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Electronic version

URL: <https://journals.openedition.org/rei/5769>

DOI: 10.4000/rei.5769

ISSN: 1773-0198

Publisher

De Boeck Supérieur

Printed version

Date of publication: 15 March 2014

Number of pages: 155-180

ISBN: 9782804187941

ISSN: 0154-3229

Electronic reference

Daniel Calleja and Francisco Caballero, "A New Industrial Policy for Europe: Reinforcing Europe's Industrial Base to Create Employment and Growth", *Revue d'économie industrielle* [Online], 145 | 1er trimestre 2014, Online since 15 March 2016, connection on 03 June 2022. URL: <http://journals.openedition.org/rei/5769> ; DOI: <https://doi.org/10.4000/rei.5769>

A NEW INDUSTRIAL POLICY FOR EUROPE: REINFORCING EUROPE'S INDUSTRIAL BASE TO CREATE EMPLOYMENT AND GROWTH

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Keywords: Industrial Policy, European Union, Industry, European Economic Policy, Industrial Change

Mots clés : Politique industrielle, Union européenne, industrie, politique économique européenne, changement industriel

*“For those who don’t know which port they are headed to,
no wind is favorable.”
(Seneca)*

1. INTRODUCTION

The economic crisis has hit hard developed economies. The protracted recovery has raised social demand for active growth policies in Western economies and for industrial policy in particular. The decline of industry in many of those economies together with the emergence of new global players in China, Far East Asia and South America, where governments have actively supported industrialisation, have raised questions on the policy stance adopted by many developed industrialised economies in the recent past.

Until recently, many considered that 'the best industrial policy was no industrial policy'. This is hard to accept for two reasons. First, public policy interventions in areas such as taxation, environmental protection, trade, competition and other microeconomic policy decisions have a direct impact on industrial activities and on business in general. Without any common orientation on the way in which industry is expected to move, there is *de facto* an industrial policy by default resulting from the net impact of all those policy decisions. Thus, there is always, in one-way or another, some form of industrial policy in place. Secondly, this kind of industrial policy by default without publicly stated objectives could hardly be the best possible industrial policy. As suggested by the ancient Roman aphorism, if industry does not know where it is heading to, it is unlikely to do well. Without an industrial policy orientation, it would be hard to preserve consistency in the direction and effects on industry of the interventions in different areas of public policy.

An increasing number of economists now argue that a passive industrial policy is not the best policy option for growth. Philippe Aghion and others (2011) defend the case for industrial policy as necessary to achieve environmental sustainability. They also argue the need for industrial policy in a "second best" world where this policy is actively used by emerging economies. The former chief economist of the World Bank Justin Lin and others (2011) take a realistic attitude in favour of active industrial policies in the process of economic development. Dani Rodrik (2008) deserves an especially outstanding position among the pioneer economists who defended these views *vis-à-vis* what used to be a clear majority of economists who rejected any form of industrial policy. Some policy propositions have already been suggested. For instance, Aghion et al. (2011) suggest that industrial policy is likely to produce more positive results when applied to competitive sectors.

World leaders and businessmen around the world also acknowledge the importance of industrial policy as well as industry as a driver of growth. President Obama stated in his State of the Union speech last 12 February 2013 that "Our first priority is making America a magnet for new jobs and manufacturing."¹ The new Japanese Government is working on a new

1 2013 State of the Union Speech accessible at <http://www.whitehouse.gov/state-of-the-union-2013>.

"Growth Strategy" that will include a new approach to industrial Policy as part of their three pillar programme for economic recovery. The UK has commissioned an extensive study on the future of manufacturing and is developing a dedicated effort to reinforce the future competitiveness of UK industry. In France, the President asked the former CEO of EADS to draw plans for an industrial policy for competitiveness (Gallois, 2012). China unveiled in 2011 a new industrial programme including the tripling of total expenditure in R&D, that should go from 1.75 to 2.2% of GDP.

The new industrial policies implemented by developed economies have little to do with the European industrial policies of the 50s and 60s. It is not a matter of picking up "winners", i.e. sectors or firms that "deserve" public financial support. The idea of developing powerful State-owned industrial groups such as the disappeared Italian ENI is not an option either.

There is no single industrial policy design emerging, even among the recently industrialised countries. There are some but not many points in common among the industrial policies of the emerging economies like China, India or Brazil.

Likewise, new forms of industrial policy are being developed in industrialised countries in this post-financial crisis era to respond to the specific needs of these advanced economies. Contrary to the case of new emerging economies, industrialised Western countries cannot rely on low labour costs and the adoption of foreign technologies often imported in embodied capital by foreign investments. Protectionism is also excluded from the toolkit of these countries, as open international markets are very important for their economies.

Advanced Western economies are in a process of discovery of their industrial policy models and social choices in these countries are basic parameters in that process. For instance, the high levels of social protection and environmental sustainability are necessary conditions to take into account in the design of the European model of industrial policy.

This paper reports on recent steps taken in the making of this new industrial policy in the context of the European Union during the last three years. As in any other process of economic policy making, choices must

be made under incomplete and insufficient information within a limited time frame. Here below we discuss some of the data that have been considered in the update of the EU's industrial policy in October 2012. We present the rationale behind some of the most critical choices made in this process. In the next section, we briefly present the precedents of the most recent steps taken in the definition of our industrial policy and the circumstances that led to the update of the "flagship" industrial policy in October 2012. Then we explain the main elements of the diagnostic that led us to formulate the policy proposals presented in our October 2012 Industrial Policy Communication.² Section four describes the main components of this Commission Communication and the final section before the conclusions explains the steps taken so far for the implementation of our industrial policy.

2. AN INTEGRATED INDUSTRIAL POLICY IN THE CONTEXT OF THE EUROPE 2020 INITIATIVE

In 2010, the European Commission launched the Europe 2020 strategy, a growth strategy to transform the EU into a smart, sustainable and inclusive economy with high levels of employment, productivity and social cohesion. This strategy set out five ambitious objectives – in the areas of employment, innovation, education, social inclusion and climate/energy – to be reached by 2020.

Although industrial policy did not clearly feature as a component of this strategy at an early stage, improved competitiveness was considered a necessary condition to achieve growth and employment. The Commission adopted in October 2010 a Communication³ on an integrated industrial policy including over 35 measures that should contribute to foster competitiveness and thereby to creating a smart, sustainable and inclusive

2 European Commission, COM (2012) 582 final, "A Stronger European Industry for Growth and Economic Recovery – Industrial Communication Update", 10 October 2012.

3 European Commission, COM (2010) 614 final, "An Integrated Industrial Policy for the Globalisation Era", 28 October 2010.

economy by 2020. This “flagship” communication presents the following distinctive characteristics.

1. The objectives of the communication, as the rest of the Europe 2020 strategy, have a long-term horizon. The multiple measures included in the Communication were not supposed to deliver observable effects in the short term. As in previous communications, “competitiveness” was an objective remote in the time, not an urgent goal.
2. The Communication included a long list of measures with multiple objectives and did not focus on specific priorities.
3. Finally and most importantly, the notion of an industrial policy “integrating” other microeconomic policies was introduced as a means to enhance the effectiveness of EU interventions.

The 2010 Communication was prepared and adopted when the sharp drop in economic activity of 2009 was over and recovery was within sight. These characteristics seemed to fit well with the economic outlook at the time that suggested a slow but upcoming pick up in economic activity. However, this recovery did not materialise and a period of relative economic stagnation set in for the following two years.

By the time the industrial policy update was due, the economic situation had considerably deteriorated in several peripheral Member States and the global outlook started turning grim as growth rates of the emerging economies slowed down. In mid 2012, industrial production was still well below its pre-crisis levels and over three million jobs had been lost in manufacturing (i.e. about 10% of total employment in manufacturing). The unemployment rate was approaching 10% for the Union as a whole and global demand growth was expected to slow down.

The preparatory work for the new Industrial Policy Communication revealed that the industrial policy update could not be limited to a simple review and tweaking of some existing measures. It was necessary to continue further shaping up a new approach to industrial policy to address some of the problems that the EU economy is facing at this stage of the current economic crisis.

Figure 1. EU27 production indices 2000 – 2012 (seasonally adjusted).
Index 2005 = 100

Source: Eurostat.

In particular, it became increasingly urgent to contribute to the economic recovery of the European economy as well as to growth and job creation in the long term. Some of these facts are still present in the first quarter of 2013. It was necessary to react to the worsening of the economic situation with more focus on the short term. In addition, it was necessary to adopt further measures to put the European economy on tracks to get on board of the new “industrial revolution” that is changing the patterns of the geographic distribution of industrial and in general economic activities across the world.

2.1. Economic challenges for the real economy of the EU after the crisis

The volatility and uncertainty created by the financial crisis had distracted public attention from the impact of the crisis on the real economy for some time. Such impact started to become increasingly apparent during the second half of 2011 as the expected recovery was further delayed and economic data and forecasts for 2012 turned grimmer. The crisis had

hit hard sectors such as real estate and construction where bubbles had developed prior to 2007 in a number of countries. By the end of 2011, the crisis was threatening to destroy considerable portions of the competitive industrial tissue of countries where bank credit had dried out in many countries. The following sections present the main economic facts that were considered as especially relevant for the industrial policy update.

2.1.1. A weak internal demand with a considerable fall in private investment

The financial crisis had a very negative impact on private investment. Gross fixed capital formation plummeted by over 2 percentage points of GDP after the 2009 crash, but most importantly, it did not recover afterwards despite the improvement in business sentiment and orders. This was the equivalent to 350 bn euros not invested since the onset of the crisis in 2007 till the end of 2011 according to McKinsey (2012).

Figure 2.

However, private investment seems to be the main component of aggregate demand that could help to economic recovery. The protracted and slow process of deleveraging in the private sector is likely to hold back private consumption for some time. The widespread efforts across the EU to consolidate public sector finances that are needed to appease financial

markets and restore financial market stability exclude the possibility of aggregate demand stimuli coming from the public sector. Finally, the worsening outlook for global trade linked to the reduced growth expectations in emerging economies is shedding a shade of doubt on the possible role of external demand as an engine for recovery.

Against this background, the improvement of the industrial environment for private investment must to be a priority for two reasons. First, private investment is a key factor for economic recovery in the short and mid-term for the reasons explained above. In addition, there is enough liquidity in the balance sheet of firms to carry out that investment. McKinsey (2012) estimated in over 750 bn euros the excess liquidity available in the balance sheets of the 100 largest European listed companies. Our own estimates based on balance sheet information from the Amadeus database give figures between 580 to 850 bn of excess liquidity available in industrial firms. Nevertheless, it must be said that these money balances are very unevenly distributed across countries and sectors. Secondly, it would be desirable to see investment flowing into innovations. This is necessary to speed up the uptake of new advanced manufacturing technologies by European industry. Failing to do so would have very costly effects for the competitiveness of the European economy in the medium to long term.

2.1.2. Sluggish recovery of intra EU trade and a worrying outlook for extra-EU trade

Intra-EU trade recovered after the 2009 slump albeit at a sluggish rate compared to global demand. An eventual reactivation of intra-EU trade would take time because it would depend of the recovery of income within the EU and forecasts for the coming two years remain pessimistic. Structural reforms in the Internal Market are also possible and needed, but their impact would also take time to become visible.

Figure 3. Intra and extra-EU trade for EU 27 (2000-2012) Index 2005=100

Source: Eurostat.

Compared to intra-EU trade, external demand recovered much more vigorously and despite difficulties, it is now well above the pre-crisis levels while intra-EU trade is still below the levels reached in 2006-2008. The impulse of external demand has been very important for the European economy. It has supported the major economies of Europe through the crisis and Germany in particular. European countries outside the EU together with China and far-East Asia, Africa and Brazil have been the most dynamic markets and the EU exported more to those countries between 2008 and 2011 than in the previous four years.

However, the outlook for trade looked less positive in the second half of 2012 and the continuity of this external support was uncertain at that time. This was a critical issue since investment in equipment needed the stimulus provided by foreign demand to recover.

2.1.3. Serious difficulties to access bank credit in some countries of the Union, especially for SMEs

Access to finance became increasingly difficult to firms as the crisis deepened. Given the high dependency of the EU economy on bank credit, especially for SMEs, access to finance became a critical problem that worsened considerably in 2011. Listed investment grade and larger corporations could find alternative funding in the debt markets but SMEs suffered from the drop of loan flows to non-financial corporations as deleverage progressed. Nevertheless, there are considerable differences across countries in the availability of bank credit. SMEs from peripheral countries with support programmes suffered the bank credit cuts more severely than other countries.

Figure 4. Loans to non-financial corporations in the euro area (€ billion, last three months)

Source: ECB.

2.1.4. Mismatches and slow adjustments in the labour market across the EU

Table 1. Change in employers experiencing difficulties in recruitment, 2009-2012

Rank	Country	Change in percentage points
	EU27	1
1	Austria	12
2	France	11
3	Belgium	8
4	Germany	7
5	Sweden	7
6	Norway	3
7	Spain	1
8	United Kingdom	0
9	Czech Republic	-3
10	Ireland	-3
11	Poland	-11
12	Italy	-12
13	Netherlands	-12
14	Greece	-13
15	Romania	-17

Source: EU Skills Panorama.

Notes: A positive (negative) sign means an increase (decrease) in the number of employers experiencing difficulties in recruitment during the period 2009-2012.

Another striking factor of the European industry in the first quarter of 2012 was the considerable difficulties of the labour markets to adjust. While unemployment was increasing quickly in some Member States and in some labour market segments in other countries, there was a demand of highly qualified workers (engineers in particular) in Germany that could not be met quickly enough. Structural deficiencies in the vocational education system in several Member States have been blamed for the considerable shortages in STEM (Science, Technology, Engineering and Mathematics) qualifications in labour markets. This shortage was also pointed out to the

Commission by industry and other stakeholders in the extensive public consultation that took place between May and August 2012.⁴

2.1.5. *Differences across countries and markets*

As indicated above, problems were quite different across countries and sectors. As shown in Figure 1, the production of high-tech products was much more resilient to the impact of the crisis than other industrial sectors. In general, countries with a strong industrial base have better endured the impact of the crisis. In a recent paper, Aiginger (2011) claims that “... empirical data show that countries were more hit by the crisis the lower the manufacturing base had been, the more this sector had eroded over the past years and the larger the current account deficit had been at the start of the crisis” and that “... countries with a large and stable industrial base and positive current account like Sweden and Austria had less deep declines in GDP”.

This situation called for a bottom-up approach in the implementation of industrial policy measures. A “one size fits all” solution would be clearly inappropriate in these circumstances. Choices must be made and implementation would require cooperation at grass-root level, at regional rather than national level.

These five factors were part of the diagnosis for the industrial policy proposal included in the 2012 Communication. They were not the only ones. Other factors counted and were taken into account too. The choice for sustainable growth as an overriding component of the Europe 2020 strategy was a very important factor. The consideration of some sectoral specificities in industries such as steel and shipbuilding where excess capacity had become a serious problem as the economy entered into a stagnation period also required attention. The cumulative impact of different legislative measures on the same industrial sector was also considered but there was not enough evidence at the time to take measures on this important issues and studies of the cumulative impact of legislation on individual sectors or “sectoral fitness checks” were announced starting with the refining and aluminium sectors. Finally, structural problems such as the high cost of energy in Europe remained a serious threat to the recovery and the long-term objective of re-launching Europe's seek for improved competitiveness.

4 See European Commission (2012) for a summary of the results of this consultation.

2.2. The European industry in the eve of the new industrial age

Despite the difficulties and challenges that EU industry is confronted with, it must be said that it still remains highly competitive in a number of sectors. Europe holds very high markets shares in sectors such as aeronautics and pharmaceuticals. Most importantly, the share of EU in the world income calculated thanks to the WIOD database remains above the rest of the world regions.

However, the situation gives some reasons of concern.

First, total factor productivity in the EU, is growing below the USA growth rates and well below the rates exhibited by emerging countries.

Figure 5. Global value chain income (regional shares in world income)

Source: WIOD database.

Note: East Asia = Japan, South Korea and Taiwan. BRIIMT = Brazil, Russia, India, Indonesia, Mexico and Turkey. "Other" = all other countries in the world.

The share of high-tech manufactured products in the total of our exports is falling. This is a trend observed for several years now. As a result of this trend, the EU is becoming specialised in mid-high tech products. It is important to note that this happens in the context of an increasing share of high-tech products in our manufacturing output as shown in Figure 1. However, this is not reflected in our trade figures.

Although the share in all EU exports (i.e. including services) in world trade has remained constant over time at around 20%, the market share of EU exports of manufactures over the global volume of trade in manufactures has fallen from 19% to 16% according to Eurostat in the last ten years.

This relatively dim outlook for the future of our industry in the mid and long-term comes at a crucial time for the future of industry. There are different views of what the future of industry will look like. Rifkin (2011) considers that the convergence of a new energy paradigm after the decline of the carbon age and the intelligent networking of energy and information systems will allow for a much more decentralised pattern of industrial production. This will require substantial investments in infrastructures, including electricity storage and domestic energy generation equipment. Others like Anderson (2012) focus on the impact of the current information highways that will allow for decentralised design and consumption with higher concentration in production facilities that will be flexible enough to produce short batches of customised goods, putting less emphasis on energy issues.

The American Institute for Defence Analysis carried out an in-depth study to identify the main features of these new trends that are transforming manufacturing from traditional labour-intensive processes into advanced-technology-based processes. After reviewing all the evidence available and consulting a long list of experts, they detected and reported a number of converging factors. They are “(1) the ubiquitous role of information technology, (2) the reliance on modelling and simulation in the manufacturing process, (3) the acceleration of innovation in global supply-chain management, (4) the move toward rapid changeability of manufacturing in response to customer needs and external impediments, and (5) the acceptance and support of sustainable manufacturing.”⁵

A number of elements appear in this study as the likely parameters of the possible future scenarios of advanced manufacturing in a 10 year horizon. These include among other:

- A progressive reduction in the importance of labour-intensive mechanical processes and therefore, a lower importance of low wages

5 Institute for Defence Analyses (2012) page iv.

as a key element in the geographic distribution of industrial production activities.

- Advanced manufacturing is also likely to become much more globally networked and integrated in automated digital supply.
- Energy and resource efficiency will increase considerably with respect to current levels. Energy sources and resources will also be diversified. New design and manufacturing technologies will play a crucial role in this process.

Does Europe stand a chance of competing successfully in this future industrial context?

There are reasons to believe that Europe stands good chances. First, limitations to a comparative advantage based on low labour cost and the simple imitation of imported technologies have been detected in some emerging economies. The export-led model of emerging economies like China seems to show signs of exhaustion as publicly accepted by Chinese leaders. In the absence of official statistics, independent research suggests that nominal wages grew at rates well above 10% per year in industrialised coastal regions in 2010 and 2011 and between 15 and 20% in the two precedent years. According to Pettis (2012), productivity started growing slower than wages two or three years ago. Estimates suggest that unit labour costs in China may be growing at present over 10% annually. Furthermore, the importance of the cost of labour in the production cost structure has been considerably reduced.

Resource constraints are another barrier to industrial specialization based on resource intensive industrialisation. The most important constraints come from the environment and the availability of natural resources and raw materials. As pointed out by Stiglitz (2007), the pressure on the environment in the countries of East Asia has been increasing constantly in the last twenty years.

In contrast with this resource-intensive approach, Europe chose long ago a strategy of long-term sustainable growth, intensifying R&D efforts on energy and raw materials efficient technologies and products. It is in these areas of industrial activity, that Europe has a strong comparative advantage.

Finally, the economic crisis has provided an additional new component to this trend for the change in the determinant factors of global comparative advantage and the international division of labour. As stated in a recent report by Accenture (2011) "Companies are beginning to realize that having offshored much of their manufacturing and supply operations away from their demand locations, they hurt their ability to meet their customers' expectations across a wide spectrum of areas, such as being able to rapidly meet increasing customer desires for unique products, continuing to maintain rapid delivery/response times, as well as maintaining low inventories and competitive total costs".⁶

In addition to proximity to final consumers, the cost of financing long and distant segments of the value added chains have become increasingly important. This point has been recently underlined by Kim and Shin (2012). The long-range transport of goods involves prolonged periods of storage throughout the production process with voluminous stocks to be funded at each stage. The increases in the cost of financing the working capital of companies is an incentive to "re-shoring", an inverse process to the off-shoring process that dominated the last two decades.

The relocation of manufacturing production in advanced economies appears to be confirmed by the decisions of a growing number of multinational companies. The Accenture survey mentioned above suggests that a trend to "nearshoring" (i.e. the production of local demand in nearby countries) can be detected in the USA with production moving to Mexico as well as in Western Europe, with production moving to Eastern Europe (Accenture (2011) p. 12). These figures confirm the results of another survey by the Boston Consulting Group (2011) among managers of large American multinational companies, which concluded that more than a third of them were considering to repatriate productive activities to their country of origin. There is increasing evidence supporting this phenomenon. Recently, City Research (2013) reported a number of examples on industrial investments where both, American and European parent companies had decided to invest at "home". This evidence is largely anecdotal at this stage but a trend seems to be building up.

6 Accenture (2011) page 3.

3. A NEW INDUSTRIAL POLICY FOR EUROPE

3.1. Measures included in the recent update of the EU industrial policy

The October 2012 Commission Communication aims at both short and long-term objectives. The strategy proposes a series of short-term measures to accelerate the economic recovery. Many of them are already in process of implementation at the date of publication of this article. Others tend to reinforce existing measures to achieve productivity gains. They are grouped in four pillars.

3.1.1. Accelerate investment in innovation to spur the diffusion of new technologies in six priority action lines

Six priority lines of action have been defined in markets and sectors. This is not a “winner picking exercise”. There is no financial implication in the choice of these areas. However, it is thought that public policy intervention by regional, national and European authorities can contribute to spur investment in innovation in these areas. These are areas that have been identified as two-digit growth rate drivers of industry in the coming years. They are:

- Markets for advanced industrial technologies with low environmental impact such as 3D printing technologies. The benefits from the diffusion of these technologies will also affect traditional productive sectors (e.g. energy savings in industrial furnaces or boilers and more efficient use of materials).
- The market for “key enabling technologies” including nanoelectronics, advanced materials, biotechnology and photonics.
- Markets for biological products based on technologies that allow for the replacement of petroleum-based products for the production of plastics and other materials and consume less energy and produce biodegradable waste.
- Sustainable construction and raw materials to improve the energy efficiency of buildings and the use of lighter construction materials, durable and reusable.

- Vehicles of “clean technologies”, including hybrid technology, electric or biofuel.
- Smart grids to integrate renewable technologies in power systems, energy storage and adjust the supply and demand of energy produced in a much more decentralized way than today (e.g. industrial or commercial cogeneration).

All these areas were identified as the key industries and markets for the foreseeable future in the responses to our public consultation. In addition, all sectors are contributing to the goals of long-term sustainable growth identified in our 2020 initiative. They are also the sectors considered as pillars of the Third Industrial Revolution. Finally, they can also be found in the strategic choices of our major global competitors like the USA.

Contrary to what one might think, this is not a vertical or sectoral policy. It is a basically horizontal innovation policy, as these technologies have applications in many industrial sectors. Many traditional sectors such as construction materials or plastics will benefit from the introduction of innovations in these areas. The adoption of these innovations will benefit suppliers' sectors but also users' sectors that will see their productivity and market shares increased.

3.1.2. Improve market prospects of European companies in the market and in global markets

Investments will materialize if only if there are good sales prospects. The internal market with over 500 million consumers still has untapped potential. Exploiting that potential requires making the internal market more efficient and dynamic. It has to be more dynamic because the crisis is taking its toll on the attitude of Europeans towards risk. This is reflected in the propensity to undertake entrepreneurial activities. Five years ago, 45% of young Europeans preferred to become independent professionals or entrepreneurs rather than becoming employees. This percentage was only 37% in 2012 while it is well above 50% in the USA. In order to make the Internal Market more dynamic and following the 2012 industrial Policy Communication, a plan was launched in January 2013 to promote entrepreneurship including measures ranging from education to the digital sector.

To increase the efficiency of the internal market, a thorough reform will simplify legislation that has accumulated over the years to make it more agile and effective. Technology markets (that is, sales of licenses and patents, industrial designs, trademarks, etc.) have become more complex. The strategic use of intellectual property rights in the standardization process can sometimes pose serious problems given the increasing number of elements protected by intellectual property rights, standards and technical standards.

Domestic demand in Europe is now relatively less buoyant than in emerging markets. Thus, European companies have much to gain by increasing its international presence. Internationalisation has become a major objective, especially for SMEs. While one out of four SMEs export within the internal market, only one in eight export beyond EU borders.

Trading costs are a major factor limiting the growth of firms in some countries. According to Rubini et al. (2013) innovation costs are a common factor limiting the growth of SMEs in many countries, but in some countries like Spain, export costs are also a major obstacle to SME growth. Once more, the need to find country-specific solutions appears as a major element for the optimal design of industrial policy.

Despite the good export performance of the EU in recent years, there are considerable differences in the evolution of exports to different country destinations of our exports. If we compare the total volume of exports to different destinations in the period 2004-2007 and 2008-2011 we find that some of our traditional markets such as the USA present a net reduction in the volume of exports in recent years. This shows the importance of the upcoming negotiations of a new FTA with the USA.

Figure 6. Change in the destination of EU exports between 2004-2007 and 2008-2011 (mio €)

Source: Eurostat.

An active “industrial” diplomacy has been launched to facilitate the international links of EU firms with key trade partners in emerging countries. These contacts are very useful for opening markets to European companies and to facilitate access to raw materials of high strategic importance in certain sectors. In addition, international activities of European companies can better protect themselves in various fields. The creation of a European investment policy following the new powers contained in the Lisbon Treaty is very important to improve the protection of our investment interests overseas. Finally, support and information services networks are useful for the protection of industrial property rights of SMEs from piracy and the violation of those rights.

Figure 7. Gross Fixed Capital Formation EU 27 (2005=100)

Source : Eurostat.

The importance of success in the internationalisation of EU firms cannot be overestimated. Foreign markets can have a mayor influence on the uptake of new technologies. Exposure to tough international competition is a key incentive for the uptake of new technologies by our firms, and SMEs in particular for two reasons. First, because it makes up for the low demand in the internal market as we saw before. Second and most important, when confronted with tougher competition, European firms have greater incentives to invest in new and more efficient equipment. The Figure shows that in fact, while other components of fixed capital formation fell, investment in equipment increased in 2010 and 2012 although 2012 figures show a drop in this very positive evolution of this key variable. It is not possible to establish a causation link between exports and investment in equipment here but *prima facie* evidence suggests that export sectors and countries seem to have been those investing more in equipment during these years.

3.1.3. Improving conditions for business finance and SMEs in particular

Investment and innovation are not possible without adequate financing conditions. In the current situation, companies and SMEs in particular face serious difficulties in financing their investment projects and routine activities. Once again, the situation in this area varies considerably

across EU countries. In countries with major problems in their financial markets, funding sources are limited. Banks' deleveraging, the restructuring of the banking sector in many countries, the slowdown in venture capital and regulatory reforms of the financial sector threaten the availability of credit to businesses in many countries. The interest rate cut by the ECB in July 2011 revealed failures in the transmission mechanism of monetary policy as in some countries the cost of bank credit downgrade came after the central bank rate.

Special efforts are being made to improve the conditions of access to credit for businesses. The new Horizon 2020 and COSME programs will make more funds available for innovation and SMEs respectively. The European Investment Bank will have 10 billion euros of additional capital which will allow to increase its financing capacity over 60 billion.

New programs of our cohesion policy for 2014-2020 are based on smart specialization of regions and "clusters" industrial. Specialization lines selected for regional policy largely coincide with priority action lines for industrial policy outlined above.

But despite the considerable increase in the availability of public funds, the financing that our industry needs for investment and innovation also requires considerable improvements in capital markets. Restoring bank lending remains a priority, but Europe must also take this opportunity to reduce its traditional dependence on financial intermediation for the financing of industrial activities. Direct access of companies to the capital market is by far less common in Europe than in the U.S. This dependency has helped to increase the virulence of the crisis in Europe. Our industrial strategy is to aim for the diversification of sources of business financing. Different industrial needs require appropriate funding sources and today the options are very limited. A green paper consultation will be launched in Spring 2013 to explore possible solutions to this problem.

3.1.4. Providing specialized human resources and training adapted to the new employment opportunities that the industry demanded

Industry's success will largely depend on the availability and quality of the human capital needed to meet in technological change that is coming. The lack of suitably qualified staff has become a growing problem as the unemployment rate increases in Europe. Vocational training and the provision of specialized technical and engineering education in new technologies are critical factors for success in the implementation of European industrial policy and this has been reflected in the recommendations of the Council of Ministers to Member States last spring.

Europe's industrial strategy relies on efforts in this area at the Union and Member States' levels to ensure that mismatches in the supply and demand of skills are minimised. Actions in this area include for example, measures to eliminate barriers to the circulation of skilled labour by providing a common framework of quality and learning practices of young people to encourage companies to offer internships with good working conditions. The development of the EURES system into a fully functional integrated job-search environment also goes in that direction. Other measures are also intended to anticipate industry changes to ensure a smooth transition in the best possible conditions to the new industrial environment.⁷

3.2. Main Characteristics of Europe's Industrial Strategy

Success in the implementation of industrial policy largely depends on the choice of measures but as Rodrik (2008) has indicated, it also ultimately hinges on the way it is implemented. This industrial policy is largely horizontal and respects competition. It has many points in common with new

7 The list of measures presented above is not exhaustive. A limited number of specific measures were also included to tackle specific issues. For instance, a High level Round table was announced and created before the end of 2012 for the analysis and recommendation of measures to take in the steel sector. The Leadership programme was also launched for the shipbuilding sector.

industrial policies developed in the USA or the UK, but it has a number of very distinctive features that make it different.

1. Partnerships

The selection and implementation of measures to foster investment in innovation in the six selected priority action lines will be carried out in the context of partnerships with Member States and industry. Both supplier and user industries will be consulted as well as national and regional authorities were necessary to identify which measures can contribute to the faster uptake of industrial policy measures in areas such as standardisation, internal market legislation or innovation to spur the diffusion of the new technologies. Dedicated task forces will work to that effect and will contribute to the implementation of policy measures.

2. Regional base

As previously indicated, measures cannot be of a “one size fits all” kind. Regions and Member States will play a major role in the choice of their industrial specialisations. The design of a new cohesion policy based on “smart specialisation” will play a critical role to that effect.

3. Adaptation to specific circumstances over time

A closer monitoring of country developments in the context of the European Semester of policy coordination and new governance measures in the Competitiveness Council will allow for a permanent adaptation of the strategy to the evolution of the economy of the Union and its Member States.

4. CONCLUSION

Europe needs to strengthen its industrial base. First because it is necessary to reverse the trend of competitiveness losses *vis-à-vis* our major trading partners. Secondly, because we are in the eve of a new industrial era and investments in industry are needed to benefit from the transformations in the production patterns that this new “industrial revolution” will bring about all over the world. Finally, a revitalised industry could make a considerable contribution to the economic recovery from the financial crisis.

The EU has joined other industrialised countries in the development of more active growth policies. The search for a new industrial policy will be a “learning-by-doing process”. However, the margin for error will be very narrow for some countries if a protracted economic recovery is to be avoided.

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