

costs ratios between 2004 and 2007, followed by a steady increase thereafter, until 2009, which may be due to the evolution of the denominator of added value.

Beyond the evolution of added value, factors that may affect the evolution of regulatory costs may relate to the increasing costs for the environmental package due to the Industrial Emissions Directive (IED). The cost increases are linked to the impact of the IPPC, followed by that of the IED in 2013, which have triggered the noted changes in costs over time for the carpentry and joinery subsector. Costs associated with the climate and energy package have been stable over time, with a modest increase in 2013. This increase may be due to the impact of the Renewable Energy Directive, reflecting increasing raw material costs. It may also reflect the purchase of CO₂ allowances under the ETS system, in particular as the third trading period began in 2013.

5.5 Cumulative cost assessment of manufacture of wooden pallets and other wooden packaging (16.24)

Eurostat definition of manufacture of wooden pallets and other wooden packaging

NACE Rev.2: C1624

NACE Rev. 1.1: C204

This sub-sector includes the manufacture of packing cases, boxes, crates, drums and similar packings of wood, the manufacture of pallets, box pallets and other load boards of wood, the manufacture of barrels, vats, tubs and other coopers' products of wood and the manufacture of wooden cable-drums. Eurostat, 2016

The following five legislative packages were prioritised for the wooden pallets and other wooden packaging sub-sector: climate and energy, environment, forest-related, employment and products legislative packages. The company survey confirmed this policy prioritisation but highlights that it is especially the environment (OPEX) legislative package that has generated costs. The other legislative packages are in fact not significant in terms of generating a large amount of costs for the sub-sector.

Regulatory costs for the sub-sector reach 4.4% of turnover, 16.4% of added value and 50.7% of gross operating surplus of companies, which can be broken down between legislative packages and cost categories as follows:

Table 28: Costs for manufacture of wooden pallets and other wooden packaging by package and comparison with main financial indicators – annual average for 2005-2014

	% turnover	% AV	% GOS	Share of total regulatory costs
Climate & Energy	0.24%	0.9%	2.8%	5.5%
Environment	3.44%	12.8%	39.4%	77.6%
Forest	0.07%	0.2%	0.8%	1.5%
Employment	0.36%	1.3%	4.2%	8.2%
Product	0.32%	1.2%	3.7%	7.2%
Total	4.43%	16.4%	50.7%	100.0%

Source: Authors' elaboration based on cost data from companies' books and online survey; comparators (turnover, AV and GOS) from Eurostat, Structural Business Statistics.

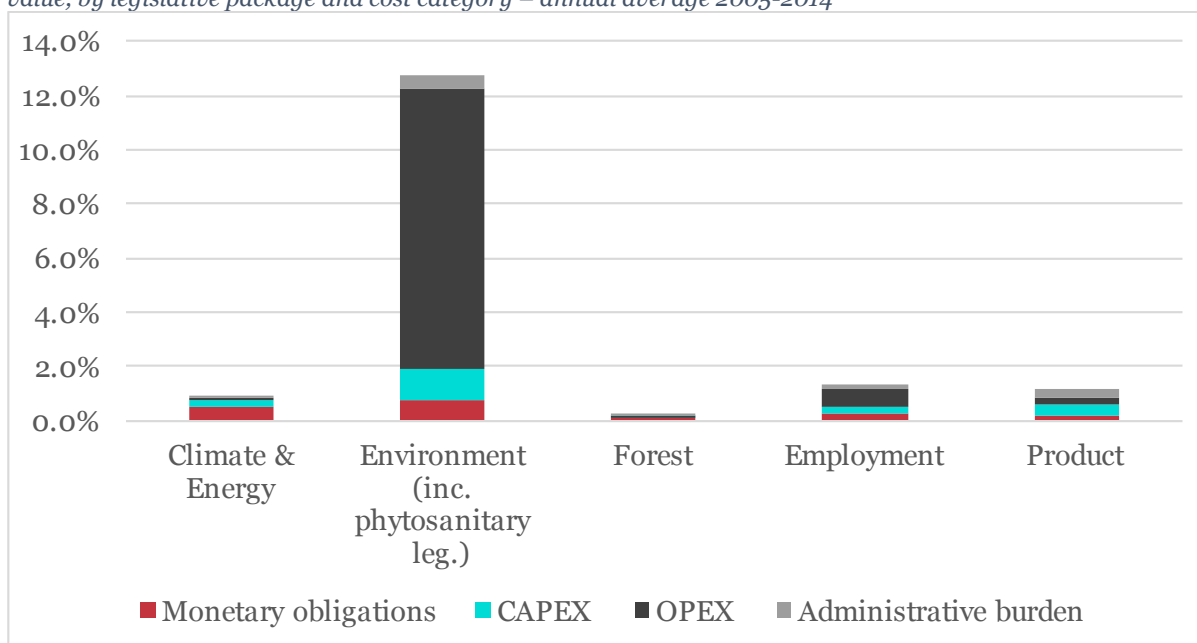
Table 29 Costs for manufacture of wooden pallets and other wooden packaging by cost category and comparison with main financial indicators – annual average for 2005-2014

	% turnover	% AV	% GOS
Monetary obligations	0.5%	1.8%	5.7%
CAPEX	0.5%	2.0%	6.0%
OPEX	3.1%	11.4%	35.3%
Administrative burden	0.3%	1.2%	3.7%
Total	4.4%	16.4%	50.7%

Source: Authors' elaboration based on cost data from companies' books and online survey; comparators (turnover, AV and GOS) from Eurostat, Structural Business Statistics.

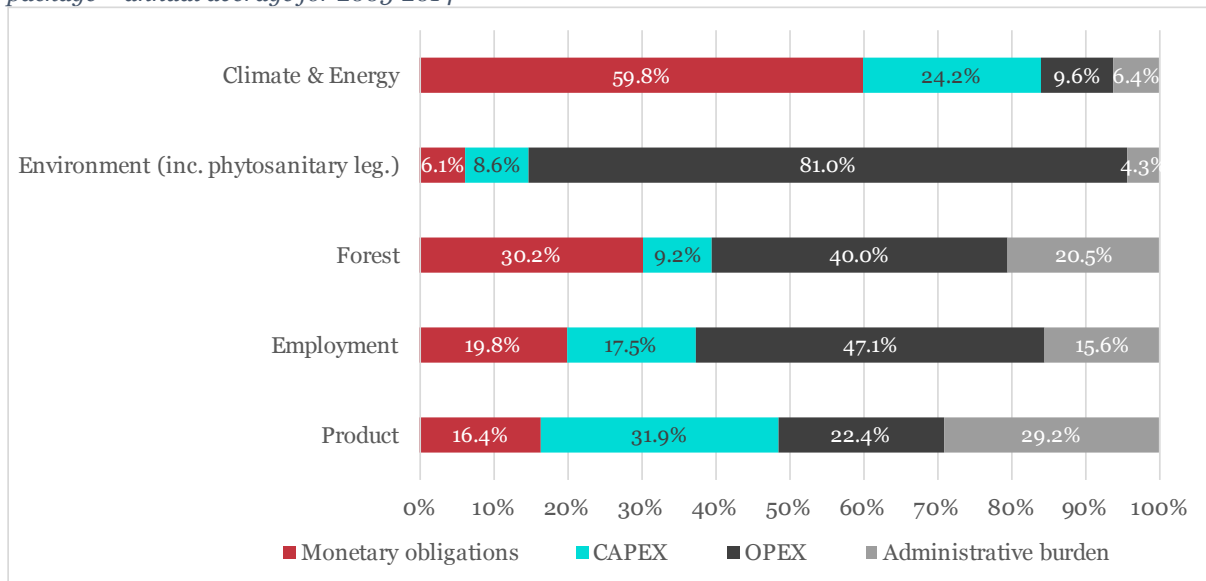
Costs from EU regulation can be split by package and by cost categories. The following paragraphs elaborate on the pieces of legislation and related cost categories driving the regulatory costs.

Figure 35 Regulatory costs for manufacture of wooden pallets and other wooden packaging as % of added value, by legislative package and cost category – annual average 2005-2014



Source: Authors' elaboration based on cost data from companies' books and online survey; comparators (turnover, AV and GOS) from Eurostat, Structural Business Statistics.

Figure 36 Share of categories of costs for manufacture of wooden pallets and other wooden packaging by package – annual average for 2005-2014



Source: Authors' elaboration based on cost data from companies' books and online survey; comparators (turnover, AV and GOS) from Eurostat, Structural Business Statistics.

The **environment legislative package** accounts for 77.6% of total regulatory costs (12.8% of added value). Key legislation from this package relate to waste (Waste Framework Directive) as well as the Packaging and Packaging Waste Directive. It also relates to relevant parts of the phytosanitary regulations (e.g. rules on wooden packaging which incorporate the ISPM 15 standard for treatment and marking, which, although it is a standard developed by the International Plant Protection Convention from the U.N.'s Food and Agriculture Organization, it has been incorporated into the EU phytosanitary legislation) to prevent the introduction of harmful, plant-borne alien organisms. Significant investments have been necessary for companies to collect and process returned products and wastes in accordance with the principle of extended producer responsibility (e.g. costs of waste management are to be carried partly or wholly by the producer). Personnel costs and other operating and maintenance costs are also associated with these obligations.

There are in addition administrative burdens (e.g. control, inspection and testing) associated with obtaining certificates for those companies that import products as well as export them to non-EU countries. For instance, the applied treatment must be marked on the product (e.g. showing details of the processing agents that have been used) to certify that the wood packaging material has been subjected to an approved measure. It should be noted that the marking proves compliance with the requirements of all phytosanitary regulations in place, including the provision specified by the standard ISPM 15, as companies have passed the examinations for obtaining a license to use the marking.

The **employment legislative package** is the second most important package, representing 8.2% of total regulatory costs (1.3% of added value). EU policy on occupational health and safety makes an important contribution to preventing accidents at work and ensuring safe occupational conditions for workers. For instance, workers in the wooden pallets and other wooden packaging sub-sector may be exposed to high physical demands as part of the woodworking process (e.g. handling of pallets). This can in turn present both health and safety hazards, such as representing a major risk for musculoskeletal disorders. In other parts of the woodworking sub-sector, such as sawmills, planing mills or panel mills, wood dust may be a problem. Such issues require a company to invest in measures to solve these types of problems, which may include a risk assessment and improved (or modified) machinery and methods as part of the manufacturing process. Related operating costs (47.1% of this

legislative package) include the maintenance of equipment to ensure a safe and health working environment.

Accounting for 7.2% of total regulatory costs (1.2% of added value), this sub-sector principally prioritised the **product legislative package** related to materials and articles intended as finished products (cases, boxes, crates, pallets, etc.) to come into direct or indirect contact with foodstuffs, as well as common methods to measure and communicate the life-cycle environmental performance of products and organisations. However, it should be noted that this legislation does not affect all the product groups within the sub-sector as a whole. It is interesting in this case to note that the overall costs for the products package is comparatively nominal. These include fees and charges (overall 16.4% of the package) associated with applications for authorisation of a new substance to come into contact with food are nominal. It is, to some extent, certain conditions on the manufacturing process (e.g. ensuring that production is in line with good manufacturing practices) that generate OPEX costs (22.4% of the package), while the reporting obligations (as linked to inspections and audits as well as regulatory compliance as regards permits, labelling, safety and provisions for ensuring traceability and the authorisation of substances) create the administrative burden (29.2% of the package) for the sub-sector.

The **climate and energy package** only accounts for 5.5% of package (0.9% of added value), mostly driven by monetary obligations included in the energy bill because of the Renewable Energy Directive. Other types of costs include maintenance costs (9.6% of the package) due to investments in state-of-the-art production capacity to reduce emissions of greenhouse gases and to improve energy efficiency.

Figure 37 Evolution of costs for manufacture of wooden pallets and other wooden packaging as % of added value for the period 2004-2015



Source: Authors' elaboration based on cost data from companies' books and online survey; comparators (turnover, AV and GOS) from Eurostat, Structural Business Statistics.

The analysis of cost trends (time frame 2005-2014) demonstrate that share of regulatory costs on added value relating to the environment legislative package have dropped in 2007 and 2011 and have remained stable since 2012. As with the previous sub-sectors, we can observe a slight general decrease of costs ratios in 2007 (reaching a peak in 2009) and again decreasing thereafter. This is, as with the other subsectors, presumed to relate to the financial crises having an impact on producers of wooden pallets and other wooden packaging in 2008/2009, prior to which the high levels of business – “the calm before the storm”, as reflected in turnover and added value were reflected in relatively reduced costs.

The overall most significant cost for producers of wooden pallets and other wooden packaging, by far, is the environmental legislative package. In this instance, the increase of costs ratios between 2007 and 2009 may be explained by the revision of the Waste Framework Directive. The directive introduced new targets for reuse and recycling, and requirements for Member States to prepare waste prevention programmes, which may be underlying the increase in costs ratios for this sub-sector. The increase in costs ratios between 2007 and 2009 are also for a considerable part generated by the implementation of phytosanitary regulations, in particular those incorporating ISPM 15 - which was itself reviewed in this period, with investments in heat treat capacity and costs for reorganising the premises and controlling and licensing schemes. This required companies to investment in heat treatment capacity and to make adjustments to the control and marking scheme.

The remaining legislative packages have negligible costs for the sub-sector in comparison. Interestingly, we do however see an increase in employment costs ratios around 2007, which would be linked to the introduction of the second (in 2007) and third (in 2010) list of indicative occupational exposure limit values.

5.6 Cumulative cost assessment for the overall pulp, paper and paperboard sector

5.6.1 Scope

The section on cumulative cost assessment for the overall pulp, paper and paperboard sector provides an aggregated picture of EU regulatory costs (by a weighted sum of the values from each sub-sector, using turnover share as a weight) over the period 2004-2015 for the following sub-sectors:

- 17.11 Manufacture of pulp;
- 17.12 Manufacture of paper and paperboard

The subsequent sections will further cover each of these sub-sectors independently.

For the pulp, paper and paperboard sector and its sub-sectors (as mentioned above), the following sections provide an evolution of the share of regulatory cost as a percentage of added value over the time period (2005-2014). It is important to note that, while it certainly illustrates the evolution of regulatory costs over ten years, the trend is also impacted by the evolution of the ratio’s denominator, i.e. the added value of the sector. As a matter of fact, recurrent peaks of regulatory costs as percentage of added value in 2009 may hence reflect the drop in added value due to the financial crisis and its subsequently difficult business environment. Nevertheless, although conclusions cannot be drawn on whether there has been a peak in regulatory costs per se for such a year, it is correct to mention that the share of regulatory costs (reflecting the regulatory burden) on added value has increased. The evolution of added value (denominator of all cost ratio), from 2005 to 2014, is as follows: