



Council of the  
European Union

Brussels, 10 January 2019  
(OR. en)

5163/19  
ADD 7

ENER 8  
ENV 21  
CLIMA 8  
COMPET 23  
CONSOM 10  
FISC 18

#### COVER NOTE

---

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	9 January 2019
To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union

---

No. Cion doc.:	SWD(2019) 1 final - PART 7/11
Subject:	COMMISSION STAFF WORKING DOCUMENT Accompanying the document REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Energy prices and costs in Europe

---

Delegations will find attached document SWD(2019) 1 final - PART 7/11.

---

Encl.: SWD(2019) 1 final - PART 7/11



Brussels, 9.1.2019  
SWD(2019) 1 final

PART 7/11

**COMMISSION STAFF WORKING DOCUMENT**  
*Accompanying the document*

**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE  
COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE  
COMMITTEE OF THE REGIONS**

**Energy prices and costs in Europe**

{COM(2019) 1 final}

## ANNEX 2 – FACTORS DRIVING ENERGY COSTS IN MANUFACTURING IN THE EU SECTORS

This annex contains the results of the energy costs decomposition analysis of the various sectors analysed between 2010 and 2015 in the Staff Working Document (see section 6.4).

The decomposition of energy costs is following the formula below:

$$\Delta \text{Energy Costs} = (\text{real}) \text{ output effect} + (\text{real}) \text{ energy intensity effect} + \text{price effect} + \text{residual}$$

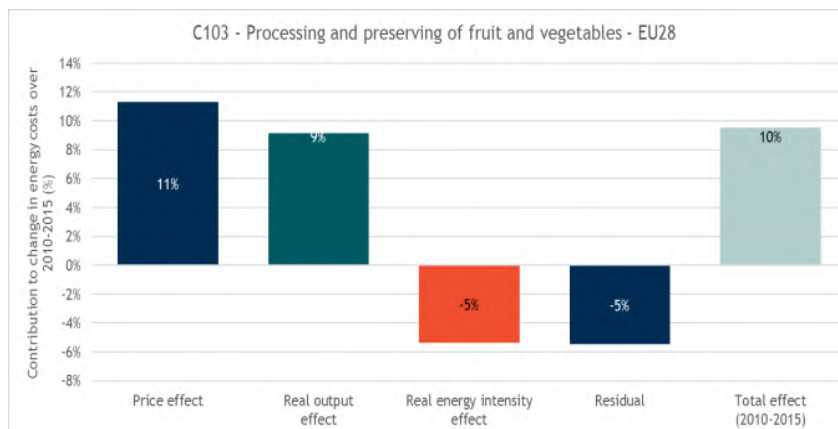
Where

- **(real) Output effect:** the effect of changes in real production (GVA),
- **(real) Energy intensity effect:** the effect of changes in energy per unit of real output (GVA) over time due to energy efficiency measures, behavioural changes and industry structural change;
- **Price effects:** the effect of changes in coal, gas and electricity prices.
- The **residual**, which includes the effect of unexplained data discrepancy with Eurostat SBS data on 'purchases of energy'.

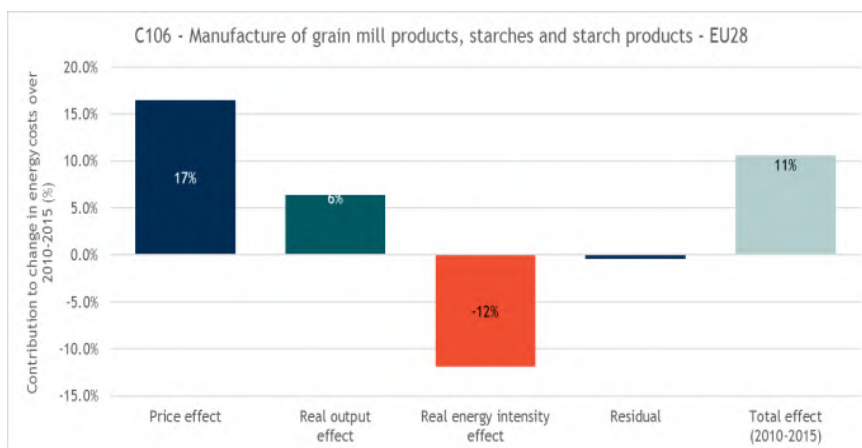
Be aware that the residual can be rather significant in some specific cases for which the results of the analysis should be taken with precaution.

## List of figures

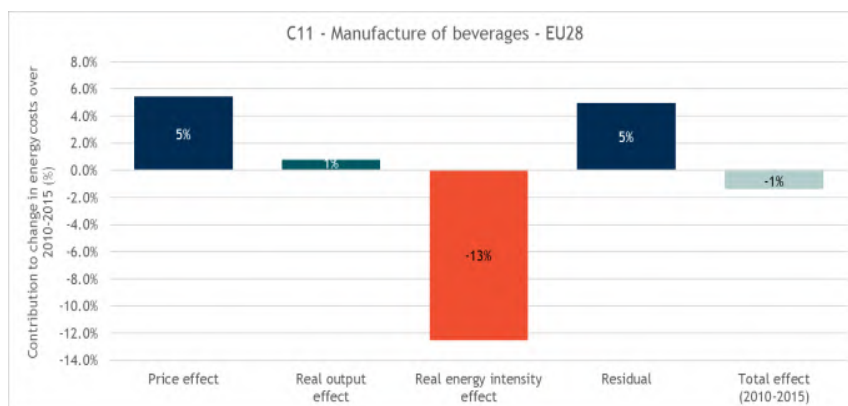
<a href="#"><u>Figure 1: Fruit and vegetables</u></a> .....	93
<a href="#"><u>Figure 2: Grain mill and starch products</u></a> .....	93
<a href="#"><u>Figure 3: Manufacture of beverages</u></a> .....	93
<a href="#"><u>Figure 4: Textiles</u></a> .....	94
<a href="#"><u>Figure 5: Wood</u></a> .....	94
<a href="#"><u>Figure 6: Pulp, paper and paperboard manufacture</u></a> .....	94
<a href="#"><u>Figure 7: Paper and paperboard articles</u></a> .....	95
<a href="#"><u>Figure 8: Refineries</u></a> .....	95
<a href="#"><u>Figure 9: Man-made fibres</u></a> .....	95
<a href="#"><u>Figure 10: Pharmaceutical products</u></a> .....	96
<a href="#"><u>Figure 11: Plastics</u></a> .....	96
<a href="#"><u>Figure 12: Glass</u></a> .....	96
<a href="#"><u>Figure 13: Refractory products</u></a> .....	97
<a href="#"><u>Figure 14: Clay building materials</u></a> .....	97
<a href="#"><u>Figure 15: Ceramics</u></a> .....	97
<a href="#"><u>Figure 16: Cement</u></a> .....	98
<a href="#"><u>Figure 17: Stone</u></a> .....	98
<a href="#"><u>Figure 18: Basic iron and steel</u></a> .....	98
<a href="#"><u>Figure 19: Aluminium</u></a> .....	99
<a href="#"><u>Figure 20: Casting of Metals</u></a> .....	99
<a href="#"><u>Figure 21: Fabricated metal products</u></a> .....	99
<a href="#"><u>Figure 22: Electrical equipment</u></a> .....	100
<a href="#"><u>Figure 23: Machinery and equipment</u></a> .....	100
<a href="#"><u>Figure 24: Computer and electronic products</u></a> .....	100
<a href="#"><u>Figure 25: Motor vehicles and trailers</u></a> .....	101
<a href="#"><u>Figure 26: Transport equipment</u></a> .....	101
<a href="#"><u>Figure 27: Other Manufacturing</u></a> .....	101
<a href="#"><u>Figure 28: Machinery repair and installation</u></a> .....	102



**Figure 1: Fruit and vegetables**



**Figure 2: Grain mill and starch products**



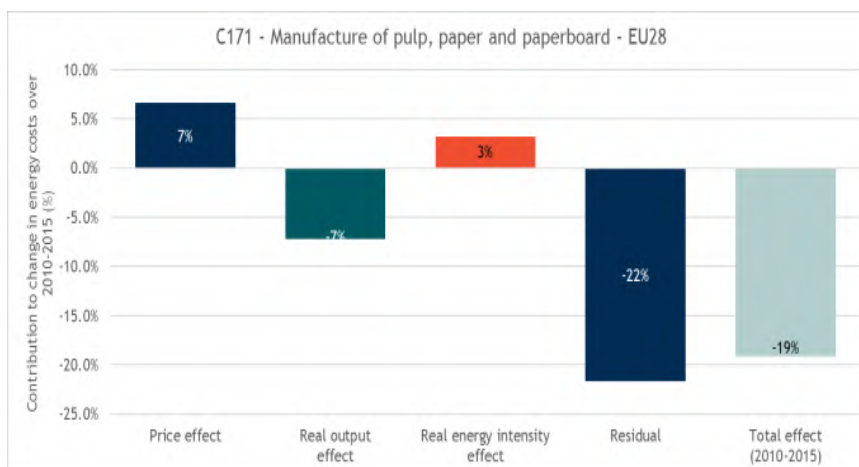
**Figure 3: Manufacture of beverages**



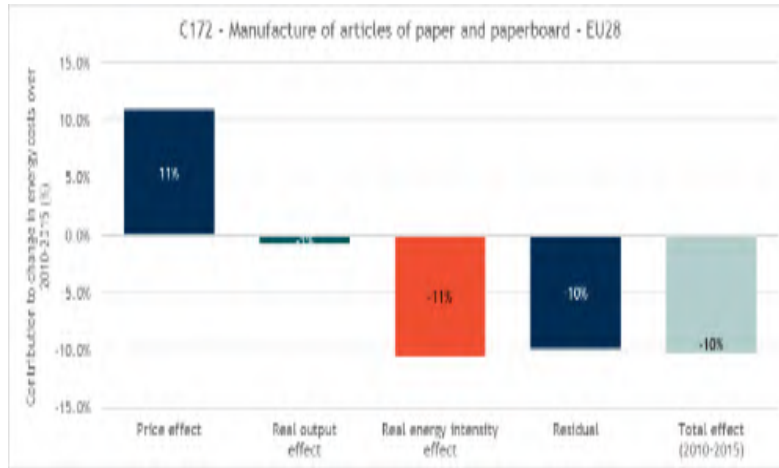
**Figure 4: Textiles**



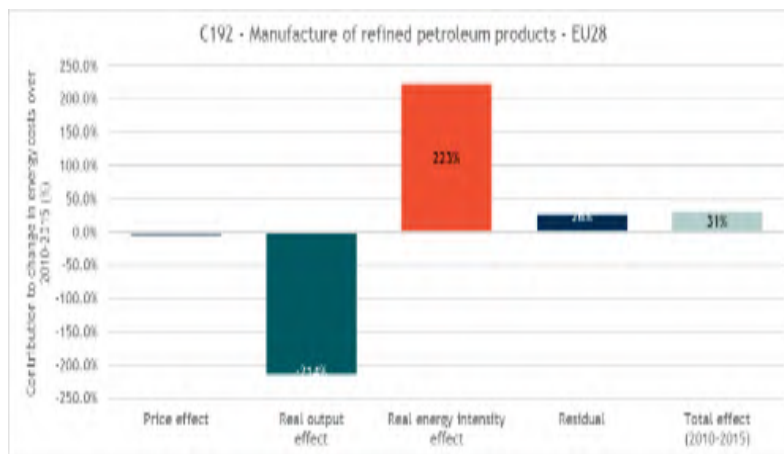
**Figure 5: Wood**



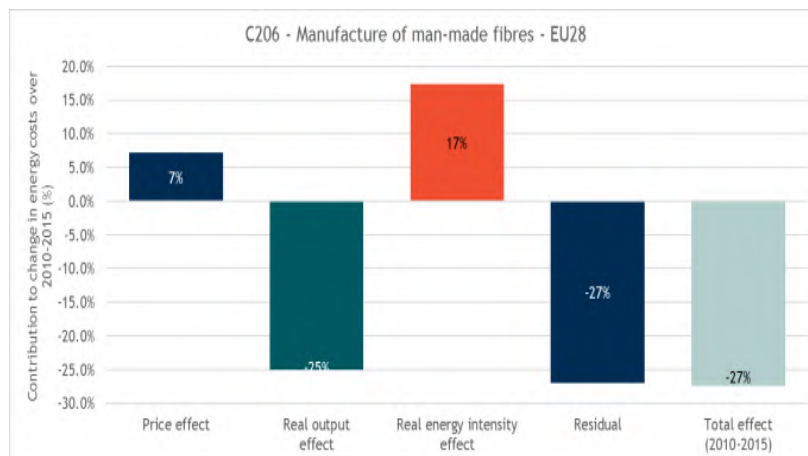
**Figure 6: Pulp, paper and paperboard manufacture**



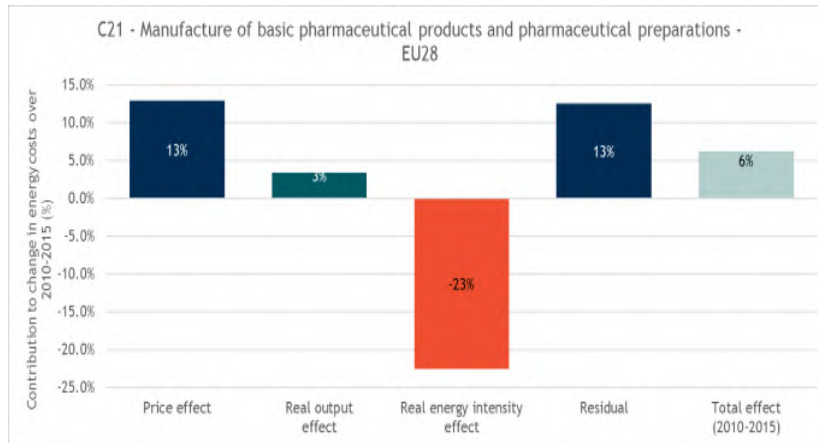
**Figure 7: Paper and paperboard articles**



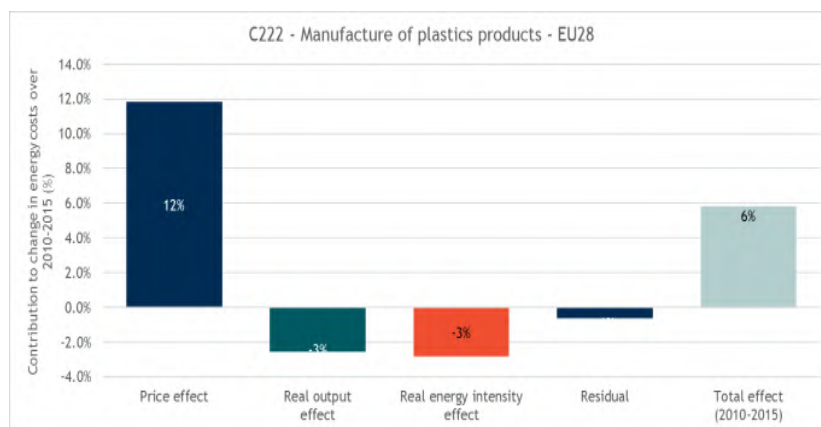
**Figure 8: Refineries**



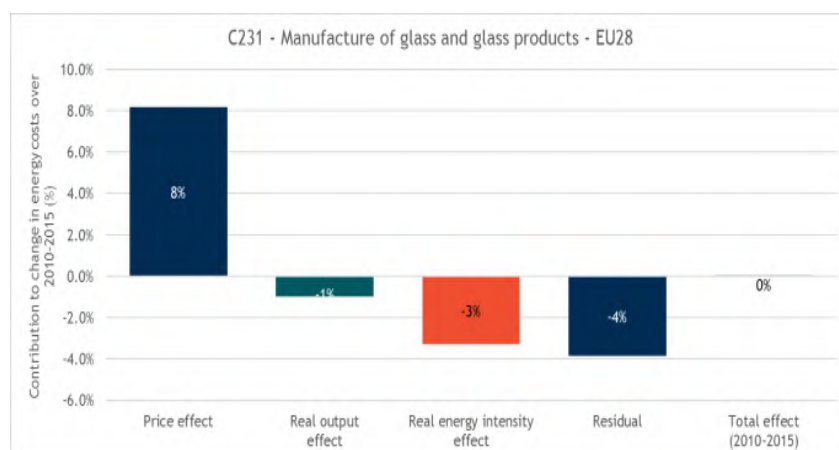
**Figure 9: Man-made fibres**



**Figure 10: Pharmaceutical products**

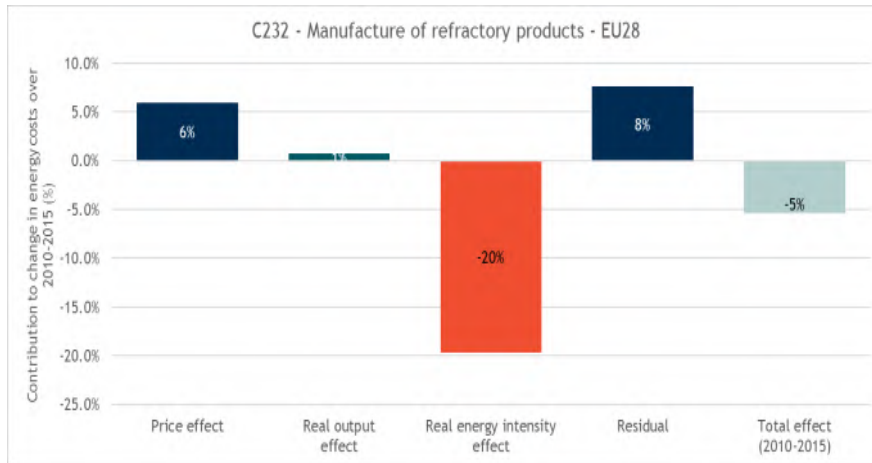


**Figure 11: Plastics**

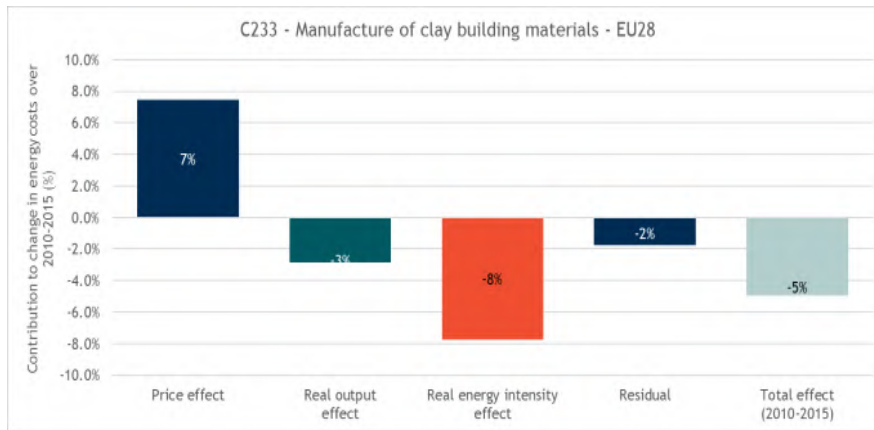


**Figure 12: Glass**

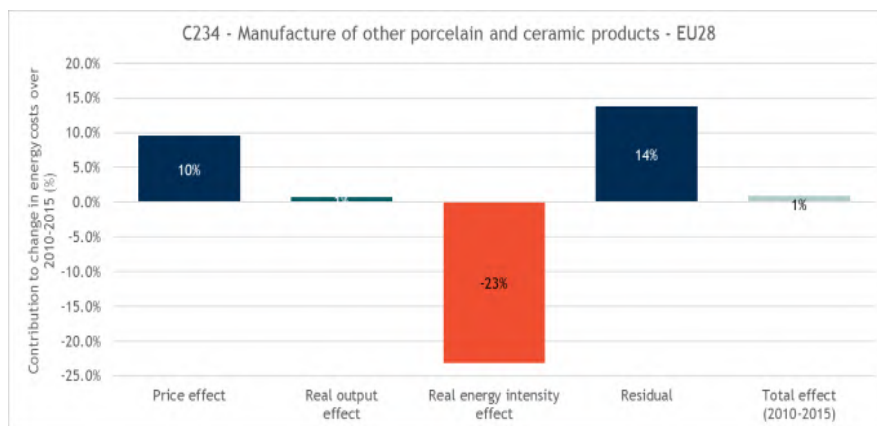




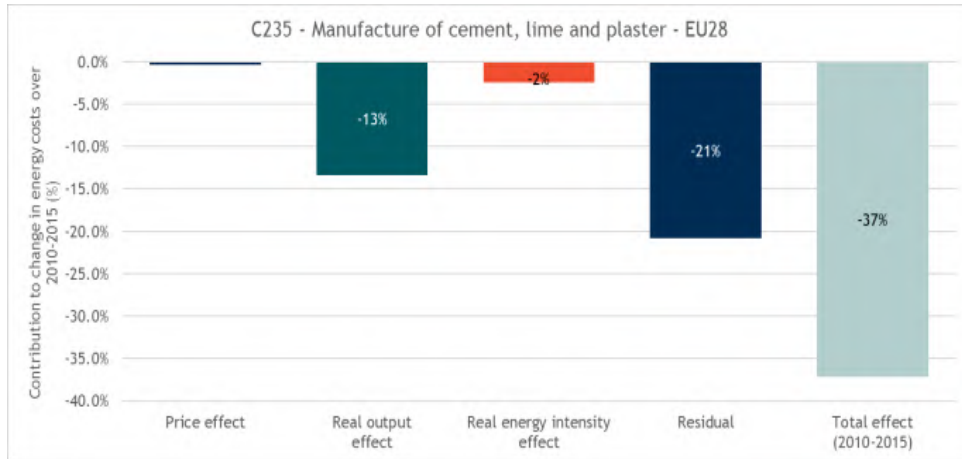
**Figure 13: Refractory products**



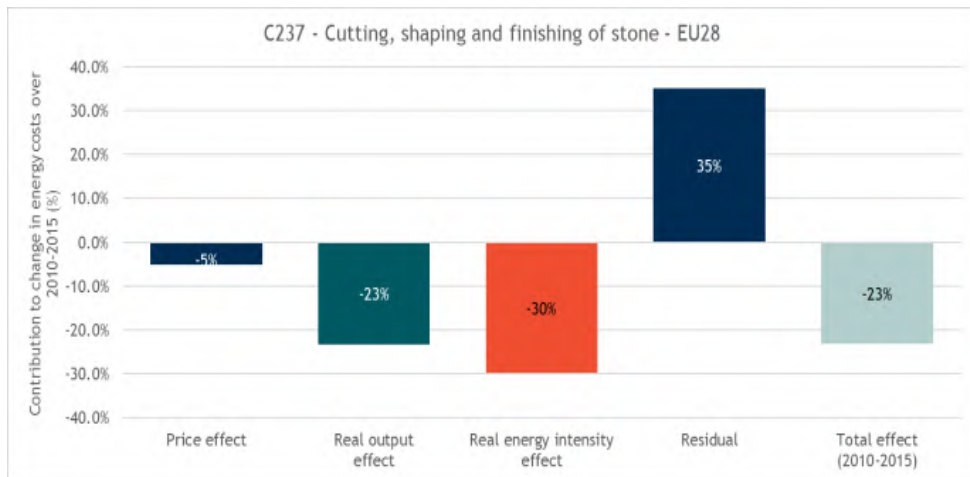
**Figure 14: Clay building materials**



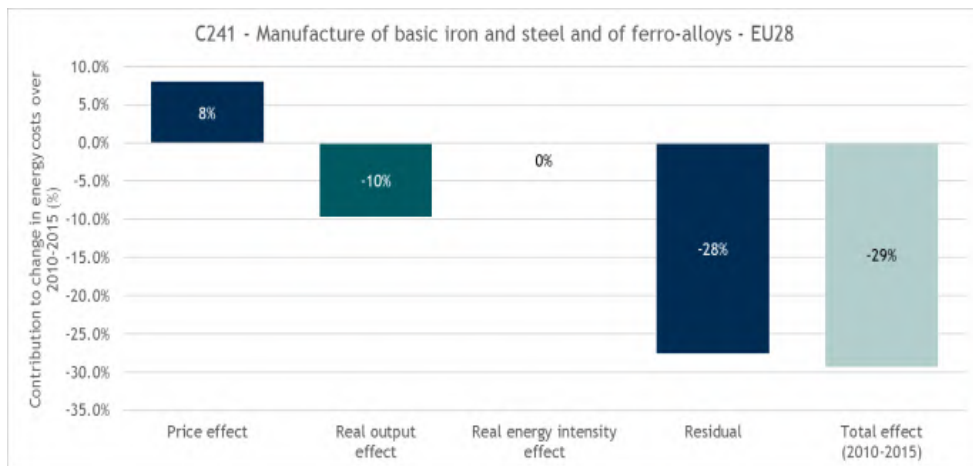
**Figure 15: Ceramics**



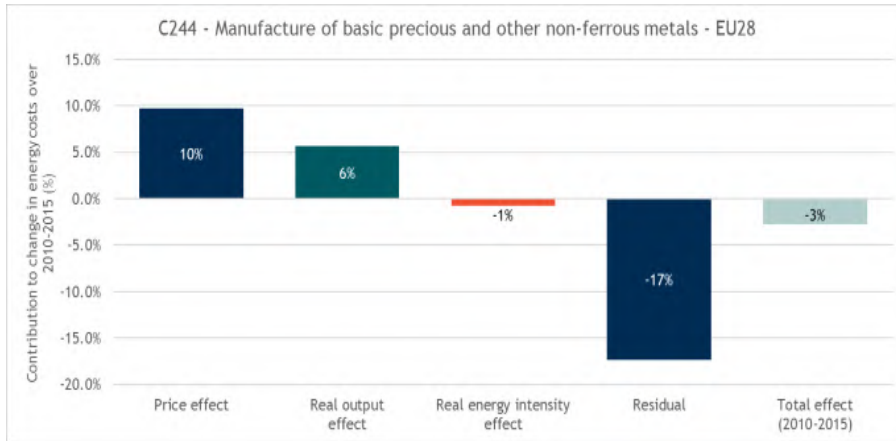
**Figure 16: Cement**



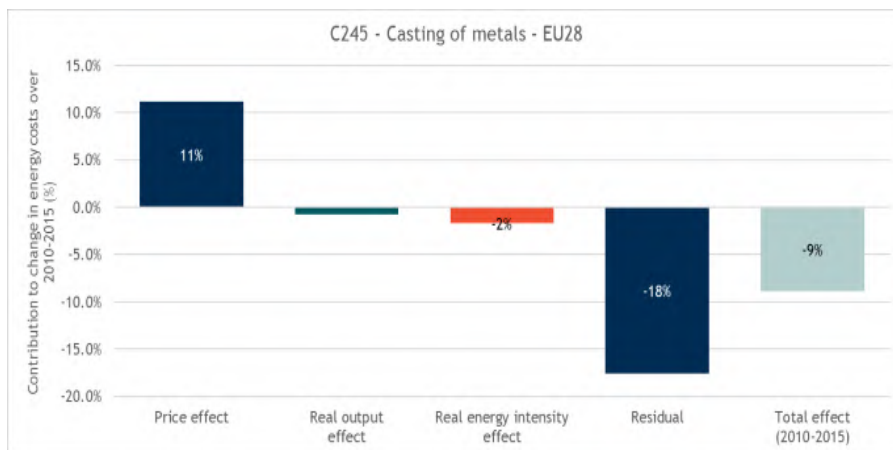
**Figure 17: Stone**



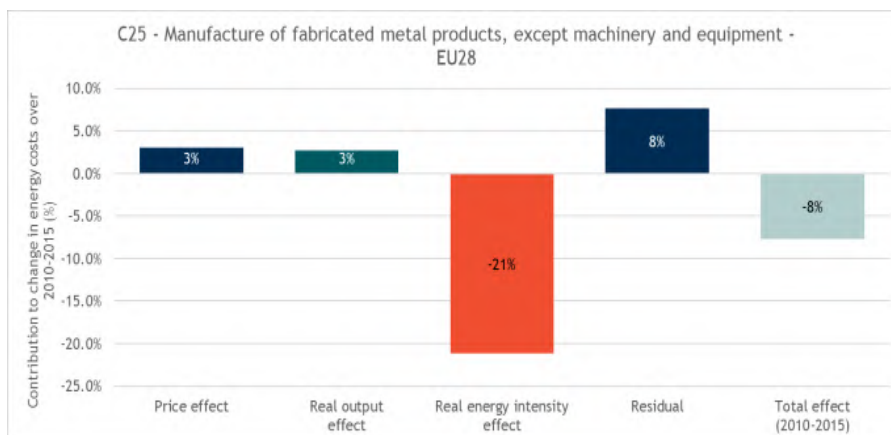
**Figure 18: Basic iron and steel**



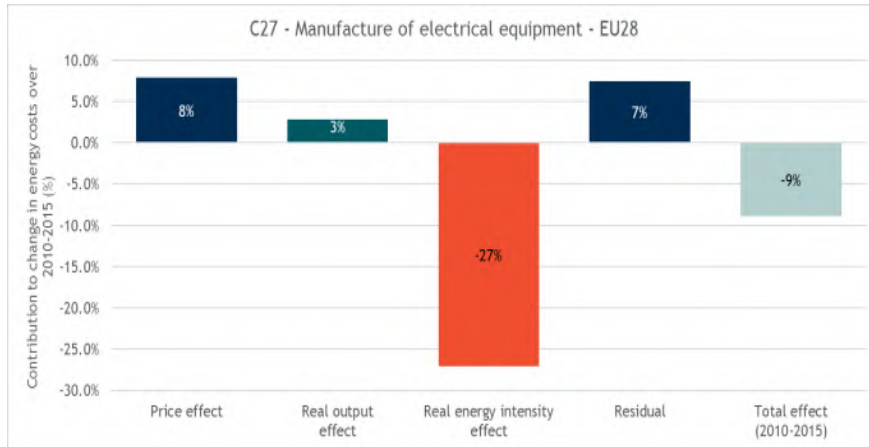
**Figure 19: Aluminium**



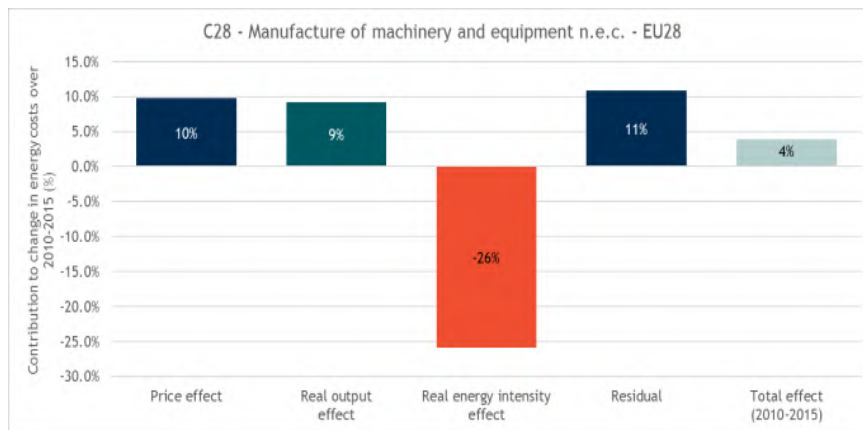
**Figure 20: Casting of Metals**



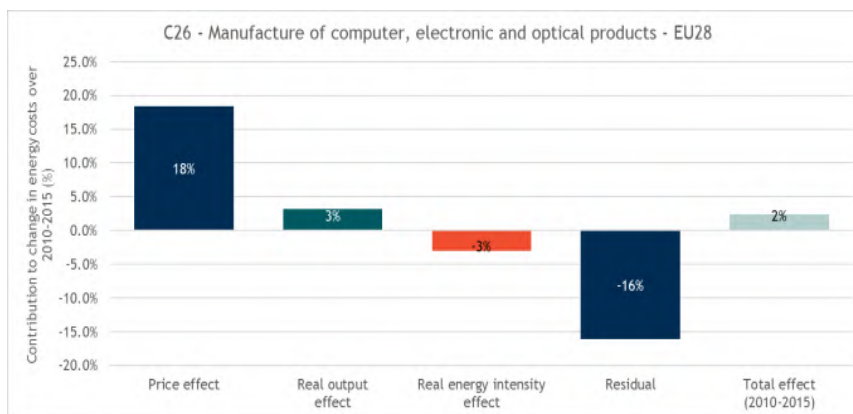
**Figure 21: Fabricated metal products**



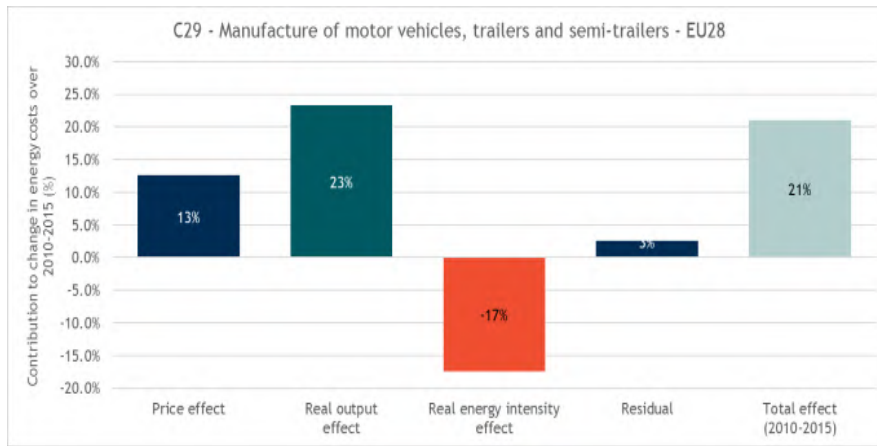
**Figure 22: Electrical equipment**



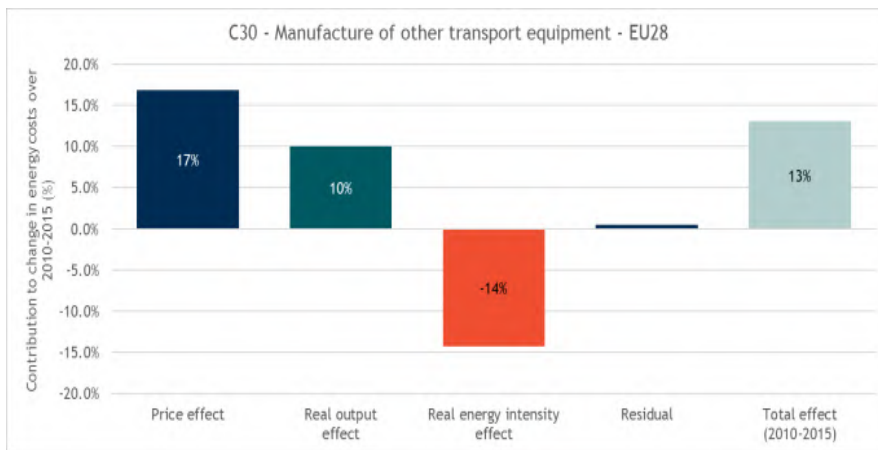
**Figure 23: Machinery and equipment**



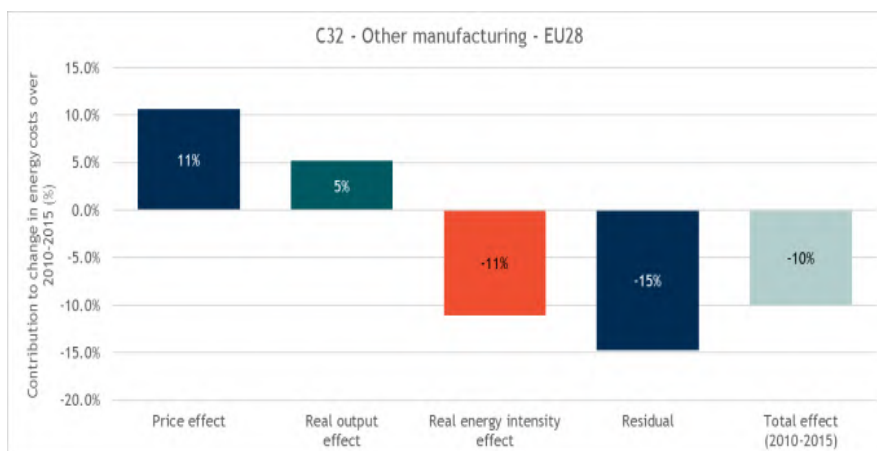
**Figure 24: Computer and electronic products**



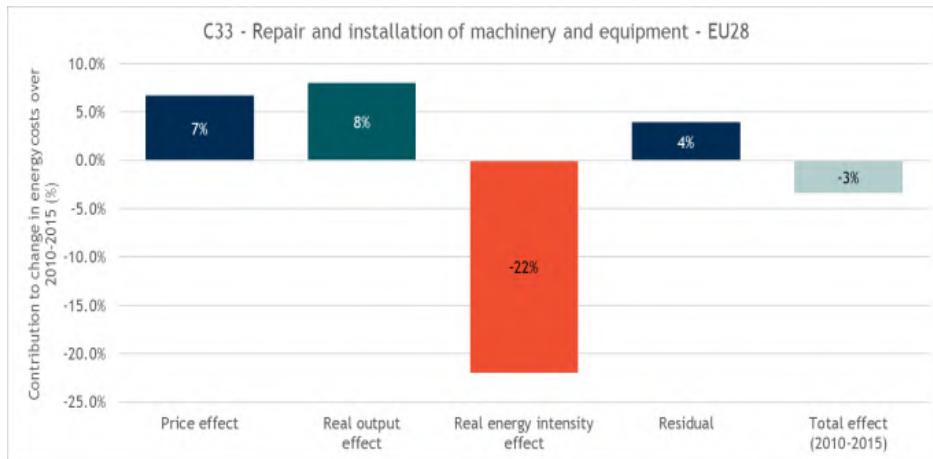
**Figure 25: Motor vehicles and trailers**



**Figure 26: Transport equipment**



**Figure 27: Other Manufacturing**



**Figure 28: Machinery repair and installation**