify the global demand constraint.

It is well documented that, in last thirty years, living conditions and real wages of both low and middle skilled workers decreased substantially while profits and, in general, earnings of top 1% earners increased impressively, especially since the 2000s (Piketty and Saez 2006, Eckstein and Nagypál 2004, OECD 2011). The widening in incomes has been especially large in the US and Anglo-Saxon countries where deregulated labour markets allow wage to adjust downward, but also affected European economies in other forms such as structurally higher unemployment rates and higher profit shares (Krugman 1994). The excessive decrease of the median wage with respect to the average productivity created a fundamental wedge between demand, which is more sensible to wage changes than to changes in profit opportunities, and supply, for which the opposite holds. Globalization plays a key role in increasing inequality between profits and wages as increases in capital mobility were not accompanied in parallel increases in international labour mobility (Stiglitz 2012). Only the joint working of increasing debt (both private and public) and of productivity improvements related to new information & communication technologies prevented the demand deficit to emerge earlier together with the dysfunctional role of excessive inequality (see Stiglitz 2012, Fitoussi and

Saraceno 2011, and on the role of technical change Patriarca and Vona 2013). Global imbalances played a key role in maintaining high the level of global demand as long as savings of countries with commercial surpluses (e.g. China) were borrowed to households and governments in countries with commercial deficits (e.g. the US). By mitigating the consequence of on excessive inequality, they keep also under control the political pressure for redistribution. But, as we have seen, they are a source of macroeconomic instability. In fact, the saving glut in export-led economies creates a mass of liquidity in search of investment opportunities that increases the likelihood of asset price bubbles, especially in presence of an inadequate and oversized financial sector (Corden 2011).

Leaving ethical considerations aside, the concern for rising inequality in western economies would have been irrelevant for overall growth provided the lower demand there was compensated by a growing demand in emerging and export-led countries, such as China. Unfortunately, the compensation did not and is not expected to take place soon for at least two reasons.

First, oligarchies in emerging economies (especially China) found it convenient to sustain global demand indirectly, rather than through wage increases proportional to productivity, by investing large current-account surpluses in the US financial market and so financing US consumers. The indirect empirical support for this argument is that inequality increased in China too since the market friendly reform started. Especially inequality in factor shares, i.e. between profits and wages, increased substantially since the 1995 with the labour share falling by between 7.2% and 12.5% depending on the accounting definitions used (Bai and Qian 2010).

Secondly, a historical comparison of catching-up episodes can help shed light on the origin of the global demand glut.

Between the second half of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century, the economic catching-up of both Germany and the US with the UK was soon followed by convergence in living standards and wages (Williamson 1998). Nowadays, the economic catching-up of China is much slower in terms of convergence of wages and living conditions. By way of example, China's GDP per capita increased from 5.7% to 17.2% of US GDP per capita from 1995 to 2010 (source: World Penn Tables), while the hourly labour compensation cost is also increasing but reached only 4.2% of the US labour compensation cost in 2008 (source: Bureau of Labor Statistics Data). This gap between GDP per capita and unit labour cost in China clearly shows that the catching-up in terms of workers' living conditions is far slower than the economic catching-up.

The reasons for this slow wage convergence deserve further investigations and have probably to do with factors affecting institutional changes that support redistribution from profits to wages, including culture and tax progressivity (Piketty and Qian 2009), in the catching up country. Certainly, the size of Chinese population relative to the world population did not help in fastening these institutional changes. By simple assumptions of standard bargaining theory, bargaining power depends on the outside option that, for workers, is limited by existence of a large 'reserve army' willing to work for extremely low wages. One can then argue that the larger the reserve army, the longer it takes to reduce the downward pressure on the workers' wages in the advanced part of the economy. De facto, the wage convergence has been much faster in previous catching-up episodes since the labour constraint becomes stringent sooner due to the smaller size of the population, allowing workers to fight for better conditions and higher wages. In a nutshell, an excessively large reserve army in the countryside prevents both wages to increase and democratic reforms to take off in China, thus creating a wedge between the timing of economic growth and the one of political

reforms, required to rebalance demand and supply.

Not only the slow wage convergence of catching-up country causes persistent global imbalances between demand and supply, it is also the essential reason of the obstacles faced to reduce inequality in western countries. First, implementing redistributive policies and increases in real wages are likely to further reduce competitiveness and to bring about a substantial investment outflows. Second, the treat of delocalizing production abroad can have forced workers to accept lower wages; an effect that is difficult to correlate empirically with observable proxies of globalization such as trade or investment outflows.. While empirical analyses looking at the last 30 years of the 20<sup>st</sup> century concur that globalization was not the main driver of inequality increases, recent evidence shows that: (i) Outsourcing had a negative impact of on middle and low skill wages and employment levels in developed countries, especially in the last decade (Firpo, Fortin and Lemieux 2011); (ii) The effect of trade on inequality can be underestimated due to production fragmentation (Krugman 2008).

Global imbalances are also likely to create political obstacles to policies aimed at reducing inequality. An oversized financial sector contributed to increase earnings of the top 1% of the population and so their lobbying power. This allowed these super-rich to heavily influence political decisions making their rents higher, especially through a massive reduction of tax progressivity (Fitoussi and Saraceno 2012) and other opaque channels (e.g. fiscal loopholes, Stiglitz 2012). Now, this lobby of super-rich makes it exceedingly difficult to limit the power of finance and restore fairer tax rates for financial rents and top incomes.

How to avoid the stalemate generated by global imbalances and global pressure for wage moderation? Are there in the system as it is endogenous forces that will eventually reduce global

imbalances and inequality?

The first option is to wait for reforms in China. Politicians in western countries can hope in a speeding up of this process that will lead to a parallel increase in real wages and hence global demand. This will be the ideal market solution, but it is unlikely to occur in the short- and medium-run. A second possibility will consist in a large scale devaluation of western economies' currencies: Dollar, Euro and Yen. However, such a policy is likely to create a devaluation spiral, also increasing investment uncertainty. Moral suasion is unlikely to convince Chinese politicians to not devalue the Yuan as their assets in dollars and euro will depreciate substantially. A third protectionist solution is not convincing at all as it is likely to trigger a retaliation spiral paving the way for global wars. Indirect and global political interactions are an issue at stake here: nationalistic political parties and the associated protectionist policies are more likely to become popular if the timing of Chinese reforms is too slow and so the adjustment process too painful in the medium-run. A fourth solution is to resort to an old idea of John Maynard Keynes on 'global automatic stabilizers'. In the post-WWII context, Keynes proposed an international institution, the so-called 'International Clearing Union' (ICU), to reabsorb both commercial surpluses and deficit, seen as equally worrisome (see also the article in Italian of A. Bramucci 2012). In particular, persistent commercial surpluses were seen as a potential source of long-term shortages of global demand. The main idea was to coordinate thorough the ICU both re-evaluations and demand expansions for the countries in surplus, and de-evaluation and control of capital movements for countries in deficit. Such an institution would go in the right direction to help reabsorbing global imbalances, but lack enforcement power to ensure that the necessary adjustments are effectively put in place.

Combining a global rule for wage adjustment with WTO sanctions can represent a more clever and reliable way to revive global demand. The first part of the proposal would consist in linking real wage growth not only to productivity growth, as proposed by A. Watt (2011), but also to commercial surplus. Conditioned to the country's level of development (so the prescribed adjustments should take into account of initial level of GDP per capita and obviously adjusted for PPPs), countries experiencing medium-term growths both in productivity and in the commercial surplus have to increase real wages. Otherwise, other countries could raise tariffs on the products exported by the country that does not follow the rule. The effective capacity to implement of the rule can be reinforced by giving to Unions, either global or local, and NGOs the power to control for specific situations where the rule is not respected, i.e. special export-oriented zone in China where labour standards are particularly low. In the case of commercial deficits, the country could be asked to follow (real) wage moderation and to put under control public deficit. In such a context, these restrictive policies would have limited harmful effects on growth for the increase in external demand that follows the wage increase in the export-oriented countries. The proposal would have also positive effect in reducing the overall level of functional inequality worldwide, restoring a more balanced distribution between wages and profits.

Overall, the coordination of global demand and supply would be restored using a simple automatic stabilizer that will neutralize the protectionist treat and, at the same time, will relax the constraints that prevent inequality-reducing policies to be approved in western countries.

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