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The globalization of the economy of the past two decades has created more challenges opportunities than for the EU. Already at the beginning of this century, the EU started feeling a heavy pressure from emerging economies, which led to a reshuffling of global GDP shares, the polarization of EU job markets and a gradual loss of competitiveness in several industry sectors. The economic downturn since 2008 has just exacerbated this

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process. Overall, this paper portraits a rather gloomy outlook for Europe's future role in the global economy: the EU suffers from major weaknesses at home, not least due to lack of political and economic integration and the prevalence of parochial instances in the trade negotiations. Current policy responses in the domain of trade policy, innovation and industrial policy do not seem likely to restore and ensure the EU's leading role in the global economy.



Globalization, the New Geography of Power, and EU Policy Response

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Global economy Global leadership Great Recession Eurozone Crisis

Over the past decade, relations between the European Union (EU) and the United States (US) have been increasingly affected by the globalization of the economy and the fast growth of emerging powers, which represent increasingly appealing trade partners and competitors. Notwithstanding the recently launched talks over a major transatlantic economic deal, the United States will continue to look beyond the EU in the quest for attractive new markets and promising trade and investment exchanges. Given the breath-taking growth of countries like Brazil, India, Russia and China at least until 2010, the US and the EU ended up – unsurprisingly – being simultaneously competitors and allies. *Competitors* in the quest for new markets, even more today as some of the emerging economies feature an unprecedented combination of political stability, openness to foreign direct investment (FDI), availability of natural resources and blossoming internal demand, which makes them very appealing commercial partners. But also *allies*, since emerging economies challenge the prominent position that both the US and the EU have held in the global economy for decades. This paper takes stock on the main effects that global economic transformations are producing for the EU, and illustrates whether and how EU institutions have taken action to tackle the new challenges and reap the opportunities created by the new geo-economic landscape.

The paper is structured as follows. Section 1 illustrates the main drivers of change in the global economy and the shifting role of the EU in global production chains over the past decade. Section 2 looks at growth- and competitiveness-related policies from a historical perspective, and looks at innovation and industrial policies at the EU level. Section 3 looks at the changing role of the EU in global trade negotiations. Section 4 concludes by providing an overall assessment of the effectiveness of these adjustment reforms, as well as a discussion of areas in which the EU has not made sufficient progress to preserve its competitive position in the global economic landscape.

1. The EU and the Global Economy: Drawing the Baseline Scenario

The European Union plays a prominent role in the world economy, having been the world's largest market, the

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largest exporter and also the largest importer of goods and services for half a century. However, the economic performance of the EU27 in the past decade has been very disappointing, with a gradual decline both in productivity and in the share of global markets. In addition, its increasingly ageing population (especially in some of the largest and richest member states such as Germany and Italy) is triggering a gradual loss of competitiveness and significant pressure on national welfare systems and public budgets. This is further exacerbated by the fact that the EU's energy dependence on the rest of the world is likely to worsen in the coming years partly due to the rising energy demand caused by technological development. The US, on the other hand, is moving towards energy independence by 2035 (IEA 2012) mostly due to the new opportunities generated by the production of shale oil and gas. Population constitutes another aspect of the gloomy forecasts for the EU as according to United Nations (UN) forecasts, between now and 2025 the world population will reach eight billion inhabitants, but 97 percent of this growth will occur in the developing countries. By then, 61 percent of the world's population will live in Asia (EC DG Research 2009). Asia is also expected to become the world's leading place for research and development, and China is expected to overtake the EU in terms of nominal research and development (R&D) already in 2014 (EC DG Research 2009).

All this exerts a significant impact on the EU's prospects for future growth and sustainable development. Globalization represents for the EU both an opportunity and a challenge. Specifically, the rise in trade exchanges and increased flows of FDI across the globe have opened up new markets and commercial opportunities for the Old Continent; at the same time, this has led to increased competition from countries with two-digit growth rates, a broader and more flexible monetary policy toolkit, younger population, lower labour costs, large pools of increasingly skilled labour and often significant endowments of natural resources (Denis, Mc Morrow and Röger 2006).

The EU economy has been largely affected from globalization, yet it bears recalling that many of these trends have been accelerated and even exacerbated by the global economic crisis. With the crisis hitting mostly industrialized countries at the outset, global trade volumes have declined, the redistribution of global wealth and the polarization of job markets has accelerated, and the de-localization of production (including the "farshoring" of value-added activities) has become evident sooner than expected (Stehrer et al. 2012).

1.1. Globalization Trends: Towards a Geo-Economic Reshuffling

A number of important trends challenge the EU's position in the global landscape. These include the following:

- A major reshuffling of global GDP shares: the share of the BRICS in world GDP increased from 17 percent in 1990 to 28 percent in 2010, mostly due to the rise of China (13.5 percent) and India (5.5 percent). In 2011, according to the Organization for Economic Cooperation and Development (OECD), the share of world's GDP held by China had already jumped to 17 percent, reaching the Euro area and not far from the US (23 percent). A recent report by the OECD (2012) also forecasted that "China and India will experience more than a seven-fold increase of their income per capita by 2060, bringing China 25 percent above the current (2011) income level of the United States, while income per capita in India will reach only around half the current US level" (OECD 2012: 23).



• Figure 1 | Share of world GDP in 2011 and forecast for 2030



Source: OECD 2012: 23.

- *The EU has lost competitiveness over the past decade.* The EU's economic performance had been disappointing since much before the advent of the economic downturn. Already in 2004, when the high-level group headed by former Dutch prime minister Wim Kok published its report on the EU's potential to boost competitiveness and growth, the Union's struggle to regain competitiveness already appeared as an uphill battle, and the ambitious goals set in 2000 with the Lisbon strategy looked more like mirages than concretely attainable targets (Kok 2004). According to Kok "Europe faces two enormous challenges – increasing global competition and a rapidly ageing population [...] to safeguard and strengthen [Europe's] distinctive economic and social model, it must adapt." ¹ Today, the EU is again in a similar situation, with most of the targets set by European Commission's Europe2020 growth agenda being impossible to achieve, and the economy approaching or already in recession in at least some of the largest European member states (France, Italy, Spain). As a matter of fact, in the past decade productivity growth has been consistently low and falling (Barkbu, Rahman and Valdés 2012). Given the negative demographics of the EU, without a boost in productivity – currently, quite unlikely – it seems that there will be very little growth attainable in the near future, at least by 2030 as shown in Figure 1.



Figure 2 | The EU-US productivity gap

Source: World Economic Forum 2012: 6.

¹ Statement at the presentation of the Kok report, 3 November 2004, available at http://ec.europa.eu/information_society/tl/essentials/reports/kok/index_en.htm.

- A changing role in global value chains. Even before the crisis, the EU industry had begun to face severe difficulties in global competition, due to the emergence of so-called "global value chains" and the pressing need to outsource and offshore industrial activities in countries with lower labour costs. The internationalization of industrial production has led to a declining contribution of the EU economy on total world output. The recent European Competitiveness Report released by the European Commission identifies a worrying trend of industrial relocation outside the EU15, not only towards the EU12 but also, increasingly, to the "greater China" (EC DG Enterprise 2012: 65; Stehrer 2012: 95-96). De-localization, internationalization and offshoring trends are, as anything else related to globalization, both an opportunity and a challenge for EU companies. On the one hand, the EU is home to many of the world's largest multinationals, which could seek competitive advantage by re-locating part of their value chain to countries with cheaper labour and proximity to booming markets and thus compete aggressively on a worldwide basis. At the same time, it is important that the high value-added phases of the production chains are not moved outside the EU - something that might cause the loss of the EU's leadership in a number of industrial sectors. Current data seem not very reassuring in this respect (Cemat and Pajo 2012). While US companies pay a lot of attention to keeping know-how at home (see e.g. the iPhone's production process between Apple in the US and Foxconn in China), also thanks to repeated calls for the development of an American manufacturing strategy, European corporations seem to be losing their control over key industrial know-how, to the advantage of other regions in the world (Council of Competitiveness 2011; Brandes et al. 2007).



Figure 3 | Main motives for production relocation

Source: European Manufacturing Survey 2006, 2009

- As a result, at least in some sectors of the economy, the EU has become more an "assembling" regional bloc, rather than a producing one. This is particularly true in the automotive sector, which marks a major difference compared to what the Barack Obama administration has done in the United States to maintain the bulk of value-added activities in US territory. Both Cernat and Pajot (2012) and Lee-Makiyama (2012) observe that the value added of employment in the car sector in the EU has fallen significantly, and is now behind that of Brazil in many large EU member states (see figure 4). The "assembled in Europe" phenomenon is of course not a problem per se, but becomes a problem if the value added component of the production chain gradually moves outside the

EU. This is why the EU trade strategy, especially as regards free trade agreements with important commercial partners, should take into account the need to avoid outflows of know-how and value added activities.

	Wages and Salary		Value added per employee		Labour Productivity Index	
	2000	2007	2000	2007	2000 - 2008	
France	28 621	55 461	71 918	104 092	-6.3%	
Germany	26 580	43 707	53 094	133 822	35.7%	
Italy	21 298	39 895	41 205	99 747	-2.2%	
Spain	24 326	44 881	52 613	106 628	14.4%	
UK	39 253	68 947	51 243	147 442	35.2%*	
US	51 338	62 020	189 997	280 262	63.7%	
Japan	66 423	60 558	241 975	290 149	32.1%*	
Korea	26 963	54 867	142 385	250 952	47.6%	
Brazil	16 042	25 653	53 577	120 299	-	
China	2 798	6 059	28 671	47 542	-	

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• Table T	wages and value	added per emplo	oyee in the car industry	, 2000 v. 2007

* Motor vehicle data unavailable, and transport equipment classification used Source: Lee-Makiyama 2012: 5, based on data from UNIDO and OECD.

The cumulative impact of these developments makes it possible to claim that the EU's competitiveness at the global level is decreasing seriously, requiring a policy response from the European Union, particularly with regards to innovation. However, as discussed in the next section, the EU's innovation strategy seems not on the mark.

1.2. Will the European Union Be Wiped Off the Innovation Map?

European Commission data show that the EU's capacity to innovate has worryingly slowed down. First, the EU *Annual Growth Survey* published in January 2010 confirmed that by 2020 the EU will miss the goal of achieving a level of R&D of 3 percent on GDP – a goal that was already set by the Lisbon strategy back in 2000 (EC 2010a). In the past three years, the R&D investment rate has stood at approximately 2 percent of GDP. In the same report, the European Commission goes back to the several causes of the poor performance of the EU27 in terms of innovation – indeed, a rather long list of well-known causes, from a poorly performing education system to the absence of a well-developed venture capital market in many member states, to problems related to the fragmentation of legal regimes regulating intellectual property rights (IPR), standard-setting and technology transfer. In addition, the polarization of innovation performance already highlighted before the economic crisis seems to have widened in the past months. For example, the recent R&D forecast for 2013 by consultancy firm Battelle shows that, while countries like Finland and Sweden rank at the top in terms of both number of skilled researchers and scientists and R&D level on GDP, the EU as a whole is losing ground in the global innovation race (Battelle 2012, Granieri and Renda 2012).

Figure 4 | World of R&D in 2012



Source: Battelle 2012: 4.

An interesting feature of the current innovation performance of EU nations is that many of the countries that are currently exhibiting poor macroeconomic fundamentals also rank very low in the innovation performance statistics. Countries that have opened up their economies to foreign, innovation-intensive investment such as Israel can boast a completely opposite trend, with less scientists being trained, but levels of R&D that are comparable to Scandinavian countries. Another important trend to be highlighted in the evolution of R&D around the world is that, between 2005 and 2009, the sources of R&D funding in all the EU27 shifted towards a greater presence of public funding, with a reduction, in percentage terms, of private R&D. By contrast, in the US and Japan it is private R&D spending that has been on the rise in the past years (see figure 6 below).



• Figure 5 | R&D spending on GDP, 2000-2010

With these trends, few would bet on the EU's recovery and revived leadership in industrial R&D and overall innovation. And indeed, the Commission's projections up to 2050 show that, at current trends, the EU27's share of global R&D is doomed to decrease, with the EU's share of global patents going down from 40 percent to approximately 20 percent in 2050, all this despite the fact that the EU27 is currently the largest world market. Moreover, one of the key findings of the EU Competitiveness report 2011 is that "while remaining a top player in terms of knowledge production and scientific excellence, the EU is losing ground as regards the exploitation of research results". Indeed, the data analyzed show that even though the EU has the highest number of peer-reviewed scientific publications in the world, the share of the EU member states' patent applications in the European Patent Office has declined and "about half of the Member States do not produce high-tech EPO patents at all" (EC DG Research 2011b: 6). To change this state of things, the report highlights the importance of reducing the costs of IPRs, in particular patents (EC DG Research 2011b: Ch. 4). But patents cannot do much as a stand-alone tool, especially when it comes to innovation by small and medium enterprises (SMEs).

Figure 6 | Nominal R&D expenditure, 2004-201



 ${f \varepsilon}$ billion in PPS at 2000 prices and exchange rates, 1995-2008 (China excluding Hong Köng)

Source: Eurostat, OECD.

Source: EC DG Research 2011a.

One could object that comparing individual EU countries (like Sweden or Finland) makes little sense, and that a more appropriate comparison would be between the EU27 and individual states of the US. However, these data are even less reassuring for the EU: countries like Slovakia appear to have a similar (low) R&D intensity to Wyoming or South Dakota, and as many as six US states are more R&D intensive than the EU's leader, Sweden. As a result, the European Commission has acknowledged that the EU's industrial leadership is already compromised (EC 2012b: 3).²





Source: EC DG Research 2011b: 396.

Yet, simply stating that the EU is lagging behind other, more dynamic regions of the world does not help policymakers devise a good strategy to exit this impasse. The main causes of the problem appear to be the following:

- Low private spending in R&D, low specialization of EU countries. In terms of technology specialization in fastgrowing, technology intensive sectors, the EU seems to perform better than its direct competitors US and Japan in general machinery, as well as in textiles, wearing apparel, leather, wood, paper, furniture, and food. On the other hand, the EU is significantly lagging behind Japan in electric components, audiovisual electronics, and telecommunications; whereas the US leads by far on medical equipment.

- "Yollies" and SMEs. In the economic literature, there is widespread consensus on the fact that the engines of innovation are mostly young innovative companies (so-called "Yollies") and more generally small and mediumsized enterprises, especially in the EU, where they represent approximately 98 percent of all firms, and two thirds of overall employment. Both categories are heavily suffering in the EU, due to a mix of cultural, economic, financial and legal factors. As confirmed by recent research, in the EU only one out of five leading innovators was created after 1975. "Yollies" account for 7 percent of overall leading firms' R&D in the EU, against 35 percent in the United States (Veugelers and Cincera 2010).

- Difficult access to finance. Access to a well-developed financial market populated by angel investors (usually affluent individuals or groups providing finance for business start-ups) and venture capitalists is an essential precondition for these companies to succeed in the marketplace, and form one of the essential ingredients of

² Arguing that "Europe needs to reverse the declining role of industry in Europe for the 21st century".

a world-class investment climate and business environment. Apparently, both categories of investors are increasingly rare in the EU.

- A declining university system. European universities are still recognized amongst the most advanced and solid from a global perspective. However, only a few European universities seem to move at a pace similar to that of US leading institutions as well as rising stars in Japan, China, Singapore, etc. And the percentage of Europeans that have completed tertiary education has remained significantly lower than that of other regions.

- *Reluctance to import new talents*. Part of the innovation problem in the EU is connected also to the reluctance, in some member states, to implement policies to attract highly skilled workers from abroad, and especially from non-EU countries that "produce" an enormous amount of new scientists every year, such as Japan and India.

- Sectoral competitiveness and the ICT gap. The European Commission has often mentioned that one of the reasons for the EU's innovation gap is the fact that most EU firms specialize in low-tech sectors. As shown in figure 9 below, five years ago the EU was still leading in sectors such as automobiles, but also wind and solar energy technologies, aeronautics and advance manufacturing. However, a closer look at available data uncovers the EU's very weak position in terms of Information and Communications Technologies (ICT), which explains the productivity gap between these regions. More precisely, among the "key enabling" technologies (KETs) identified at the EU level, the EU seems to be performing fairly well in biotechnologies and nanotechnologies, although the US maintain a lead in these fields.



• Figure 8 | The EU's relative positioning in ICT specialization

Source: EC DG Research 2011b: 39.



• Figure 9 | EU's competitive positioning in R&D vis-à-vis Asia and North America, by sector, 2007

1.3. Employment Prospects: Towards Increased Job Polarization

It is without doubt that with the increase in international trade, the European economy has certainly profited from enhanced access to global markets. At the same time, however, the combined effect of the EU enlargement, the emergence of global value chains and the rise of economies with lower labour costs has led to job losses especially in Western Europe. This applies in particular to unskilled labour, more abundant and cheaper in developing countries, but might increasingly affect also skilled labour in the future, due to the fast growth of large emerging economies (Stehrer et al. 2012). Currently, the EU is experiencing very high unemployment (close to 12 percent, see below), a deterioration of long-term unemployment, very low job creation rates and poor quality of newly created jobs. Even more importantly, there seems to be a skills gap for the older employees, and too low demand for young workers.

It needs to be mentioned that it is very difficult to disentangle the effects of globalization and those of the economic crisis that is still raging in the EU. What can be said in this respect is that employment imbalances have been perceived as a major problem also before the crisis. More specifically, the unskilled labour force is growing at a pace that cannot be absorbed by current production, and this is likely to lead several millions of people worldwide into long-term joblessness. According to a study by McKinsey, between 90 and 95 million low-skill workers (2.6 percent of the global workforce) will not be needed by employers by 2020 and will be vulnerable to permanent joblessness (Dobbs et al. 2012). The same study finds that employers around the world will need nearly 45 million more medium-skill workers (with secondary school and vocational training) and 38-40 million more high-skill workers (with college education) than those available on the market; by 2030, China and India are predicted to become the countries that add the greatest number of college-educated workers to the labour force with the EU lagging behind in these categories as well (Dobbs et al. 2012).

1.4. Globalization and Future Scenarios for the European Union

In light of the above, the future of the EU seems rather gloomy from a global perspective. Forecasts by the European Commission (DG Research 2012) and the OECD (2012) share a common assessment: the European Union is unlikely to remain a major player in the world economy in 4-5 decades from now. Ageing population, weak economic fundamentals and cumbersome decision-making procedures will doom the Union to a second-row position in global competitiveness. The EU's institutional innovations and policy responses are needed if this fate is to be avoided. In its Global Europe 2050 report, the European Commission formulates very harsh conclusions on the future of the Old Continent. "In order to avoid catastrophic declines [...], bold, ambitious and coordinated policy actions are required" (EC DG Research 2012: 142). These conclusions seem to be indicate that for the EU to remain one of the key economic players, EU level institutional and policy responses are needed.

2. From Austerity to Growth?

The disappointing economic performance of the EU at the turn of the millennium led to the adoption of competitiveness-related policies such as the Lisbon strategy and the Europe 2020 strategy, both EU level policy responses. The 2000 Lisbon strategy aimed at solving the low productivity and economic stagnation of the EU, making it "the most competitive and dynamic knowledge-based economy in the world" by 2010 (European Council 2000). Rather than by globalization as a whole, the strategy was dictated *i.a.* by the observation of the substantial results obtained by other large economies of the world (the US, Japan) through reforms for promoting labour productivity and investment in R&D. To do so, two types of structural reform were identified and imposed on individual member states: the liberalization of European markets; and a greater investment in R&D and education. However, the strategy did not contain tight governance mechanisms, nor were there any indicators to track progress, nor any sanctions for member states that failed to achieve the goals set by the strategy (e.g. investing at least 3 percent of GDP in R&D). As we have recalled above, already in 2004 the Kok report found that the ambitious Lisbon targets were closer to mirages than concrete prospects.

The failure of the Lisbon strategy was to a large extent overshadowed – at least in the public opinion – by the economic crisis. The European Commission declared that the economic crisis brought the EU more than a decade back in terms of GDP and basic macroeconomic fundamentals (EC 2010b).³ For example, the level of unemployment had dropped to less than 7 percent in 2008 from 9 percent in 2000: in December 2012, it is back at 10.7 percent (Eurostat 2013). This engendered a process of strategic rethinking within the EU, which eventually in 2010 took the form of a European Commission-promoted new, "post-Lisbon", economic agenda, the aforementioned Europe 2020 strategy. In presenting the new agenda, the European Commission clarified that the new strategy would need "to take advantage of a world of globalization and interdependence which the crisis has underlined still further", and that the "EU needs to work both at home and in international fora like the G20 to seize the new opportunities essential to reach our 2020 objectives" (EC 2009: 2).

The "post-Lisbon" strategy defines three main objectives, seven flagship initiatives and a number of ambitious targets to be met during the decade and ultimately in 2020. The three main objectives are: (i) *smart growth*, aimed at developing an economy based on knowledge and innovation; (ii) *sustainable growth*, i.e. promoting a more resource efficient, greener and more competitive economy; and (iii) *inclusive growth*, focused on fostering a high-employment economy delivering social and territorial cohesion.

³ The Commission observes that "the crisis has wiped out years of economic and social progress and exposed structural weaknesses in Europe's economy".

The headline targets of Europe 2020 include employment targets, energy targets, education-related and poverty-reduction targets.⁴ Importantly, the Europe 2020 strategy reiterates the need to achieve a 3 percent level of public and private R&D spending on GDP which already made up one of the core objective of the failed Lisbon agenda.

A preliminary look at the Europe 2020 agenda suggests continuity in the EU's view of competitiveness, more focused on a "strong at home, strong abroad" approach rather than a "smart specialization" or "smart multilateralism" approach. None of the seven flagship initiatives deals with the EU's strategy outside the EU, with the partial exception of the industrial policy initiative, which will be described below. Yet, both the Lisbon strategy and Europe 2020 are attempts by the European institutions to deal with the challenges of globalization.

To be sure, Europe 2020 was conceived at a time in which the ultimate impact of the EU's economic crisis was probably still under-estimated by politicians. Barely a year later member states were not paying attention to Europe 2020 anymore, and were rather struggling with emergency austerity plans and solidarity measures aimed at saving the EU from unprecedented attacks by financial markets on some of the weaker EU economies (the so-called "PIIGS": Portugal, Ireland, Greece and Spain, to which later Italy was also attached). Hence, many of the ambitious targets set in 2010 today appear very far from the "possibility frontier" of European countries. The question of making the EU most dynamic economy by 2020 did not seem pressing under the circumstances.

Below, the focus is in particular on three of the seven flagship initiatives launched under Europe 2020, which I consider as the most relevant for the purposes of this paper. An in-depth description would certainly fall outside the scope of this work: I will thus limit myself to an analysis of whether the new flagship initiatives are likely to address the challenges that the EU is facing due to acceleration of global economic transformation.

2.1. Innovation Policy: Turning the Tide?

As explained in Section 1 above, over the past decade the EU has lost its leadership in innovation in a number of fields. The EU's long-standing tradition of research and education is quickly vanishing, to the advantage of US and also Asian universities (EC DG Research 2011b: 157-197)⁵. The EU's SMEs are less innovative and profitable than their US counterparts, and large companies invest less in R&D. The only primacy the EU has in the world of innovation today is in the level of public funding. But this, after all, is not necessarily good news.

After the adoption of the Europe2020 strategy, EU institutions have strived to complete the policy framework for research, education and innovation. Key new features of the EU innovation landscape in the past few years are the launch of the Innovation Union initiative; the creation of the European Institute for Innovation and Technology (EIT), which coordinates all actors participating to the so-called knowledge triangle (research, education, innovation); the creation of knowledge and innovation communities (KICs) within the EIT; the launch of the Competitiveness and Innovation Programme (CIP), now extended for the 2014-2020 period under the acronym COSME; the announcement of upcoming European Innovation Partnerships (EIPs) aimed at targeting innovation efforts towards societal needs; the launch of European Venture Capital Funds and other forms of equity and debt financing of innovation by the European Investment fund (belonging to the EIB); the merging

⁴ See the Commission's dedicated website at http://ec.europa.eu/europe2020.

⁵ See, in particular, Table II.1.11, showing the relative position of universities from the US, Asia, Europe and rest of the world according to four different international university rankings.

of most research and innovation competences under a single Directorate General of the European Commission, and the consequent creation of a Commissioner for Science and Innovation; and ultimately, the launch of Horizon 2020, an 80 billion euros programme that will seek to boost the EU's innovation potential.

As argued by Granieri and Renda (2012), the new governance of innovation policy in the European Union is unlikely to lead to a more efficient and effective support for innovation in the EU. To the contrary, a sort of "performance anxiety" seems to have characterised EU institutions over the past few years, which has led to the creation of too many lines of funding, too many institutions, and overall a very complex and fragmented governance, which leaves still too little room for bottom-up innovation policies. Even the 80 billion euros that Horizon 2020 will devote to innovation seem at once too many, and not enough. In fact, the European Commission is still struggling to understand to reconcile research and innovation in its forthcoming Horizon 2020 calls for projects; how to reach and fund innovative SMEs; how to avoid that the fragmentation of patent policy, the absence of certainty in technology transfer legislation and the absence of a risk-taking attitude by European entrepreneurs end up into yet another failing strategy at the EU level.

If one considers that research and innovation policy should represent a possible way out of the challenges of globalization, the current assessment shows that the EU's gap vis-à-vis the US in terms of education, basic and applied research and final innovation is likely to widen; whereas the EU's lead on the BRICS, specifically China, in all those dimensions will very soon be history.

2.2. The EU's New Industrial Policy Agenda: Enabling the "Third Industrial Revolution"?

Within the Europe 2020 agenda, the new flagship initiative on an "Integrated Industrial Policy for the Globalization Era" is the most explicit initiative undertaken to tackle the challenges of globalization. This initiative remained basically empty until October 2012, when the European Commission adopted a new communication on industrial policy (EC 2012b). The communication, in order to favour a recovery of industrial investments and boost the share of manufacturing in EU GDP, predicates a new partnership between the EU, member states and industry, and focuses on four pillars:

- *Investments in innovation*, with a focus on six priority areas with great potential (advances manufacturing technologies for clean production; key enabling technologies; bio-based products; sustainable industrial and construction policy and raw materials; clean vehicles and vessels; smart grids).

- *Better market conditions*, both in the internal market, with special reference to goods, entrepreneurship and IPR protection, and in international markets.

- Access to finance and capitals, by better mobilizing and targeting public resources, including from the EIB, and by unlocking private funds.

- *Human capital and skills*, to promote job creation and better anticipation of, and investments in, the skills needed to promote industry's competitiveness.

Against this background, the communication goes at length in explaining how, according to the European Commission, the EU will be able to overcome the current impasse and move towards new frontiers of compe-

titiveness. More in detail, the Commission proposes to take action in a number of markets to strengthen the EU's competitiveness in emerging technologies and in manufacturing industries, based on the following key variables:

- *Gross fixed capital formation* should recover pre-crisis levels and grow steadily at rates above 9 percent of GDP until 2020. In 2007 it was 21.25 percent of GDP, and dropped to 18.6 percent in 2011.

- Trade in goods should be 25 percent of GDP by 2020 (today it stands just below 21 percent).

- The number of small firms engaging in e-commerce selling should increase to reach 33 percent by 2015 (it was 25 percent in 2009).

Hitting these targets altogether should allow the European Union to re-industrialize its economy and thus bring industry's weight on GDP to 20 percent from the current 16 percent. But whether this would be enough for the EU to get back on track with international competitors remains uncertain.

The new communication on industrial policy identifies six areas where the EU should focus its policy and funding efforts to revitalize growth in the EU. These six areas are the main pillars of EU's plans to catch up with the rest of the world in terms of competitiveness.

- Markets for advanced manufacturing technologies for clean production;

- *Key Enabling Technologies* (KETs), which include micro- and nano-electronics, advanced materials, industrial biotechnology, photonics, nanotechnology and advanced manufacturing systems;

- Bio-based product markets;
- Sustainable industrial policy, construction and raw materials;
- Clean vehicles and vessels; and
- Smart grids.

All in all, the Commission seems to have reacted to globalization and the crisis following the same motto "strong at home, strong abroad" it has followed in trade policy. Indeed, this trend is consistent with the tendencies observed in trade policy in the past years – rather than developing a consistent, pragmatic policy for collaboration and competition with other world economies, the EU seems focused on protecting its large economies from the rising (and in most sectors, well established) competition from the US, Japan, and the BRICS. The novel-ty of late 2012 is that the European Commission has decided to follow Jeremy Rifkin's idea of an upcoming Third Industrial Revolution, and hopes to regain competitiveness by anticipating investment in the most promising areas compared to other regions of the world. Emphasis on collaboration with countries that lead in at least some of these areas is not contemplated.

2.3. The "Battle of Skills"

Faced with an ongoing polarization of the job market, the EU adopted a new response to globalization in 2006 with the launch of the European Globalization Adjustment Fund (EGF), which was set up to show solidarity with, and provide support to, workers made redundant as a consequence of major structural changes in world trade patterns. The EGF was designed as a means of reconciling the overall long-term benefits of open trade in terms of growth and employment with the short-term adverse effects which globalization may have, particularly on the employment of the most vulnerable and lowest-skilled workers. Between 2007 – when the Fund became operational – and July 2012, the Commission received 101 applications for assistance amounting to 440.5 million euros from twenty member states, and covering some 91,000 redundant workers. Most applications (17) originate from Spain, followed by The Netherlands (16). 65 percent of all applications concern manufacturing, out of which the automotive industry represents the biggest share, followed by textiles (10 percent), machinery

and equipment (10 percent) and the printing industry (9 percent). A further 10 percent of all applications were linked to the construction industry and another 10 percent to services (wholesale and retail trade, ICT services, road transport, social work, warehousing/storage and call centre communication services) (EC DG Employment 2012, EC 2012a).

In addition, in both the Lisbon strategy and Europe 2020, the Commission has focused on the need for new skills. In April 2012, within its flagship initiative on "New Skills for New Jobs", the Commission launched a new employment package aimed at boosting employment in the member states (EC 2012c). More in detail, member states are asked to:

- Create the right conditions for job creation and labour demand such as hiring subsidies that create new jobs, a (budget neutral) tax shift from labour to environmental taxes, or support for self-employment.

- Exploit the big job potential areas for the future such as the green economy where 20 million jobs could be created between now and 2020 and to include green employment into their' National Job Plans, strengthening green skills intelligence.

- Improve health workforce planning and forecasting to match the demand and supply of health professionals better while offering them long-term job prospects and stimulate exchange on innovative and effective recruitment and retention strategies for health workers. The Commission is also launching a consultation on employment opportunities in personal and household services.

- Support an increase in highly qualified ICT labour and promote digital skills across the workforce.

In addition, the Commission looks more specifically at labour policies at member state level and recommends that countries stimulate internal flexibility to reduce job insecurity and fiscal costs; establish decent and sustainable wages and avoid low-wage traps; ensure appropriate contractual arrangements to prevent the excessive use of non-standard ones; deliver on opportunities for young people, as well as developing lifelong learning which is key to security in employment and to productivity; ensure higher investment in skills to address the skills mismatches in the EU's labour markets, as well as better anticipation of skills needs.

Against this background, similarly to what happened for industrial policy and trade, very limited attention was devoted to a more "open" policy, for example promoting the attraction of talents from outside the EU. The only initiative so far aimed at filling this gap was the Blue Card Directive of May 2009, which anyway left it to member states to manage admission policies (European Council 2009). The Blue Card has been heavily criticized both by developing countries and by member states, which are simply not ready to delegate sovereignty to the extent the directive requires. Not surprisingly, many member states have transposed the directive with significant delay (Belgium only in September 2012).

3. EU Trade Policy

In the past few years, the EU has been reflecting on how to change its trade policy strategy to respond to the challenges of globalization. In 2002 the Commission's communication on trade and development made commitments to granting developing countries greater access to the EU market, providing adequate funding for trade-related assistance, and making trade a central part of development strategies (EC 2002). The commitments included using trade agreements to promote greater market access, support regional integration and improve trade rules to promote development. The EU market has traditionally been the most open to developing countries, although in key sectors such as agriculture the latter have been quite vocal in denouncing an alleged tendency towards protectionism. Reality is that, fuels excluded, the EU imports more from least developed countries (LDCs) than the US, Canada, Japan and China combined (EC 2012d: 6).

In 2006, in the wake of the re-launch of the Lisbon growth strategy, the European Commission took stock of the need to thoroughly rethink competitiveness-related policies both "at home" and "abroad", in the belief that competitiveness is a game that must be played on both grounds. The communication *Global Europe: Competing in the World* set the stage for an ambitious "shift of gear" in EU policy. The underlying belief, for what concerns trade policy, was that "openness to global trade and investment increases [Europe's] ability to exploit the benefits of an effective single market", since it "exposes the domestic economy to creative competitive pressures, spurring and rewarding innovation, providing access to new technologies and increasing incentives for investment". As a result, the EU made the important choice of refusing protectionism in the name of global competition, although it was rather ambiguously added that "imposing temporary and targeted restrictions on anti-competitive imports into Europe can play a role in defending European interests against unfair trade" (EC 2006: 12).

Overall, the logic of Europe's 2006 trade strategy relied on the following pillars:

- Trade openness boosts competition and productivity at home. This means that the EU rejected protectionism as a way to preserve employment and prosperity at home. More generally, for a long time the concept of "industrial policy" has been far from popular at the EU level, where competition policy was heavily used to open up markets intra-EU and avoid the protection of national champions. Some member states, however, have traditionally sought a more mixed strategy, especially in some heavy industry sectors and network industries.

- The single market is needed to create the economies of scale and the competitive pressure necessary to conquer foreign markets and attract imports and FDI at home. This means that completion of the single market – especially in the services sector – can boost the EU's potential for conquering new markets abroad, by stimulating competition and consolidation of service providers within the EU27.

- Trade policy should focus on bringing European values abroad and create the preconditions for opening and liberalizing foreign markets. In the opinion of the European Commission, emerging markets are still too often relying on protectionist measures in their national growth strategies. These can take the form of tariff and also, increasingly, non-tariff barriers. On the other hand, European institutions believe that openness on both sides means mutual growth possibilities, and should be made a precondition when negotiating free trade agreements and other trade partnerships.

That said, and also given the ongoing stalemate of Doha round negotiations, on which the EU had initially devoted significant effort, the EU trade strategy has moved towards a constellation of instruments aimed at awarding different conditions to different trade blocs. This complex galaxy includes:

• *The Generalized Scheme of Preferences (GSP)* adopted under the recommendation of the UN Conference on Trade and Development (UNCTAD) and aimed at facilitating trade between the EU and developing countries. The GSP provides a sliding scale of preferences according to different needs:

- A basic GSP which grants duty reductions for approximately 66 percent of all tariff lines for beneficia ries.⁶

- A "GSP+" scheme set up in 2006 for GSP participants that implement core human rights, labour rights and other sustainable development conventions.⁷

^{6 111} countries and territories enjoy these reductions, and in 2011 exported products worth € 72.5 billion thanks to these preferences. This is 83 percent of all imports benefiting from GSP preferences.

⁷ There are 16 beneficiaries which exported in 2011 4 billion euro thanks to these preferences. This is 5 percent of all GSP preferences.

- The "Everything But Arms" scheme set up in 2001, which provides a "full duty free, quota free access for all products except arms" for LDCs.⁸

• The *Aid for Trade* (AfT) initiative, launched in 2007 in cooperation with member states, led to the allocation of a large portion of EU development funds to trade-related projects. As shown in figure 11 below, the dimension of funding under AfT has been increasing significantly in the past decade. However, only 22 percent of the funding reaches least developed countries, which is something that the European Commission expressed the willingness to fix in the future.



Figure 9 | Collective EU aid for trade, 2000-2009

- *Economic partnership agreements (EPAs)*, which the EU started to negotiate with African, Caribbean and Pacific (ACP) countries in 2002 (after the Cotonou agreement), leading to a comprehensive, regional EPA signed with the CARIFORUM group of states in the Caribbean.

- Free trade agreements, initially concluded with countries like Chile and Mexico, and then re-launched in 2006, targeting India, Ukraine, South Korea and Japan. The key economic criteria for concluding new FTAs are the market potential (economic size and growth) and the level of protection against EU export interests (tariffs and non-tariff barriers); but increasingly, the EU states that potential partners' negotiations with EU competitors are also important.⁹

- The EU also sought to conclude *"region-to-region" free trade agreements*, as part of its endeavour to foster regional integration and reduce transaction costs in international negotiations. However, in most cases this has

Source: EC 2012d: 8.

⁸ There are 49 beneficiaries which exported in 2011 products under GSP worth 10.5 billion euro. This is 12 percent of all GSP preferences.

⁹ FTAs can carry risks for the multilateral trading system since they can complicate trade, erode the principle of non-discrimination and exclude the weakest economies. To have a positive impact FTAs must be comprehensive in scope, provide for liberalization of substantially all trade and go beyond WTO disciplines.

become a never-ending saga: with the Association of South-East Asian Nations (ASEAN), the Gulf Cooperation Council (GCC) and the Mercado Comùn del Sur (MERCOSUR) negotiations have stalled, often due to a failure to agree on very specific products or sectors. This has led the EU to seek a more bilateral strategy with individual countries, leading to comprehensive FTAs with Peru, Colombia and ongoing talks with Singapore, Malaysia and Vietnam.

- The EU has further engaged in *strategic cooperation* with a number of governments, from China to Brazil, Canada and the United States, India, Japan and Russia. These looser forms of cooperation have been in some cases complementary, in other cases alternative to FTA negotiations.

- In the case of both Canada and the US, cooperation has also taken the form of a stable *regulatory cooperation* platform, aimed at reducing divergences between rules and standards adopted on the two (northern) sides of the Atlantic. Most recently, EU leaders have agreed to open talks with the US over a comprehensive Transatlantic Trade and Investment Partnership (TTIP) that, in theory, will lead to a further liberalization of trade in goods and services, facilitate cross-oceanic investment, and narrow the gap between standards and regulatory regimes.

All these attempts indicate that the EU was able to use its market share in global economy to negotiation multiple deals on trade. Overall, until 2012 the EU seems to have played a paramount role in global trade negotiations: however, in several important occasions potentially beneficial trade agreements have been blocked or hampered by the prevalence of national prerogatives over the common interest of EU citizens. Also, trade talks have not slowed down the EU's decline in global markets, despite the success of some European countries in the export of goods and even more notably services (Germany, the United Kingdom).

3.1. The 2012 Trade Strategy: A Mixed Picture

Between 2010 and 2012 the European Commission has adopted two communications that have shaped a refined approach to trade policy in the years to come (EC 2010d and 2012d). The major new features of EU trade policy as it stands today can be summarized as follows:

- A more targeted approach to the use of the GSP and AfT instruments, aimed at reaching least developed countries, more than emerging economies. Evidence that only a minor portion of the AfT funding had reached LDCs will lead to a thorough restructuring of this budget item, together with a renewed emphasis on helping SMEs in developing countries exercise their rights.

- A stronger emphasis on reciprocity, in a time of resurgence of third party trade restrictive measures that hamper EU industries' access to foreign markets. For example, the ninth report on potentially trade-restrictive measures issued by the European Commission in 2012 observes a reinvigorated trend of "third countries' use of trade restrictive measures as part of new industrialization policies, aimed at shielding their domestic markets from international competition, continues to be confirmed in this report". The Commission quotes Brazil, China, India, South Africa and Ukraine among those countries that are trying to protect their national economies through restrictive measures; but also the recent expropriation by the Argentinean government of 51 percent of YPF shares owned by the Spanish company Repsol. In addition, the Commission observes that some of Russia's recent actions may not be in conformity with the obligations it has as new member of the World Trade Organization (WTO). Overall, between September 2011 and 1 May 2012, as many as 123 new potentially trade-restrictive measures were adopted around the world, whereas only 13 were withdrawn (EC DG for Trade 2012).

- A stronger emphasis on promoting EU values and achieving broader public policy through trade policy. In particular, the values that will be increasingly incorporated in preferential trade schemes are sustainability and respect for human rights. More specifically, the EU seems to target mostly Mediterranean countries and Eastern neighbourhood countries, announcing negotiations for Deep and Comprehensive FTAs with Egypt, Tunisia, Jordan and Morocco; and also with Armenia, Georgia and Moldova.

- A more ambitious strategy to promote FDI in developing countries, through provisions in bilateral investment treaties that strengthen rule of law, legal certainty and investor protection.

- An increased reliance on private standards and guidelines. These mostly entail the inclusion, in trade negotiations, of public and private corporate social responsibility guidelines such as the OECD ones; standards on transparency along the value chain, such as the Extractive Industries Transparency Initiative (EITI), the Forest Law Enforcement, Governance and Trade (FLEGT) and the Timber Regulation; the recently updated OECD Guidelines for multinational enterprises; OECD's recommendations on due diligence and responsible supply chain management; etc. Section 3.2 below contains a more in-depth analysis of the role of private standards in global trade negotiations.

Overall the new EU trade policy has been criticized by experts and commentators, since it contains traces of revived protectionism and even "neo-colonialism", a more cautious approach to multilateral trade talks; an undesirable proliferation of instruments and goals; and dilution of trade objectives through commingling with other policy goals; and overall, the impression of a lack of clear ideas and strategies for the future (Overseas Development Institute 2012). Most importantly, the European Commission does not mention the enormous opportunities that it has missed in the past few years due to an internal collective action problem, which has hampered negotiations on key FTAs such as the one with ASEAN, MERCOSUR and the Gulf. Accordingly, no real strategy is offered to remedy these problems.

In this respect, the expected future Transatlantic Trade and Investment Partnership might become an opportunity for the US and the EU to "raise the bar" in international trade, and agree on standards that include values and policy goals that are shared by the two largest markets of the world. This "demand-led" form of standard-setting might place emerging powers such as China in a more delicate situation in global trade exchanges.

3.2. The EU's New Leadership in Risk Regulation and the Emergence of Private Standards: Cause or Coincidence?

It is widely acknowledged in the literature that globalization has led to the rise of transnational private regulation (Cafaggi 2011, Abbott and Snidal 2009b and 2009a). Everywhere around the world, the failure of public regulation to lead to comprehensive and predictable rules to govern common goods and achieve global public goals has led to the development of several private initiatives, mostly focused on sustainability and corporate social responsibility. In addition, private regulatory schemes have evolved also in the field of standard setting and global contractual networks, with the final outcome of replacing national legislation with contractual obligations imposed, most often, by multinationals.

Transnational private standards and codes of conduct are as important as big superpowers in shaping the directions and patterns of trade and investment, especially in times of globalization. Buch and Mattli have defined these schemes "The new global rulers", and have tried to assess the EU's capacity to affect emerging global standards. Their conclusion is that, contrary to US authorities (more geared towards international standardization in financial services), the EU has focused mostly on product standards, ranging from electrical products to food (Büthe and Mattli 2011).

Against this background, it must be recalled that several existing global regulatory schemes (e.g. the Global Food Safety Initiative, IATA, ISEAL, etc.) are located in the EU and borrow extensively from the co-regulatory experience of EU institutions in fields such as health, food safety and the environment. The most recent contributions in the literature seem to highlight a proactive policy at the EU level, aimed at making use of stricter standards and the precautionary principle as ways to strengthen the EU's non-tariff barriers in international trade. For example, reliance on the GlobalGAP standard for food safety (certified by the Brussels-based GFSI) was considered as hampering food exports by African countries, due to the cost of certification. In particular, recently David Vogel (2012b) has stated that since the early 1990s, the EU has taken an unprecedented leadership role in risk regulation, mostly due to a more comprehensive application of the precautionary principle than the one applied by United States administrations. Cases related to poultry, beef and milk hormones, antibiotics in animal feeds, genetically modified organisms (GMOs), chemicals (disciplined by the REACH regulation), toxic substances (mercury, cadmium, etc.) and the environment all testify to a tendency towards stricter, EU-specific standards in the global trading of goods. This often takes the form of EU's reliance on (or contribution to) existing private standards rather than a much less politically acceptable public standardization policy that would officially shift the EU away from international agreements on standards. Vogel argues that "due to both the EU's relatively stringent regulatory standards, as well as its position now as the world's largest single market, the regulatory policies of many other nations are now based on those of the EU rather than the US" (Vogel 2012a). This indicates the EU's importance as a point of referral.

Among possible explanations of the EU's new leadership in risk regulation is certainly the need to respond to public opinion's concerns about product safety, but also – according to more malicious interpretations the same revamping protectionism that is seen, in other forms, in trade policy. The prospective EU-US TTIP, in spite of the high expectations it is perhaps prematurely raising, is unlikely to lead to greater alignment in regulatory practices, unless one of the two parties fundamentally changes its approach to risk regulation.

4. Concluding Remarks: Is the European Union Successfully Managing Globalization?

Faced with mounting global competition and growing internal tensions, the EU could have reacted in many ways. First, it could have used monetary policy and in particular the currency lever to sustain its competitiveness in world exchanges, as was done by the United States (Suominen 2013). However, its monetary union and the limited competences of the European Central Bank have made this strategic choice impossible for the EU.

Second, the EU could have accelerated privileged trade agreements with old and new superpowers, in order to secure a share of world exchanges for its own products. However, internal tensions between member states have delayed and hampered the conclusion of trade agreements with important regions of the world such as MERCOSUR, ASEAN and the Gulf. To date, and contrary to what still occurs for the US, the EU does not seem on its way to preserving a leading role in global economic recovery. Whether the prospective major economic deal with the US – the TTIP – is sufficient to reverse this trend remains to be seen.

Third and related, the EU could have strengthened and consolidated its single market to secure economies of scale, a more efficient allocation of tasks in production chains, and overall a more appealing offer for world customers. But the single market is still far from complete, especially in services.

Fourth, the EU should have supported R&D and innovation more convincingly over the past two decades, and instead ended up pouring large pools of public funds into hard-to-reach and hard-to-monitor research and industrial realities.

Fifth, the EU (but not some of its largest member states) refrained from engaging into an aggressive industrial policy, aimed at avoiding the disruption of the EU's massive and strategic industrial know-how. Yet, contrary to what the US has done with the re-launch of the manufacturing industry, the EU has remained tied to its idea that competition policy, rather than industrial policy, is the way towards global competitiveness (one easy example being tight state aid regulations). Current developments seem to suggest that this choice – dictated perhaps by the failure to strike a deal between large member states – was a bit *naïve* and doomed to fail since emerging countries and regions have engaged in aggressive, publicly-funded industrial policies for many years, and have multiplied their trade-restrictive measures in the past months.

Finally, the EU's response seems to have suffered from the lack of political integration, and its failure to speak with one voice in trade and internal market policies. Too many veto powers linger over what would have otherwise been complex and courageous political decisions. The increasingly lengthy policy process that characterizes the EU stands as the most significant obstacle on the way to economic resurgence. This is why, in looking at past policies in response to globalization, the EU's lack of economic and political integration appears, uncontroversially, as the elephant in the room.

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The Project

In an era of global flux, emerging powers and growing interconnectedness, transatlantic relations appear to have lost their bearings. As the international system fragments into different constellations of state and non-state powers across different policy domains, the US and the EU can no longer claim exclusive leadership in global governance. Traditional paradigms to understand the transatlantic relationship are thus wanting. A new approach is needed to pinpoint the direction transatlantic relations are taking. TRANSWORLD provides such an approach by a) ascertaining, differentiating among four policy domains (economic, security, environment, and human rights/democracy), whether transatlantic relations are drifting apart, adapting along an ad hoc cooperationbased pattern, or evolving into a different but resilient special partnership; b) assessing the role of a re-defined transatlantic relationship in the global governance architecture; c) providing tested policy recommendations on how the US and the EU could best cooperate to enhance the viability, effectiveness, and accountability of governance structures.

Consortium

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