

# THE IMPACT OF THE EUROPEAN STEEL INDUSTRY ON THE EU ECONOMY

MAY 2018

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To discuss the report further please contact:

Doug Godden: [dgodden@oxfordeconomics.com](mailto:dgodden@oxfordeconomics.com)

Oxford Economics

Broadwall House, 21 Broadwall, London, SE1 9PL, UK

Tel: +44 20 3910 8000

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# EXECUTIVE SUMMARY

## €128 billion

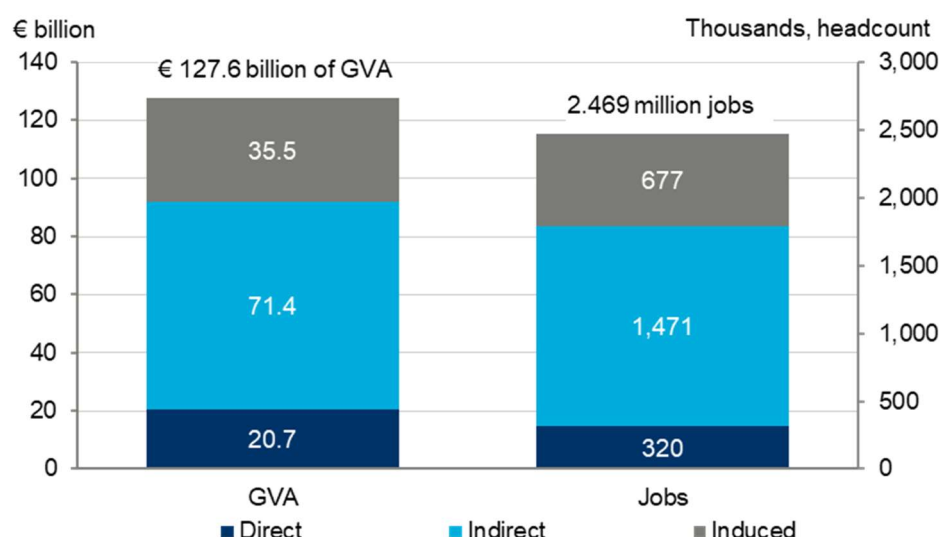
Total GVA supported across the EU by the region's steel industry in 2016.

*This includes support provided to other sectors through supply chain and staff spending impacts, as well as the €21 billion GVA of the industry itself.*

This study examines the impact of the European steel industry on the EU economy, taking into account three spending channels. These are the direct impact, concerned with the industry's own activity, the indirect impact, relating to activity in its supply chain, and the induced impact, reflecting the effect of consumer demand funded by the wages of industry and supply chain workers. The modelling takes a comprehensive view of supply chain linkages, ensuring that none of the impact of cross-border trade within the EU is 'lost', and that 'feedback effects' from complex EU / non-EU supply chains are also captured.

The direct impact of the European steel industry is found to be €21 billion in terms of the gross value added measure of output (GVA), which is essentially the sum of its total employment costs and gross profits. However, the total GVA contribution, taking into account supply chain and staff spending impacts as well, is substantially higher, at €128 billion. This overall contribution is broadly on a par with the total GVA produced in, for example, the region of Berlin.

**Fig. 1. The European steel industry's economic footprint across the EU**



Source: Oxford Economics

The indirect impact accounts for €74 billion of that total, and is spread across goods and services providers in a wide range of industries. The induced impact, which is spread across a range of more consumer-facing sectors, is estimated to be €35 billion. The indirect and induced impacts spread across national boundaries, and amongst other things benefit the handful of EU countries where the steel industry itself has no presence of any significance.

The steel industry employs around 320,000 workers across 22 member states. But its total contribution to employment across the EU-28, through all three channels of impact, is close to 2.5 million jobs. This overall jobs impact is broadly on a par with total number of people employed in, for example, the metropolitan area around Düsseldorf, and the entire country of Finland.

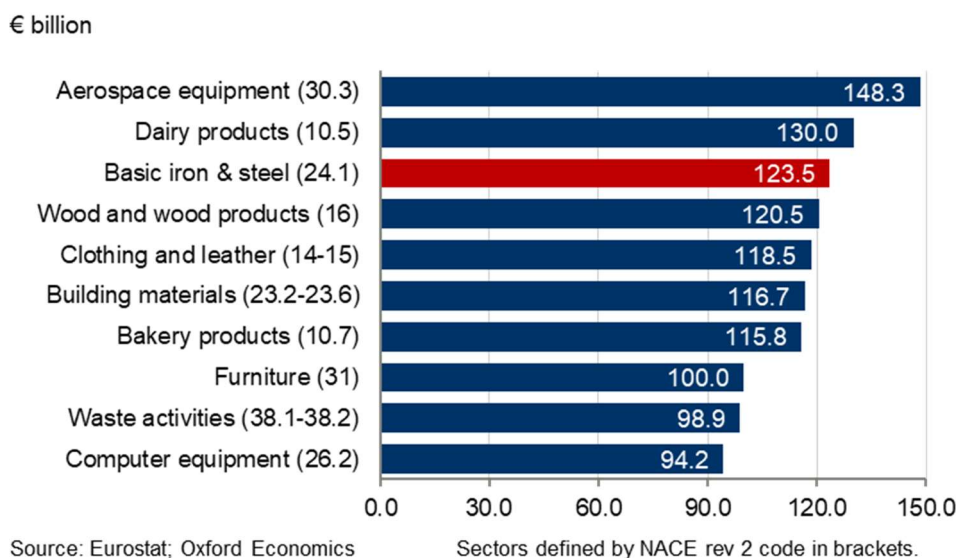
EU steel production is more valuable than the Union's output of clothing and leather goods, and greater than that of its computer equipment manufacturers.

## 2.5 million

Total number of EU jobs supported through these three channels of impact.

*Of these jobs, around 320,000 are in the steel industry itself.*

**Fig. 2. Value of production compared with other EU industries**



**6.2 x**

Total GVA supported is 6.2 times the steel industry's own GVA.

*This ratio—a so-called 'multiplier'—is very high by the standards of typical industries.*

The steel industry's total contribution to EU GVA is 6.2 times its direct impact alone, while the sum of direct and indirect GVA is 4.5 times that of the direct effect. The corresponding ratios for jobs are 7.7 and 5.6 respectively. These ratios, known as 'multipliers', are very high by typical industry standards.

These high ratios mainly reflect the fact that the total value of production—which is very similar to the total value of turnover or sales—is, at €124 billion, six times the value of the sector's own direct GVA. The remaining revenues are used to purchase inputs of raw materials, goods and services from suppliers in other sectors within the EU and beyond. Most of this spending is accounted for by the indirect GVA of EU suppliers, with the remainder reflecting content imported from outside the EU. The jobs multipliers are a little higher still, reflecting the fact that GVA per worker is higher in the industry itself than in its supply chain, and higher than in the wider economy.

More specifically, European steel industry GVA per worker is around 11 percent above the average for the overall EU economy, and some seven percent higher than that of the wider EU manufacturing sector. In part, this reflects the fairly capital-intensive nature of the industry, which spends €3.9 billion per annum on new machinery and building work.

**7.7 x**

The number of jobs supported through the three channels together is 7.7 times the steel industry's own employment.

*This multiplier is also much higher than typically found.*

By country, Germany makes the largest single contribution to the industry's own production, GVA and jobs, at around a quarter of the total EU value in each case, followed by Italy. Beyond that, France, Spain, Belgium, the UK and Austria make the next most important contributions to production and GVA. But Romania and Poland rank third and fourth in terms of the contribution to direct jobs. As a share of economy-wide national GVA, the industry is most important in Slovakia, followed by Luxembourg, Austria, Slovenia and the Czech Republic. The sector's share of national jobs is greatest in Luxembourg, followed by Slovenia, Slovakia, Austria, and Sweden.

The greatest indirect GVA impacts are enjoyed by Germany, Italy, France, Spain and the UK, while Poland joins those states in the case of supply chain jobs. The same patterns are found for the total GVA and jobs impacts.

# 1. INTRODUCTION

The steel industry has had a longstanding and important presence in Europe. It provides a key input into other manufacturing and construction activities which, in turn, benefit living standards across the continent. It has also been, and to some extent remains, an important source of skilled employment. It may be less well known, however, that the industry supports significant activity and jobs in a range of other industries throughout the EU, as a result of the large amount of money spent on the materials and services used in the course of steel production.

This report, commissioned by EUROFER, the European Steel Association, aims to examine the extent of this so-called ‘economic footprint’, whereby production of a particular good supports employment not just in the industry itself, but in a wide range of other sectors through ‘knock-on’ demand-side effects.

## 1.1 MEASURING THE INDUSTRY’S ECONOMIC FOOTPRINT

More specifically, this report measures the impact of the European steel industry on the gross value added measure of output (GVA) across the EU, and on associated employment, in 2016.<sup>1,2</sup>

Three channels of demand impact are taken into account:

- the direct impact, concerned with activity in the industry itself;
- the indirect impact, reflecting activity supported throughout the EU-based supply chains of the European steel sector; and
- the induced impact, relating to further activity supported by household spending, to the extent that that is effectively funded out of wages earned in the European steel industry or in its supply chain.

For the purposes of this report, only ‘basic’ iron and steel production is included in the definition of the industry, with further processing and casting excluded, to align with the membership of EUROFER.<sup>3</sup>

To capture the true extent of the indirect and induced impacts, a comprehensive modelling exercise was undertaken.<sup>4</sup> The various countries of the EU were modelled alongside each other, and the rest of the global economy, allowing the impact of cross-border transactions in all directions to be captured.

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<sup>1</sup> The ‘European steel industry’ in this report relates to steel production in the EU-28.

<sup>2</sup> GVA is a similar concept to GDP, except that it is measured at ‘basic prices’, i.e. net of taxes on sales such as VAT, rather than at ‘market prices’ which include those taxes. It is essentially equal to total employment costs, plus gross profits before tax, interest and depreciation. More details about the concepts and data sources can be found in Appendix 2.

<sup>3</sup> For the purposes of alignment with official datasets, this is taken to be ‘manufacture of basic iron and steel and of ferro-alloys’, which is sector 24.1 in the ‘NACE rev 2’ industrial classification system used by the EU statistical office, Eurostat.

<sup>4</sup> The exercise used the recently-developed Oxford Economics Global Impact Model, described in Appendix 2.

This is a superior approach to a ‘traditional’ exercise, looking at individual countries and then summing up to arrive at the EU total. In such a traditional model, the indirect GVA and jobs impacts are reduced by the full amount of recorded imports into each state. By contrast, the exercise undertaken for this study aimed to ensure that:

- The measured indirect impact for the EU as a whole is not reduced in any way, simply as a result of cross-border transactions between the different member states.
- Where content is imported from outside of the Union, those supplies are tracked further up the global supply chain to take account of any content originally created within the EU.
- An appropriate share of spending by workers in the European steel industry’s global supply chain, but themselves located outside of the EU, is allocated to the purchase of imports from the EU.

## **1.2 REPORT STRUCTURE**

The remainder of this report is structured as follows:

- Chapter 2 describes the European steel industry itself, including the direct contribution made to GVA and employment.
- Chapter 3 sets out the industry’s wider economic footprint, taking into account the indirect and induced channels of impact.
- Chapter 4 sets out results on a country-by-country basis.
- Three appendices then provide results tables in detail, a description of the methodology, and details of the industry classification used to illustrate the indirect and induced impacts.

## 2. THE EU STEEL INDUSTRY'S DIRECT ECONOMIC CONTRIBUTION

This chapter describes the scale of the economic activities of the European steel industry itself, including the direct contribution made to EU GVA and jobs.

As figure 3 shows, the industry employed just over 320,000 individuals in 2016, when it produced €123.5 billion worth of output. The proceeds of this activity were used to cover €15.1 billion of employment costs, and generated a further €5.6 billion in gross profits (before tax, interest and capital depreciation). These income streams together, some €20.7 billion, comprise the industry's direct contribution to GVA.

**Fig. 3. Key parameters of the European steel industry**

|                                              | Values in 2016 <sup>1</sup> |
|----------------------------------------------|-----------------------------|
| Employment (headcount)                       | 320,392                     |
| Value of production (€ billion)              | 123.5                       |
| Gross value added (GVA) (€ billion)          | 20.7                        |
| Of which: total employment costs             | 15.1                        |
| Procurement (€ billion)                      | 102.9                       |
| Capital expenditure <sup>2</sup> (€ billion) | 3.9                         |
| Ratio of total production value to GVA       | 6.0                         |
| GVA per worker (€)                           | 64,524                      |
| Production value as % total EU manufacturing | 1.87%                       |
| GVA as % total EU manufacturing              | 1.13%                       |
| Jobs as % total EU manufacturing             | 1.06%                       |
| GVA as % total EU economy                    | 0.15%                       |
| Jobs as % total EU economy                   | 0.14%                       |

<sup>1</sup> Values relate to 'manufacture of basic iron and steel and of ferro-alloys' (NACE 24.1).

<sup>2</sup> Gross spending on machinery, equipment and construction work only. Excludes land, existing buildings, and intangible assets.

Source: EUROFER (employment data); Oxford Economics estimates based mainly on Eurostat's 'Annual detailed enterprise statistics for industry'.

The direct GVA therefore accounted for 17 percent of the total value of production. The remainder—some €102.9 billion—was used to procure inputs into the production process, including raw materials, other non-capital goods, and services. These purchases form the driving force behind the sector's indirect contribution to GVA and jobs, as discussed in the next chapter.

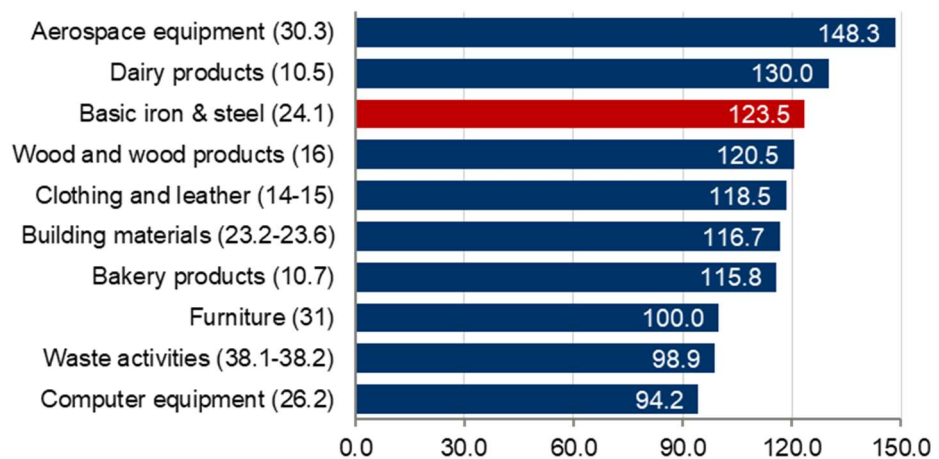
Separately to that procurement, some €3.9 billion of capital outlays were made, relating to the purchase of new machinery and equipment, and the funding of construction activity.

## 2.1 VALUE OF PRODUCTION

To put the value of production in context, it is broadly comparable in scale to that of several other 'household name' EU-wide industries. It is, for example, larger than the combined production of clothing and leather goods, and clearly more valuable on this count than the output of the Union's computer equipment manufacturers.

**Fig. 4. Value of production compared with other EU industries**

€ billion



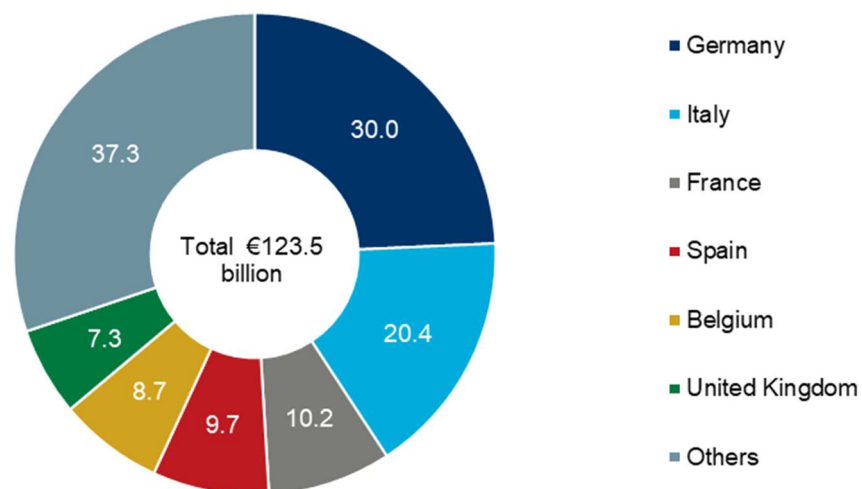
Source: Eurostat; Oxford Economics

Sectors defined by NACE rev 2 code in brackets.

Six countries account for some 70 percent of total activity, with Germany accounting for 24 percent, Italy for 16 percent, and France, Spain, Belgium and the UK for 6-8 percent each.

**Fig. 5. Industry production by country**

€ billion

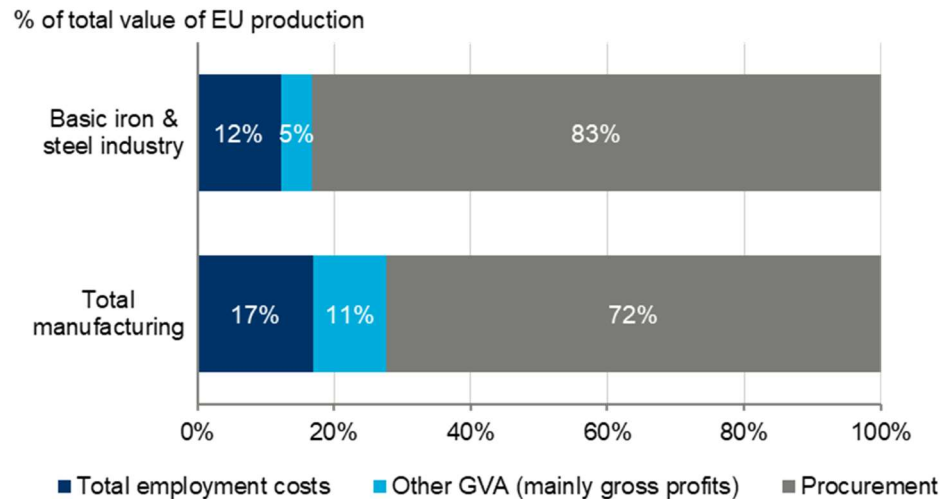


Source: Oxford Economics

## 2.2 DIRECT GROSS VALUE ADDED

The 17 percent share of production value accounted for by sector GVA, rather than procurement, compares with an average of 28 percent for the EU manufacturing sector as a whole.

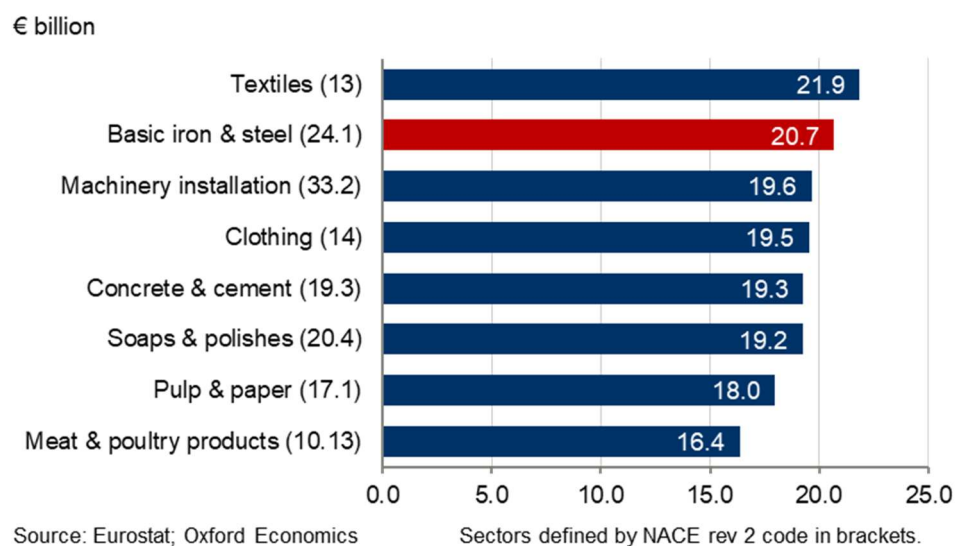
**Fig. 6. Breakdown of production value by major cost component**



Source: Oxford Economics; Eurostat

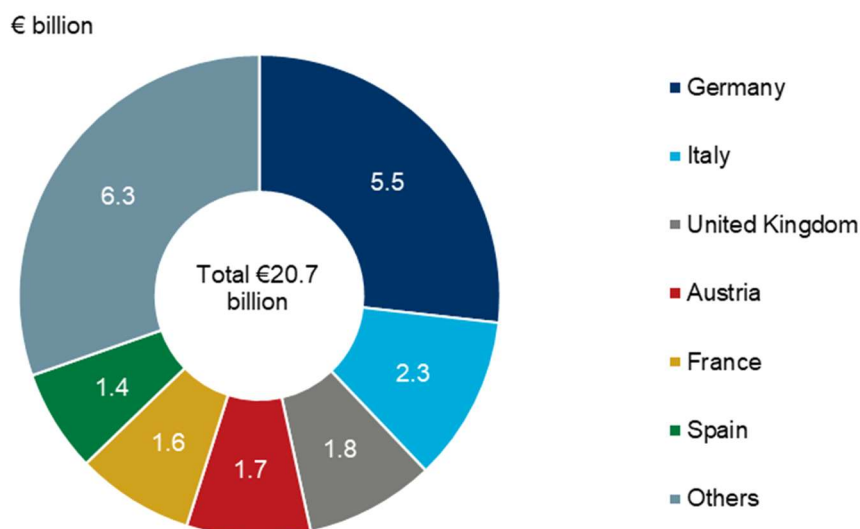
Compared with other manufacturing industries, the steel industry is therefore further down the 'rankings' when considering direct GVA as opposed to the total value of production. Even so, the industry's direct contribution to GVA is still larger than that of some other 'household name' sectors, including clothing manufacture, and production of concrete products and cement.

**Fig. 7. GVA compared with other EU industries**



By country, Germany and Italy lead the way here, with 27 percent and 11 percent of EU-wide steel industry GVA respectively. The UK, Austria, France and Spain follow, with 7-9 percent each.

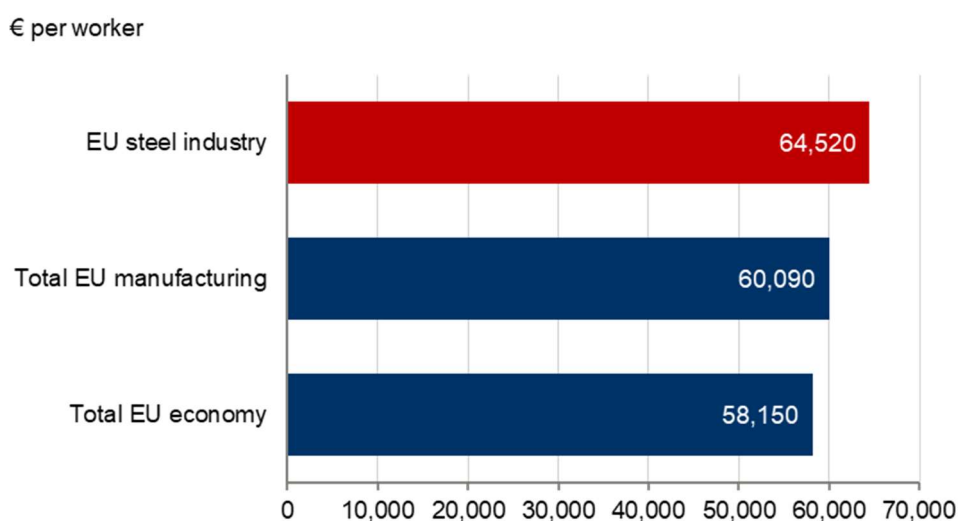
**Fig. 8. Industry GVA by country**



Source: Oxford Economics

The sector accounts for 0.2 percent of GVA across the EU economy as a whole, but that ratio is higher in some individual countries, most notably Slovakia (0.6 percent), Luxembourg (0.6 percent), Austria (0.5 percent), Slovenia (0.4 percent) and the Czech Republic (0.4 percent). The industry accounts for 1.1 percent of total manufacturing GVA across the Union, but is well above that in the cases of Luxembourg (10.3 percent), Slovakia (3.3 percent), Austria (3.3 percent), Belgium (2.5 percent) and Finland (2.3 percent).

**Fig. 9. Industry GVA per worker in context**



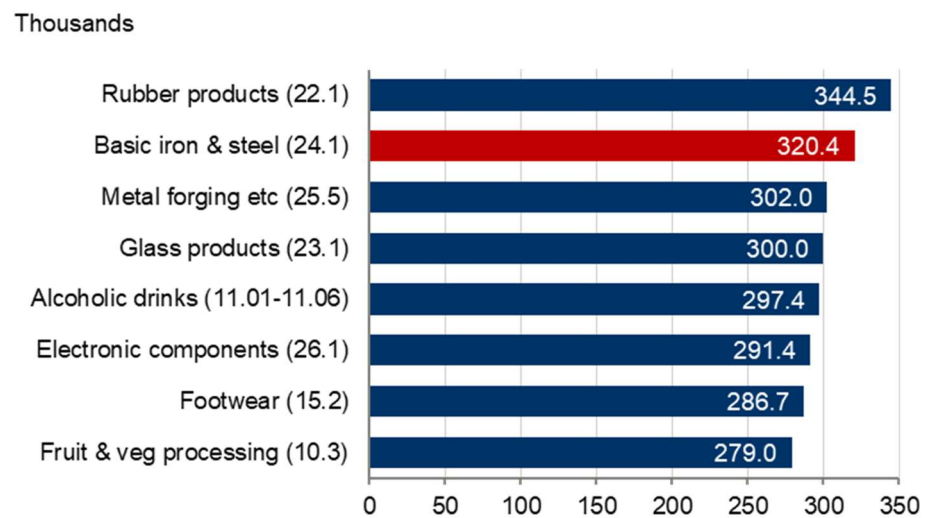
Source: Oxford Economics; Eurostat

The European steel industry's productivity, which approaches €65,000 in terms of GVA per worker, is some seven percent above the average for all EU manufacturing, and 11 percent higher than the average across the EU economy as a whole.

### 2.3 DIRECT EMPLOYMENT

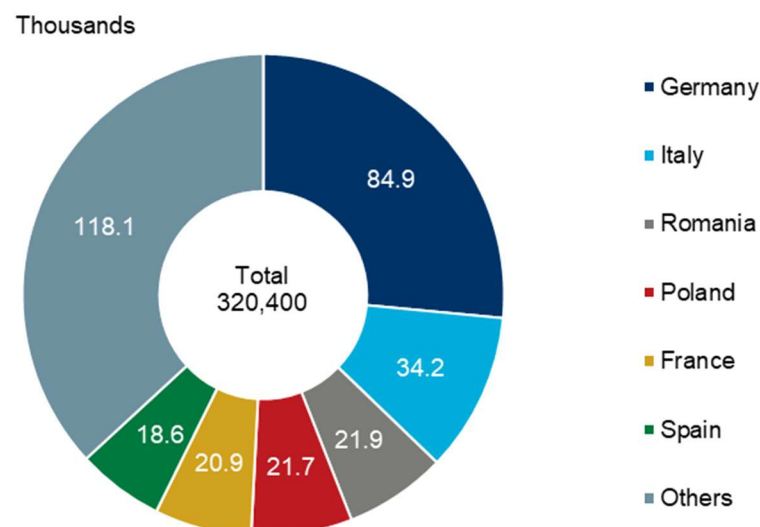
Employment in the industry, at just over 320,000, is greater than that across the EU's glass products, alcoholic drinks, and electronic component manufacturing sectors. By country, Germany accounts for 27 percent of EU-wide jobs, and Italy for 11 percent. They are followed by Romania, Poland, France and Spain, at 6-7 percent each.

**Fig. 10. Employment compared with other EU industries**



Source: Eurostat; EUROFER; Oxford Economics Sectors defined by NACE rev 2 code in brackets.

**Fig. 11. Industry jobs by country**



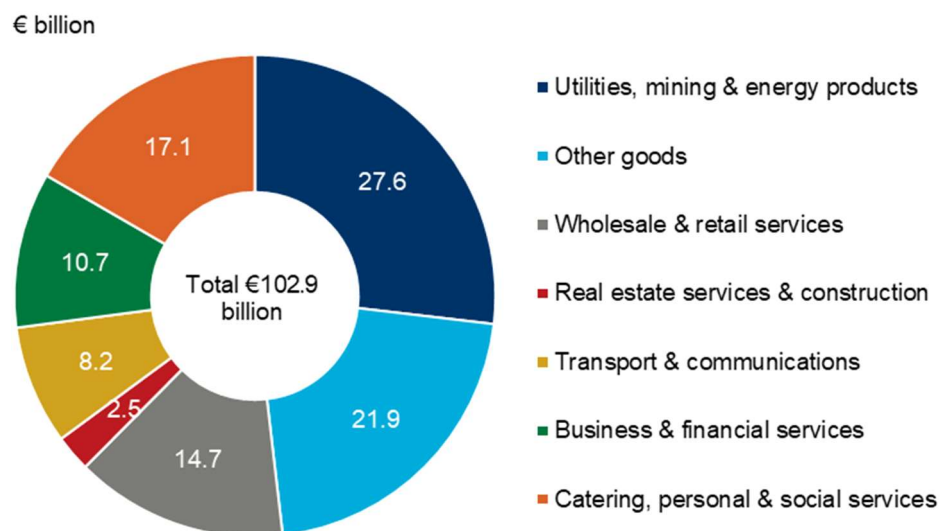
Source: EUROFER; Oxford Economics

The sector accounts for 0.1 percent of all jobs across the EU. It is relatively most important in Luxembourg (1.8 percent of jobs), Slovenia (0.5 percent), Slovakia (0.4 percent), Austria (0.3 percent) and Sweden (0.3 percent). The share of EU manufacturing jobs accounted for by the sector is 1.1 percent, but well above that in Luxembourg (13.1 percent), Sweden (2.7 percent), Finland (2.4 percent), Austria (2.3 percent) and Slovakia (2.2 percent).

## 2.4 PROCUREMENT OF GOODS AND SERVICES FROM OTHER SECTORS

In total, businesses in the European steel sector purchased €102.9 billion of raw materials, other goods, and services, from other industries in 2016. Some 27 percent of the value of these purchases related to utilities, mining and energy products, and 21 percent to other goods (mainly manufactures), with the remaining 52 percent spread across a range of mainly service activities.<sup>5</sup>

**Fig. 12. Procurement by product type**



Source: Oxford Economics

The German steel industry accounts for 24 percent of all of these purchases by value, and the Italian industry for 18 percent. France, Spain, Belgium and Finland follow at 6-8 percent each.

Some 59 percent of these purchases are from suppliers located within the same country as the purchaser, but 25 percent are from businesses located in a different EU country. Together, these purchases form the main starting point for the industry's indirect GVA and jobs impacts, as set out in the next chapter. However, the 16 percent of supplies purchased from entities outside of the EU

<sup>5</sup> The industry classification used here is the 'ISIC rev 3' system, which is the basis for the Oxford Economics Global Industry Model. Details can be found in Appendix 3. The most pertinent issue for present purposes is that waste services other than recycling are classified to 'community services', within the 'catering, personal and social services' grouping shown, while recycling is part of 'manufacturing not elsewhere specified', and so included in 'other goods' here. In the 'NACE rev 2' classification now used by the EU statistical authorities, waste and recycling services are included in 'utilities'.

will also include some value added content originating within the Union, which is also captured in the indirect effects.

**Fig. 13. Procurement by country of purchaser**

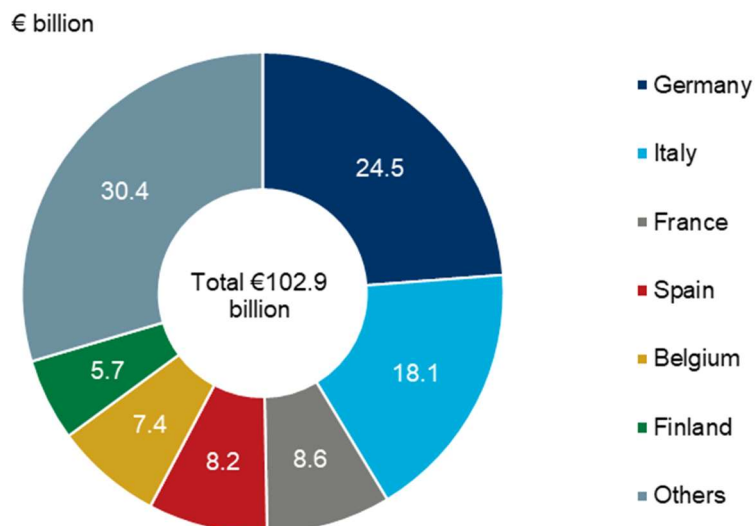
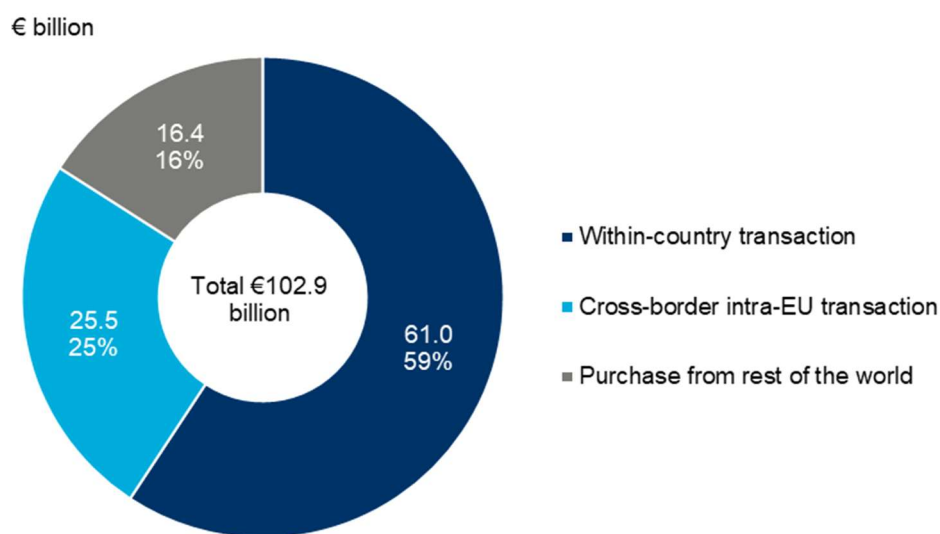


**Fig. 14. Procurement by type of transaction**



## 2.5 CAPITAL EXPENDITURE

In 2016, these businesses also spent €3.9 billion on tangible capital items, excluding purchases of land and existing buildings. This comprised €3.5 billion of machinery and equipment, and €0.4 billion of spending on construction activity, including work on new buildings and building alterations. Some 55 percent of this capital expenditure was accounted for by firms in Germany, Italy, Austria and Belgium.

This capital spending should help to improve productive capacity in future, and/or the efficiency of the industry's productive processes. But in addition, it

will benefit manufacturers of capital machinery and construction firms based in the EU. This benefit will be additional to the indirect GVA and benefits calculated, which reflect the impact of procurement of non-capital items only.

**Fig. 15. Capital expenditure by country and category**

| € billion in 2016                       | Value <sup>1</sup> |
|-----------------------------------------|--------------------|
| Germany                                 | 0.84               |
| Italy                                   | 0.57               |
| Austria                                 | 0.42               |
| Belgium                                 | 0.30               |
| France                                  | 0.25               |
| United Kingdom                          | 0.22               |
| Sweden                                  | 0.21               |
| Others                                  | 1.06               |
| <b>Total EU</b>                         | <b>3.88</b>        |
| Of which:                               |                    |
| Machinery & equipment                   | 3.53               |
| Construction & alterations to buildings | 0.35               |

<sup>1</sup> Figures relate to gross capital expenditure, excluding purchases of land, existing buildings and intangible assets.

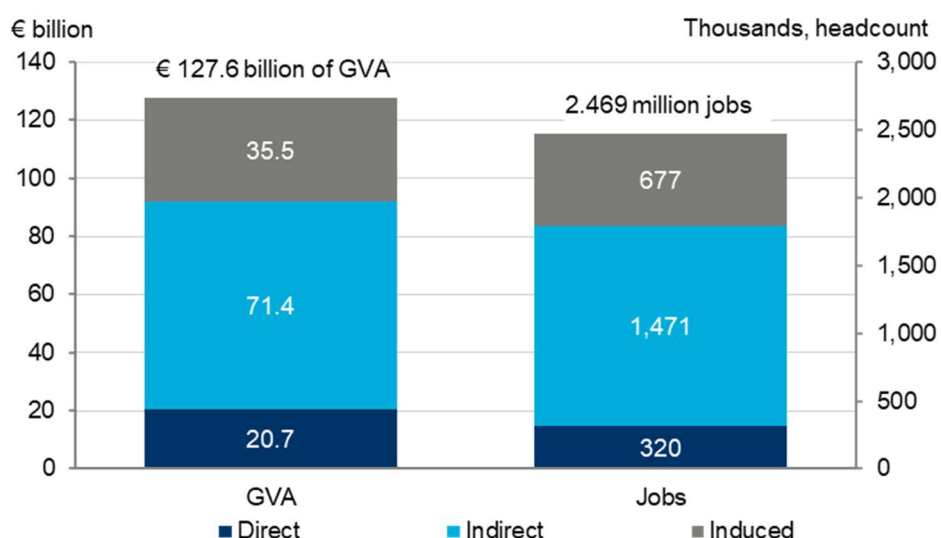
Source: Oxford Economics estimates based mainly on Eurostat's 'Annual detailed enterprise statistics for industry'.

### 3. THE EU STEEL INDUSTRY'S WIDER ECONOMIC FOOTPRINT

This chapter describes the European steel industry's wider economic footprint across the Union, taking into account the so-called indirect and induced impacts, which relate to supply chain linkages and wage-funded staff spending respectively.

The industry's total contribution to EU GVA—the sum of the direct, indirect and induced impacts—amounted to €127.6 billion in 2016, associated with 2.47 million jobs. The indirect and induced impacts are worth considerably more than the direct impact, reflecting the high share of total production value accounted for by content procured from other sectors.

**Fig. 16. The European steel industry's economic footprint across the EU**



Source: Oxford Economics

More precisely, indirect GVA amounted to €71.4 billion in 2016. Consequently, the so-called 'type I' GVA multiplier—the ratio of direct plus indirect GVA to direct GVA alone—can be put at 4.5. With an associated 1.47 million indirect jobs in the EU-based supply chains, the equivalent multiplier for jobs is 5.6. The jobs multiplier is even higher than the GVA multiplier, as GVA per head in the steel industry itself is somewhat higher than that across the supply chain.

**Fig. 17. Industry multipliers**

|                     | 'Type I' multiplier | 'Type II' multiplier |
|---------------------|---------------------|----------------------|
| Multiplier for GVA  | 4.5                 | 6.2                  |
| Multiplier for jobs | 5.6                 | 7.7                  |

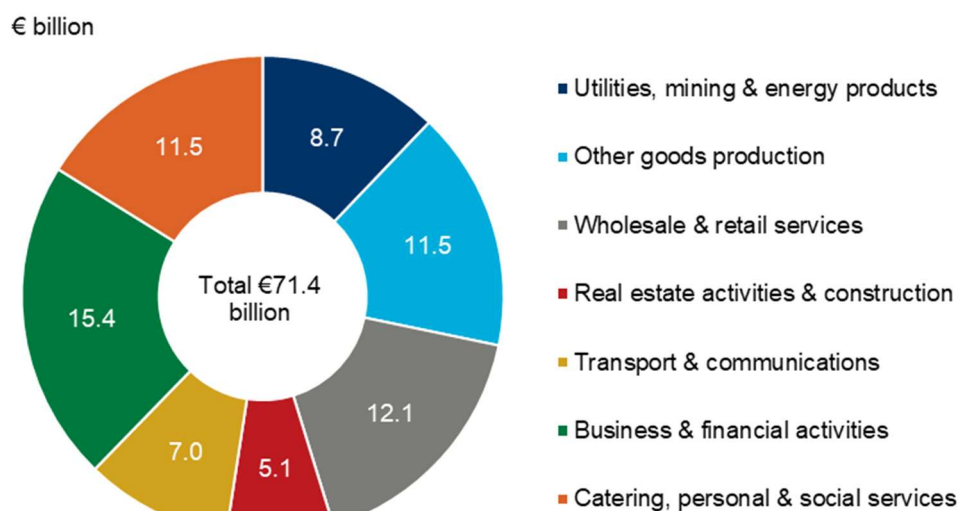
The 'type I' multiplier is the ratio of direct plus indirect activity to direct activity. The 'type II' multiplier is the ratio of total activity to direct activity.

The induced impact amounts to €35.5 billion of GVA, with an associated 677,000 workers. Taking this into account as well, the 'type II' GVA multiplier—the ratio of the total GVA contribution to direct GVA alone—works out at 6.2. The corresponding jobs multiplier is 7.7.

### 3.1 INDIRECT IMPACTS

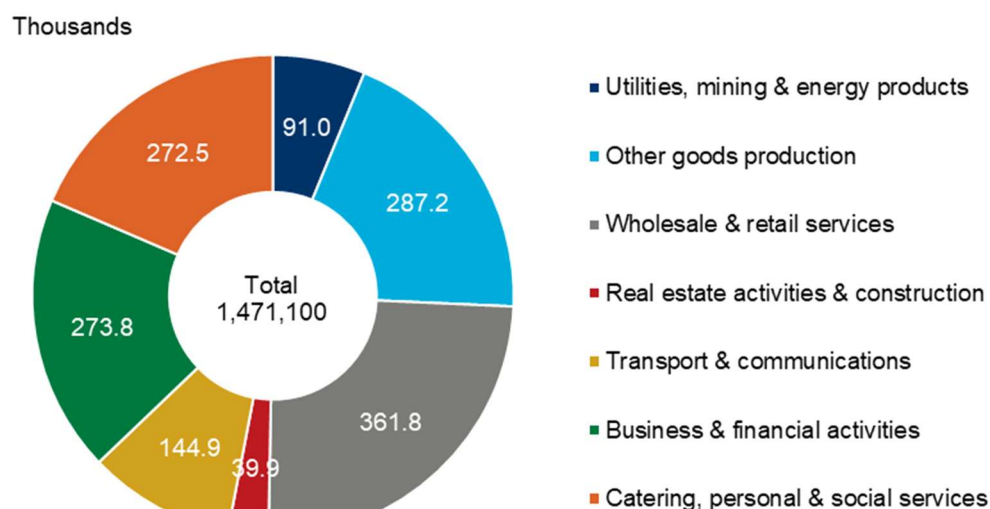
Of the €71.4 billion of GVA stimulated by the European steel industry's procurement, utilities, mining and energy products account for 12 percent of the total, and other goods—such as fabricated metal products, chemical products, and machine parts—for 16 percent. The remaining 72 percent is spread across a range of service sectors, with business and financial services accounting for 22 percent of the total, and wholesale and retail services for 17 percent.

**Fig. 18. Indirect GVA impact by industry of supplier**



Source: Oxford Economics

**Fig. 19. Indirect employment impact by industry of supplier**

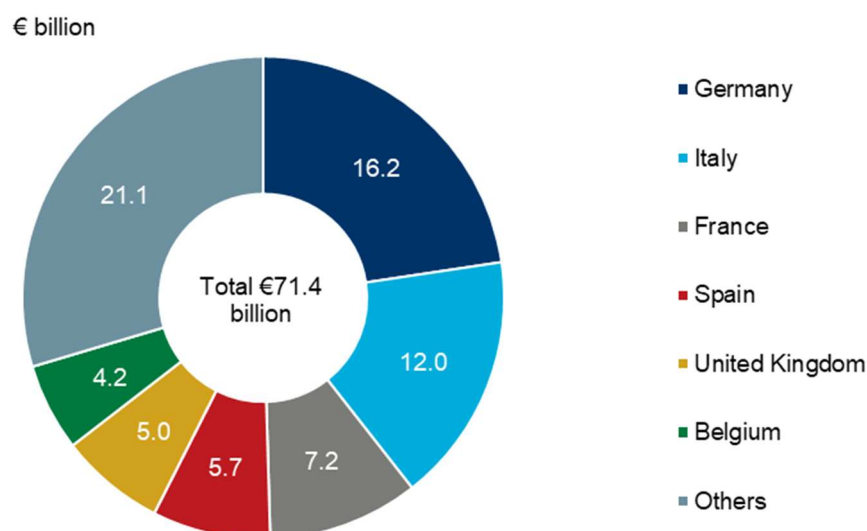


Source: Oxford Economics

The share of mining and manufacturing in EU supply chain GVA is lower than the share of mined and manufactured products in steel industry procurement (see section 2.4). In part, this reflects the importance of goods imports by the steel sector from outside of the EU, as compared with services imports. In particular, 67 percent of mined products (mainly metal ores), accounting for nine percent of all procurement, are imported from outside of the EU. However, further rounds of transactions between goods and services sectors, and between the EU and the rest of the world, will also influence this finding.

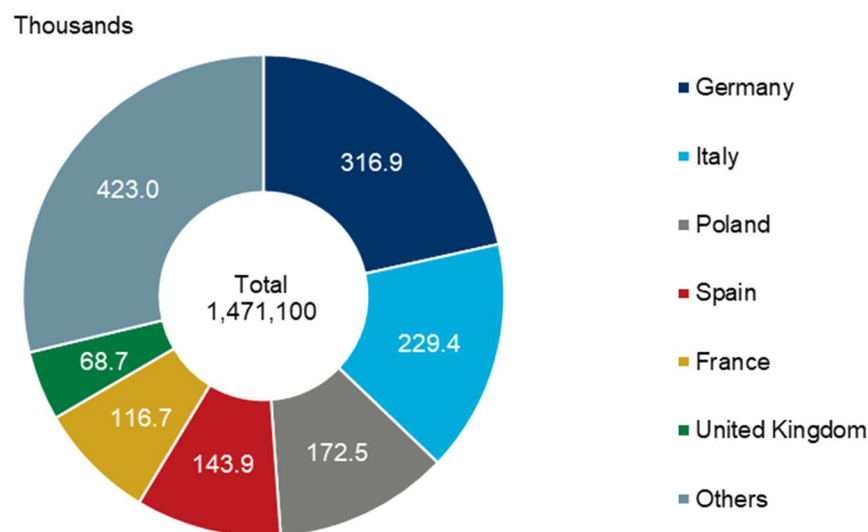
The pattern of indirect employment is somewhat different to the pattern of GVA, reflecting the significant variation in GVA per job by industrial sector. The importance of utilities, mining and energy products (six percent) is significantly reduced, while that of retail and wholesale services (25 percent) is boosted.

**Fig. 20. Indirect GVA impact by country of supplier**



Source: Oxford Economics

**Fig. 21. Indirect employment impact by country of supplier**



Source: Oxford Economics

German suppliers benefit the most from the European steel industry's procurement, in terms of absolute GVA value, accounting for 23 percent of the total. Italy (17 percent) and France (10 percent) are ranked next, followed by Spain, the UK and Belgium (6-8 percent each). However, the pattern for jobs is again somewhat different, with Poland ranked third after Germany and Italy (at 12 percent, 22 percent, and 16 percent, respectively). These are followed by Spain (10 percent), France (eight percent) and the UK (five percent).

### 3.2 INDUCED IMPACTS

Induced impacts reflect the additional GVA and jobs supported by the wage-funded expenditure of European steel industry employees, together with that of workers in the European steel industry's worldwide supply chain. The induced impact amounts to €35.5 billion per annum, supporting 677,000 jobs.

In aggregate, induced GVA is equivalent to just under 40 percent of the total of the direct and indirect GVA impacts, with this ratio reflecting:

- the proportion of total employment costs in total steel industry and supply chain GVA;
- the share of take-home pay in those employment costs;
- the proportion of that take-home pay spent by the workers on goods and services;
- the share of GVA in the turnover of the businesses providing those goods and services;
- the impact of further rounds of supply chain transactions; and
- the net impact of transactions between the EU and the rest of the world.

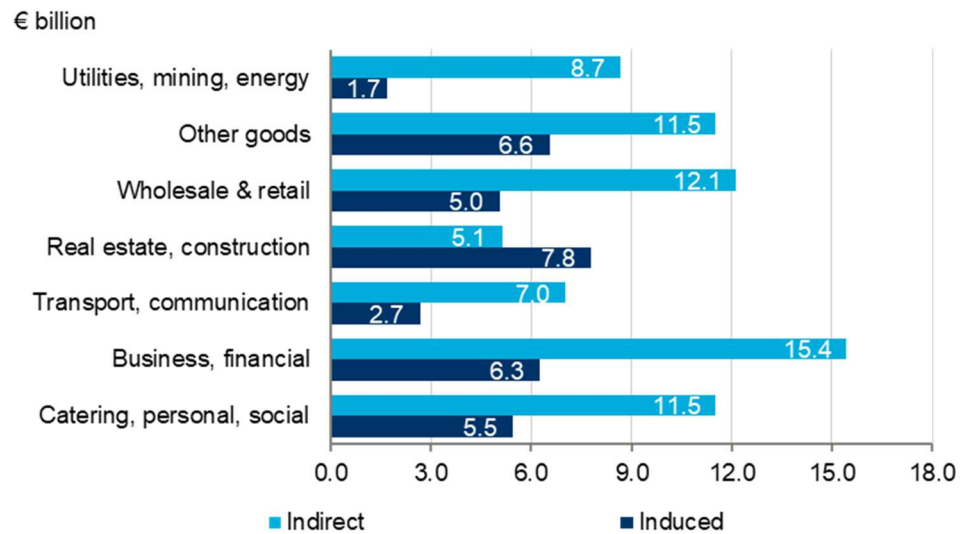
The pattern of induced GVA is heavily influenced by the pattern of household expenditure, and bears no systematic relationship with the pattern of indirect activity. Typically, it is not that dissimilar to the overall pattern of activity across the economy concerned.

**Fig. 22. Induced impacts by broad industrial sector**

|                                                  | GVA  | Jobs |
|--------------------------------------------------|------|------|
| Utilities, mining & energy products              | 5%   | 3%   |
| Other goods production                           | 18%  | 29%  |
| Wholesale & retail services                      | 14%  | 22%  |
| Real estate activities & construction            | 22%  | 4%   |
| Transport & communications                       | 8%   | 7%   |
| Business & financial activities                  | 18%  | 15%  |
| Catering, personal & social services             | 15%  | 21%  |
| Total induced impact                             | 100% | 100% |
| Induced impact as % direct plus indirect impacts | 39%  | 38%  |

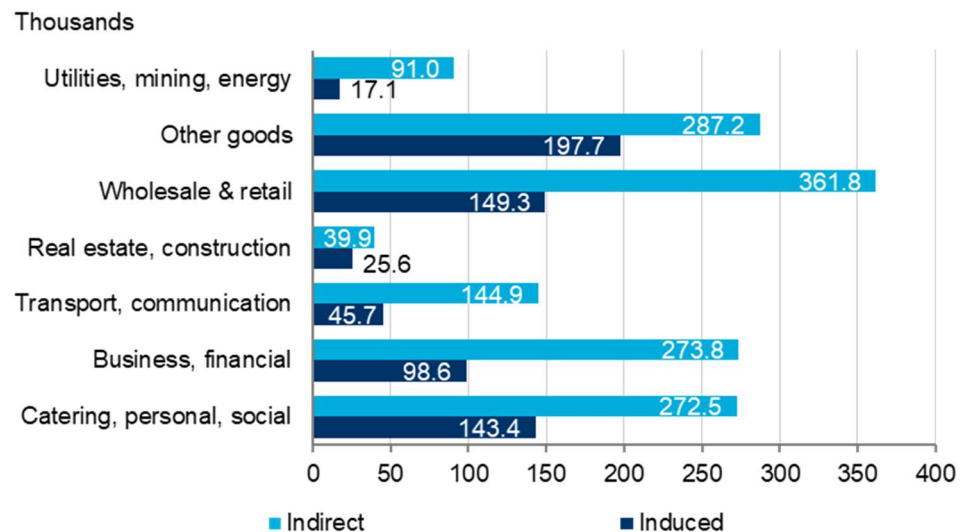
Source: Oxford Economics

**Fig. 23. Pattern of induced GVA relative to indirect GVA**



Source: Oxford Economics

**Fig. 24. Pattern of induced jobs relative to indirect jobs**



Source: Oxford Economics

The share of utilities, mining and energy products in induced GVA is therefore modest compared with that sector's share in indirect GVA, while that of real estate activities is comparatively high—and indeed, higher in absolute terms. However, the pattern of induced employment is different again, with relative productivity effects boosting the share of retail, catering and personal-type services at the expense of real estate and financial services.

By country, Germany has the largest share of induced GVA (23 percent), followed by Italy (12 percent), France (11 percent), Spain (nine percent), the UK (nine percent), and Belgium (five percent). But Poland ranks second, behind Germany, in terms of the number of induced jobs (12 percent and 22 percent respectively). These are followed by Italy and Spain (11 percent each), France (nine percent), and the UK (six percent).

**Fig. 25. Induced GVA impact by country**

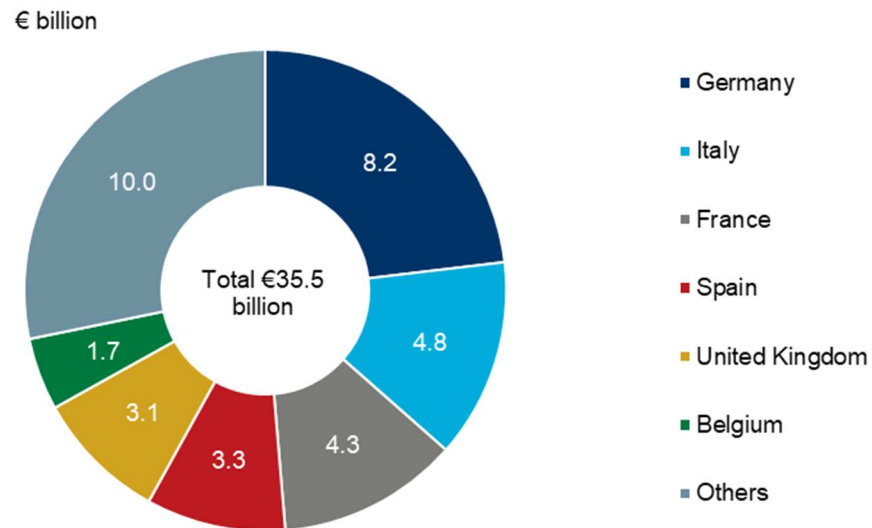
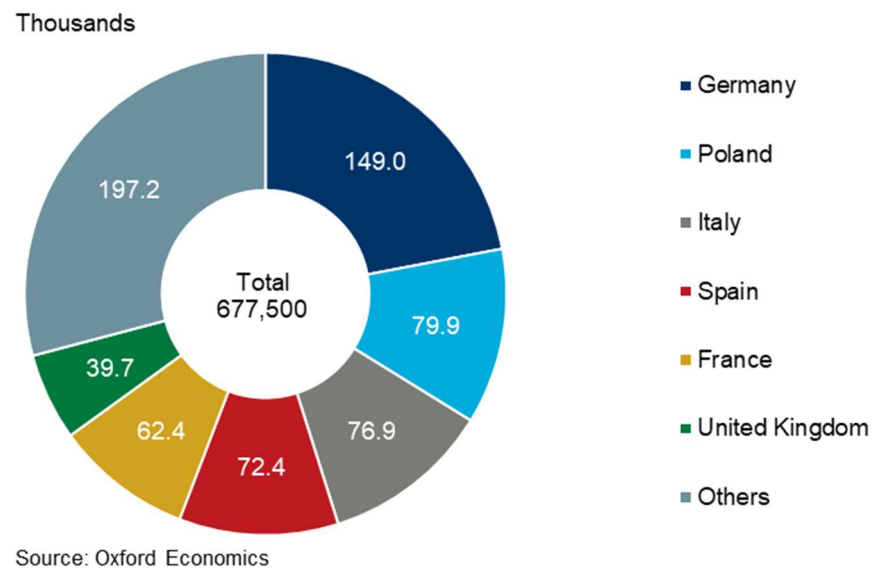


**Fig. 26. Induced jobs impact by country**

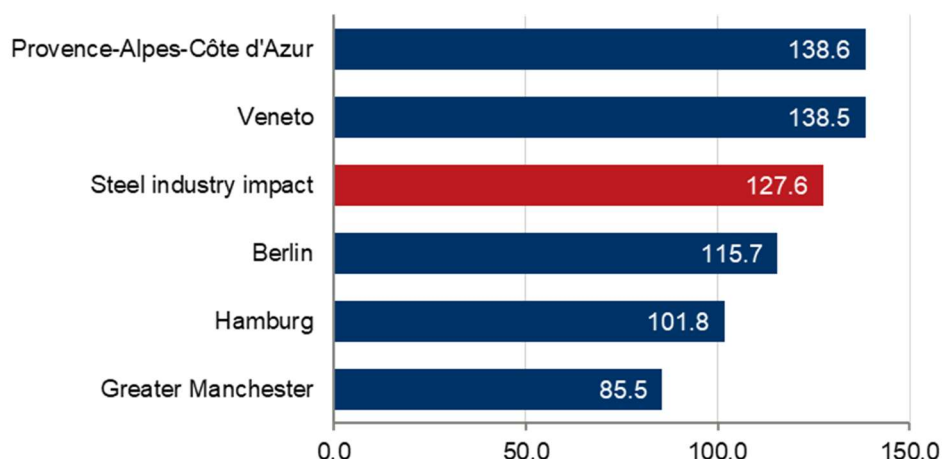


### 3.3 TOTAL ECONOMIC CONTRIBUTION

The total economic contribution of €127.6 billion in terms of GVA, and 2.47 million jobs, is equivalent to around 1.0 percent of all EU GVA and 1.1 percent of all EU employment. To put that further in context, the total impact on GVA is greater than, for example, the GVA produced in the regions of Berlin and Greater Manchester.

**Fig. 27. Total GVA contribution relative to the GVA of selected regions**

€ billion

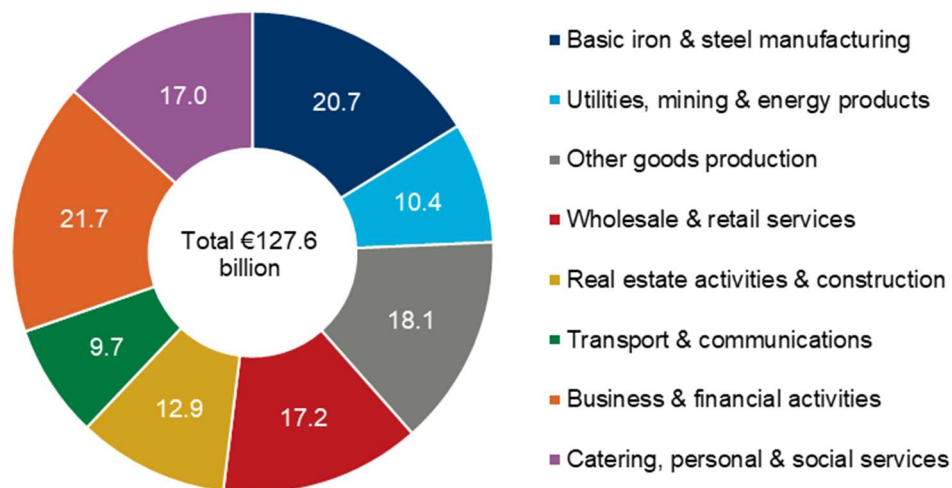


Source: Oxford Economics. NUTS 1 and 2 regions' 2016 GVA, based on Eurostat data for 2015 GDP.

By industry, basic iron and steel manufacturing—i.e. the direct impact in this study—accounts for a comparatively modest 16 percent of the total, with utilities, mining and energy products accounting for eight percent, and all other goods production for 14 percent. The remainder is spread across the various service sectors, with business and financial services accounting for 17 percent of the overall total.

**Fig. 28. Total GVA contribution by broad industrial sector**

€ billion

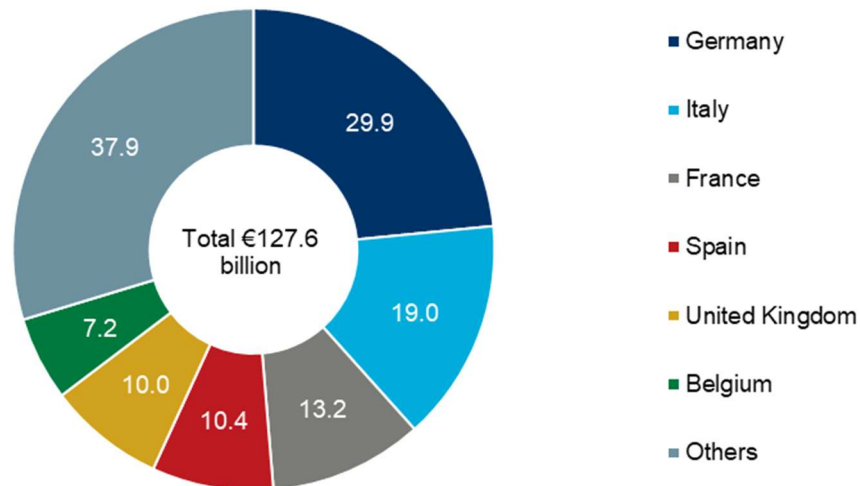


Source: Oxford Economics

The largest total GVA contributions by country are found in Germany (23 percent of the EU total), Italy (15 percent) and France (10 percent), followed by Spain and the UK (eight percent each), and Belgium (six percent). As a share of national GVA, the total GVA impact is highest in Finland (2.2 percent), Austria, Slovenia and Slovakia (2.0 percent each), and Belgium (1.9 percent).

**Fig. 29. Total GVA contribution by country**

€ billion

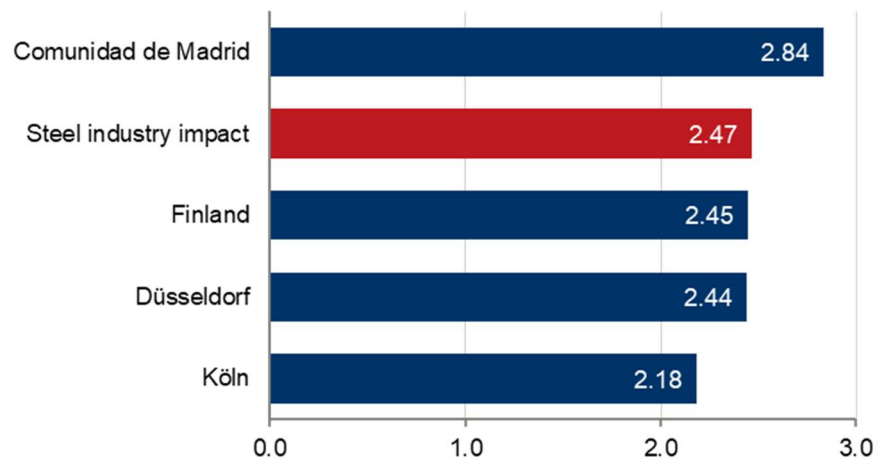


Source: Oxford Economics

Turning to the total contribution to employment, the 2.47 million jobs figure is higher than the number of jobs in, for example, the entire country of Finland, and the metropolitan area around Düsseldorf.

**Fig. 30. Total jobs contribution relative to jobs in selected regions**

Millions

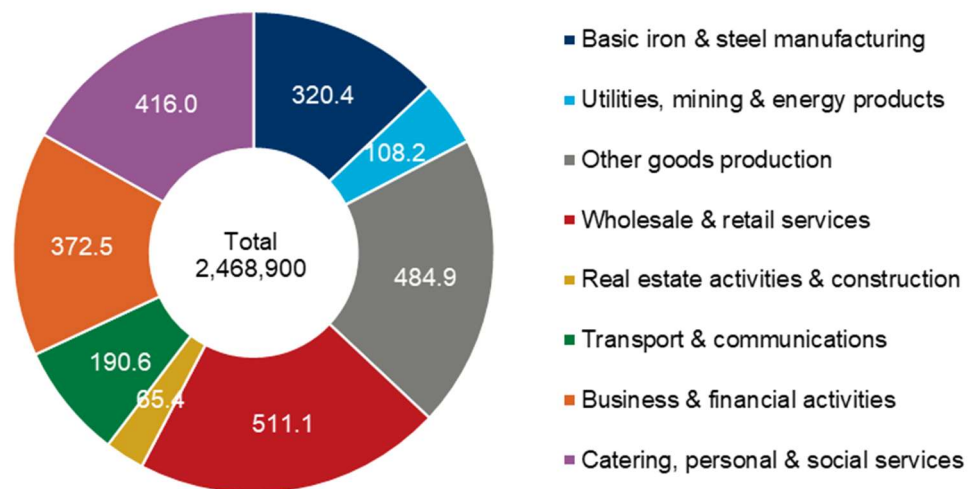


Source: Eurostat; Oxford Economics. Regional data relate to official EU 'NUTS 1 and 2' regions.

By broad industrial sector, the basic iron and steel industry itself accounts for 13 percent of the total contribution to employment, with utilities, mining and energy products accounting for four percent, and all other goods production for 20 percent. The remainder is accounted for mainly by services sectors, including wholesale and retail services (21 percent), catering, personal and social services (17 percent), and business and financial activities (15 percent).

**Fig. 31. Total employment contribution by broad industrial sector**

Thousands

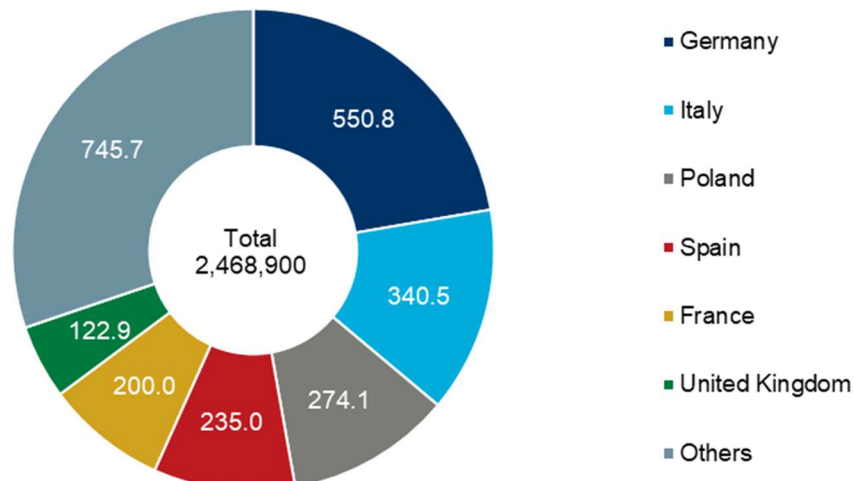


Source: Oxford Economics

The greatest number of jobs supported in total by the European steel industry is found in Germany (at 22 percent of the EU-wide total), followed by Italy (14 percent), Poland (11 percent), Spain (10 percent), and France (eight percent). As a share of total national employment, the total jobs contribution is highest in Luxembourg (2.5 percent), Slovenia (2.2 percent), Finland (2.2 percent), Belgium (2.0 percent), and Austria (1.8 percent).

**Fig. 32. Total employment contribution by country**

Thousands



Source: Oxford Economics

## 4. RESULTS BY COUNTRY

The following pages set out the results on a country-by-country basis, preceded by the results for the EU as a whole for the purposes of comparison.

The following points should be noted:

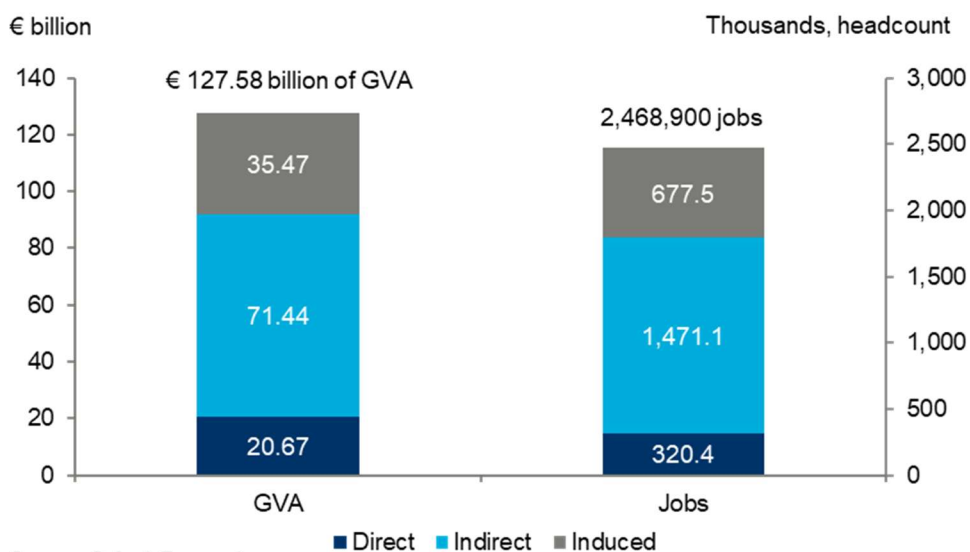
- (1) Employment figures are provided by EUROFER. Other values are from Eurostat's 'Annual detailed enterprise statistics for industry', or are Oxford Economics estimates mainly based on that dataset. Shares of national manufacturing industries are based on the same Eurostat dataset, but data on national economies—used to estimate industry shares in those economies—is taken from the Oxford Economics Global Economics Model, which is sourced in turn from a variety of official sources.
- (2) No direct impact is shown for six countries, namely Cyprus, Estonia, Ireland, Latvia, Lithuania and Malta, as the EUROFER employment dataset does not cover those countries. The Eurostat dataset is consistent with the industry having no significant presence in any of those member states, although it is not shown to be completely absent in the cases of Ireland, Latvia and (possibly) Malta.
- (3) As the GVA and employment data come from different sources, the figures for direct GVA per worker should be seen as indicative rather than precise. In addition, GVA is depressed in Romania and Hungary by low profits and negative profits respectively, and in Bulgaria by the very low share of total GVA in the value of production. In all three cases, the total value of production per worker is somewhat closer to the range seen across the rest of the EU.
- (4) The indirect and induced impacts reflect the impact of the EU-wide steel industry on economic activity in the country concerned, not the impact of that country's steel industry on the wider EU economy. However, the figures for steel industry procurement, which relate to the country of purchaser rather than supplier, will give some indication of each national industry's relative contribution to the indirect economic impact across the Union.
- (5) Figures for capital spending cover gross spending on plant, machinery and equipment, and on construction activity. Spending on land, existing buildings, and intangible assets is excluded.

## EUROPEAN UNION

Fig. 33. The steel industry's direct economic contribution

| Total EU          | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 123.55                                   | 20.67                         | 320,392                | 102.88                    | 3.88                         | 6.0                                            |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Total EU          | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.87%                                    | 1.13%                         | 1.06%                  | 0.15%                     | 0.14%                        | 64,524                                         |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Total EU          | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 100.0%                                   | 100.0%                        | 100.0%                 | 100.0%                    | 100.0%                       | 100%                                           |

Fig. 34. The European steel industry's economic footprint across the EU



Source: Oxford Economics

Fig. 35. Total economic impact in context

| Total EU          | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 100.0%                         | 100.0%                          | 0.96%                              | 1.08%                                |
| Rank out of EU-28 | -                              | -                               | -                                  | -                                    |

# AUSTRIA

Fig. 36. The steel industry's direct economic contribution

| Austria           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 6.87                                     | 1.72                          | 14,311                 | 5.15                      | 0.42                         | 4.0                                            |
| Rank out of EU-28 | 7                                        | 4                             | 10                     | 8                         | 3                            | 20                                             |
| Austria           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 4.03%                                    | 3.30%                         | 2.28%                  | 0.53%                     | 0.33%                        | 120,130                                        |
| Rank out of EU-28 | 3                                        | 3                             | 4                      | 3                         | 4                            | 2                                              |
| Austria           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 5.6%                                     | 8.3%                          | 4.5%                   | 5.0%                      | 10.9%                        | 186%                                           |

Fig. 37. The European steel industry's economic footprint in Austria

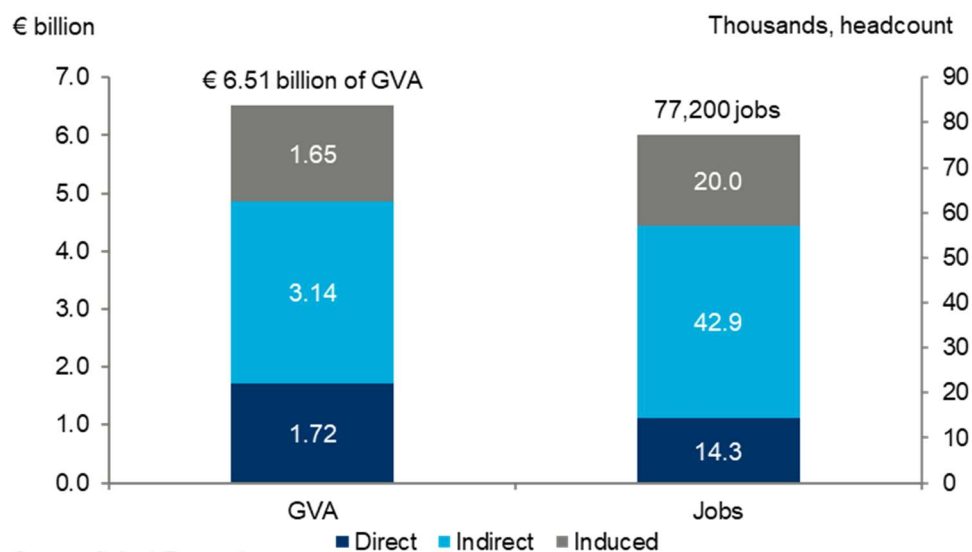


Fig. 38. Total economic impact in context

| Austria           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 5.1%                           | 3.1%                            | 2.00%                              | 1.78%                                |
| Rank out of EU-28 | 7                              | 10                              | 2                                  | 5                                    |

## BELGIUM

Fig. 39. The steel industry's direct economic contribution

| Belgium           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 8.66                                     | 1.27                          | 10,587                 | 7.39                      | 0.30                         | 6.8                                            |
| Rank out of EU-28 | 5                                        | 7                             | 11                     | 5                         | 4                            | 9                                              |
| Belgium           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 3.84%                                    | 2.47%                         | 2.15%                  | 0.33%                     | 0.23%                        | 119,934                                        |
| Rank out of EU-28 | 4                                        | 4                             | 6                      | 6                         | 9                            | 3                                              |
| Belgium           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 7.0%                                     | 6.1%                          | 3.3%                   | 7.2%                      | 7.6%                         | 186%                                           |

Fig. 40. The European steel industry's economic footprint in Belgium

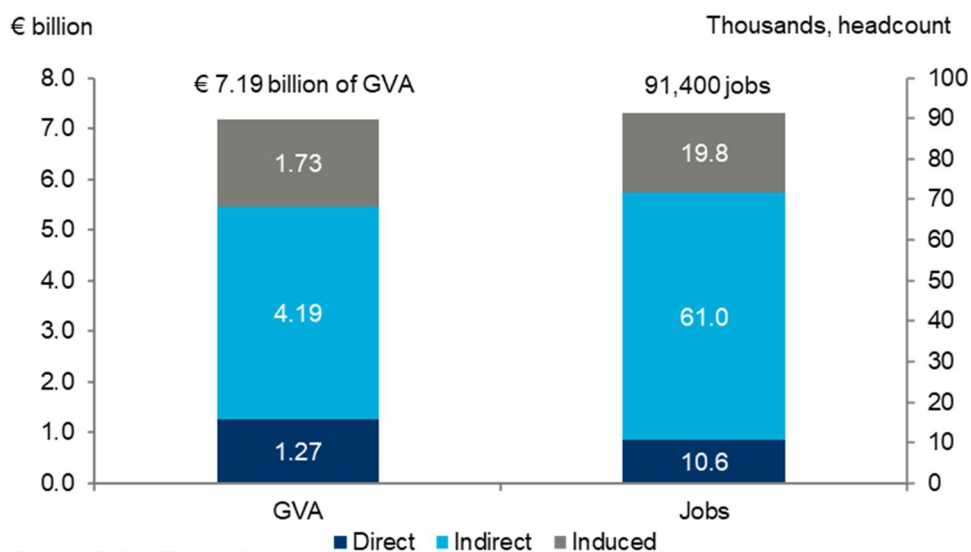


Fig. 41. Total economic impact in context

| Belgium           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 5.6%                           | 3.7%                            | 1.89%                              | 1.96%                                |
| Rank out of EU-28 | 6                              | 8                               | 5                                  | 4                                    |

## BULGARIA

Fig. 42. The steel industry's direct economic contribution

| Bulgaria          | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 0.39                                     | 0.02                          | 2,450                  | 0.37                      | 0.02                         | 18.6                                           |
| Rank out of EU-28 | 20                                       | 21                            | 18                     | 20                        | 17                           | 1                                              |
| Bulgaria          | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.38%                                    | 0.33%                         | 0.45%                  | 0.05%                     | 0.08%                        | 8,583                                          |
| Rank out of EU-28 | 14                                       | 19                            | 18                     | 18                        | 16                           | 21                                             |
| Bulgaria          | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.3%                                     | 0.1%                          | 0.8%                   | 0.4%                      | 0.4%                         | 13%                                            |

Fig. 43. The European steel industry's economic footprint in Bulgaria

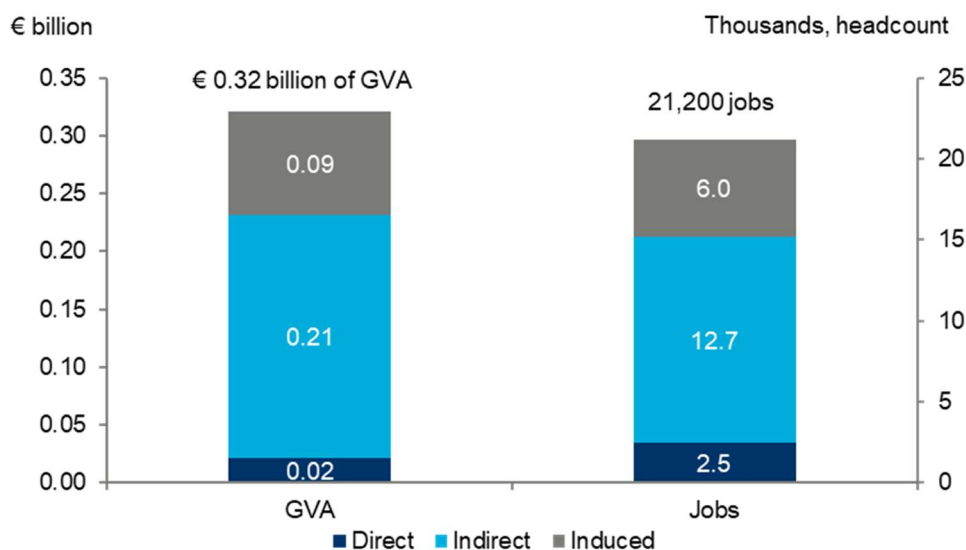


Fig. 44. Total economic impact in context

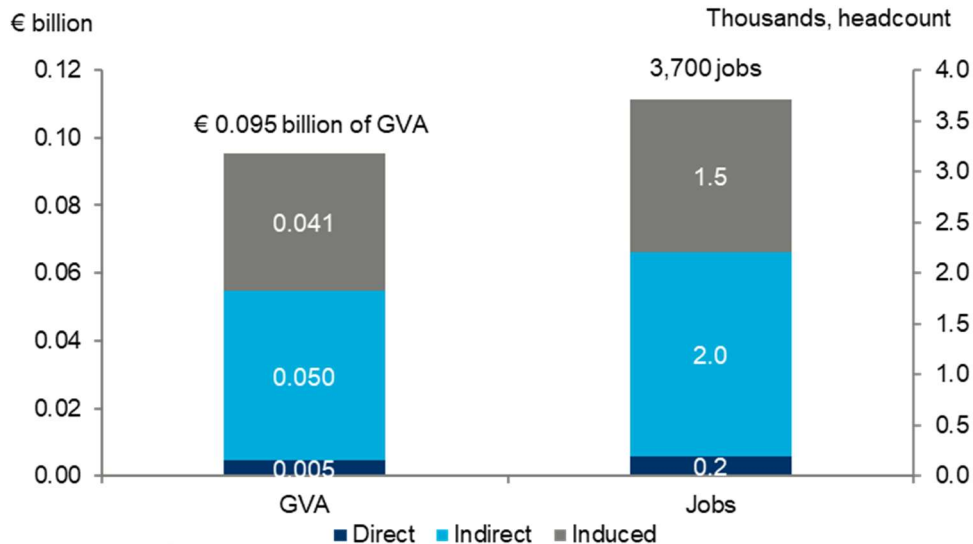
| Bulgaria          | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.3%                           | 0.9%                            | 0.78%                              | 0.70%                                |
| Rank out of EU-28 | 22                             | 18                              | 15                                 | 17                                   |

## CROATIA

Fig. 45. The steel industry's direct economic contribution

| Croatia           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 0.043                                    | 0.005                         | 190                    | 0.038                     | 0.012                        | 9.4                                            |
| Rank out of EU-28 | 22                                       | 22                            | 22                     | 22                        | 20                           | 7                                              |
| Croatia           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 0.24%                                    | 0.08%                         | 0.07%                  | 0.01%                     | 0.01%                        | 24,092                                         |
| Rank out of EU-28 | 21                                       | 21                            | 22                     | 21                        | 21                           | 19                                             |
| Croatia           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.03%                                    | 0.02%                         | 0.06%                  | 0.04%                     | 0.30%                        | 37%                                            |

Fig. 46. The European steel industry's economic footprint in Croatia



Source: Oxford Economics

Fig. 47. Total economic impact in context

| Croatia           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.07%                          | 0.15%                           | 0.26%                              | 0.27%                                |
| Rank out of EU-28 | 24                             | 25                              | 26                                 | 28                                   |

## CYPRUS

Fig. 48. The steel industry's direct economic contribution

| Cyprus            | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Cyprus            | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Cyprus            | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |

Fig. 49. The European steel industry's economic footprint in Cyprus

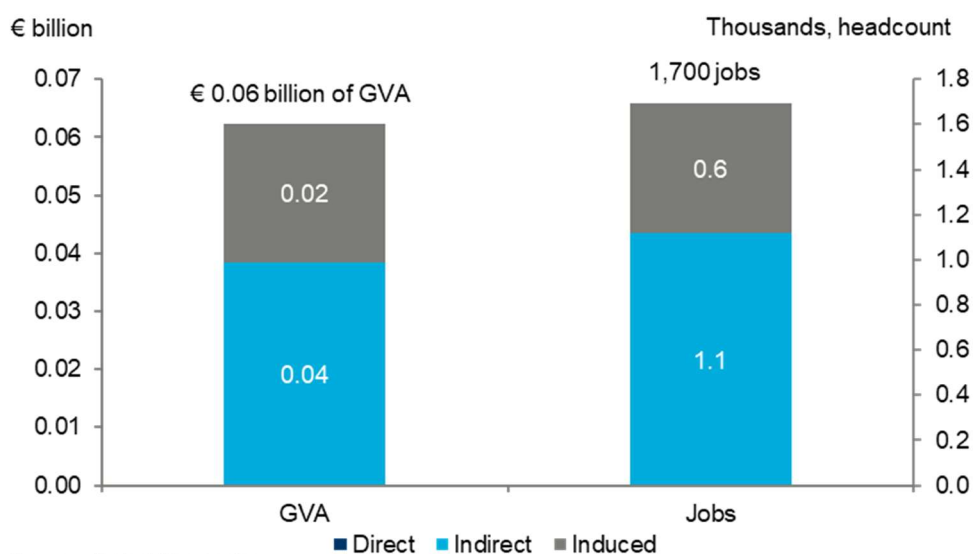


Fig. 50. Total economic impact in context

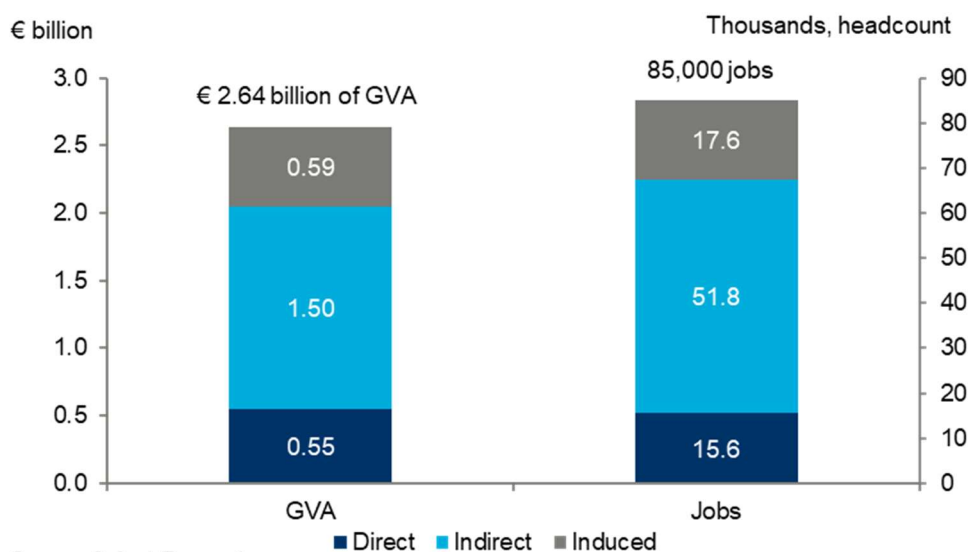
| Cyprus            | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.05%                          | 0.07%                           | 0.39%                              | 0.47%                                |
| Rank out of EU-28 | 27                             | 27                              | 23                                 | 21                                   |

# CZECH REPUBLIC

Fig. 51. The steel industry's direct economic contribution

| Czech Republic    | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 3.15                                     | 0.55                          | 15,609                 | 2.60                      | 0.14                         | 5.8                                            |
| Rank out of EU-28 | 11                                       | 12                            | 8                      | 11                        | 10                           | 14                                             |
| Czech Republic    | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 2.06%                                    | 1.50%                         | 1.21%                  | 0.36%                     | 0.31%                        | 35,094                                         |
| Rank out of EU-28 | 10                                       | 8                             | 10                     | 5                         | 6                            | 17                                             |
| Czech Republic    | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 2.5%                                     | 2.6%                          | 4.9%                   | 2.5%                      | 3.6%                         | 54%                                            |

Fig. 52. The European steel industry's economic footprint in the Czech Republic



Source: Oxford Economics

Fig. 53. Total economic impact in context

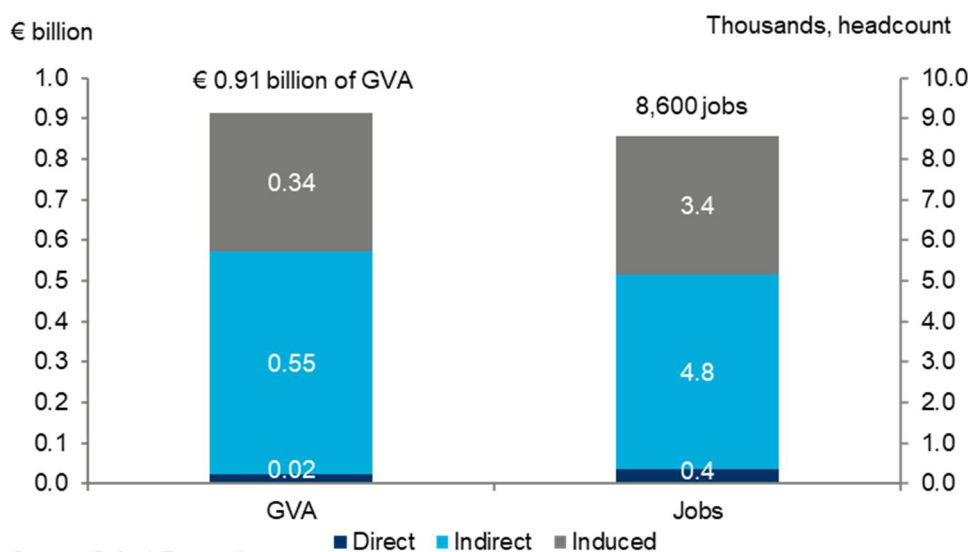
| Czech Republic    | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 2.1%                           | 3.4%                            | 1.74%                              | 1.70%                                |
| Rank out of EU-28 | 12                             | 9                               | 6                                  | 7                                    |

## DENMARK

Fig. 54. The steel industry's direct economic contribution

| Denmark           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 0.125                                    | 0.021                         | 368                    | 0.104                     | 0.002                        | 5.9                                            |
| Rank out of EU-28 | 21                                       | 20                            | 21                     | 21                        | 22                           | 12                                             |
| Denmark           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 0.12%                                    | 0.06%                         | 0.10%                  | 0.01%                     | 0.01%                        | 57,349                                         |
| Rank out of EU-28 | 22                                       | 22                            | 21                     | 22                        | 22                           | 13                                             |
| Denmark           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.10%                                    | 0.1%                          | 0.11%                  | 0.10%                     | 0.05%                        | 89%                                            |

Fig. 55. The European steel industry's economic footprint in Denmark



Source: Oxford Economics

Fig. 56. Total economic impact in context

| Denmark           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.7%                           | 0.3%                            | 0.38%                              | 0.31%                                |
| Rank out of EU-28 | 16                             | 20                              | 24                                 | 26                                   |

## ESTONIA

Fig. 57. The steel industry's direct economic contribution

| Estonia           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Estonia           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Estonia           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |

Fig. 58. The European steel industry's economic footprint in Estonia

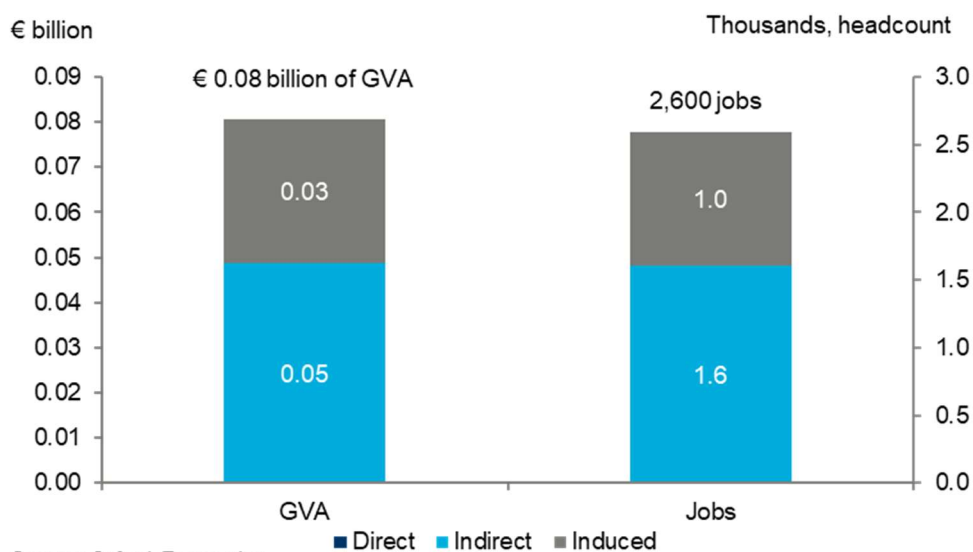


Fig. 59. Total economic impact in context

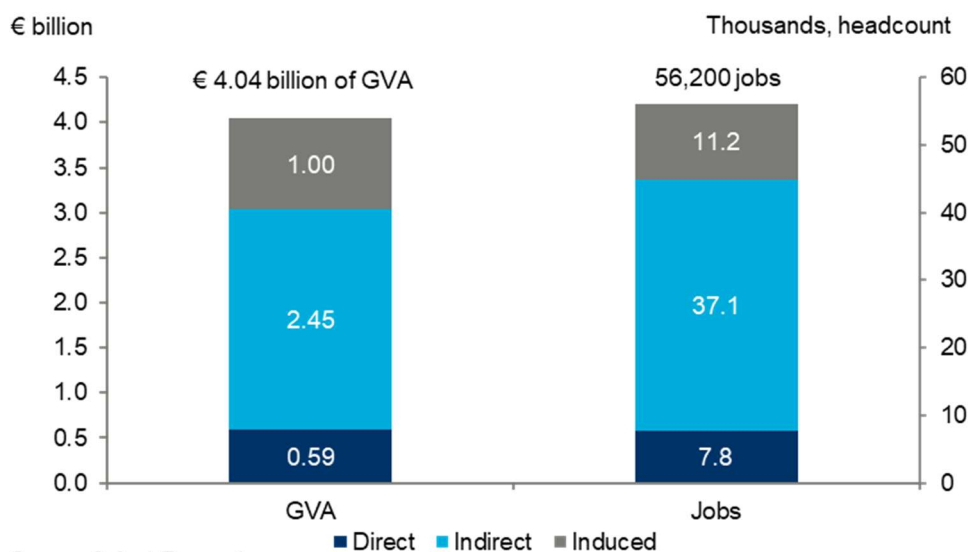
| Estonia           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.06%                          | 0.10%                           | 0.44%                              | 0.40%                                |
| Rank out of EU-28 | 25                             | 26                              | 21                                 | 23                                   |

## FINLAND

Fig. 60. The steel industry's direct economic contribution

| Finland           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 6.28                                     | 0.59                          | 7,783                  | 5.68                      | 0.14                         | 10.6                                           |
| Rank out of EU-28 | 8                                        | 11                            | 14                     | 6                         | 9                            | 5                                              |
| Finland           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 6.19%                                    | 2.34%                         | 2.43%                  | 0.32%                     | 0.31%                        | 76,326                                         |
| Rank out of EU-28 | 2                                        | 5                             | 3                      | 7                         | 7                            | 6                                              |
| Finland           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 5.1%                                     | 2.9%                          | 2.4%                   | 5.5%                      | 3.7%                         | 118%                                           |

Fig. 61. The European steel industry's economic footprint in Finland



Source: Oxford Economics

Fig. 62. Total economic impact in context

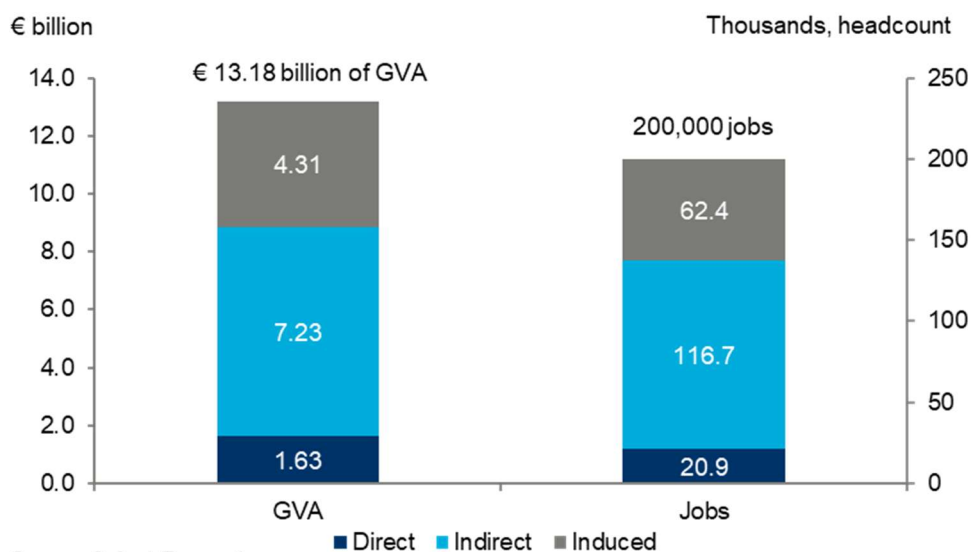
| Finland           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 3.2%                           | 2.3%                            | 2.16%                              | 2.23%                                |
| Rank out of EU-28 | 11                             | 12                              | 1                                  | 3                                    |

# FRANCE

Fig. 63. The steel industry's direct economic contribution

| France            | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 10.22                                    | 1.63                          | 20,900                 | 8.59                      | 0.25                         | 6.3                                            |
| Rank out of EU-28 | 3                                        | 5                             | 5                      | 3                         | 5                            | 11                                             |
| France            | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.34%                                    | 0.80%                         | 0.72%                  | 0.08%                     | 0.07%                        | 78,076                                         |
| Rank out of EU-28 | 15                                       | 16                            | 16                     | 16                        | 17                           | 5                                              |
| France            | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 8.3%                                     | 7.9%                          | 6.5%                   | 8.4%                      | 6.4%                         | 121%                                           |

Fig. 64. The European steel industry's economic footprint in France



Source: Oxford Economics

Fig. 65. Total economic impact in context

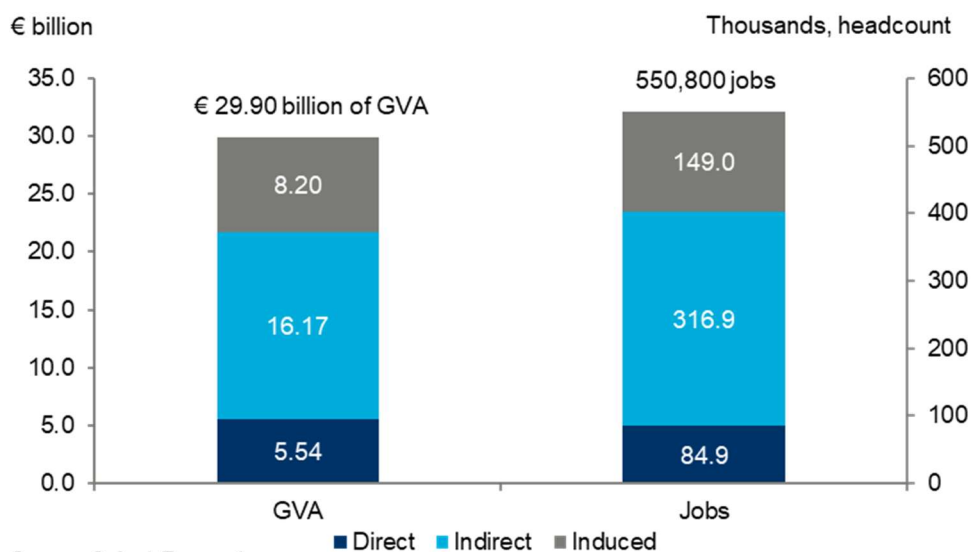
| France            | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 10.3%                          | 8.1%                            | 0.66%                              | 0.71%                                |
| Rank out of EU-28 | 3                              | 5                               | 18                                 | 16                                   |

## GERMANY

Fig. 66. The steel industry's direct economic contribution

| Germany           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 30.01                                    | 5.54                          | 84,931                 | 24.47                     | 0.84                         | 5.4                                            |
| Rank out of EU-28 | 1                                        | 1                             | 1                      | 1                         | 1                            | 15                                             |
| Germany           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.73%                                    | 1.08%                         | 1.17%                  | 0.20%                     | 0.19%                        | 65,180                                         |
| Rank out of EU-28 | 13                                       | 12                            | 11                     | 10                        | 10                           | 10                                             |
| Germany           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 24.3%                                    | 26.8%                         | 26.5%                  | 23.8%                     | 21.7%                        | 101%                                           |

Fig. 67. The European steel industry's economic footprint in Germany



Source: Oxford Economics

Fig. 68. Total economic impact in context

| Germany           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 23.4%                          | 22.3%                           | 1.06%                              | 1.26%                                |
| Rank out of EU-28 | 1                              | 1                               | 11                                 | 12                                   |

# GREECE

Fig. 69. The steel industry's direct economic contribution

| Greece            | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 0.56                                     | 0.05                          | 1,361                  | 0.51                      | 0.01                         | 11.5                                           |
| Rank out of EU-28 | 19                                       | 19                            | 19                     | 18                        | 21                           | 3                                              |
| Greece            | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.22%                                    | 0.45%                         | 0.44%                  | 0.03%                     | 0.04%                        | 35,622                                         |
| Rank out of EU-28 | 16                                       | 17                            | 19                     | 20                        | 19                           | 16                                             |
| Greece            | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.5%                                     | 0.2%                          | 0.4%                   | 0.5%                      | 0.2%                         | 55%                                            |

Fig. 70. The European steel industry's economic footprint in Greece

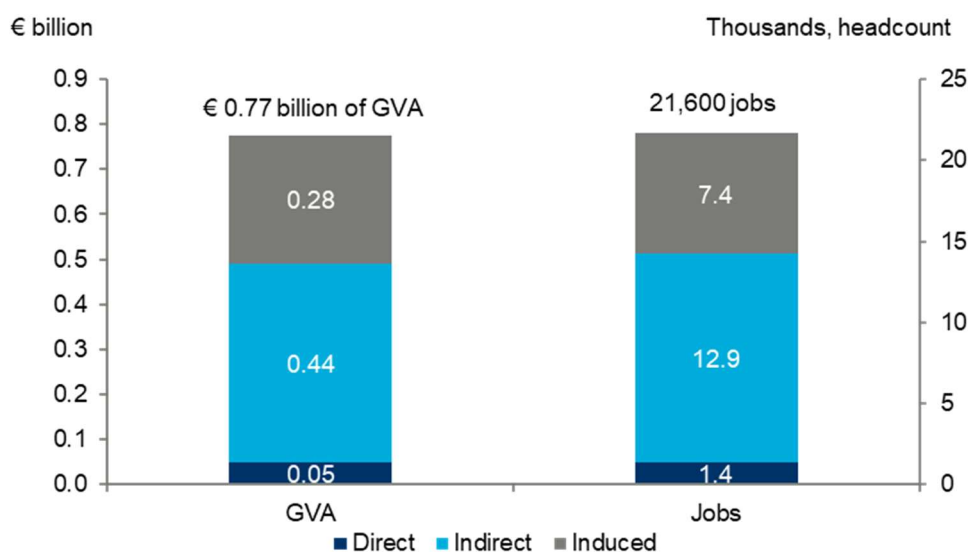


Fig. 71. Total economic impact in context

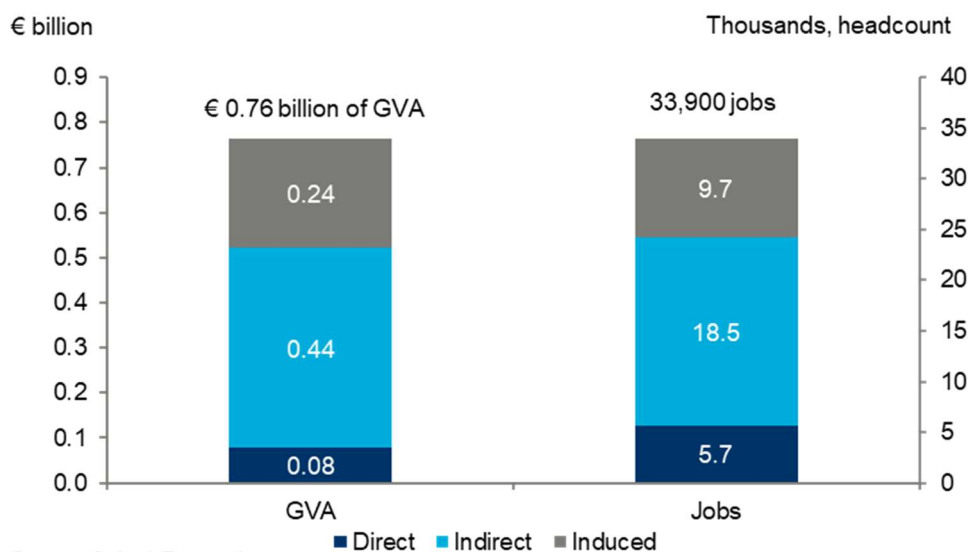
| Greece            | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.6%                           | 0.9%                            | 0.50%                              | 0.59%                                |
| Rank out of EU-28 | 17                             | 17                              | 19                                 | 19                                   |

# HUNGARY

Fig. 72. The steel industry's direct economic contribution

| Hungary           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 0.73                                     | 0.08                          | 5,696                  | 0.66                      | 0.02                         | 9.5                                            |
| Rank out of EU-28 | 17                                       | 17                            | 15                     | 17                        | 18                           | 6                                              |
| Hungary           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 0.80%                                    | 0.35%                         | 0.77%                  | 0.08%                     | 0.13%                        | 13,623                                         |
| Rank out of EU-28 | 20                                       | 18                            | 15                     | 17                        | 13                           | 20                                             |
| Hungary           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.6%                                     | 0.4%                          | 1.8%                   | 0.6%                      | 0.4%                         | 21%                                            |

Fig. 73. The European steel industry's economic footprint in Hungary



Source: Oxford Economics

Fig. 74. Total economic impact in context

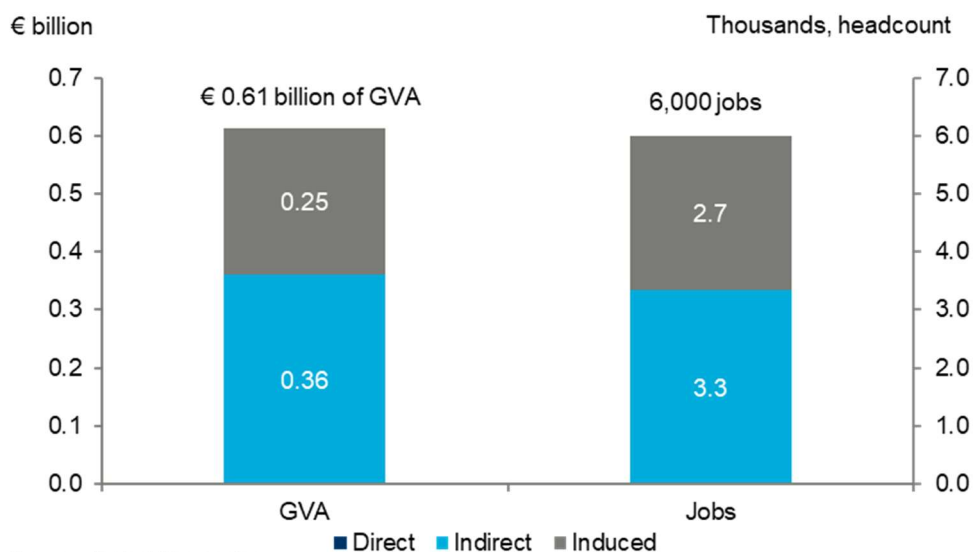
| Hungary           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.6%                           | 1.4%                            | 0.79%                              | 0.78%                                |
| Rank out of EU-28 | 18                             | 16                              | 14                                 | 15                                   |

## IRELAND

Fig. 75. The steel industry's direct economic contribution

| Ireland           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Ireland           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Ireland           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |

Fig. 76. The European steel industry's economic footprint in Ireland



Source: Oxford Economics

Fig. 77. Total economic impact in context

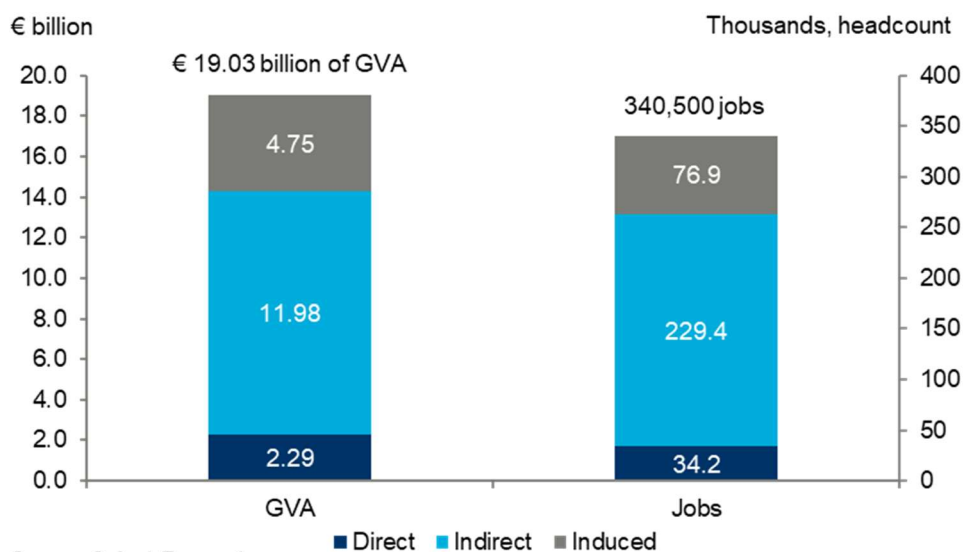
| Ireland           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.5%                           | 0.2%                            | 0.24%                              | 0.30%                                |
| Rank out of EU-28 | 21                             | 22                              | 28                                 | 27                                   |

# ITALY

Fig. 78. The steel industry's direct economic contribution

| Italy             | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 20.37                                    | 2.29                          | 34,226                 | 18.07                     | 0.57                         | 8.9                                            |
| Rank out of EU-28 | 2                                        | 2                             | 2                      | 2                         | 2                            | 8                                              |
| Italy             | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 2.29%                                    | 1.05%                         | 0.93%                  | 0.15%                     | 0.15%                        | 67,036                                         |
| Rank out of EU-28 | 8                                        | 13                            | 13                     | 11                        | 11                           | 9                                              |
| Italy             | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 16.5%                                    | 11.1%                         | 10.7%                  | 17.6%                     | 14.7%                        | 104%                                           |

Fig. 79. The European steel industry's economic footprint in Italy



Source: Oxford Economics

Fig. 80. Total economic impact in context

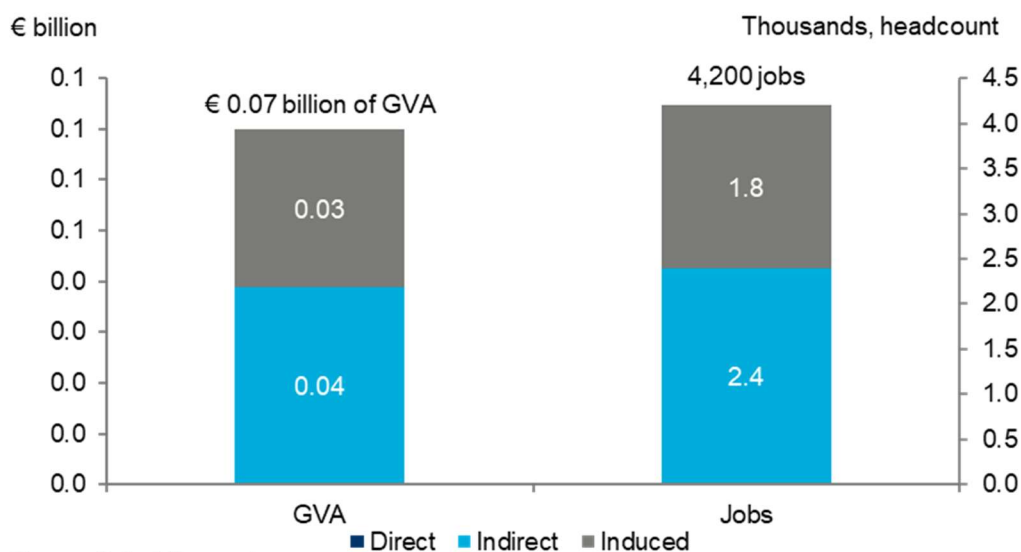
| Italy             | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 14.9%                          | 13.8%                           | 1.25%                              | 1.50%                                |
| Rank out of EU-28 | 2                              | 2                               | 10                                 | 10                                   |

## LATVIA

Fig. 81. The steel industry's direct economic contribution

| Latvia            | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Latvia            | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Latvia            | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |

Fig. 82. The European steel industry's economic footprint in Latvia



Source: Oxford Economics

Fig. 83. Total economic impact in context

| Latvia            | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.05%                          | 0.17%                           | 0.25%                              | 0.47%                                |
| Rank out of EU-28 | 26                             | 24                              | 27                                 | 20                                   |

# LITHUANIA

Fig. 84. The steel industry's direct economic contribution

| Lithuania         | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Lithuania         | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Lithuania         | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |

Fig. 85. The European steel industry's economic footprint in Lithuania

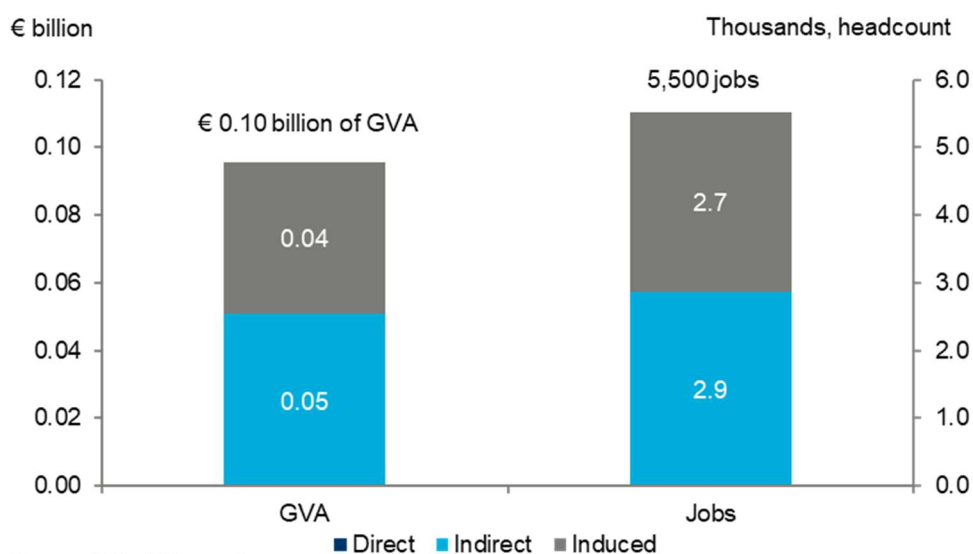


Fig. 86. Total economic impact in context

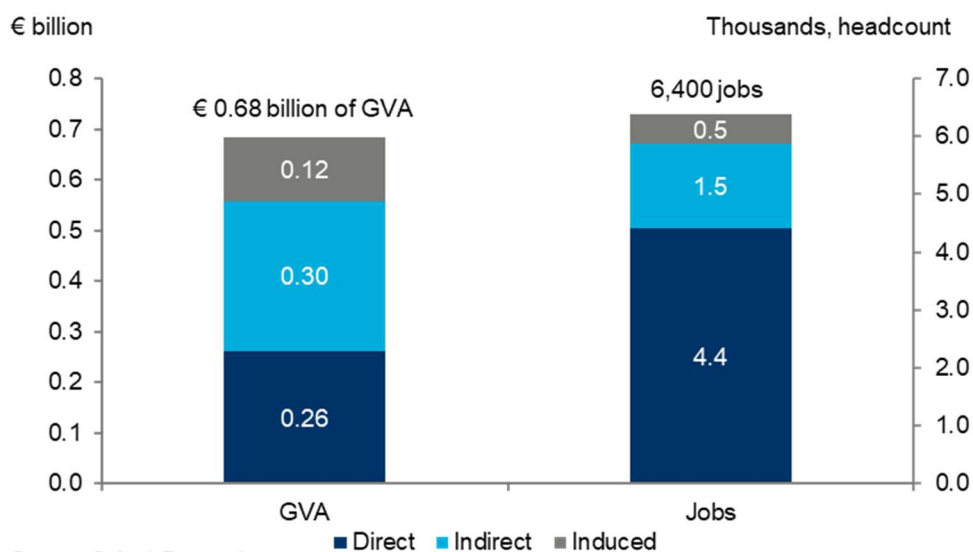
| Lithuania         | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.07%                          | 0.22%                           | 0.40%                              | 0.41%                                |
| Rank out of EU-28 | 23                             | 23                              | 22                                 | 22                                   |

# LUXEMBOURG

Fig. 87. The steel industry's direct economic contribution

| Luxembourg        | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 1.03                                     | 0.26                          | 4,400                  | 0.77                      | 0.04                         | 3.9                                            |
| Rank out of EU-28 | 15                                       | 14                            | 16                     | 16                        | 16                           | 21                                             |
| Luxembourg        | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 9.84%                                    | 10.34%                        | 13.09%                 | 0.55%                     | 1.76%                        | 59,583                                         |
| Rank out of EU-28 | 1                                        | 1                             | 1                      | 2                         | 1                            | 12                                             |
| Luxembourg        | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.8%                                     | 1.3%                          | 1.4%                   | 0.8%                      | 1.0%                         | 92%                                            |

Fig. 88. The European steel industry's economic footprint in Luxembourg



Source: Oxford Economics

Fig. 89. Total economic impact in context

| Luxembourg        | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.5%                           | 0.3%                            | 1.44%                              | 2.55%                                |
| Rank out of EU-28 | 20                             | 21                              | 8                                  | 1                                    |

## MALTA

Fig. 90. The steel industry's direct economic contribution

| Malta             | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Malta             | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Rank out of EU-28 | -                                        | -                             | -                      | -                         | -                            | -                                              |
| Malta             | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | -                                        | -                             | -                      | -                         | -                            | -                                              |

Fig. 91. The European steel industry's economic footprint in Malta

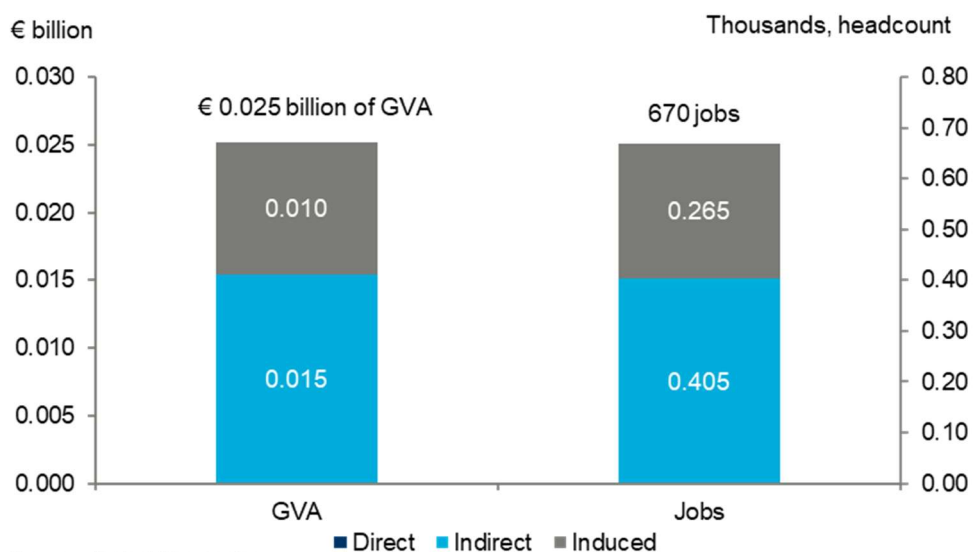


Fig. 92. Total economic impact in context

| Malta             | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.02%                          | 0.03%                           | 0.29%                              | 0.35%                                |
| Rank out of EU-28 | 28                             | 28                              | 25                                 | 25                                   |

# NETHERLANDS

Fig. 93. The steel industry's direct economic contribution

| Netherlands       | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 2.99                                     | 0.78                          | 9,224                  | 2.22                      | 0.12                         | 3.8                                            |
| Rank out of EU-28 | 12                                       | 10                            | 13                     | 12                        | 12                           | 22                                             |
| Netherlands       | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.02%                                    | 1.24%                         | 1.35%                  | 0.12%                     | 0.13%                        | 84,381                                         |
| Rank out of EU-28 | 19                                       | 11                            | 9                      | 13                        | 14                           | 4                                              |
| Netherlands       | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 2.4%                                     | 3.8%                          | 2.9%                   | 2.2%                      | 3.1%                         | 131%                                           |

Fig. 94. The European steel industry's economic footprint in the Netherlands

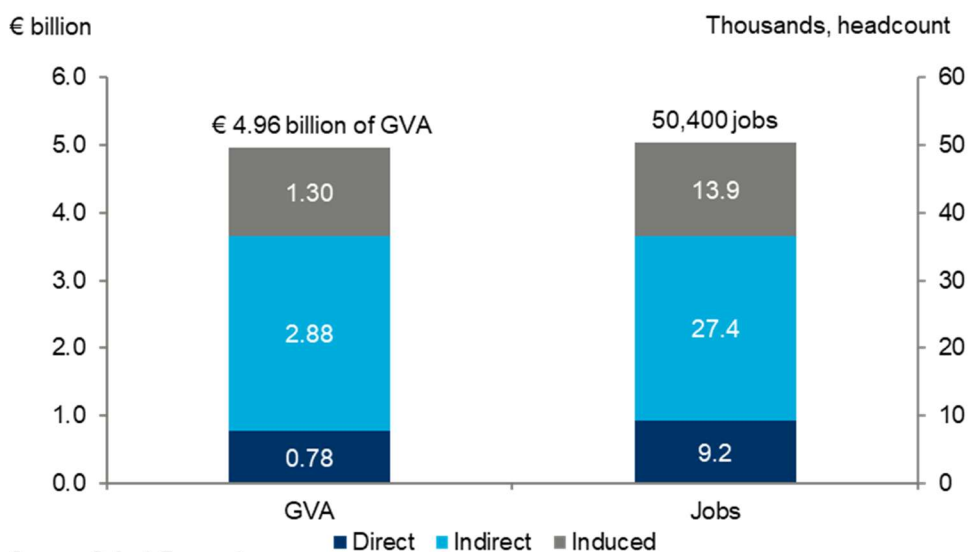


Fig. 95. Total economic impact in context

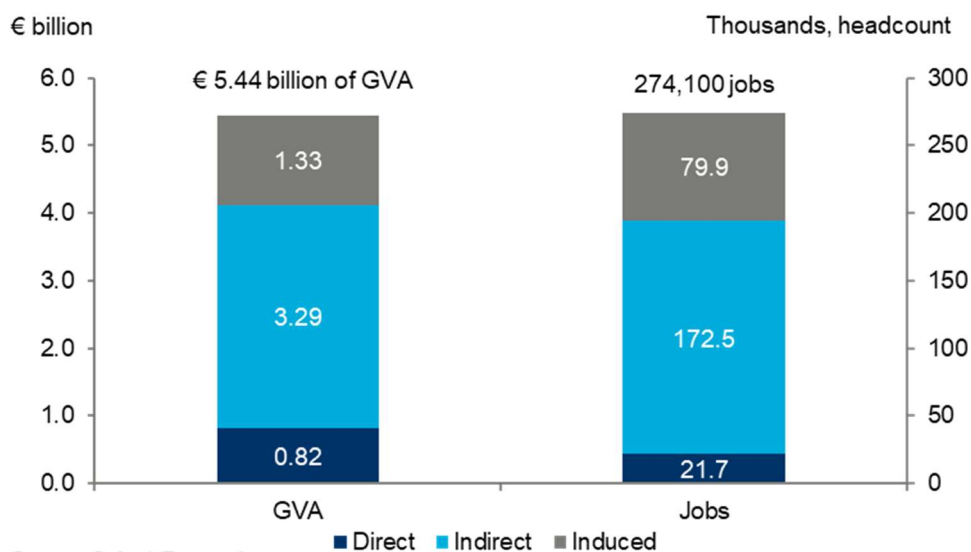
| Netherlands       | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 3.9%                           | 2.0%                            | 0.78%                              | 0.69%                                |
| Rank out of EU-28 | 10                             | 13                              | 16                                 | 18                                   |

# POLAND

Fig. 96. The steel industry's direct economic contribution

| Poland            | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 4.80                                     | 0.82                          | 21,700                 | 3.97                      | 0.13                         | 5.8                                            |
| Rank out of EU-28 | 10                                       | 9                             | 4                      | 10                        | 11                           | 13                                             |
| Poland            | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.80%                                    | 1.32%                         | 0.84%                  | 0.22%                     | 0.13%                        | 37,900                                         |
| Rank out of EU-28 | 12                                       | 10                            | 14                     | 9                         | 12                           | 15                                             |
| Poland            | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 3.9%                                     | 4.0%                          | 6.8%                   | 3.9%                      | 3.3%                         | 59%                                            |

Fig. 97. The European steel industry's economic footprint in Poland



Source: Oxford Economics

Fig. 98. Total economic impact in context

| Poland            | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 4.3%                           | 11.1%                           | 1.46%                              | 1.70%                                |
| Rank out of EU-28 | 8                              | 3                               | 7                                  | 6                                    |

# PORTUGAL

Fig. 99. The steel industry's direct economic contribution

| Portugal          | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 0.91                                     | 0.06                          | 1,000                  | 0.85                      | 0.01                         | 14.9                                           |
| Rank out of EU-28 | 16                                       | 18                            | 20                     | 15                        | 19                           | 2                                              |
| Portugal          | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.18%                                    | 0.32%                         | 0.15%                  | 0.04%                     | 0.02%                        | 61,226                                         |
| Rank out of EU-28 | 18                                       | 20                            | 20                     | 19                        | 20                           | 11                                             |
| Portugal          | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.7%                                     | 0.3%                          | 0.3%                   | 0.8%                      | 0.4%                         | 95%                                            |

Fig. 100. The European steel industry's economic footprint in Portugal

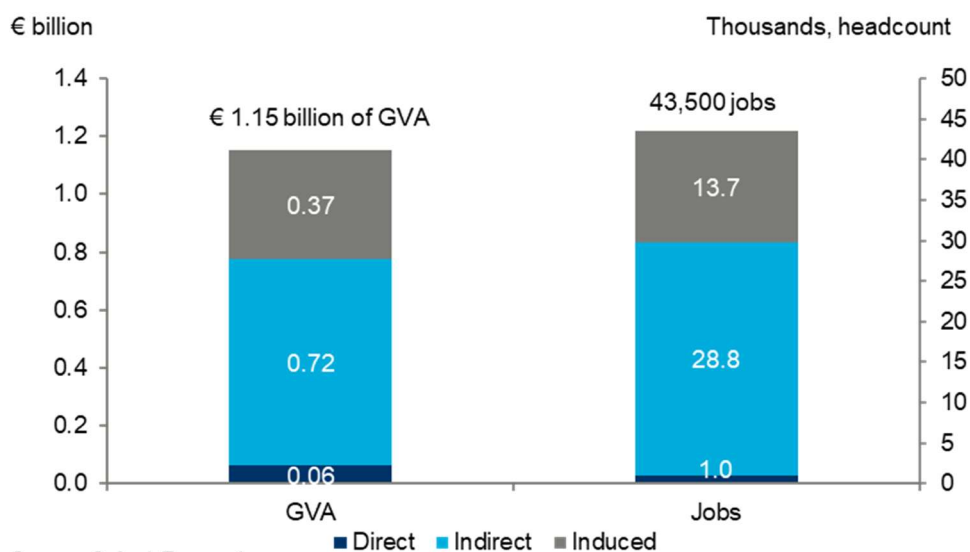


Fig. 101. Total economic impact in context

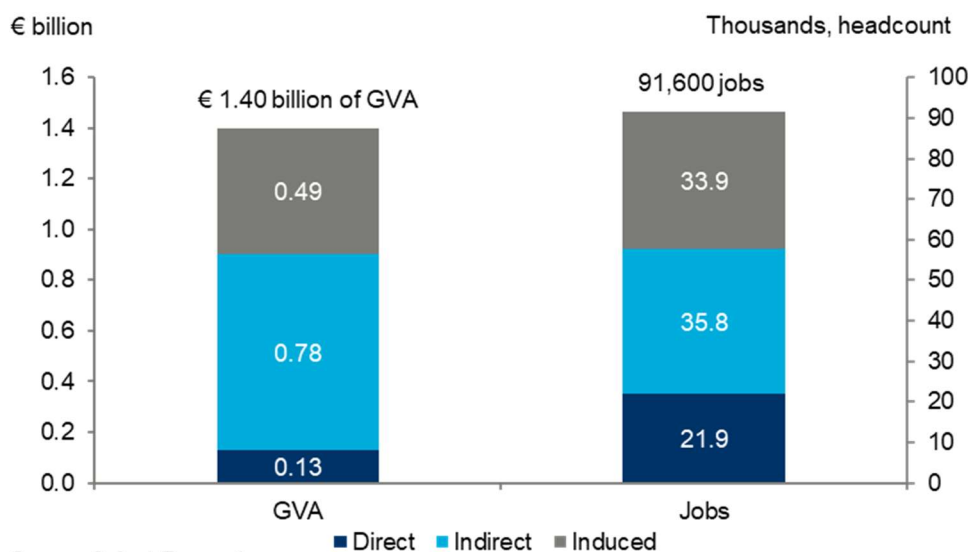
| Portugal          | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.9%                           | 1.8%                            | 0.73%                              | 0.94%                                |
| Rank out of EU-28 | 15                             | 14                              | 17                                 | 14                                   |

## ROMANIA

Fig. 102. The steel industry's direct economic contribution

| Romania           | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 1.37                                     | 0.13                          | 21,920                 | 1.24                      | 0.10                         | 10.6                                           |
| Rank out of EU-28 | 14                                       | 16                            | 3                      | 14                        | 14                           | 4                                              |
| Romania           | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.94%                                    | 0.81%                         | 1.81%                  | 0.09%                     | 0.26%                        | 5,869                                          |
| Rank out of EU-28 | 11                                       | 15                            | 8                      | 14                        | 8                            | 22                                             |
| Romania           | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 1.1%                                     | 0.6%                          | 6.8%                   | 1.2%                      | 2.5%                         | 9%                                             |

Fig. 103. The European steel industry's economic footprint in Romania



Source: Oxford Economics

Fig. 104. Total economic impact in context

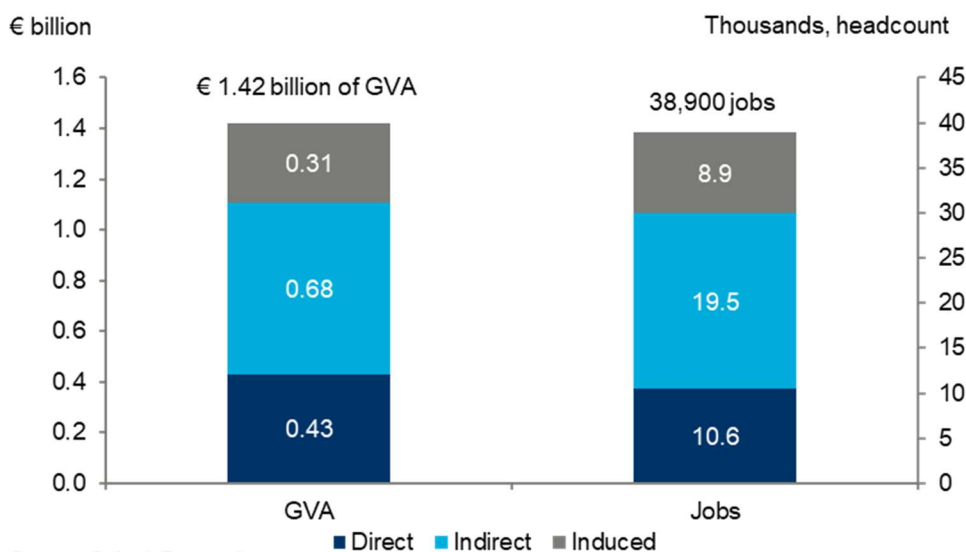
| Romania           | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 1.1%                           | 3.7%                            | 0.94%                              | 1.10%                                |
| Rank out of EU-28 | 14                             | 7                               | 13                                 | 13                                   |

# SLOVAKIA

Fig. 105. The steel industry's direct economic contribution

| Slovakia          | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 2.23                                     | 0.43                          | 10,553                 | 1.80                      | 0.11                         | 5.2                                            |
| Rank out of EU-28 | 13                                       | 13                            | 12                     | 13                        | 13                           | 16                                             |
| Slovakia          | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 3.26%                                    | 3.33%                         | 2.22%                  | 0.60%                     | 0.42%                        | 40,867                                         |
| Rank out of EU-28 | 5                                        | 2                             | 5                      | 1                         | 3                            | 14                                             |
| Slovakia          | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 1.8%                                     | 2.1%                          | 3.3%                   | 1.7%                      | 2.8%                         | 63%                                            |

Fig. 106. The European steel industry's economic footprint in Slovakia



Source: Oxford Economics

Fig. 107. Total economic impact in context

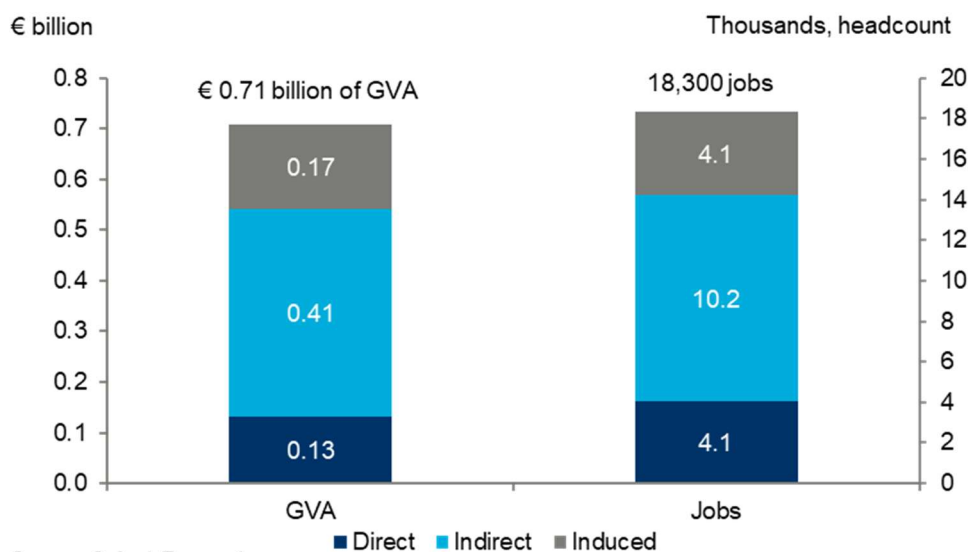
| Slovakia          | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 1.1%                           | 1.6%                            | 1.97%                              | 1.56%                                |
| Rank out of EU-28 | 13                             | 15                              | 4                                  | 9                                    |

# SLOVENIA

Fig. 108. The steel industry's direct economic contribution

| Slovenia          | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 0.61                                     | 0.13                          | 4,069                  | 0.48                      | 0.06                         | 4.6                                            |
| Rank out of EU-28 | 18                                       | 15                            | 17                     | 19                        | 15                           | 18                                             |
| Slovenia          | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 2.54%                                    | 1.78%                         | 2.15%                  | 0.37%                     | 0.50%                        | 32,469                                         |
| Rank out of EU-28 | 7                                        | 7                             | 7                      | 4                         | 2                            | 18                                             |
| Slovenia          | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 0.5%                                     | 0.6%                          | 1.3%                   | 0.5%                      | 1.6%                         | 50%                                            |

Fig. 109. The European steel industry's economic footprint in Slovenia



Source: Oxford Economics

Fig. 110. Total economic impact in context

| Slovenia          | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 0.6%                           | 0.7%                            | 1.98%                              | 2.24%                                |
| Rank out of EU-28 | 19                             | 19                              | 3                                  | 2                                    |

# SPAIN

Fig. 111. The steel industry's direct economic contribution

| Spain             | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 9.67                                     | 1.42                          | 18,645                 | 8.25                      | 0.16                         | 6.8                                            |
| Rank out of EU-28 | 4                                        | 6                             | 6                      | 4                         | 8                            | 10                                             |
| Spain             | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 2.22%                                    | 1.42%                         | 1.01%                  | 0.14%                     | 0.10%                        | 76,130                                         |
| Rank out of EU-28 | 9                                        | 9                             | 12                     | 12                        | 15                           | 7                                              |
| Spain             | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 7.8%                                     | 6.9%                          | 5.8%                   | 8.0%                      | 4.1%                         | 118%                                           |

Fig. 112. The European steel industry's economic footprint in Spain

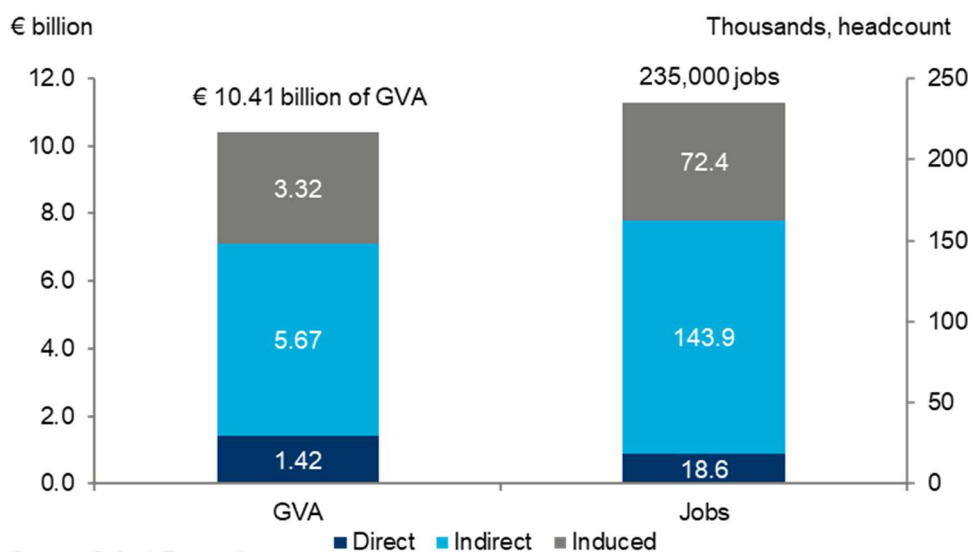


Fig. 113. Total economic impact in context

| Spain             | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 8.2%                           | 9.5%                            | 1.03%                              | 1.28%                                |
| Rank out of EU-28 | 4                              | 4                               | 12                                 | 11                                   |

## SWEDEN

Fig. 114. The steel industry's direct economic contribution

| Sweden            | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 5.20                                     | 1.07                          | 16,000                 | 4.13                      | 0.21                         | 4.8                                            |
| Rank out of EU-28 | 9                                        | 8                             | 7                      | 9                         | 7                            | 17                                             |
| Sweden            | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 2.97%                                    | 2.01%                         | 2.70%                  | 0.29%                     | 0.33%                        | 67,090                                         |
| Rank out of EU-28 | 6                                        | 6                             | 2                      | 8                         | 5                            | 8                                              |
| Sweden            | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 4.2%                                     | 5.2%                          | 5.0%                   | 4.0%                      | 5.4%                         | 104%                                           |

Fig. 115. The European steel industry's economic footprint in Sweden

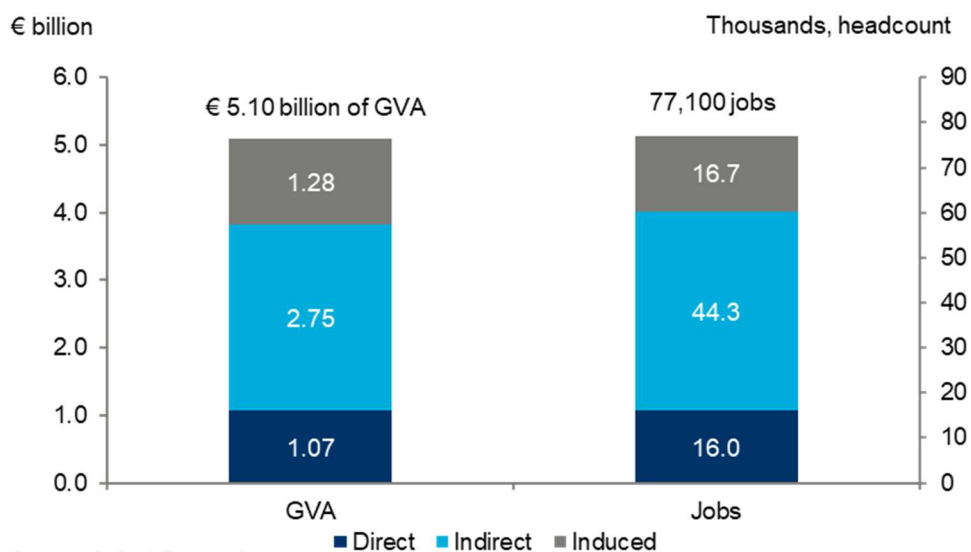


Fig. 116. Total economic impact in context

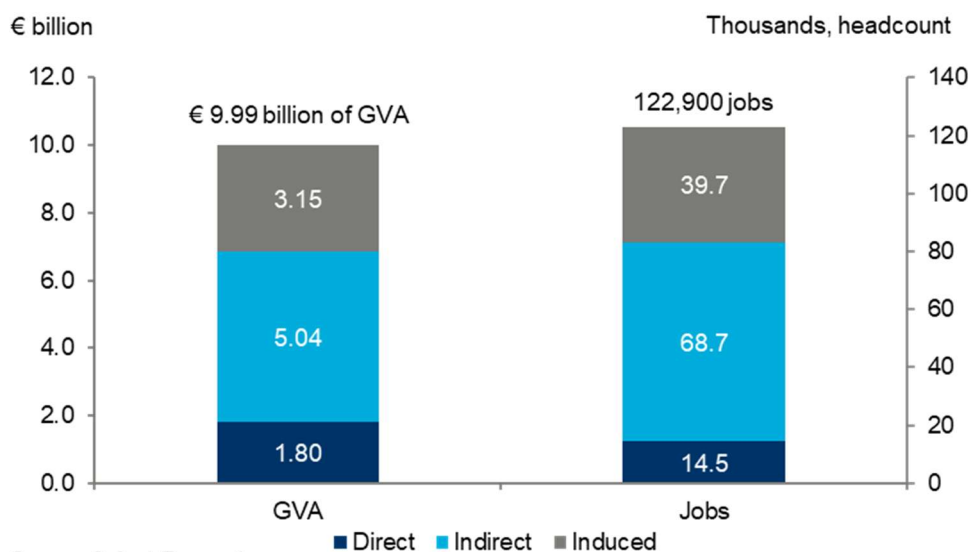
| Sweden            | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 4.0%                           | 3.1%                            | 1.38%                              | 1.57%                                |
| Rank out of EU-28 | 9                              | 11                              | 9                                  | 8                                    |

## UNITED KINGDOM

Fig. 117. The steel industry's direct economic contribution

| United Kingdom    | Levels in 2016                           |                               |                        |                           |                              | Ratio of production value to gross value added |
|-------------------|------------------------------------------|-------------------------------|------------------------|---------------------------|------------------------------|------------------------------------------------|
|                   | Value of production (€ billion)          | Gross value added (€ billion) | Employment (headcount) | Procurement (€ billion)   | Capital spending (€ billion) |                                                |
| Value             | 7.33                                     | 1.80                          | 14,469                 | 5.53                      | 0.22                         | 4.1                                            |
| Rank out of EU-28 | 6                                        | 3                             | 9                      | 7                         | 6                            | 19                                             |
| United Kingdom    | Share of national manufacturing industry |                               |                        | Share of national economy |                              | GVA per worker (€)                             |
|                   | Value of production                      | Gross value added             | Employment             | Gross value added         | Employment                   |                                                |
| Value             | 1.21%                                    | 0.88%                         | 0.57%                  | 0.08%                     | 0.04%                        | 124,295                                        |
| Rank out of EU-28 | 17                                       | 14                            | 17                     | 15                        | 18                           | 1                                              |
| United Kingdom    | Share of total EU value                  |                               |                        |                           |                              | GVA per worker as % EU average                 |
|                   | Value of production                      | Gross value added             | Employment             | Procurement               | Capital spending             |                                                |
| Value             | 5.9%                                     | 8.7%                          | 4.5%                   | 5.4%                      | 5.8%                         | 193%                                           |

Fig. 118. The European steel industry's economic footprint in the UK



Source: Oxford Economics

Fig. 119. Total economic impact in context

| United Kingdom    | Total GVA impact as % EU total | Total jobs impact as % EU total | Total GVA impact as % national GVA | Total jobs impact as % national jobs |
|-------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------------------|
| Value             | 7.8%                           | 5.0%                            | 0.46%                              | 0.36%                                |
| Rank out of EU-28 | 5                              | 6                               | 20                                 | 24                                   |

## 5. APPENDIX 1: DETAILED RESULTS

### DETAILED RESULTS

**Fig. 120. Direct impact of the European steel industry**

|                 | Value of production (€ billion) | Gross value added (GVA) (€ billion) | Employment (head-count) | Total employment costs (€ billion) | Procurement (€ billion) | Capital spending (€ billion) <sup>1</sup> | Ratio of production value to GVA |
|-----------------|---------------------------------|-------------------------------------|-------------------------|------------------------------------|-------------------------|-------------------------------------------|----------------------------------|
| Austria         | 6.87                            | 1.72                                | 14,311                  | 1.07                               | 5.15                    | 0.42                                      | 4.0                              |
| Belgium         | 8.66                            | 1.27                                | 10,587                  | 1.03                               | 7.39                    | 0.30                                      | 6.8                              |
| Bulgaria        | 0.39                            | 0.02                                | 2,450                   | 0.01                               | 0.37                    | 0.02                                      | 18.6                             |
| Croatia         | 0.04                            | 0.00                                | 190                     | 0.00                               | 0.04                    | 0.01                                      | 9.4                              |
| Czech Republic  | 3.15                            | 0.55                                | 15,609                  | 0.33                               | 2.60                    | 0.14                                      | 5.8                              |
| Denmark         | 0.13                            | 0.02                                | 368                     | 0.02                               | 0.10                    | 0.00                                      | 5.9                              |
| Finland         | 6.28                            | 0.59                                | 7,783                   | 0.45                               | 5.68                    | 0.14                                      | 10.6                             |
| France          | 10.22                           | 1.63                                | 20,900                  | 1.28                               | 8.59                    | 0.25                                      | 6.3                              |
| Germany         | 30.01                           | 5.54                                | 84,931                  | 4.50                               | 24.47                   | 0.84                                      | 5.4                              |
| Greece          | 0.56                            | 0.05                                | 1,361                   | 0.09                               | 0.51                    | 0.01                                      | 11.5                             |
| Hungary         | 0.73                            | 0.08                                | 5,696                   | 0.08                               | 0.66                    | 0.02                                      | 9.5                              |
| Italy           | 20.37                           | 2.29                                | 34,226                  | 1.95                               | 18.07                   | 0.57                                      | 8.9                              |
| Luxembourg      | 1.03                            | 0.26                                | 4,400                   | 0.21                               | 0.77                    | 0.04                                      | 3.9                              |
| Netherlands     | 2.99                            | 0.78                                | 9,224                   | 0.43                               | 2.22                    | 0.12                                      | 3.8                              |
| Poland          | 4.80                            | 0.82                                | 21,700                  | 0.35                               | 3.97                    | 0.13                                      | 5.8                              |
| Portugal        | 0.91                            | 0.06                                | 1,000                   | 0.04                               | 0.85                    | 0.01                                      | 14.9                             |
| Romania         | 1.37                            | 0.13                                | 21,920                  | 0.11                               | 1.24                    | 0.10                                      | 10.6                             |
| Slovakia        | 2.23                            | 0.43                                | 10,553                  | 0.27                               | 1.80                    | 0.11                                      | 5.2                              |
| Slovenia        | 0.61                            | 0.13                                | 4,069                   | 0.07                               | 0.48                    | 0.06                                      | 4.6                              |
| Spain           | 9.67                            | 1.42                                | 18,645                  | 0.99                               | 8.25                    | 0.16                                      | 6.8                              |
| Sweden          | 5.20                            | 1.07                                | 16,000                  | 0.87                               | 4.13                    | 0.21                                      | 4.8                              |
| United Kingdom  | 7.33                            | 1.80                                | 14,469                  | 0.94                               | 5.53                    | 0.22                                      | 4.1                              |
| <b>Total EU</b> | <b>123.55</b>                   | <b>20.67</b>                        | <b>320,392</b>          | <b>15.10</b>                       | <b>102.88</b>           | <b>3.88</b>                               | <b>6.0</b>                       |

<sup>1</sup> Gross capital spending on plant, machinery and construction work. Spending on land, existing buildings, and intangible assets is excluded.

Source: Employment data are provided by Eurofer while monetary values are Oxford Economics estimates based mainly on the Eurostat dataset, 'Annual detailed enterprise statistics for industry'. The industry is defined as the NACE sector 24.1, i.e. 'manufacture of basic iron and steel and of ferro-alloys'.

**Fig. 121. Total GVA contribution by channel, country and broad industrial sector**

| € billion                             | Direct GVA impact | Indirect GVA impact <sup>1</sup> | Induced GVA impact <sup>1</sup> | Total GVA impact |
|---------------------------------------|-------------------|----------------------------------|---------------------------------|------------------|
| Austria                               | 1.72              | 3.14                             | 1.65                            | 6.51             |
| Belgium                               | 1.27              | 4.19                             | 1.73                            | 7.19             |
| Bulgaria                              | 0.02              | 0.21                             | 0.09                            | 0.32             |
| Croatia                               | 0.005             | 0.05                             | 0.04                            | 0.10             |
| Cyprus                                | -                 | 0.04                             | 0.02                            | 0.06             |
| Czech Republic                        | 0.55              | 1.50                             | 0.59                            | 2.64             |
| Denmark                               | 0.02              | 0.55                             | 0.34                            | 0.91             |
| Estonia                               | -                 | 0.05                             | 0.03                            | 0.08             |
| Finland                               | 0.59              | 2.45                             | 1.00                            | 4.04             |
| France                                | 1.63              | 7.23                             | 4.31                            | 13.18            |
| Germany                               | 5.54              | 16.17                            | 8.20                            | 29.90            |
| Greece                                | 0.05              | 0.44                             | 0.28                            | 0.77             |
| Hungary                               | 0.08              | 0.44                             | 0.24                            | 0.76             |
| Ireland                               | -                 | 0.36                             | 0.25                            | 0.61             |
| Italy                                 | 2.29              | 11.98                            | 4.75                            | 19.03            |
| Latvia                                | -                 | 0.04                             | 0.03                            | 0.07             |
| Lithuania                             | -                 | 0.05                             | 0.04                            | 0.10             |
| Luxembourg                            | 0.26              | 0.30                             | 0.12                            | 0.68             |
| Malta                                 | -                 | 0.02                             | 0.01                            | 0.03             |
| Netherlands                           | 0.78              | 2.88                             | 1.30                            | 4.96             |
| Poland                                | 0.82              | 3.29                             | 1.33                            | 5.44             |
| Portugal                              | 0.06              | 0.72                             | 0.37                            | 1.15             |
| Romania                               | 0.13              | 0.78                             | 0.49                            | 1.40             |
| Slovakia                              | 0.43              | 0.68                             | 0.31                            | 1.42             |
| Slovenia                              | 0.13              | 0.41                             | 0.17                            | 0.71             |
| Spain                                 | 1.42              | 5.67                             | 3.32                            | 10.41            |
| Sweden                                | 1.07              | 2.75                             | 1.28                            | 5.10             |
| United Kingdom                        | 1.80              | 5.04                             | 3.15                            | 9.99             |
| <b>Total EU-28</b>                    | <b>20.67</b>      | <b>71.44</b>                     | <b>35.47</b>                    | <b>127.58</b>    |
| <i>Of which, by broad sector:</i>     |                   |                                  |                                 |                  |
| Basic iron & steel manufacturing      | 20.67             | -                                | -                               | 20.67            |
| Utilities, mining & energy products   | -                 | 8.67                             | 1.68                            | 10.35            |
| Other goods production                | -                 | 11.52                            | 6.55                            | 18.07            |
| Wholesale & retail services           | -                 | 12.14                            | 5.05                            | 17.19            |
| Real estate activities & construction | -                 | 5.13                             | 7.79                            | 12.92            |
| Transport & communications            | -                 | 7.03                             | 2.68                            | 9.71             |
| Business & financial activities       | -                 | 15.43                            | 6.27                            | 21.69            |
| Catering, personal & social services  | -                 | 11.52                            | 5.45                            | 16.97            |

<sup>1</sup> The indirect and induced impacts for each country reflect the impact of the EU-wide steel industry on activity in that country, not the impact of that country's European steel industry on activity across the EU.

**Fig. 122. Total employment contribution by channel, country and broad industrial sector**

| Headcount                             | Direct jobs impact | Indirect jobs impact <sup>1</sup> | Induced jobs impact <sup>1</sup> | Total jobs impact |
|---------------------------------------|--------------------|-----------------------------------|----------------------------------|-------------------|
| Austria                               | 14,311             | 42,856                            | 20,040                           | 77,207            |
| Belgium                               | 10,587             | 61,050                            | 19,765                           | 91,402            |
| Bulgaria                              | 2,450              | 12,741                            | 6,018                            | 21,209            |
| Croatia                               | 190                | 2,012                             | 1,508                            | 3,710             |
| Cyprus                                | 0                  | 1,118                             | 577                              | 1,695             |
| Czech Republic                        | 15,609             | 51,809                            | 17,560                           | 84,978            |
| Denmark                               | 368                | 4,790                             | 3,415                            | 8,573             |
| Estonia                               | 0                  | 1,610                             | 979                              | 2,589             |
| Finland                               | 7,783              | 37,130                            | 11,246                           | 56,159            |
| France                                | 20,900             | 116,660                           | 62,430                           | 199,990           |
| Germany                               | 84,931             | 316,922                           | 148,987                          | 550,839           |
| Greece                                | 1,361              | 12,874                            | 7,411                            | 21,646            |
| Hungary                               | 5,696              | 18,522                            | 9,692                            | 33,910            |
| Ireland                               | 0                  | 3,347                             | 2,651                            | 5,998             |
| Italy                                 | 34,226             | 229,411                           | 76,856                           | 340,492           |
| Latvia                                | 0                  | 2,395                             | 1,813                            | 4,208             |
| Lithuania                             | 0                  | 2,859                             | 2,662                            | 5,521             |
| Luxembourg                            | 4,400              | 1,473                             | 505                              | 6,378             |
| Malta                                 | 0                  | 405                               | 265                              | 670               |
| Netherlands                           | 9,224              | 27,353                            | 13,854                           | 50,431            |
| Poland                                | 21,700             | 172,479                           | 79,875                           | 274,054           |
| Portugal                              | 1,000              | 28,825                            | 13,687                           | 43,512            |
| Romania                               | 21,920             | 35,847                            | 33,856                           | 91,623            |
| Slovakia                              | 10,553             | 19,458                            | 8,874                            | 38,885            |
| Slovenia                              | 4,069              | 10,156                            | 4,093                            | 18,318            |
| Spain                                 | 18,645             | 143,903                           | 72,418                           | 234,966           |
| Sweden                                | 16,000             | 44,323                            | 16,740                           | 77,063            |
| United Kingdom                        | 14,469             | 68,731                            | 39,692                           | 122,892           |
| <b>Total EU-28</b>                    | <b>320,392</b>     | <b>1,471,057</b>                  | <b>677,469</b>                   | <b>2,468,919</b>  |
| <i>Of which, by broad sector:</i>     |                    |                                   |                                  |                   |
| Basic iron & steel manufacturing      | 320,392            | -                                 | -                                | 320,392           |
| Utilities, mining & energy products   | -                  | 91,026                            | 17,142                           | 108,168           |
| Other goods production                | -                  | 287,166                           | 197,722                          | 484,888           |
| Wholesale & retail services           | -                  | 361,776                           | 149,277                          | 511,053           |
| Real estate activities & construction | -                  | 39,864                            | 25,553                           | 65,417            |
| Transport & communications            | -                  | 144,862                           | 45,720                           | 190,582           |
| Business & financial activities       | -                  | 273,821                           | 98,640                           | 372,462           |
| Catering, personal & social services  | -                  | 272,543                           | 143,415                          | 415,958           |

<sup>1</sup> The indirect and induced impacts for each country reflect the impact of the EU-wide steel industry on activity in that country, not the impact of that country's EU steel industry on activity across the EU.

**Fig. 123. GVA and employment contributions as a share of national economies**

|                    | Direct<br>GVA as<br>%<br>manufac-<br>turing<br>GVA | Direct<br>GVA as<br>%<br>national<br>GVA | Direct<br>jobs as %<br>manufac-<br>turing<br>jobs | Direct<br>jobs as %<br>national<br>jobs | Total<br>GVA<br>impact as<br>%<br>national<br>GVA | Total<br>jobs<br>impact as<br>%<br>national<br>jobs |
|--------------------|----------------------------------------------------|------------------------------------------|---------------------------------------------------|-----------------------------------------|---------------------------------------------------|-----------------------------------------------------|
| Austria            | 3.30%                                              | 0.53%                                    | 2.28%                                             | 0.33%                                   | 2.00%                                             | 1.78%                                               |
| Belgium            | 2.47%                                              | 0.33%                                    | 2.15%                                             | 0.23%                                   | 1.89%                                             | 1.96%                                               |
| Bulgaria           | 0.33%                                              | 0.05%                                    | 0.45%                                             | 0.08%                                   | 0.78%                                             | 0.70%                                               |
| Croatia            | 0.08%                                              | 0.01%                                    | 0.07%                                             | 0.01%                                   | 0.26%                                             | 0.27%                                               |
| Cyprus             | -                                                  | -                                        | -                                                 | -                                       | 0.39%                                             | 0.47%                                               |
| Czech Republic     | 1.50%                                              | 0.36%                                    | 1.21%                                             | 0.31%                                   | 1.74%                                             | 1.70%                                               |
| Denmark            | 0.06%                                              | 0.01%                                    | 0.10%                                             | 0.01%                                   | 0.38%                                             | 0.31%                                               |
| Estonia            | -                                                  | -                                        | -                                                 | -                                       | 0.44%                                             | 0.40%                                               |
| Finland            | 2.34%                                              | 0.32%                                    | 2.43%                                             | 0.31%                                   | 2.16%                                             | 2.23%                                               |
| France             | 0.80%                                              | 0.08%                                    | 0.72%                                             | 0.07%                                   | 0.66%                                             | 0.71%                                               |
| Germany            | 1.08%                                              | 0.20%                                    | 1.17%                                             | 0.19%                                   | 1.06%                                             | 1.26%                                               |
| Greece             | 0.45%                                              | 0.03%                                    | 0.44%                                             | 0.04%                                   | 0.50%                                             | 0.59%                                               |
| Hungary            | 0.35%                                              | 0.08%                                    | 0.77%                                             | 0.13%                                   | 0.79%                                             | 0.78%                                               |
| Ireland            | -                                                  | -                                        | -                                                 | -                                       | 0.24%                                             | 0.30%                                               |
| Italy              | 1.05%                                              | 0.15%                                    | 0.93%                                             | 0.15%                                   | 1.25%                                             | 1.50%                                               |
| Latvia             | -                                                  | -                                        | -                                                 | -                                       | 0.25%                                             | 0.47%                                               |
| Lithuania          | -                                                  | -                                        | -                                                 | -                                       | 0.40%                                             | 0.41%                                               |
| Luxembourg         | 10.34%                                             | 0.55%                                    | 13.09%                                            | 1.76%                                   | 1.44%                                             | 2.55%                                               |
| Malta              | -                                                  | -                                        | -                                                 | -                                       | 0.29%                                             | 0.35%                                               |
| Netherlands        | 1.24%                                              | 0.12%                                    | 1.35%                                             | 0.13%                                   | 0.78%                                             | 0.69%                                               |
| Poland             | 1.32%                                              | 0.22%                                    | 0.84%                                             | 0.13%                                   | 1.46%                                             | 1.70%                                               |
| Portugal           | 0.32%                                              | 0.04%                                    | 0.15%                                             | 0.02%                                   | 0.73%                                             | 0.94%                                               |
| Romania            | 0.81%                                              | 0.09%                                    | 1.81%                                             | 0.26%                                   | 0.94%                                             | 1.10%                                               |
| Slovakia           | 3.33%                                              | 0.60%                                    | 2.22%                                             | 0.42%                                   | 1.97%                                             | 1.56%                                               |
| Slovenia           | 1.78%                                              | 0.37%                                    | 2.15%                                             | 0.50%                                   | 1.98%                                             | 2.24%                                               |
| Spain              | 1.42%                                              | 0.14%                                    | 1.01%                                             | 0.10%                                   | 1.03%                                             | 1.28%                                               |
| Sweden             | 2.01%                                              | 0.29%                                    | 2.70%                                             | 0.33%                                   | 1.38%                                             | 1.57%                                               |
| United Kingdom     | 0.88%                                              | 0.08%                                    | 0.57%                                             | 0.04%                                   | 0.46%                                             | 0.36%                                               |
| <b>Total EU-28</b> | <b>1.13%</b>                                       | <b>0.15%</b>                             | <b>1.06%</b>                                      | <b>0.14%</b>                            | <b>0.96%</b>                                      | <b>1.08%</b>                                        |

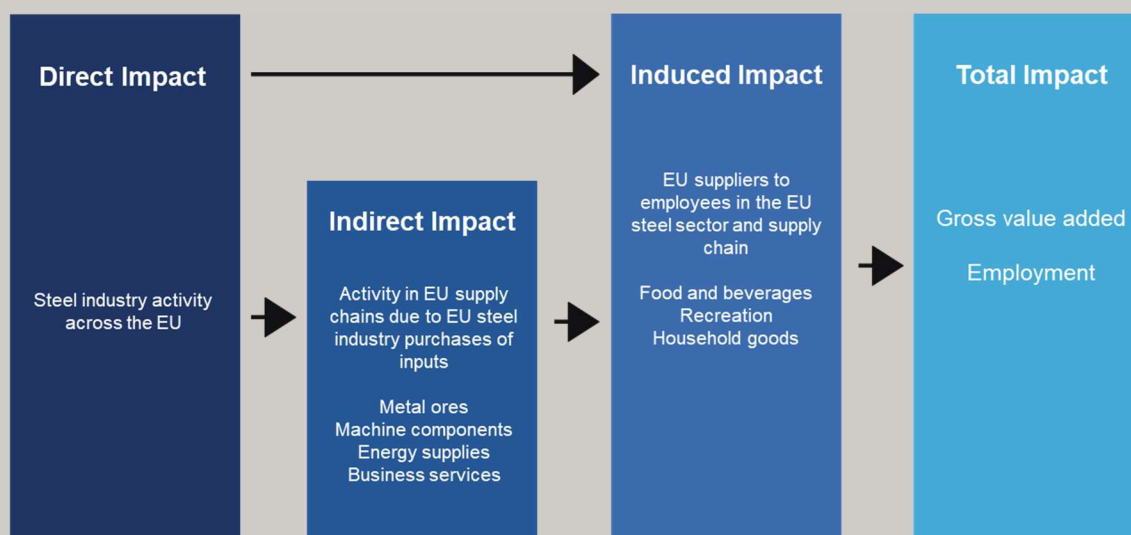
## 6. APPENDIX 2: METHODOLOGY

### ECONOMIC IMPACT MODELLING

Economic impact modelling is a standard tool used to quantify the economic contribution of an industrial sector, company, or investment project. Impact analysis traces the economic impact of a company's activities through three separate channels:

- **Direct impact** – the activity of the European steel industry itself.
- **Indirect impact** – the activity across the EU that is supported as a result of the procurement of goods and services by the European steel sector.
- **Induced impact** – the activity across the EU supported by the spending of the European steel industry workforce, and by the spending of workers in the sector's supply chain.

Fig. 124. Direct, indirect, induced and total economic impacts



#### Direct Impacts

The direct contributions were estimated using employment data provided by EUROFER, and financial values found in the Eurostat 'Annual detailed enterprise statistics for industry' database. The sector is defined by the 'NACE rev 2' sector 24.1, i.e. 'manufacture of basic iron and steel and of ferro-alloys'. Missing financial values were estimated by Oxford Economics taking into account relevant ratios found in the database, and information from other official sources.

#### Indirect and induced impacts

Indirect and induced impacts were estimated using Oxford Economics' Global Impact Model. Indirect impacts were worked out in three steps:

- For each country, total procurement from other sectors was taken to be the difference between the sector's total value of production and its own GVA, as sourced from the Eurostat database.
- The pattern of procurement for each country of purchaser was estimated, by type of product and country of supplier, taking into account ratios in 'input-output tables'

sourced from the OECD.

- This pattern of procurement was then combined with ratios from the same set of input-output tables, to arrive at the indirect GVA impact by country of supplier.

As the model includes a 'rest of the world' sector, the indirect impacts captured include all of those relating to:

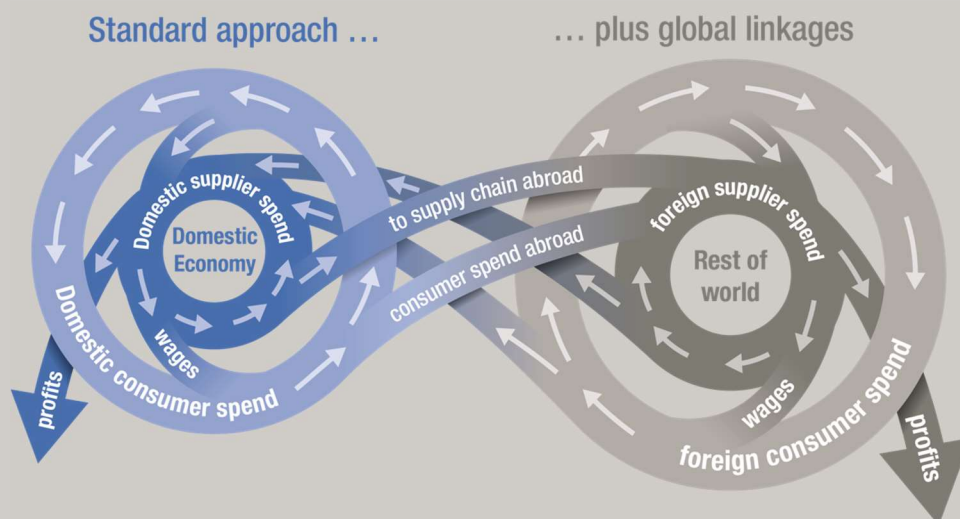
- transactions within each EU state member state;
- cross-border transactions within the EU; and
- purchases of EU supplies by businesses that are in the European steel industry's supply chain but located outside of the EU.

The induced GVA impact was then estimated in two stages. The impact relating to staff in the supply chain was worked out alongside the indirect impact, using further ratios from the input-output tables. Induced impacts relating to the steel industry's own employees were added to that, using estimates of steel industry employment costs (the major element of GVA, and found in the Eurostat dataset) as the starting point. Induced impacts include all those relating to:

- transactions within each EU state member state;
- cross-border transactions within the EU; and
- purchases of EU-sourced goods and services by workers in the European steel industry's supply chain outside of the EU.

The Global Impact Model therefore captures the full range of impacts, including cross-border 'feedback' effects that would be missed by a more traditional economic impact modelling approach.

**Fig. 125. The Oxford Economics Global Impact Model**



Employment impacts were worked out from the GVA impacts, taking into account official data for GVA per job, separately for each EU country and on an industry-by-industry basis.

## 7. APPENDIX 3: INDUSTRIAL SECTOR CLASSIFICATION

| Report category for indirect, induced and total impacts | ISIC code | Industrial sector                                          |
|---------------------------------------------------------|-----------|------------------------------------------------------------|
| Utilities, mining & energy                              | 40-41     | Electricity, gas and water supply                          |
|                                                         | 10-14     | Mining and quarrying                                       |
|                                                         | 23        | Coke, refined petroleum products and nuclear fuel          |
| Other goods production                                  | 15-16     | Food products, beverages and tobacco                       |
|                                                         | 17-19     | Textiles, textile products, leather and footwear           |
|                                                         | 20        | Wood and products of wood and cork                         |
|                                                         | 21-22     | Pulp, paper, paper products, printing and publishing       |
|                                                         | 24        | Chemicals and chemical products                            |
|                                                         | 25        | Rubber and plastics products                               |
|                                                         | 26        | Other non-metallic mineral products                        |
|                                                         | 27        | Basic metals                                               |
|                                                         | 28        | Fabricated metal products                                  |
|                                                         | 29        | Machinery and equipment, nec                               |
|                                                         | 30; 32-33 | Computer, electronic and optical equipment                 |
|                                                         | 31        | Electrical machinery and apparatus, nec                    |
|                                                         | 34        | Motor vehicles, trailers and semi-trailers                 |
|                                                         | 35        | Other transport equipment                                  |
|                                                         | 36-37     | Manufacturing nec; recycling                               |
|                                                         | 01-05     | Agriculture, hunting, forestry and fishing                 |
| Wholesale & retail services                             | 50-52     | Wholesale and retail trade; repairs                        |
| Real estate activities & construction                   | 70        | Real estate activities                                     |
|                                                         | 45        | Construction                                               |
| Transport & communications                              | 60-63     | Transport and storage                                      |
|                                                         | 64        | Post and telecommunications                                |
| Business & financial activities                         | 65-67     | Financial intermediation                                   |
|                                                         | 71        | Renting of machinery and equipment                         |
|                                                         | 72        | Computer and related activities                            |
|                                                         | 73-74     | R&D and other business activities                          |
| Catering, personal & social services                    | 55        | Hotels and restaurants                                     |
|                                                         | 75        | Public admin.; defence; compulsory social security         |
|                                                         | 80        | Education                                                  |
|                                                         | 85        | Health and social work                                     |
|                                                         | 90-93     | Other community, social and personal services <sup>1</sup> |
|                                                         | 95        | Private households with employed persons                   |

<sup>1</sup> Waste services are included in this sector.

**Europe, Middle East,  
and Africa:****Global headquarters**

Oxford Economics Ltd  
Abbey House  
121 St Aldates  
Oxford, OX1 1HB  
UK

**Tel:** +44 (0)1865 268900

**London**

Broadwall House  
21 Broadwall  
London, SE1 9PL  
UK

**Tel:** +44 (0)20 7803 1418

**Belfast**

Lagan House Sackville Street  
Lisburn  
County Antrim, BT27 4AB  
UK

**Tel:** + 44 (0)2892 635400

**Paarl**

12 Cecilia Street  
Paarl 7646  
South Africa

**Tel:** +27(0)21 863-6200

**Frankfurt**

Mainzer Landstraße 41  
60329 Frankfurt am Main  
Germany

**Tel:** +49 69 95 925 280

**Paris**

3 Square Desaix  
75015 Paris  
France

**Tel:** +33 (0)1 78 91 50 52

**Milan**

Via Cadorna 3  
20080 Albairate (MI)  
Italy

**Tel:** +39 02 9406 1054

**Dubai**

Jumeirah Lake Towers  
Dubai,  
UAE

**Tel:** +971 56 396 7998

**Americas:****New York**

5 Hanover Square, 19th Floor  
New York, NY 10004  
USA

**Tel:** +1 (646) 786 1879

**Philadelphia**

303 West Lancaster Avenue  
Suite 2e  
Wayne, PA 19087  
USA

**Tel:** +1 (610) 995 9600

**Mexico City**

Emerson 150, Despacho 802  
Col. Polanco, Miguel Hidalgo  
México D.F., C.P. 11560

**Tel:** +52 (55) 52503252

**Boston**

51 Sawyer Road  
Building 2 - Suite 220  
Waltham, MA 02453  
USA

**Tel:** +1 (617) 206 6112

**Chicago**

980 N. Michigan Avenue,  
Suite 1412 Chicago  
Illinois, IL 60611  
USA

**Tel:** +1 (773) 372-5762

**Los Angeles**

2500 Broadway, Building F,  
Suite F-125  
Santa Monica, 90404

**Tel:** +1 (424) 238-4331

**Florida**

8201 Peters Road,  
Suite 1000  
Plantation,  
Miami 33324  
USA

**Tel:** +1 (954) 916 5373

**Toronto**

2425 Matheson Blvd East  
8th Floor Mississauga, Ontario  
L4W 5K4  
Canada

**Tel:** +1 (905) 361 6573

**Asia Pacific:****Singapore**

6 Battery Road  
#38-05  
Singapore 049909

**Tel:** +65 6850 0110

**Hong Kong**

30/F, Suite 3112  
Entertainment Building  
30 Queen's Road Central

**Tel:** +852 3103 1096

**Tokyo**

4F Tekko Building  
1-8-2 Marunouchi  
Tokyo  
100-0005

**Tel:** +81 3 6870 7175

**Sydney**

Level 56, MLC Centre  
19-21 Martin Place  
Sydney, NSW

**Tel:** +61 2 9220 1707

**Email:**

[mailbox@oxfordeconomics.com](mailto:mailbox@oxfordeconomics.com)

**Website:**

[www.oxfordeconomics.com](http://www.oxfordeconomics.com)