

Analysis of the Cumulative Cost Assessment of the EU Ceramics Industry

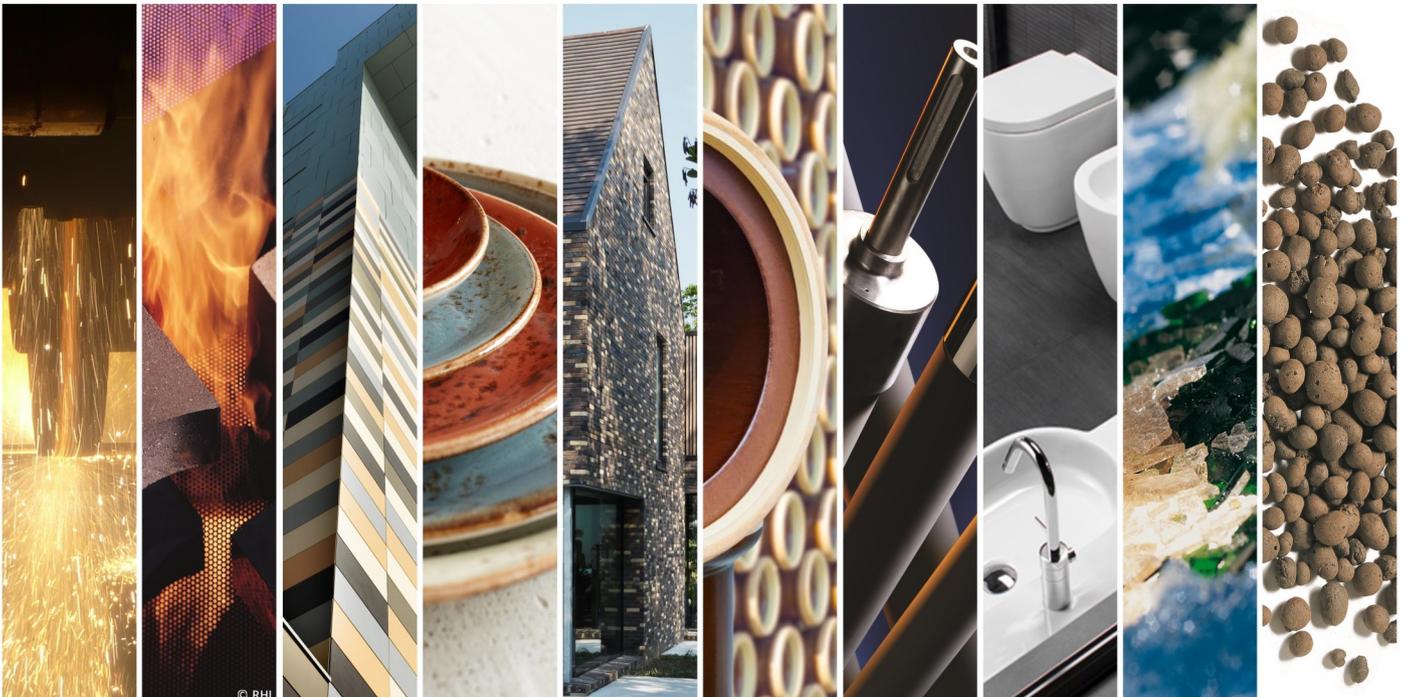


Table of Content

Introduction	3
Cumulative impact and cost	6
Internal Market (REACH, CLP and CPR)	8
Energy and Climate legislation	10
Waste and BREF	13
Trade	15

Introduction

Like all industries operating in the European Union, the ceramic industry is subject to a suite of EU regulations to cover the proper functioning of the single market. Regulation is important for ensuring a level playing field and for accounting for the externalities associated with the activities of the industry. When applied effectively, EU regulations allow the European Union to deliver on its policy objectives while at the same time respecting the principles of proportionality and subsidiarity.

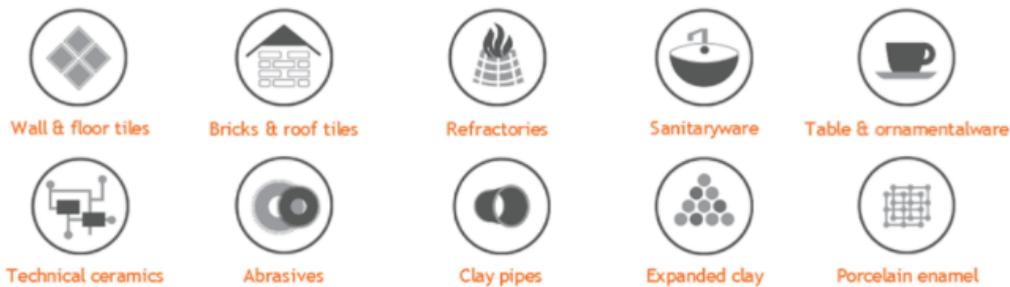
There is a cost implied with meeting the standards set by regulations, and as with any costs, they should be fair and proportional. There is a balance to be found where the costs

of complying with regulations are not disproportionately high relative to production costs and profit margins and in comparison with the potential benefits of such regulations. For this reason, it is important to evaluate the costs of regulation and its effectiveness in order to be transparent and to form an evidence base for future policymaking.

A Cumulative Cost Assessment (CCA) is an ex post evaluation tool to determine the costs generated by selected pieces of legislation on a particular sector. It is retrospective and strictly centred on regulatory costs, does not include benefits side of rules, nor does it assess the cost-benefit balance of the legislation.

The aim of the *Cumulative Cost Assessment of the EU Ceramics Industry* is to determine the costs of EU-wide regulations for our industry over the period 2006-2015. The report assesses a variety of regulations that affect the European ceramic industry in different ways, including amongst others: the internal market, energy, climate, environment, workers' and workplace safety, and consumers and health legislation.

The European ceramic industry as represented by Cerame-Unie is structured in ten sectors ranging from construction products and consumer goods to industrial processes and cutting edge technologies.



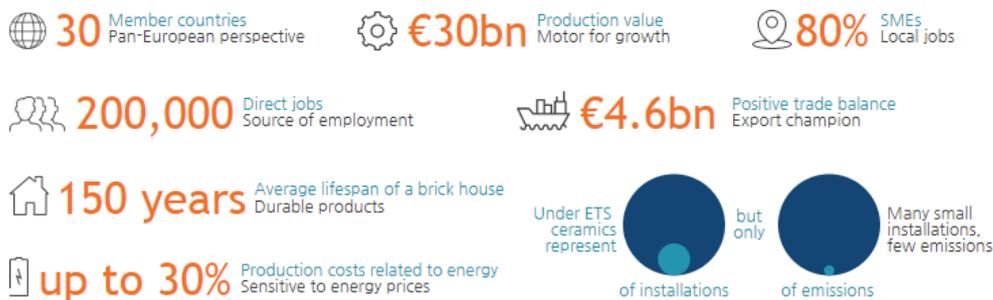
Purpose of a Cumulative Cost Assessment

- Identify, assess, and quantify overall costs generated by selected areas of EU legislation on a given sector;
- Helps to measure the cost competitiveness of a sector.

What happens with the results?

- They will be used to provide inputs for evaluations, impact assessments, and Fitness Checks.

The European ceramic industry is composed of world-leading companies that manufacture value-added solutions by transforming mineral raw materials into sustainable, functional, innovative products.



Scope of the CCA - ceramic sectors assessed

The *Cumulative Cost Assessment of the EU Ceramics Industry* covers quantitative analysis of the three sectors of the ceramic industry: bricks and roof tiles, wall and floor tiles, and refractories. The report deals with fired refractories and unfired shaped refractories separately. The reason for that may be explained with the different nature of the production processes for these refractory sectors. While fired refractories are formed by heating the refractory material to high temperatures in a kiln to form a ceramic bond, the unfired shaped refractories are formed with the aid of selected additives that, set up at lower temperatures, provide structural integrity, eliminating the need for a proper firing stage (only drying applies).

The investigated sectors represent about 67% of the European ceramic industry in value and were considered sufficiently representative and in a better position to provide the consultants with the detailed data required for this exercise. Moreover, altogether, these three sectors illustrate the wide range of key policy areas affecting the ceramic industry as a whole. Lastly, the three sectors reflect the diversity of the ceramic industry composed of construction materials, consumer products, high tech and industrial applications, mostly exposed to international trade, structured around both large networks of SMEs and some larger companies benefiting from a long standing global leadership in their sector.

The other sectors of the ceramic-industry, which are not covered in the quantitative assessment part are technical ceramics, table and ornamentalware, sanitaryware, clay pipes, abrasives, porcelain enamel and expanded clay. However, a limited overview of these sectors is provided in Annex I of the CCA report.

The conducted methodology is explained in detail by the consultants in their report. The aim of the CCA is to measure regulatory costs, according to a classification of three different categories of regulatory costs: i) direct costs; ii) indirect costs; and iii) enforcement costs. The CCA quantifies the so-called direct compliance costs, which comprise three main cost components representing the bulk of regulatory costs across most of the areas of legislation in the scope of this CCA, which are: administrative burdens; substantive compliance costs; and direct charges. Administrative burdens are compliance costs incurred by companies to provide information to public authorities and/or third parties. They are generated by information obligations (IOs) included in the relevant legislation. Substantive compliance costs include expenditures faced by businesses to comply with requirements imposed by legal rules. They are generated by substantive obligations (SOs), i.e. provisions requiring businesses to take actions to adapt their activities in order to comply with the legal obligation. Direct charges, are usually generated by so-called monetary obligations (MOs). MOs are provisions requiring the business to bear monetary costs, such as costs of fees, taxes and levies. This CCA measures the so-called indirect compliance costs, i.e. compliance costs experienced by entities operating in sectors and markets other than those under evaluation. Enforcement costs are linked to the administration and implementation of legislation. The most important costs in this respect are usually adjudication/litigation costs. According to the outcome of the conducted interview for this CCA, the importance of enforcement costs appears to be marginal compared to direct and indirect regulatory costs generated by the investigated areas of legislation.

Scope of the CCA - policy areas

The CCA study identifies, assesses and quantifies the cumulative costs generated on ceramic sectors by the following selected areas of EU legislation: Internal Market (chemicals and construction products legislation); Energy (electricity, gas and energy efficiency); Climate; Environmental (industrial emissions and waste); Consumer and Health; Workers' and workplace safety and other areas of legislation such as Trade, Competition and Transport.,.

A clear added value of the CCA is that it should contribute to a better understanding by policy decision makers of the composition of the ceramic industry and how its various sectors are affected differently by different policies. Nearly all ceramic sectors are affected by energy, climate and environment policies but not necessarily to the same extent. In addition, the relevance of trade, internal market, and chemical legislation differs to a large extent from one ceramic sector to the other. In that respect, the CCA study is by far the most thorough analysis assessing how ceramics are affected by regulation and it is probably the first study illustrating the regulatory differences between fired and unfired refractory ceramics, two sub-sectors usually grouped in the category of refractories.

Due to the very nature of the CCA methodology which is looking only at the past and at regulatory costs, some policy areas which are key to the ceramic industry would need further investigation. This is notably the case for the EU trade policy which is usually perceived as bringing benefits to the industry rather than generating costs. Food contact legislation is another important area which would need additional investigation in the CCA due to the fact that it is only relevant to the ceramic tableware & kitchenware and porcelain enamel sectors, two sectors not assessed quantitatively.

Use of the CCA in policy making

As clearly defined in the scope of the CCA, the consultants have not been asked to draw policy recommendations based on the cumulative regulatory costs findings. Considering the significant investment in resources this study represents for institutions and the companies having provided data, Cerame-Unie hopes that the CCA will become a useful tool for the regulators to better assess the impact of various policies on ceramic sectors. Accordingly, this analysis has been performed by Cerame-Unie keeping in mind the ongoing and future legislative processes and with an attempt to express recommendations in these policy areas.

Cerame-Unie would like to thank the European Commission for instigating this assessment and the work of CEPS, Economisti Associati and Ecorys in producing the report. We commend the great lengths they went to in order to understand the different sectors of the ceramics industry and the processes involved in making our products. We thank the companies that supported the study by contributing with information, but acknowledge the relatively lower level of contribution by SMEs, which are often the businesses that are most burdened by regulatory changes because of their size. The under-representation of SMEs can be explained by the complexity of the exercise and the lack of resources and available data.

Cumulative impact and cost

- ⇒ The cumulated regulatory impact is significant compared to profits and is continuously growing;
- ⇒ For most ceramic sectors, regulatory costs related to climate & energy, and more particularly electricity represent the largest share for regulatory costs and are increasing steadily;
- ⇒ Environment legislation represents the largest share of regulatory costs for fired refractories. Most ceramic sectors are affected by the Industrial Emissions Directive;
- ⇒ Internal market legislation has a more limited cost clearly outweighed by the benefits of EU harmonisation although costs related to chemical legislation impact in particular the refractory sector;
- ⇒ Trade policy (both market access and trade defence policy) has played an essential role in strengthening the competitiveness of the EU ceramic industry. However, making use of EU Trade Defence Instruments for SME sectors such as ceramics remains extremely burdensome and challenging.

The CCA of the EU ceramics industry has evaluated the regulatory costs contracted by EU manufacturers of bricks and roof tiles, ceramic tiles, fired refractories and unfired shaped refractories over the period 2006-2015; with key findings for the year 2015. This assessment identifies the most recent impact of EU legislation on the EU ceramic industry. Firstly, the CCA for EU ceramic industry shows an upward trend in regulatory costs over the past decade for all the EU ceramics sectors involved in the study. Secondly, electricity regulatory costs are growing sharply and consistently for all sectors.

Cumulative regulatory costs

The cumulated regulatory costs are significant compared to profits for all EU ceramic sectors assessed in the CCA. In some sectors and regions (e.g. in Southern Europe in the bricks & roof tiles sector), regulatory costs have exceeded profits during the years of crisis. For bricks and roof tiles, the regulatory costs are on average 42% of the EBIT (above 15 €/tonne for the period 2006-2015). In 2013 they were equal to 87% of EBIT and represented 35.8 % of EBIT in 2015. Concerning wall and floor ceramics tiles, the regulatory costs were on average 17% of EBIT. They were equal to 16.2% of EBIT in 2015. Regarding fired refractories, the regulatory costs were on average 17%, going up to 27.1% in terms of EBIT in 2015. Lastly, for unfired shaped refractories, EBITDA fell to 34.7 €/tonne in 2015 while regulatory costs reached their peak at 14.77€/tonne in the same year; accordingly, in the last year under analysis, regulatory costs were 42.5% of EBITDA. Regulatory costs were higher than EBITDA in 2006 and 2009. For the latter sector, EBIT was not available and consequently, all comparisons are made with EBITDA.

Figure 5. Bricks and Tiles - Cumulative cost by category of regulatory costs (€/tonne)

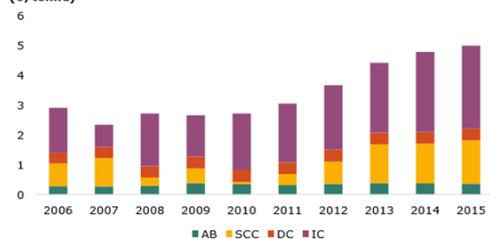


Figure 9. Ceramic Tiles - Cumulative cost by category of regulatory costs (€/tonne)

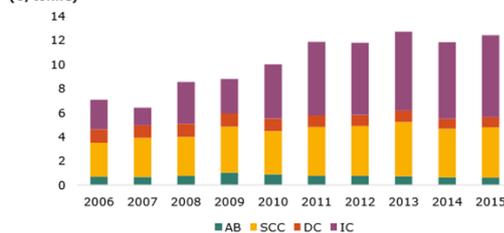


Figure 13. Fired Refractories - Cumulative cost by category of regulatory costs (€/tonne)

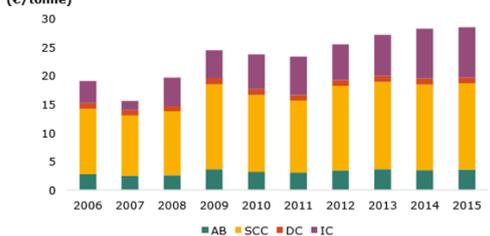
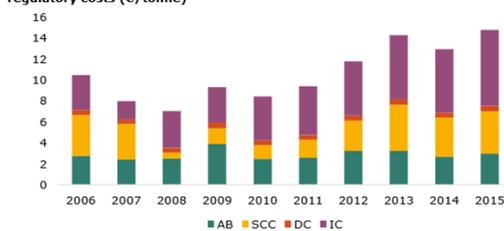


Figure 17. Unfired Shaped Refractories - Cumulative cost by category of regulatory costs (€/tonne)



Note: AB=administrative burdens; SCC=substantive compliance costs; DC=direct charges; IC=indirect compliance costs.

Source: Author's own elaboration.

* Figure 5: CEPS study refers to bricks and tiles and CU refers to bricks and roof tiles

The largest share for regulatory costs is linked to energy & climate policy

Regulatory costs related to climate & energy represent the largest share of regulatory costs for most sectors, especially for bricks & roof tiles as well as ceramic tiles. Cumulated share related to electricity, gas and climate are above 60% of regulatory costs for bricks and roof tiles and for ceramic tiles. These regulatory costs, particularly those related to electricity network costs and renewable taxation (RES), have been consistently growing rapidly throughout the whole period under study. It is also worth noticing that the EU Emissions Trading Scheme (ETS) has been a net cost for the whole ceramic industry since 2013.

The CCA shows the relevance of the Industrial Emissions Directive for all ceramic sectors

Regulatory costs related to environmental regulation represents the largest share of regulatory costs for fired refractory, a sector for which this trend is growing faster since 2011. However all ceramic sectors have been affected by the legislation on industrial emissions which are emissions to air, water and waste, as well as noise and odours. The IED is perceived by the industry as having triggered investments in retrofitting of plants and/or in the adoption of more environmentally friendly technologies such as electrostatic precipitator, filter, kiln improvement, etc. On the basis of the data collected, the consultants concluded that the average shares of plants' investment costs (CAPEX) attributable to EU legislation were set at 50%, 74% and 76% for the plants surveyed in the ceramic tiles, bricks and tiles, and fired refractories sectors, respectively. Only the unfired shaped refractory sector was found not to be affected by the Industrial Emissions Directive. On the other hand this sector is more exposed than other ceramic sectors to regulatory costs related to REACH and CLP.

Internal market legislation generates costs and benefits

The CCA study provides useful information on the evolution of the costs related to the Construction Products Directive (CPD) and then the Construction Product Regulation (CPR). These shall be assessed keeping in mind the fundamental benefit in terms of free movement of goods in the EU delivered by the CPD and CPR. The CCA results show that in general the CPR generates low regulatory costs in comparison with other EU legislation. The administrative burdens costs are the only costs for manufacturers of ceramic construction products.

Trade Policy has played an essential role in improving the competitiveness of the ceramic industry

As implied in the introduction, it is not appropriate to evaluate trade policy in terms of regulatory costs. Instead, trade policy should be assessed in terms of positive or negative contribution to the competitiveness of the industry. In the case of ceramics, the data provided to the consultants shows that EU trade policy has clearly made a positive contribution through market access instruments such as FTAs and the adoption of trade defence measures tackling unfair trade practices. However, the input reported in the CCA on trade defence should also illustrate that the cost and burden to collect sufficient evidence is clearly an obstacle for SME sectors such as ceramics.

Internal Market (REACH, CLP and CPR)

- ⇒ Manufacturers of ceramic construction products incur administrative costs to comply with CPR obligations, i.e. drafting and provision of DoP and application of CE marking label;
- ⇒ For the workplace legislation, the costs incurred are mostly related to compliance costs. Those costs remain relatively low;
- ⇒ The main costs related to the REACH legislation are direct, and due to the potential substitution costs;
- ⇒ The CLP legislation did not raise significant costs for the companies.

Construction Products Regulation

The Construction Products Regulation (CPR), which replaced the Construction Products Directive (CPD), entered into full force in July 2013. The goal of the CPR is to set up harmonised rules for placing construction products in the EU market and therefore make the single market work better. When a construction product is covered by a harmonised European standard (hEN) that is cited in the Official Journal of the European Union (OJEU), the manufacturer shall draw up a Declaration of Performance (DoP) and affix CE marking to the product.

The CPR generates costs to measure, certify and communicate the performance of construction products according to the respective hEN. The direct costs are related to the administrative burdens, i.e. drafting, supply and storage of DoP, and application of CE marking label, and substantive compliance costs, particularly the costs for testing the products and factory production control. With regards to the measurement of the administrative burdens, the following information was provided: (1) amount of personnel working on DoPs and CE marking, (2) costs of access to hEN; (3) IT investment and operational costs for storing and supplying the DoP; (4) printing investment and operational costs for DoP and CE marking, and (5) translation and other costs.

The CCA results show that in general the CPR generates low regulatory costs in comparison with other EU legislation. The administrative burdens costs are the only relevant costs for manufacturers of ceramic construction products. For the bricks and roof tiles sector, the CCA study shows that the transition from the CPD to the CPR doubled the regulatory costs. The reason behind this could be that under the CPD there was no obligation to provide the Attestation of Conformity to customers, but under the CPR, manufacturers have the duty to supply the DoP to customers. The delegated act to provide the DoP on websites helped producers to reduce administrative costs.

The ceramic industry considers the CPR the core regulatory framework for construction products. It contributes to removing barriers to trade and improves the free movement of construction products in the EU. It has an essential role in the harmonisation of the conditions for marketing products by establishing a harmonised technical language that defines the essential characteristics in relation to their performance in hEN. In order to improve the implementation of the CPR, Cerame-Unie proposes to have the option to simplify the CE marking. There is a substantial overlap between the information required in the DoP and CE marking. Therefore, the option to reduce the size of CE marking, which would contain a minimum mandatory information, would help reducing costs for manufacturers of construction products. The full information would be available in the DoP. Furthermore, citation of hENs standards can be very slow and Cerame-Unie calls for a pragmatic solution to speed up the process and make it more transparent.

Workers safety and health legislation

The workers safety and health legislation provides the general requirements for the prevention of occupational risks, the safety and health protection, the elimination of risk and accident factions and the training as well as guidelines for employers and employees. The workplace directive provided the obligations for the employers to prevent the risk for the employees. The main costs related to worker's safety and health are regulatory costs of compliance.

The majority of the costs are related to the requirements of compliance for the companies, such technical maintenance, as well as proper equipment and devices. It is important to note that member states have different regulatory regimes impacting differently the implementation of the directives.

All sectors and regions have a majority of compliance costs. These costs can be divided in the determination and assessment of risk of hazardous agents, avoiding and reducing exposure as well as worker's training. The cost of complying with workplace legislation varies across the different sectors of the ceramics industry. It is however, always related to the administrative burden and compliances costs.

REACH and CLP

The ceramics industry is subject to two main regulations covering the internal market for chemicals: REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) and CLP (Classification, Labelling and Packaging). The REACH regulation entered into force on 1 June 2007, while the CLP Regulation entered into force on 1 June 2005. Meanwhile, the environmental impacts of the ceramics industry are governed by the Industrial Emissions Directive (IED). These include industrial emissions to air, water and land.

The different bodies of legislation covering chemicals and the environment incur different types of costs and affect the different ceramic sectors in different ways. The ceramics industry on the whole generally only a downstream user of substances that fall under the scope of the REACH Regulation, or does not use them at all. These arise from the potential increased costs of chemical substances due to substitution or registration costs upstream. For bricks and roof tiles, and ceramic tiles the REACH regulation represents a very minor cost.

Indeed, for unfired shaped refractories, the Business As Usual (BAU) factor is set at around 80%, meaning that some of the activities may have also been in spite of the regulation in order to serve the needs of other stakeholders, such as downstream users.

Direct regulatory costs of the REACH Regulation for bricks and roof tiles are estimated to be €0.01/tonne of production output in a typical year at the EU level and is only associated with administrative burdens but not direct charges. On the other hand, direct regulatory costs associated with the REACH regulation for producers of fired refractories is €1.77/tonne of production, which still is largely made up of administrative costs, with only a very small share of direct charges paid to ECHA, which were only reported in a few cases. The CLP regulation requires companies to classify, label and package hazardous chemicals appropriately before placing them on the market. This regulation does not generate significant regulatory costs for the majority of ceramic producers. It is relevant for producers of fired and unfired shaped refractories. However, the regulatory costs are solely associated with administrative burdens in both cases.

The study does not cover the future inclusion of respirable crystalline silica (RCS) under the Carcinogens and Mutagens Directive (CMD) that may generate significant regulatory costs for all ceramic sectors unless best practices implemented so far under the "NEPSI" social dialogue agreement remain the main tool to implement the exposure limit set in Annex III of the CMD. We encourage a strong recognition of NEPSI as a best practice to implement any legislation regarding potential risks linked to the use RCS in manufacturing processes.

Policy recommendations

- ⇒ The CPR must be the core regulatory framework for construction materials.
- ⇒ The implementation of the CPR could be improved by introducing the option to simplify the CE marking to decrease the administrative burdens placed on construction products manufacturers.
- ⇒ A harmonized implementation of worker's safety and health legislation would allow a level playing field throughout the industry.
- ⇒ The NEPSI efforts for respiratory crystalline silica lead the ceramic sector to control and prevent the risks for employees while allowing a level playing field throughout industries. NEPSI should be the technical reference to address employers' obligations on respiratory crystalline silica in the EU.

Energy and Climate legislation

- ⇒ Energy and climate regulatory costs constitute the major share of the EU regulatory costs for most ceramic sectors investigated; ca. 65% in 2015 for bricks and roof tiles and wall and floor tiles sectors;
- ⇒ Indirect costs are in most cases the highest increasing regulatory costs throughout the whole period (in particular the electricity network costs, RES costs and indirect carbon costs in the EU ETS);
- ⇒ Climate regulatory costs are on a growing trend since 2009 and for all sectors investigated create a net burden since the start of the EU ETS phase 3 in 2013.

Policy introduction

Ceramic industry, one of the most energy-intensive manufacturing sectors, is directly impacted by the European climate and energy policy. The CCA study takes into account relevant EU legislation in the field, such as internal energy markets in electricity and natural gas, renewable energy directive, energy taxation, as well as energy efficiency directive. In the field of climate policy the EU ETS directive and its implementing legislation, like monitoring, reporting and verification regulation, are taken into consideration.

Analysis

The categories of costs analysed in the CCA with regards to the energy legislation involve:

- ◇ direct costs: costs incurred due to the Energy Taxation Directive (direct charges generated depending on the taxation in different Member States), and due to the Energy Efficiency Directive EED (85% of the costs of the energy audits were attributed by the consultants to the EED);
- ◇ indirect costs: costs related to the internal market in gas and electricity legislation as well as the renewable energy directive; they are connected with the infrastructure costs passed on to the energy consumers in the energy bills, such as electricity network costs (30% attributed to EU legislation in 2006-2009 and 50% in 2010-2015) and gas network costs, (assessed by consultants at 15% in the whole period) as well as RES support (50% in 2006-2009, 85% in 2010-2015).

For the climate field there are the following types of costs identified:

- ◇ substantive compliance costs: the direct costs that are linked to the surrender of EUAs to cover GHG emissions; the EU Transaction Log and National Registries were used here as a data source;
- ◇ indirect costs: carbon costs passed on in the electricity bills; the pass-on rates used in the assessment were 0.6 and 1; (it is worth noting that no ceramic installation receive indirect costs compensations);
- ◇ administrative costs: one-off costs related to the start-up of the process and recurring costs related to monitoring, verification and reporting obligations; companies questionnaires served as a data source.

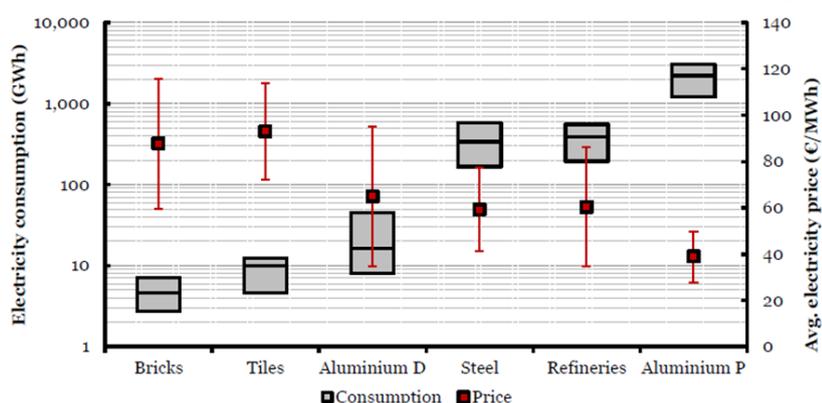
All sectors investigated quantitatively in the CCA are covered by the EU ETS, as defined in the ETS directive Annex 1, and are deemed to be at risk of the carbon leakage. In total there were over 1200 ceramic installations in the EU ETS phase 3 (2013-2020).

Impact on the industry

The CCA study confirms the findings of previous EC reports on the energy prices and costs in the ceramic industry*, in particular with regards to the fact that the industry is sensitive to natural gas prices (as gas is the main fuel used by the industry), but even more so to the electricity prices.

The previous studies have indicated that the average electricity price paid by the ceramic bricks and tiles sectors is much higher when comparing with other energy intensive industries, such as steel, aluminium or refineries (see the graph below), what can be explained with a fact that the ceramic sectors are mainly composed by SMEs.**

Graph: Electricity consumption and price variations grouped by sector weighted average, 2008-15.



Electricity, as the most expensive energy carrier, is the main energy price driver for ceramics. For most sectors involved in the analysis, the results indicate that the average EU electricity regulatory costs constitute the highest share in the total regulatory costs (in 2015: 45% for bricks, 47% for tiles, 44% for unfired shaped refractories).

The increase in the cumulative regulatory costs of EU electricity legislation was sharp for all sectors over the period investigated (please see graph on the next page).

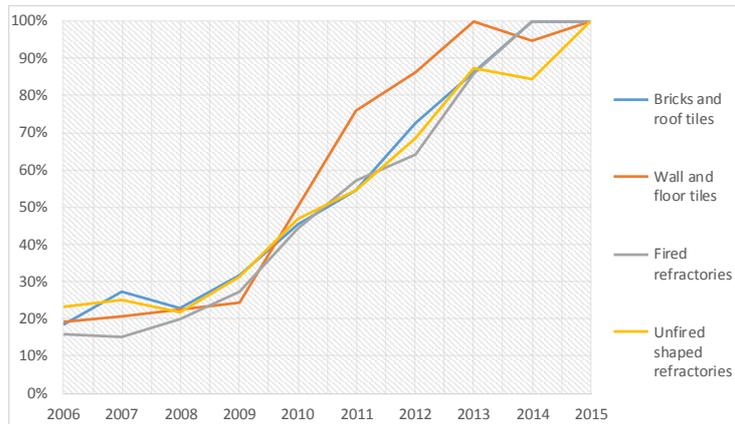
The gas regulatory costs are significantly lower than the electricity regulatory costs and in 2015 constituted about 10% of all regulatory costs for bricks and roof tiles as well as for wall and floor tiles and 3-5% for the refractories sector.

With regards to the substantive compliance costs related to energy efficiency directive, it can be stated that some energy audit costs were recorded in few plants in the sample, however, as the EED has only been implemented since 2012, their impact is anticipated to be higher in the future.

*CEPS, *Composition and drivers of energy prices and costs: case studies in selected energy-intensive industries*, Brussels, June 2016, p. 171 - 258, see [here](#).

** *Ibidem*, p. 41.

Graph: Increase in the cumulative regulatory costs of electricity legislation over the period 2006-2015, EU averages, based on the CCA Final Report.



Main conclusions

On the basis of the CCA analysis it can be concluded that the climate and energy regulatory costs constitute the sole major chunk of the EU regulatory costs investigated. For the two ceramic sectors - bricks and roof tiles and wall and floor tiles - the sum of the energy and climate regulatory costs adds up to 65% of the total regulatory costs in 2015. It can also be observed that these regulatory costs are clearly on the growing trend for most ceramic sectors throughout the whole period under study. They constitute the most increasing cost component for all sectors (except for the fired refractories, where the environmental direct compliance costs prevail). For all ceramic sectors the absolute record is the increase in the indirect costs of electricity legislation, which have multiplied over the period: 4-times for bricks and roof tiles, 5-times for wall and floor tiles, 6-times for refractories.

The role of the indirect costs is substantial within both the energy and climate regulatory costs. These are the costs stemming from the electricity network costs, RES as well as the EU ETS indirect costs.

Policy recommendations:

- ⇒ It must be ensured that the European energy-intensive industries, such as ceramics, highly sensitive to the energy and carbon prices, are provided with an equal level playing field and not at disadvantage when comparing with their global competitors.
- ⇒ The EU must strive towards an internal energy market that would benefit all consumers, including industrial consumers and also SMEs. The electricity market integration shall be achieved at a minimum cost while keeping competitiveness and security of supply as its main aims.
- ⇒ For the climate legislation impact, it is necessary to take into account the constantly growing costs faced by the European manufacturers. As the EU ETS system is currently under reform and even higher carbon costs are expected after 2020, the ETS review must ensure that full carbon leakage mitigation is guaranteed to all ceramic sectors and in particular further simplifications shall be assured for small emitters. The indirect carbon costs must be compensated as well, what shall be made possible through the EU ETS State Aid Guidelines.

Waste and BREF

- ⇒ The IED costs are associated to the administrative burden for compliance;
- ⇒ The IED has enhanced significant investments for most ceramic sectors;
- ⇒ All ceramic sectors incurred investments and operational costs that are linked to waste disposal and recycling systems.

BREF

The IED entered into force in phases between 2014 and 2016 to replace the Integrated Pollution and Prevention Control (IPPC) Directive. Under the IED, operators of industrial installations must obtain and thereafter renew integrated environmental permits from their national or local competent authorities. The values that the permits are set at comes from the Best Available Techniques and their Associated Emission Levels (BAT-AELs). Since the IED covers various types of industries with different polluting profiles, the BAT-AELs are established in individual sector-level technical documents called BAT Reference Documents (BREFs). The conclusions of the individual BREFs form the basis of the emission limits and these are formally adopted by the Commission through an Implementing Decision (the so-called BAT Conclusions).

The BREF for ceramics regulates emissions to air, water and waste, as well as noise and odours. Emissions to air are the most significant pollutants for the ceramics industry, while wastewater is only produced in very small amounts because most water used to make ceramics gets evaporated. Some solid wastes from the manufacture of ceramics can be partly reused in the plant or be supplied to other industries.

The IED incurs specific direct costs through the administrative workload associated with obtaining and renewing permits from national or local authorities, as well as the burden of monitoring and inspection requirements. The IED is also associated with direct compliance costs associated with preventing and controlling emissions. These include investment costs, financial costs and operating costs. Average regulatory costs generated by environmental legislation for the bricks and roof tiles sector were €0.73/tonne of production, with dust and fluoride filters and wastewater treatment systems reported most commonly.

The main costs associated with the regulations covering the environmental legislation are associated with paying consultants to carry out the relevant monitoring and applications for permits. To comply with the Industrial Emissions Directive, there are some other direct financial costs associated with capital investments in the installations. The cost of complying with environmental legislation varies across the different sectors of the ceramics industry. Relative to production costs, these are manageable and not exorbitant. Broadly speaking, the majority of costs are administrative in nature. The costs associated with the Industrial Emissions Directive are still largely administrative in nature, although this regulation is associated with upfront investment costs to improve the environmental performance of the installations. These costs of compliance are also substantive namely: investment costs, such as the resources invested in the retrofitting of plants and/or in the adoption of more environmentally friendly technologies; financial costs, which are by the opportunity cost of the capital invested; and operating costs, such as the incremental expenses associated with environmental protection measures. This can clearly be reflected in the example of the refractories sector below. The average shares of plants' investment costs (CAPEX) attributable to EU environment legislation were set at 50%, 74% and 76% for the plants surveyed in the ceramic tiles, bricks and roof tiles, and fired refractories sectors, respectively.

However, for the fired shaped refractories where the additional costs associated with these environment related investments, were reported to be more significant than other ceramics sectors. This added an increment in absolute terms and on the average of share of the capital expenditure (OPEX/CAPEX). For this sub-sector, the OPEX/CAPEX ratios have been estimated in the 15-20% range, leading to an annual average value of OPEX during the 2006-15 period of some €70,000 per plant.

Furthermore, the large majority of the refractories producers surveyed, reported to have made environment-related investments over the 2006-15 period, for a total of a €15.1 million. The share of these investments attributable to the EU legislation is equal to €11.5 million, further confirming the significant role played by normative prescriptions. The range of environment-related investments reported by fired refractories producers is more diversified than the one of other ceramics sectors, encompassing regenerative afterburning systems, regenerative thermal oxidizer, and kiln refurbishment/realignment, among others.

Having said that, the business as usual (BAU) factor is often quite high for these investments as they may be required by local level legislation anyway, or they may be associated with additional benefits to the companies, such as improved corporate reputation.

Waste Legislation

The Waste Framework Directive (WFD) provides the general framework for the management of waste and sets the basic waste management definitions for the EU. The goal of the Landfill of Waste Directive is to prevent or reduce the adverse effects of the landfill of waste on the environment.

The ceramic industry incurs substantive compliance costs, i.e. for waste collection, segregation, reuse, recycling and disposal and landfilling in some cases also include investment costs (special machines, warehouses for waste storage). In the Landfill of waste directive, bricks, roof tiles and ceramic tiles are on the “list of wastes acceptable at landfills for inert waste without testing”. A manufacturer of ceramic tiles indicated that unfired broken tiles generated in the factory, can be easily recycled into new tiles because their properties remain the same. They can be crushed into small pieces and used for the production of new ceramic tiles.

The direct regulatory costs of the WFD and Landfill directive vary for the different ceramic sectors at a typical year. The CCA study shows that the main investments and operations costs are linked to waste disposal and recycling systems for all ceramic sectors. The costs related to landfilling of waste are of low relevance for the ceramic industry.

Policy recommendations

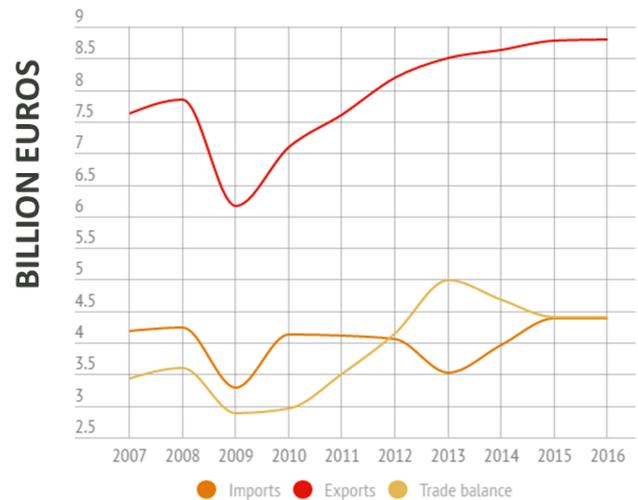
- ⇒ Costs for BREF/IED are generally administrative;
- ⇒ The impact of the BREF/IED should be assessed in the light of investments required for compliance. Existing costs related to the BREF/IED shall not be further increased in future;
- ⇒ For BREF it is important to ensure transparency in the processes as well as information sharing throughout sectors.

Trade

- ⇒ Tariff barriers remain a significant burden for European ceramic exporters, and more non-tariff barriers have been developed by third countries in the last recent years;
- ⇒ Anti-dumping and anti-subsidy represent higher costs for SMEs;
- ⇒ Trade Defence Instruments (TDIs) have played an important role to restore a fair level playing field in ceramics.

Introduction

The European ceramic industry has suffered from the economic crisis. Although it has started to recover over the last years it has not yet reached its level of before the crisis. It is an industry which exports 30% of its production with a positive trade balance. The sector is competitive at international level with Russia, Switzerland and Saudi Arabia being the top three exporting destinations. The largest exporting SME sector is ceramic wall and floor tiles, competing mainly on the US market.



Source: Eurostat

Analysis

Trade Barriers

Top 10 Destination Markets		Top 10 Exporters to EU	
United States	20.2%	Turkey	46.0%
Saudi Arabia	6.5%	China	23.0%
Russia	6.3%	United Arab Emirates	11.7%
Switzerland	5.8%	India	3.9%
Israel	4.2%	Brazil	2.4%
Algeria	3.8%	Vietnam	2.1%
Canada	3.5%	Russia	1.5%
Australia	2.5%	Serbia	1.3%
Lebanon	2.5%	Ukraine	1.1%
Morocco	2.4%	Malaysia	1.1%

Table 100 of CCA. Top 10 trading partners for ceramic tiles in 2015 (% of overall export/import values) - Source: Eurostat

The CCA analysis acknowledges the tariffs barriers and non tariffs barriers as main obstacles for EU exporters with the examples of the non-tariffs trade barriers of Egypt, Russia, and Saudi Arabia. Cerame-Unie is a traditional supporter of bilateral free trade agreements, as they are a way to remove trade barriers but in particular the non-tariffs ones, if swiftly implemented. The EU-South Korea Free Trade Agreement has been a real success at removing tariffs and helped to boost EU ceramic industry exports to South Korea and create jobs in the EU. The EU ceramic industry sees similar benefits in the newly implemented CETA. However, it is important not to forget that in some countries European ceramic exporters are facing high duties and peak tariffs, notably in the US. Consequently should TTIP negotiations resume again ceramic industry would fully support the removal of high & peak tariffs and the removal of technical barriers to trade (TBTs).

Trade Defence Instruments (TDIs)

The ceramic industry, in particular ceramic wall & floor tiles and tableware & kitchen ware, have faced unfair trade imports from China causing dumping and injury to the EU ceramic industry producers and hampering fair competition. The European Commission has imposed anti-dumping measures on imports of ceramic wall & floor tiles and tableware & kitchen ware from China respectively in 2011 and 2013. These measures have played an essential role in restoring fair competition and thereby allowing these two sectors to relaunch investments and preserve employment at a stable level.

Access to TDIs is particularly challenging for SME sectors due to the large amount of *prima facie* evidence required and the WTO requirement that each complaint should be signed by at least 25% of the EU production. Moreover, it takes up to two years to prepare a complaint, about 200,000 EUR of legal & consultancy costs topped with additional human resources during 15 months of investigation. Although costs related to TDIs can be considered as low compared to potential benefits, these costs are sufficiently high to represent a serious obstacle for SME sectors to make use of the EU trade defence instruments. The CCA acknowledged that in some circumstances (not necessarily in the ceramic sector), EU TDIs proved to be too soft on unfair trade practices (e.g. Lesser duty rule).

Lastly, the 15-month long investigation period increases uncertainty for businesses and additional costs related to the damage caused during this very long period during which no measures are imposed.

New antidumping methodology

With the non-market economy methodology used in the current anti-dumping cases in ceramic tiles and tableware, the imposed anti-dumping measures have been effective against dumped prices and enabled a fairer competition for EU ceramic industry especially for SMEs. However, the new antidumping methodology, the prospects of accessibility and effectiveness of TDIs needs to be carefully assessed. Cerame-Unie is calling on the Commission to ensure more predictability in its proposal. But also to ensure the burden of proof should lie on the exporting producer and not on the Commission (as it is planned in the EC's proposal). It should be clearly established that exporting producers have to demonstrate that they are not affected by horizontal distortions before they can demonstrate that some of their costs are undistorted. Moreover, a minimum level of 30% duty is required to ensure effectiveness of the duties. Overcapacities should be duly considered for the Report the Commission and complainants may use in future trade defence cases. Just in the ceramic wall and floor tiles sector an overcapacity of 4bn sq.m. has been found in 2014, thus representing over four times the EU's consumption.

Main conclusions

The competitiveness of the ceramic industry, represented by 80% of SMEs can be ensured if tariffs and non-tariff barriers are removed in third countries markets and if the ceramic companies compete at a level playing field. The removal of trade barriers and dumping would significantly reduce the costs to the EU ceramic industry entrepreneurs and ensure better predictability in their business, safeguard thousands of direct & indirect jobs and continue investing in the EU.

Policy recommendations

- ⇒ Foster market access for European companies in third countries.
- ⇒ Ensure fair competition at international level.
- ⇒ Keep a robust trade defence instrument accessible for SMEs.
- ⇒ Ensure a faster imposition of trade defence measures.

**Cerame-Unie is the Brussels-based trade association that
represents the European ceramic industry.**

We engage in a constructive dialogue with the EU institutions,
international partners and social and environmental
stakeholders on behalf of our members.

Our members include national associations and companies
from ten ceramic sectors and 30 European countries,
including 26 EU Member States.

Cerame-Unie A.I.S.B.L.

Rue Belliard 12, 1000 Brussels

Tel. +32 2 808 38 80

Fax +32 2 511 51 74

sec@cerameunie.eu

www.cerameunie.eu

twitter.com/CerameUnie

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