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ABSTRACT

The European Commission has launched a new industrial policy for Europe, which is reviewed in this paper. While manufacturing industry remains a key building block of the European economy, it faces a number of challenges – as well as opportunities – in the form of rapid technological change; increasing trade and financial integration of the world economy; and the rise of new emerging market competitors. Whilst some sectors are performing strongly, the overall industrial structure of the EU economy makes it less than ideally positioned to face these challenges. The new industrial policy articulated by the Commission is to help the European economy adapt to the new circumstances. In contrast to old policies that sought to ‘pick winners’, the new approach starts from the screening of horizontal policies and framework conditions in terms of their implications for specific industrial sectors. Second, the Commission has integrated policy by bringing more closely together different policy dimensions of key relevance to various industries. Finally, the new approach attempts to achieve a greater consensus over policy, through the involvement at an early stage of key stakeholders and Member States in policy making.

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The European Commission's new industrial policy

1. Introduction

In October 2005, the European Commission (2005a) announced a new industrial policy for Europe in the form of a Communication entitled "Implementing the Community Lisbon Programme: A Policy Framework to Strengthen EU Manufacturing – Towards a More Integrated Approach for Industrial Policy". This policy forms a key part of the Commission's commitment to focus on growth and jobs as a necessary means to preserve the European Union's (EU) social cohesion and maintain high environmental ambitions in Europe.

Manufacturing industry is important for the EU economy. It directly provides around a fifth of EU output and employs some 34 million people. However, manufacturing's importance to the dynamism and competitiveness of the EU economy is much greater than its size might suggest. To start with, manufacturing is key to exploiting the new knowledge economy: over 80 percent of EU private sector research and development (R&D) expenditures are spent in manufacturing. Manufacturing industries therefore provide the major impetus for the development and adoption of new technologies, and they are a key driver of productivity growth.

Moreover, the share of manufactured products in international trade is far larger than that of services. Manufacturing provides some three-quarters of EU exports, thus dominating the current account balance. The ability of the economy to pay for energy and the import of other basic resources therefore depends on manufacturing exports.

Finally, manufacturing makes intensive use of inputs from other sectors of the economy, creating growth and jobs in the wider EU economy. Input-output tables indicate that manufacturing sales are around three times as large as manufacturing value added. For example, as documented in European Commission (2005b), manufacturing's purchases from the services sector alone amount to some two-thirds of manufacturing value added.

The need for a new and modern industrial policy is therefore almost indisputable. Of course, modern industrial policy has to be sophisticated and intelligent. It is nowadays illusory to think that one can select winning technologies and sectors and try to determine exactly where and how jobs should be created. Nor is it possible in today's closely integrated world economy to try to resist globalisation and structural change.

Instead, the role of industrial policy is to provide the right framework conditions for enterprise development and innovation and to help manage the process of industrial change. This will help make the EU an attractive place for industrial investment and job creation. In addition, industrial policy has a key role to play in addressing market failures and complex coordination issues where technological development, standard setting, and the generation of wider benefits to society are linked.

This means that industrial policy covers three distinct, but interrelated elements. First, it is to optimise horizontal framework conditions, as it is necessary to ensure that 'horizontal' policies, such as for example competition policy or R&D policy, are conducive to the development of competitive and innovative enterprises.



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Second, it is to optimise sectoral framework conditions through the development of appropriate regulatory frameworks for individual sectors, including at both national and EU level, with the aim to promote competitiveness.

And third, where markets fail due to externalities or complex coordination problems, a sectoral approach is justified. This is likely to be especially important in respect of technology development in conjunction with standard setting and the procurement of (quasi-)public goods. Clearly, this third, more activist, approach will have to be firmly based on robust economic criteria and analysis to avoid a return to the 'picking-the-winners' policies of the past.

Given that the competences for the policy tools are partly at Community level and partly at Member State and even regional level, coordination of initiatives across different policy levels is essential. Indeed, the Treaty asks the Community and the Member States to coordinate their industrial policies.

2. The challenges for industrial policy

The changing nature of manufacturing production and globalisation are clear challenges for EU industrial policy.

The European Commission (2005a) identified two clear challenges for EU industrial policy. First, the nature of manufacturing production continues to change profoundly. Fast technological changes are taking place across the globe. In many industries, traditional manufacturing methods of mass production are being replaced by more adaptable production runs, using intelligent and multitask production equipment. Global production networks are putting a premium on reducing costs and increasing flexibility. Moreover, in increasingly knowledge- and technology-intensive industries, intellectual property, network externalities, and industry standards are ever more important to competition and competitiveness.

Most notably, the information and communication technology (ICT) industries have seen an enormous expansion of technological opportunities resulting in strong increases in both output and productivity. Also, the development of biotechnology and other life sciences technologies has provided the basis for new industries, but raised new challenges in terms of financing R&D and protecting intellectual property. Furthermore, the spill-over effects of these new general purpose technologies provide both challenges and opportunities for other sectors of manufacturing. Major reorganisations of business methods, management techniques, and work practices are required to benefit fully from the new opportunities.

The second challenge for EU industrial policy is globalisation, which is here to stay. The EU cannot turn back the clock. Global production networks are reducing costs and increasing flexibility. In particular, the Asian emerging market economies are today taking their place and fully participating in global markets. The rising internationalisation of production is driven by improved transport linkages and falling communication costs; reduced trade barriers (both tariffs and non-tariff barriers) as a result of successive trade rounds; increased financial integration of the world economy, leading to increased competition for international investment; and an increasingly well-trained scientific and engineering workforce, including in the newly emerging market economies, leading to intensified competition for R&D spending.

Overall, this increasing internationalisation offers enormous opportunities for the EU. But naturally it also intensifies competition for the EU as a location for investment, production, and R&D spending. Of course, the path to globalisation is not easy. There is a need to overcome and manage sometimes

difficult adjustments. However, on the whole, globalisation can and should bring strong benefits for Europe: the EU is the biggest trading bloc in the world and it has most to lose from any rise in protectionism.

3. The performance of EU manufacturing industry

In spite of these challenges, there are reasons to be confident about EU manufacturing industry's place in the world and about its future. Commission analyses show that EU industry has not, by and far, performed as badly as often presumed. The majority of individual EU manufacturing sectors have performed well in comparison with their counterparts in other industrialised economies. Important EU manufacturing sectors like pharmaceuticals, mechanical engineering, chemicals, and motor vehicles sectors have a substantial revealed comparative advantage and record trade surpluses against the rest of the world.

Nevertheless, the industrial structure of the EU economy as a whole makes it less than ideally positioned to face the ongoing globalisation process.

First, there has clearly been a productivity growth differential between the EU and other industrialised economies, particularly the United States. To a large extent this has been due to an industrial composition effect. In particular, the ICT-producing sectors are among the growth engines of the US economy. They grow faster and their share in the whole economy is bigger than in Europe. In contrast, some other sectors of EU manufacturing have performed very strongly in relation to the US industry, notably chemicals, motor vehicles, and mechanical engineering.

Second, the industrial structure of the EU economy as a whole makes it less than ideally positioned to face the ongoing globalisation process. Much of EU trade is still concentrated in sectors with medium-high technologies and low to intermediate labour skills (European Commission 2005b and 2005d). This exposes EU countries to competition from producers in emerging economies that are upgrading the skill intensity of their exports and catching up in terms of the non-price factors that often underlie the EU competitive edge on world markets. Hence, adaptability and structural change, allowing a shift towards a more robust situation of comparative advantage, are critically needed if the EU is to maximise the gains from the integration of China, India, and other fast growing economies into the world economy.

Third, whilst EU foreign direct investment flows towards the emerging Asian economies have increased in recent years, their share in total flows remains limited (European Commission 2005d). International relocations of EU jobs to low-cost countries are limited in most manufacturing sectors. Nevertheless, they can still have painful consequences for particular regions and individual sectors, especially as regards lower-skilled workers, thus justifying actions to try to reduce the social and economic costs of these changes.

Fourth, there is newly emerging evidence of increasing international competition for R&D spending (European Commission 2005c and 2005d). Indeed, there is some evidence that the EU is not competitive enough as a location for research. The United States and Japan are attracting more international R&D expenditure than the EU and there is emerging evidence that countries such as China and India are becoming important locations for new R&D investments. The United States has also been more successful than the EU in attracting researchers and highly skilled staff. These trends are a matter of considerable concern in so far as they lead to a loss of R&D investment and researchers from the EU.

The EU's industrial structure is less than ideal to face globalisation.

4. Policy screening of industrial sectors

The challenge for industry is to maintain and further improve its performance in the future in an environment of ongoing technological breakthroughs and continued internationalisation. How can EU policy makers give a clear and coherent response to these challenges and concerns and make substantial improvements to the general environment in which European industry operates?

The European Commission has made in-depth analyses of 27 manufacturing sectors.

European Commission (2005e), with inputs from stakeholders and the Member States, contains a detailed analysis of 27 manufacturing sectors, identifying for each of them their strengths, weaknesses, and priority challenges. The screening aims to determine to what extent their performance is or could be influenced by the instruments of industrial policy. Policies of particular importance for sectoral productivity growth and international competitiveness include measures to ensure an open and competitive Single Market, including competition policy; the creation of knowledge (such as research), innovation, and skills; better regulation; synergies between competitiveness, energy, and environmental policies; full and fair participation in global markets; and social and economic cohesion

The screening process has resulted in the identification of the most important competitiveness and policy challenges for each individual sector, both quantitatively and qualitatively, as detailed in the Annex. The Commission has identified four main manufacturing groupings, each facing broadly common challenges. These sub-sectors are discussed below, and their share in total manufacturing and their growth rates are summarised in Table 1.

The first group is the food and life sciences industries, including the biotech, pharmaceuticals, and cosmetics sectors. These sectors make up almost 20 percent of EU manufacturing output, with some of the life sciences industries growing particularly fast and having high R&D expenditures. As highly innovative industries, key knowledge challenges for them are R&D, protection of intellectual property rights, and the financing of innovation for highly innovative SMEs. Better regulation of these industries is another key challenge. They rely upon the continued adaptation and updating of regulations in the Single Market to keep up with technological progress, whilst ensuring health and safety standards. International regulatory convergence is also an issue for many of them.

The second group comprises the machine and systems industries, including notably ICT, engineering, motor vehicles, aerospace, and shipbuilding. These industries make up about a third of EU manufacturing value added, and they are characterised by medium to high growth rates and by high rates of R&D spending. These industries also face knowledge challenges, related – in particular – to raising R&D spending, intellectual property protection, and widening and deepening of their skill base. The regulatory environment is also important for many of these industries since their market depends on technical standards. Gaining better access to international markets, many of them still protected, is also of key importance for these industries.¹

The fashion and design industries, in turn, include the textiles, clothing, leather, footwear, and furniture industries. They account for some 8 percent of manufacturing value added, but their output has been contracting over the last ten years. For these industries, the key challenge is to make structural adjustment successful by moving up the product quality ladder. Obtaining better access to currently heavily protected world markets is also a key requirement for these industries.

¹ The motorcar, aerospace, and shipbuilding industries are facing environmental challenges, particularly the need to continually improve the environmental performance of their vehicles, planes, and ships, without compromising their competitiveness *vis à vis* non-EU producers.

Finally, the basic and intermediate goods industries – including chemicals, steel, pulp and paper, and so on – account for some 40 percent of manufacturing value added. As suppliers of key inputs for the rest of the EU industry, these industries can be an important source of innovation. Growth rates in this group have been medium to low. These industries are largely energy intensive; hence, their main challenges relate to energy and the environment. Important sector-specific challenges include the new EU legislation framework for chemical industry (known as REACH) and legislative simplification issues for the construction sector. Structural adjustment is an important issue for some industries, such as the ceramics, printing, and steel industries.

Table 1. Share and growth of sub-sectors in European manufacturing (in %)

	Share in manufacturing value added (2004)	Average annual growth rate 1993-2004
Food and life sciences	18.1	2.4
Machine and systems	33.1	3.5
Fashion and design	7.5	-2.0
Basic and intermediate goods industries	41.3	2.1
Total manufacturing	100.0	2.3

Source: Eurostat

5. Improving the framework conditions for EU manufacturing in competition and research policy

In the context of the Lisbon strategy, the Commission has already made a start in improving the framework conditions for industry in two key policy fields, namely those of competition policy and research policy.

In June 2005, the Commission announced a comprehensive, coherent, and far-reaching reform of state aid policy, designed to take a more economic approach to state aid policy, focusing on market failures and avoiding market distortions. A particular focus has been the reform of state aid policy in relation to innovation and R&D. Following a consultation on state aid for innovation (European Commission 2005f), a new draft “Community Framework for State Aid for R&D and Innovation” was issued in April 2006. Under these proposals, the scope of allowable state aid would be increased to cover many aspects of the innovation process, subject to aid proportionality as well as the avoidance of distortions to competition and the location of trade flows and investment.

Concerning research policy, for a number of years the Commission has been encouraging the development of European Technology Platforms (ETPs; European Commission 2005g). There are now 29 ETPs with ‘strategic research agendas’ that play an important voluntary role for shaping industrial and policy strategies in key technology domains. In its Seventh Research Framework Programme (European Commission 2005h), the Commission proposed that some of these should be developed into Joint Technology Initiatives to work as an innovative mechanism for supporting industrial research. Reflecting the Commission’s proposal, the Competitiveness Council agreed an identification process involving the following set of criteria (to be successively applied): (i) strategic importance of the topic and presence of a clear deliverable; (ii) existence of market failure; (iii) concrete evidence of Community value added; (iv) evidence of substantial, long-term industry commitment; and (v) inadequacy of existing Community instruments.

The Commission has started to improve industry’s framework conditions in the fields of competition and research policies.

Finally, the Communication on Research and Innovation (European Commission 2005i) set out a new, integrated approach to policies and actions in support of research and innovation, which included many initiatives highly relevant for industrial sectors.

6. New horizontal initiatives for EU manufacturing

Seven major cross-sectoral policy initiatives have been announced.

In the light of the screening process, seven further major cross-sectoral policy initiatives were announced to address the common challenges across different manufacturing sub-sectors and to reinforce the synergies between different policy areas taking into account competitiveness considerations. These seven initiatives are discussed below in turn.

High-Level Group on Competitiveness, Energy, and the Environment. Competitiveness, energy, and environmental policies are closely interrelated and their impact is of significant importance, in particular for many basic and intermediate product industries. In order to develop an integrated approach to these policies, whilst improving both sustainability and competitiveness, the High-Level Group on competitiveness, energy and the environment was set up early in 2006 at Commissioner-level, with the participation of Member States and a balanced group of all relevant stakeholders. The objective is to create a stable and predictable regulatory framework for competitiveness, energy, and the environment. Amongst the initial issues to be addressed are: (i) the functioning of energy markets, particularly the electricity market; (ii) climate change – particularly the emissions trading scheme – energy efficiency, and renewables; (iii) the improvement of resource efficiency and the adoption of environmental and other innovative technologies; and (iv) the impact of legislation on energy-intensive industries.

External aspects of competitiveness and market access. Access to international markets is a priority issue for most sectors. The Commission is currently working on a Communication on the revision of Market Access Strategy, reviewing the existing strategy and instruments to focus on those sectors and markets with greatest potential for strengthening competitiveness. In cooperation with stakeholders, a detailed strategy will be developed and implemented to tackle barriers in the selected sectors and countries. A specific market access action plan has already been introduced for textiles, and it has been expanded to cover leather and footwear products. A wider process of reflection and debate on the external aspects of EU competitiveness will also be initiated through a further Communication dealing, *inter alia*, with trade issues related to intellectual property rights, regulatory issues, investment and government procurement, particularly the possibility of creating instruments that would improve incentives to third countries to negotiate the reciprocal opening of their public procurement markets.

New legislative simplification programme. Better regulation at various levels has been identified as a key challenge for several sectors, including construction, motor vehicles, ICT industries, and the food and life sciences industries. In addition, waste regulations have been identified as important to a wide range of different sectors, particularly SMEs. The Commission has subsequently set out a Simplification Work Programme in a Communication on Legislative Simplification (COM (2005) 535, published in November 2005). In the Communication, three priority areas were identified for this approach: the automotive sector, the construction sector, and waste legislation. In fact, the CARS 21 High-Level Group has already accomplished the screening of existing legislation in the automotive field and made recommendations (see Section 7 below).

An intellectual property rights and counterfeiting initiative. Intellectual property rights (IPR) are of key importance for competitiveness. While important progress has been made, more could

be done to ensure that the regulatory framework stimulates innovation, provides stability for investment, and encourages the development of efficient new business models. The framing of such IPR rules to balance the needs of all stakeholders is by no means easy. The Commission is therefore launching a dialogue with industry and other interested parties to determine what more might usefully be done to provide the European industry with a sound IPR framework. In addition, the proper enforcement of IPR within the internal market and in third countries is of the highest importance. IPR infringements can jeopardise public health and safety as well as threaten innovation. Counterfeiting continues to be a major problem for many industries. The Commission is therefore reviewing the state of progress in the whole area of IPR enforcement. In this context, the Commission has been working with the US government to develop a Joint IPR Enforcement Action Strategy in time for the 2006 EU-United States Economic Summit.

Improving sectoral skills. Skill shortages were identified as a key challenge in a wide range of different industries, including the ICT and engineering industries, the textile and leather industries, and a number of basic and intermediate goods industries. Moreover, there is some evidence that relocation of industrial activity is in some cases motivated more by skill shortages than by cost factors. The Commission has already begun to address skill shortage issues through a number of policies, such as the Education and Training 2010 work programme, including the European Qualification Framework (EQF). To supplement these existing initiatives, the Commission is making assessments of the nature of the sectoral skill problems, including the identification of current and likely future skill gaps and effects on SMEs. Building upon the on-going work by Cedefop², this information base would allow the articulation of future specific policy initiatives in the light of sectoral competitiveness requirements.

Managing structural change in manufacturing. Whilst the private sector has the primary responsibility for undertaking structural adjustment, the EU has useful levers at its disposal to anticipate and accompany change, as acknowledged in the development of the European Globalisation Adjustment Fund (EGF)³. The EGF will complement the efforts of the Member States at national, regional, and local levels by providing one-off funding for measures such as job search assistance and retraining to enable workers to find and retain a new job. Moreover, the Commission intends to ensure that the positive management of economic restructuring is included in the new Structural Funds programmes for 2007-2013, including support for the modernisation of labour markets and the structural adjustment of industries, alongside active measures to reinforce regional economic wellbeing and to improve cooperation between regions facing similar problems and challenges.

An integrated European approach to industrial research and innovation. As part of the follow up to the Communication on Research and Innovation, a European Industrial Research and Innovation Monitoring System will be established in 2006 to provide a consolidated overview and analysis of developments relevant to industrial research and innovation, and a conduit for stakeholder views. This will ensure the availability of industry- and policy-relevant data and intelligence, helping to anticipate both barriers and opportunities to improving research and innovation investment and the commercialisation of new technologies in Europe. A high-level stakeholders group, including policy maker representatives, will be set up to provide guidance and feedback on the focus and relevance of this activity for competitiveness.

The EU has some useful levers at its disposal to anticipate and accompany structural change.

² Cedefop is the European Centre for the Development of Vocational Training. Established in 1975, it is a European agency that helps promote and develop vocational education and training in the EU.

³ "Proposal for a Regulation of the European Parliament and of the Council Establishing the European Globalisation Adjustment Fund" (3 March 2006).

7. New sectoral initiatives for manufacturing industry

In addition to the cross-sectoral initiatives, the Commission is proposing a series of specific new initiatives for individual sectors. In the shipbuilding, textile, and motor vehicles sectors, very good experiences with the model of sector initiatives have already been made. Therefore, new initiatives are starting in the next months, for sectors such as pharmaceuticals, defence, space, information technology, mechanical engineering, chemicals, and life sciences and biotechnology.

The Commission is also proposing sector-specific strategies.

These initiatives will vary from sector to sector, depending on the priority issues for each sector. What is common to them, however, is that the Commission wants to consult with industry, other stakeholders such as the trade unions, the Member States, and the European Parliament, in order to elaborate a sectoral strategy to improve the context for the sector. The strategy will contain recommendations addressed to the EU institutions, Member States, and the industry itself to improve the overall competitiveness of the sector.

As an example, the recent CARS 21 High-Level Group recently issued a report on the major policy areas that impact on the competitiveness of the European automobile industry. The recommendations included: (i) the simplification of legislation, recommending the replacement of 38 directives by the regulations of the UN Economic Commission for Europe, the introduction of self- or virtual testing where appropriate, and the repeal of another outdated directive; (ii) the improvement of the environmental and road safety performance of vehicles; (iii) multilateral and bilateral international trade negotiations to better safeguard intellectual property; (iv) the development of further research and development cooperation between the EU and industry; and (v) a possible EU directive on passenger-car related taxation.

In terms of the new initiatives, for instance, the new Pharmaceuticals Forum is addressing the fragmentation of the European pharmaceutical market, focussing on R&D issues and regulatory matters at Member State level. The Pharmaceuticals Forum will consist of Member States at the ministerial level, senior representatives of industry, and other key stakeholders, such as patients and health professionals.

In addition, a series of sectoral competitiveness studies have been proposed. These studies will be used to identify future policy initiatives.

8. A new policy for EU manufacturing

The outline of work set out in this paper involves a new approach to industrial policy, aimed at achieving better designed policies that are more relevant and integrated for the EU manufacturing industry.

The new approach starts from the screening of horizontal policies and framework conditions in terms of their concrete implications for specific industrial sectors. This approach makes it easier to identify those policies and framework conditions that are most relevant for each sector.

Second, the Commission has linked together under a single initiative a number of different policy dimensions of key relevance to a number of industries. Such policies may lie in the domains of a number of different Commissioners and Directorates-General. Bringing together such policy dimensions will provide increased coherence and integration between policy areas, with a more powerful effect on competitiveness.

Finally, the new approach attempts to achieve a greater consensus over policy through the involvement at an early stage of key stakeholders and Member States in policy making. Both Member States and the European social partners will therefore contribute to this work, both at the horizontal and sectoral level.

Annex

Table A1. Key EU competitiveness and policy challenges by sector

	Industry	Knowledge				Better regulation				Environment & Energy ²⁾				
		R&D/ Innovation	IPR, Counter- feiting	Skills	Access to finance for SMEs	Admin. burden/ Complexity of sectoral regulation	Internal Market	Health and Safety	Technical Standards	Climate change ¹⁾	Waste	Water	Air	Intensive Energy Use
Food and Life Science Industries	Food, drink & tobacco	X				X					X	X		
	Cosmetics	X					X	X						
	Pharmaceuticals	X	X	X	X		X	X						
	Biotech	X	X		X	X		X						
	Medical devices	X			X		X	X						
Machine and System Industries	ICT ³⁾	X	X	X		X		X		X				
	Mechanical engineering	X	X	X	X		X ¹⁰⁾							
	Electrical engineering	X	X	X	X		X ¹⁰⁾							
	Motor vehicles	X	X	X		X	X		X	X		X		
	Aerospace	X												
	Defence industries	X					X							
	Shipbuilding	X	X	X										
Fashion and Design Industries	Textiles	X	X	X								X		
	Leather and leather goods	X	X	X						X	X			
	Footwear	X	X	X										
	Furniture	X	X	X										
Basic and Intermediate Goods Industries	Non-energy extractive industries	X		X							X	X		
	Non-ferrous metals			X					X	X		X	X	
	Cement and lime								X	X		X	X	
	Ceramics		X						X	X		X	X	
	Glass		X						X	X		X	X	
	Wood & products of wood	X		X				X	X	X				
	Pulp, paper & paper products	X							X	X	X		X	
	Printing & publishing	X		X						X	X	X		
	Steel	X		X					X	X	X	X	X	
	Chemicals, rubber, and plastics	X						X	X	X	X	X	X	
	Construction	X		X		X	X	X	X		X			



Table A1. (continued)

	Industry	Trade			Structural change	Sector specificities	Sectoral actions ⁴⁾
		Access to markets	Access to raw materials	Trade distortions subsidies/dumping			
Food and Life Science Industries	Food, drink & tobacco	X	X			X	
	Cosmetics	X			X		
	Pharmaceuticals	X			X		Pharmaceutical Forum
	Biotech					X ⁵⁾	Mid-Term Review of Strategy «Life sciences and bitotechnology»
	Medical devices				X		
Machine and System Industries	ICT ³⁾	X			X		Taskforce on ICT Competitiveness
	Mechanical engineering	X					Dialogue for mechanical engineering
	Electrical engineering	X				X ⁶⁾	
	Motor vehicles	X			X	X	CARS 21 HLG
	Aerospace			X			European Space programme/ GMES
	Defence industries						HLG Defence
	Shipbuilding			X		X	X ⁷⁾
Fashion and Design Industries	Textiles	X				X	
	Leather and leather goods	X	X			X	
	Footwear	X				X	
	Furniture	X				X	
Basic and Intermediate Goods Industries	Non-energy extractive industries						X ⁸⁾
	Non-ferrous metals		X				
	Cement and lime						
	Ceramics	X		X		X	
	Glass	X					
	Wood & products of wood	X	X				
	Pulp, paper & paper products		X	X			
	Printing & publishing					X	
	Steel		X	X		X	
	Chemicals, rubber, and plastics			X			X ⁹⁾
Construction							



Notes: The table indicates with crosses the cases in which a policy challenge is considered of the highest priority for each sector amongst the many relevant policy challenges. Hence the absence of a cross does not therefore necessarily denote that the challenge is unimportant to a sector, only that it is not considered as one of the issues of greatest priority.

1 With regard to installations belonging to energy activities all sectors fall under the ETS provided the installation in question is above the capacity threshold indicated in Annex I of the Emissions Trading Directive 2003/87) EC. The sectors marked in this table are included in the ETS for their process related CO₂ emissions. 2 Many sectors will also be affected by the new legislation framework for chemicals (REACH). 3 ICT: challenges are sector specific; ICT uptake is a general challenge for the industry. 4 Includes legislative actions and/or actions involving members of the Commission. 5 GMO. 6 Energy Using Products (EUP). 7 Financial instrument. 8 Access to land. 9 Energy and feedstock costs, logistics. 10 Market surveillance.

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