OXFORD ECONOMICS

THE IMPACT OF THE EUROPEAN STEEL INDUSTRY ON THE EU ECONOMY

AN UPDATED AND EXTENDED ANALYSIS

JULY 2019

EUROFER
The European Steel Association

Oxford Economics

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EXECUTIVE SUMMARY

€148 billion

Total GVA supported across the EU by the region's steel industry in 2017.

This includes support provided to other sectors through supply chain and staff spending impacts.

This report, commissioned by EUROFER and written by Oxford Economics, updates the results of a previous study examining the impact of the European steel industry on the EU economy. It takes three spending channels into account, namely the 'direct impact', concerned with the industry's own activity, the 'indirect impact', relating to activity in its supply chain, and the 'induced impact', resulting from the wage-funded spending of both industry and supply chain workers. The modelling takes a comprehensive view of supply chain linkages, ensuring that all impacts relating to cross-border trade within the EU are captured, along with complex supply chains that cross in and out of the EU.

Furthermore, this study extends the previous analysis in two ways:

1) Taxes associated with the economic activity supported by the EU steel sector have been modelled in addition to the production and employment effects; and
2) An analysis of the impact of four key customer sectors, some of whose activity is arguably enabled by the use of EU-produced steel, is also included.

2.6 million

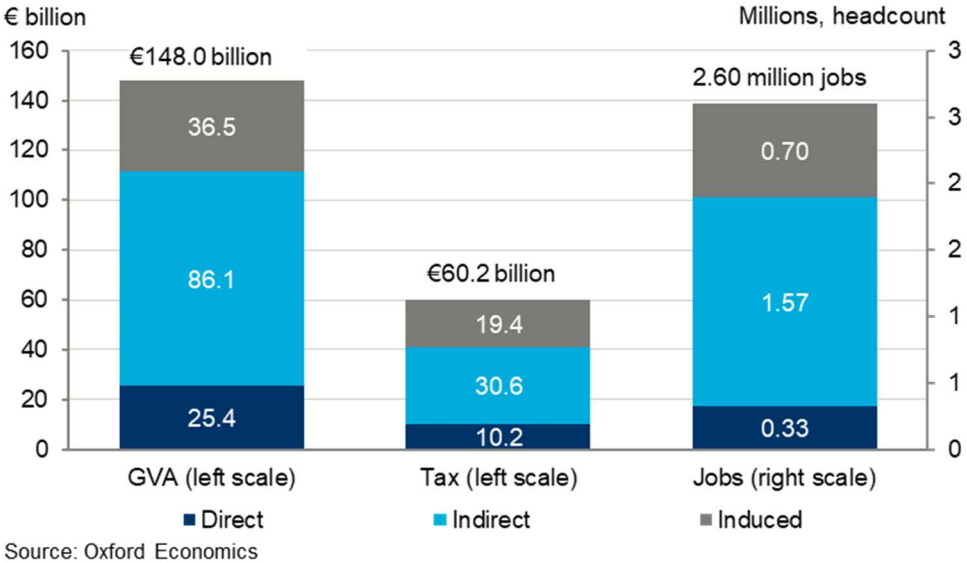
Total number of EU jobs supported through the three channels of impact in 2017.

Of these, just under 330,000 jobs were in the steel industry itself.

THE EUROPEAN STEEL INDUSTRY'S IMPACT ON PRODUCTION AND JOBS: UPDATED RESULTS

In 2017, the European steel industry made a €25 billion direct contribution to the standard 'gross value added' measure of EU-wide production (hereafter referred to as GVA). However, the industry's total GVA impact that year, when supply chain and staff spending impacts are also included, was much higher, at €148 billion (see Fig. 1). This overall contribution exceeded the total GVA produced in the region of Berlin in 2017.

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



Source: Oxford Economics

The indirect (supply chain) impact accounted for €86 billion of the steel industry's total GVA impact in 2017, and is spread across goods and services providers in all EU states and a wide range of industries. The induced (staff spending) impact, which is felt across a range of more consumer-facing sectors, is estimated to have been €37 billion.

7.9 x

The number of jobs supported through the three channels together is 7.9 times the steel industry's own employment.

This multiplier is much higher than typically found, as is the multiplier for GVA of 5.8.

The steel industry directly employed around 328,000 workers across 22 member states in 2017. But its total contribution to employment in the EU-28, through all three channels of impact, was again much bigger at 2.6 million jobs. To put that in context, the industry's overall jobs impact is greater than the total number of people employed in each of Slovakia, Finland, and Ireland.

The steel sector's total contribution to EU GVA is 5.8 times its direct impact alone, meaning that for every €1 of value-added activity in the sector itself, a further €4.80-worth of work is supported elsewhere in the EU economy, due to supply chain connections and wage-funded expenditure. The corresponding ratio for employment is 7.9, meaning that for every job in the industry, nearly seven roles are supported elsewhere through these knock-on effects for demand. These ratios, known as 'multipliers', are very high by the standards of a typical manufacturing sector of this size.

With production rising sharply in 2017, European steel industry GVA per worker is now around 21 percent above the average for the overall EU economy, and 20 percent higher than that of the EU manufacturing sector as a whole. This efficiency in the use of personnel partly reflects the capital-intensive nature of the industry, which spends €3.9 billion per annum on new machinery and building work.

THE INDUSTRY'S IMPACT ON TAX REVENUES: NEW RESULTS

€60 billion

Annual direct, indirect and induced tax revenues associated with steel.

This would have been sufficient in 2017 to fund the pay of 1.5 million teaching and healthcare professionals across the EU.

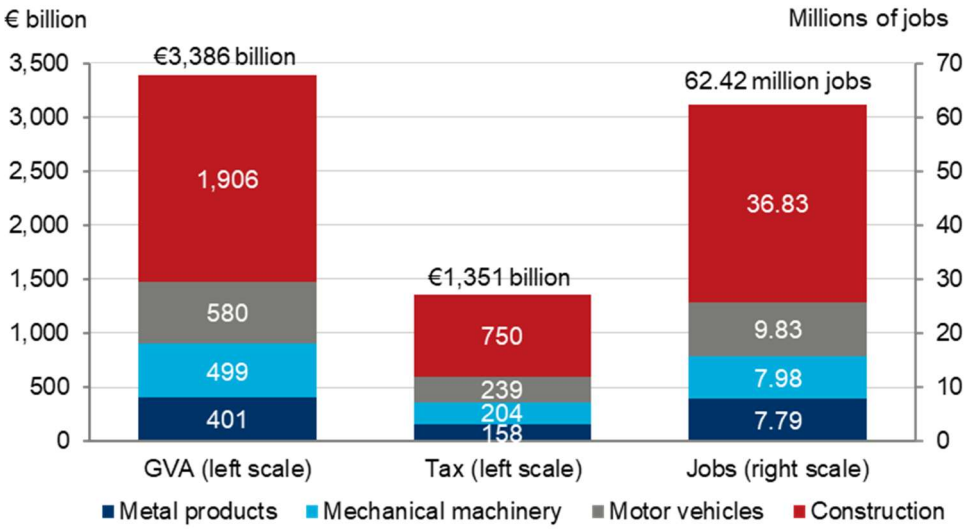
The direct tax impact—taxes paid by steel companies and their employees in the course of their work—is estimated to have been €10 billion in 2017. The total tax impact, which also includes taxes on activity in the indirect (supply chain) and induced (staff spending) channels, was around six times that value, at €60 billion. The direct tax revenues alone would have been sufficient to cover the average wages of 250,000 full-time teaching and healthcare professionals across the European Union, with the total tax impact sufficient to fund 1.5 million such staff.

NEW ANALYSIS OF THE WORK OF KEY CUSTOMER SECTORS

The four major customer sectors studied for this analysis are the manufacture of fabricated metal products, mechanical machinery, and motor vehicles, together with construction. Across these four industries combined, total direct GVA amounted to €1.35 trillion in 2017, supporting more than 24 million jobs and generating just over €500 billion of tax revenues. Taking the indirect and induced impacts into account too, they contributed almost €3.4 trillion to EU GVA in total, supporting 62 million jobs and €1.35 billion of tax revenues (see Fig. 2).[1]

[1] These impacts are completely additional to the impacts captured in the analysis of the steel industry, as indirect effects due to the customer sectors' purchases of steel are excluded. Indirect impacts relating to transactions between the customer sectors are also discounted.

Fig. 2. Total additional economic impact of four key customer sectors*



Source: Oxford Economics

* Impacts excluding those on and via steel manufacturers, and on and via each other.

One-third

Share of key customer sectors' additional impacts arguably 'enabled' by EU-produced steel.

Such a share would have been worth €1.1 trillion in 2017, supporting 19 million jobs.

Production of most of these industries' outputs would simply not be possible without the use of steel, or some alternative input performing essentially the same function. And based on the estimated share of EU-produced steel in the total 'steel and alternative resources' grouping, the proportion of additional customer sector impacts enabled by the use of EU steel looks to be, very broadly:

- three-fifths for motor vehicle and machinery manufacturing;
- two-fifths for metal product manufacturing; and
- one-eighth for construction activity.

This means that, across all four sectors combined, almost one-third of their additional economic impacts could be thought of as being 'enabled' by EU steel. So in 2017, that value would have been €1.1 trillion in terms of GVA, associated with 19 million jobs and €430 billion of tax revenues.

1. INTRODUCTION

The steel industry has had a longstanding and presence in Europe and remains important employer of skilled labour. Furthermore, as set out in Oxford Economics' 2018 report for EUROFER, the industry also 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.[2]

Crucially, steel makes a powerful contribution to the continent's standard of living, by forming a key input in the work of other industrial sectors. In turn, many of these customer industries produce items essential for the functioning of the wider EU economy, from hand tools to complex factory machinery, as well as lorries, trains and aircraft. Others produce items used directly by individuals in their everyday lives, from cutlery to cars. And steel is further used in the construction of homes and other buildings, bridges, pylons, and transmitters.

This report updates the estimates found in the 2018 Oxford Economics study, concerned with the industry's contribution to EU production and jobs in 2016, both through its own activity and by supporting demand for the outputs of other sectors. But in addition, the analysis has been extended in two ways. The sector's contribution to taxation is included alongside its impact on production and jobs. And the industry's role in further supporting the EU economy, by enabling activity in certain key customer industries, is also explored.

1.1 THE STEEL INDUSTRY'S STANDARD ECONOMIC FOOTPRINT

The first part of this report therefore quantifies the impact of the European steel industry on GVA, employment, and tax revenues, across the EU-28, in 2017.[3,4]

Here, three 'channels of 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.
- The induced impact, relating to further activity supported by household spending, to the extent that is effectively funded out of wages earned in the European steel industry or in its supply chain.

The impacts are estimated on a 'gross' basis, with no allowance for the alternative uses to which labour and other resources might otherwise be put.

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[2] Oxford Economics for EUROFER, *The impact of the European steel industry on the EU economy*, May 2018.

[3] The 'European steel industry' in this report means the 'manufacture of basic iron and steel and of ferro-alloys' —group 24.1 in the 'NACE rev 2' industrial classification used by the EU statistical office, Eurostat—in the EU-28.

[4] GVA (gross value added) refers to the additional value created by a sector, on top of (i.e. excluding) the cost of supplies from other industries. It can be thought of as revenues covering the sector's employment and capital costs, plus any net profit. It is measured at the 'basic', net-of-tax price received by the producer, rather than the 'market' price paid by the purchaser. But other than that the concept is the same as gross domestic product (GDP), which is the standard measure of production for a national economy.

To capture the true extent of the indirect and induced impacts, a comprehensive modelling exercise was undertaken.[5] The EU states were modelled alongside each other, and the rest of the world, allowing the impact of cross-border transactions in all directions to be captured. The taxes covered, meanwhile, include those paid by businesses, and by employees—both on their earnings and on their consequent wage-funded spending (see Fig. 3).

Fig. 3. Overview of tax payments captured by this report

Taxation category	Coverage
Employer taxes	Employers' social security contributions
Other business taxes	Corporation tax, taxes on production (such as on business property and vehicles), and taxes on products levied on business purchases (such as fuel duties, 'green' levies, and unrefunded VAT)
Employee taxes	Income tax and social security contributions levied on employees' wages, and on self-employed income
Consumer taxes	Taxes on products levied on the household spending of employees and the self-employed (such as VAT and excise duties). All such taxes are allocated to the induced channel.

1.2 THE ACTIVITY OF KEY STEEL-USING SECTORS

The second part of the report analyses the activities of four steel-making sectors, namely the manufacture of fabricated metal products, mechanical machinery, and motor vehicles, together with construction. These sectors are defined rather broadly, so that, for example, the 'motor vehicle manufacturing' sector includes the manufacture of parts and accessories, as well as trailers.

The analysis looks at the contribution of these sectors to EU GVA, jobs and tax revenues, through the three channels of impact, on different bases. One such base excludes impacts on and via the steel industry, and impacts on and via the other customer sectors, so that the resulting contributions are completely additional to those already captured in the analysis of the steel sector's own effects. The study goes on to give an indication of the share of those impacts that might be said to be 'enabled' by the use of EU-produced steel.

1.3 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, employment, and tax revenues.
- Chapter 3 sets out the industry's wider economic footprint, taking into account the indirect and induced channels of impact.
- Chapter 4 describes the size and activities of the four key customer sectors, the wider economic footprint of those sectors, and the role of steel in facilitating those industries' work.
- Chapter 5 sets out results on a country-by-country basis.
- Three appendices cover results tables in detail, methodology, and the industry classification used for the indirect and induced impacts.

[5] The exercise used the recently-developed Oxford Economics Global Impact Model, described in Appendix 2.

2. THE EU STEEL INDUSTRY'S DIRECT ECONOMIC CONTRIBUTION

This chapter describes the scale of the economic activities of the European steel industry itself in 2017, including the direct contribution made to EU GVA, employment, and tax revenues.

As Fig. 4 shows, the industry employed almost 328,000 individuals in that year, when it produced €147.8 billion worth of output—a substantial 20 percent higher than in 2016. The proceeds of this activity were used to cover €17.9 billion of employment costs, and generated a further €7.5 billion in gross profits (before tax, interest and capital depreciation). These income streams together, some €25.4 billion, comprise the industry's direct contribution to GVA.

Fig. 4. Key parameters of the European steel industry

	Values in 2017[1]
Employment (headcount)	327,700
Value of production (€ billion)	147.8
Gross value added (GVA) (€ billion)	25.4
Of which: total employment costs	17.9
Total business, employer & employee taxes (€ billion)	10.2
Procurement (€ billion)	122.4
Capital expenditure[2] (€ billion)	3.9
Ratio of total production value to GVA	5.8
GVA per worker (€)	77,540
Production value as % total EU manufacturing	2.11%
GVA as % total EU manufacturing	1.28%
Jobs as % total EU manufacturing	1.07%
GVA as % total EU economy	0.18%
Jobs as % total EU economy	0.15%
Tax as % total EU economy, excluding taxes on consumers	0.21%

[1] Values relate to 'manufacture of basic iron and steel and of ferro-alloys' (NACE 24.1).

[2] Gross spending on machinery, equipment and construction work only. Excludes land, existing buildings, and intangible assets.

Source: EUROFER (employment data); Oxford Economics estimates based on Eurostat's 'Annual detailed enterprise statistics for industry', and on OECD tax-to-income ratios.

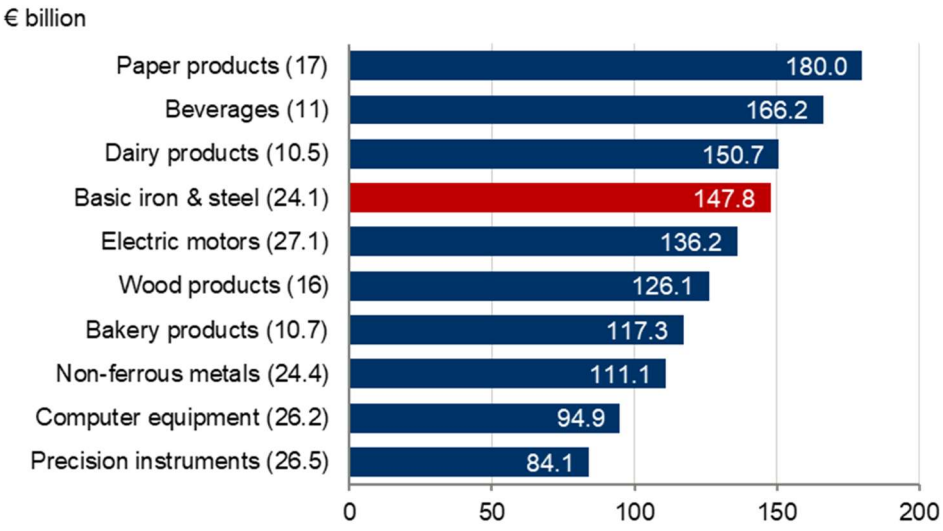
The direct GVA therefore accounted for 17 percent of the total value of production. The remainder—some €122.4 billion—was used to procure inputs into the production process, including raw materials, energy supplies, other non-capital goods, and services. These purchases result in the sector's indirect contribution to GVA, jobs, and tax, 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 new construction activity. And some €10.2 billion was paid to the governments of EU states in the form of business, employer and employee taxes.

2.1 VALUE OF PRODUCTION

To put the value of production, of €147.8 billion, in context, it is broadly comparable in scale to that of several other 'household name' EU-wide industries (see Fig. 5). It is, for example, not far short of the total production of alcoholic and non-alcoholic beverages, and significantly greater than the production of computer equipment. Basic steel production also exceeds the total production of non-ferrous metals, including precious metals.

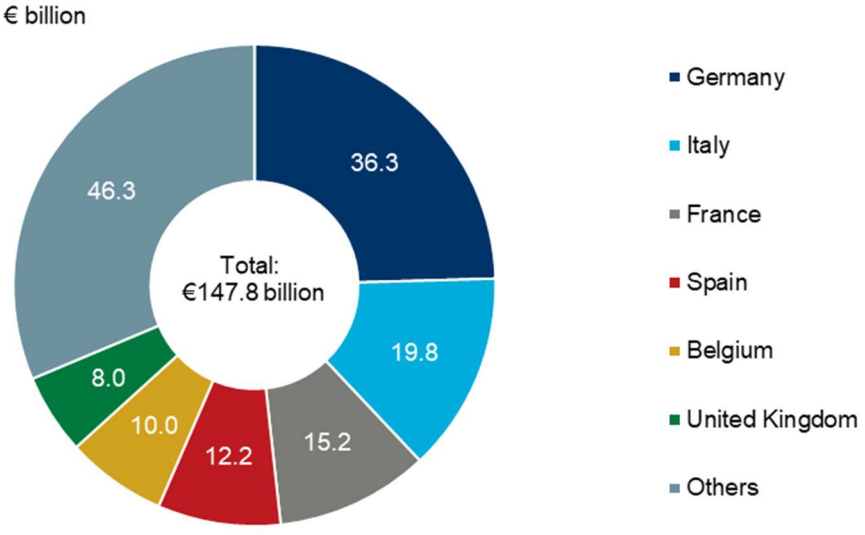
Fig. 5. Value of production compared with other EU industries



Source: Eurostat; Oxford Economics Figures in brackets are NACE classification codes

Six countries account for almost 70 percent of total activity, with Germany accounting for 25 percent, Italy for 13 percent, and France, Spain, Belgium and the UK for 5-10 percent each (see Fig. 6).

Fig. 6. Industry production by country

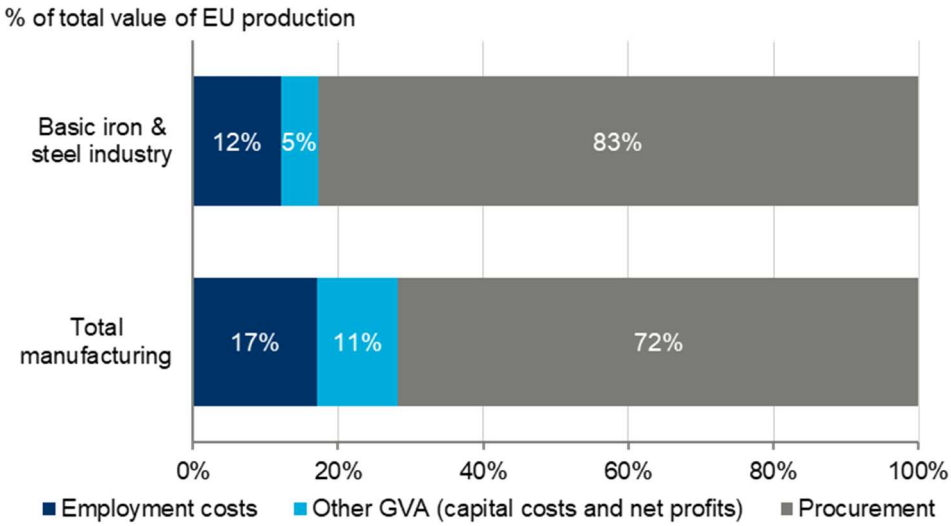


Source: Eurostat; Oxford Economics

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 (see Fig. 7).

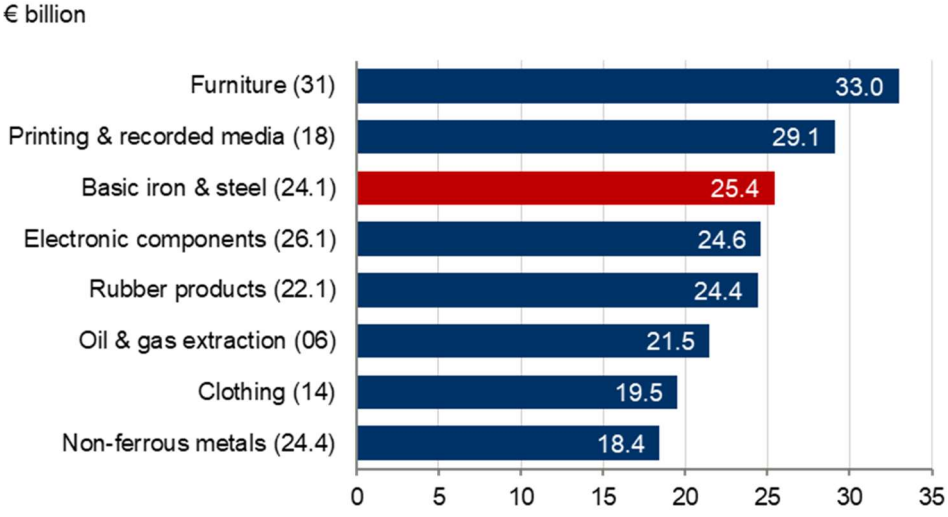
Fig. 7. Breakdown of production value by major cost component



Source: Eurostat; Oxford Economics

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, of €25.4 billion, is still larger than that of some other 'household name' sectors, including rubber products, oil and gas extraction, and clothing (see Fig. 8).

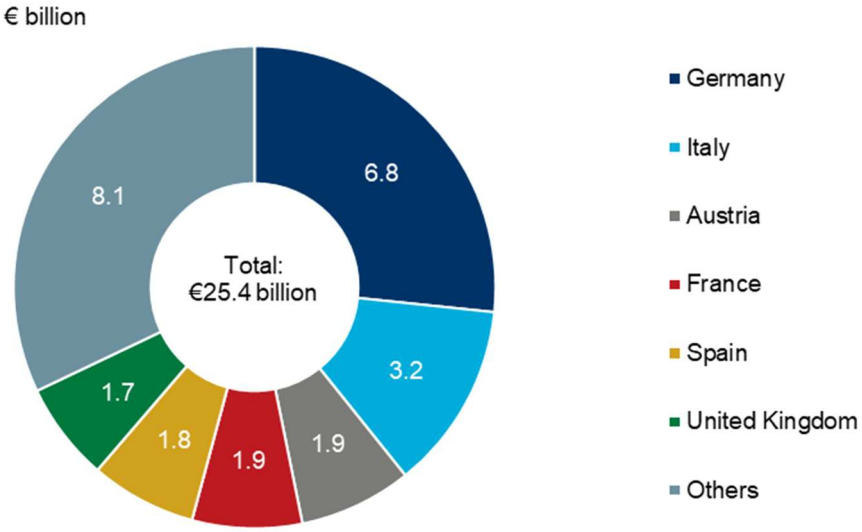
Fig. 8. GVA compared with other EU industries



Source: Eurostat; Oxford Economics Figures in brackets are NACE classification codes

By country, Germany and Italy are again the most significant producers on the GVA measure, with 27 percent and 13 percent of EU-wide activity respectively (see Fig. 9). Austria, France, Spain and the UK follow, with 7-8 percent each.

Fig. 9. Industry GVA by country



Source: Eurostat; 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 (0.7 percent), Austria (0.6 percent), and Luxembourg (0.5 percent), as well as Slovenia, Finland, Belgium, and the Czech Republic (0.4 percent each). The industry accounts for 1.3 percent of total manufacturing GVA across the Union, but this ratio is well above that in the cases of Luxembourg (7.9 percent), Slovakia (3.8 percent), Austria (3.3 percent), Finland (2.7 percent), Belgium (2.6 percent), and Sweden (2.4 percent).

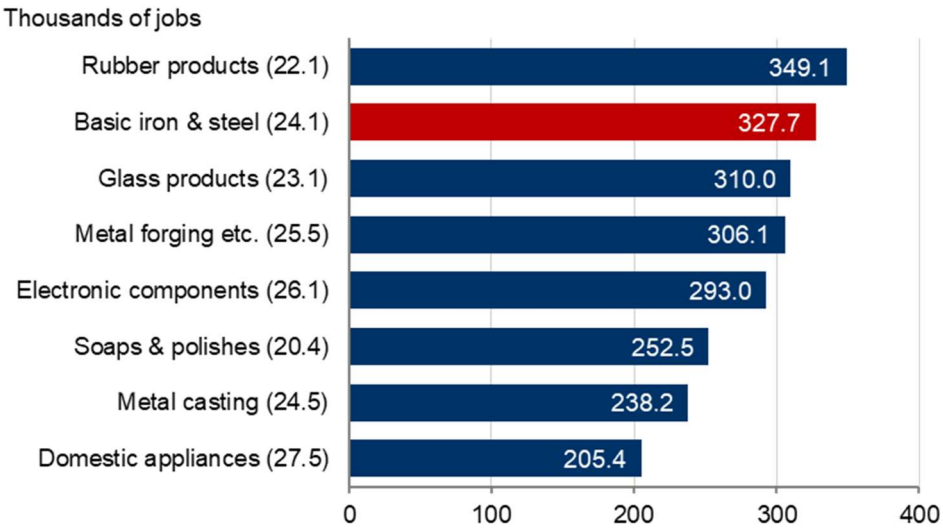
2.3 DIRECT EMPLOYMENT

Employment in the industry, at close to 328,000, is greater than that across the EU's glass product manufacturing, electronic component manufacturing, and domestic appliance manufacturing sectors (see Fig. 10).

By country, Germany accounts for 26 percent of EU-wide jobs, and Italy for 10 percent. They are followed by Poland, Romania, France and Spain, at 5-7 percent each (see Fig. 11). While the sector accounts for 0.1 percent of all jobs across the EU, it is relatively most important on this score in Luxembourg (1.8 percent of total national employment), Slovenia (0.5 percent), and Slovakia (0.4 percent). Austria, the Czech Republic, Finland, Sweden, and Romania (0.3 percent each) follow.

The share of EU manufacturing jobs accounted for by the sector is 1.1 percent. This ratio is much higher in Luxembourg (14.1 percent), Sweden (2.6 percent) and Finland (2.5 percent), followed by Austria, Belgium, and Slovakia (2.1 percent each).

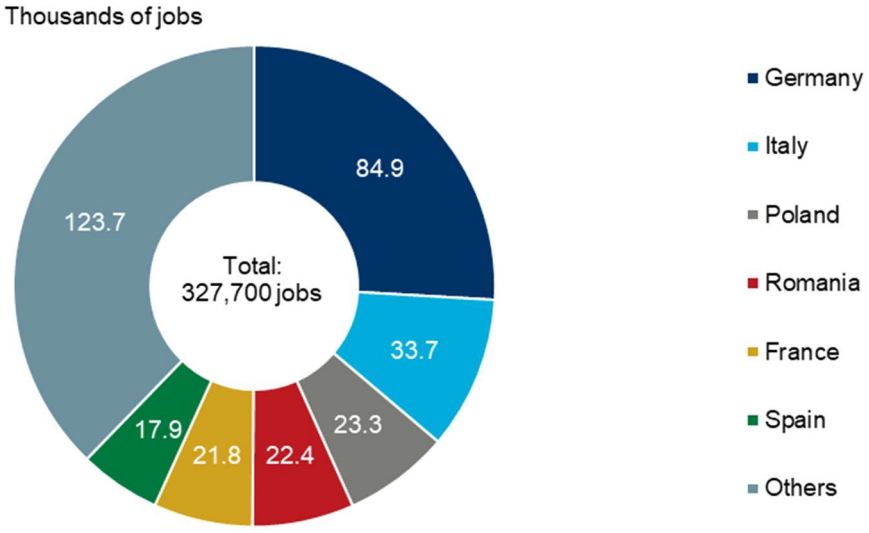
Fig. 10. Employment compared with other EU industries



Source: Eurostat; Oxford Economics

Figures in brackets are NACE classification codes

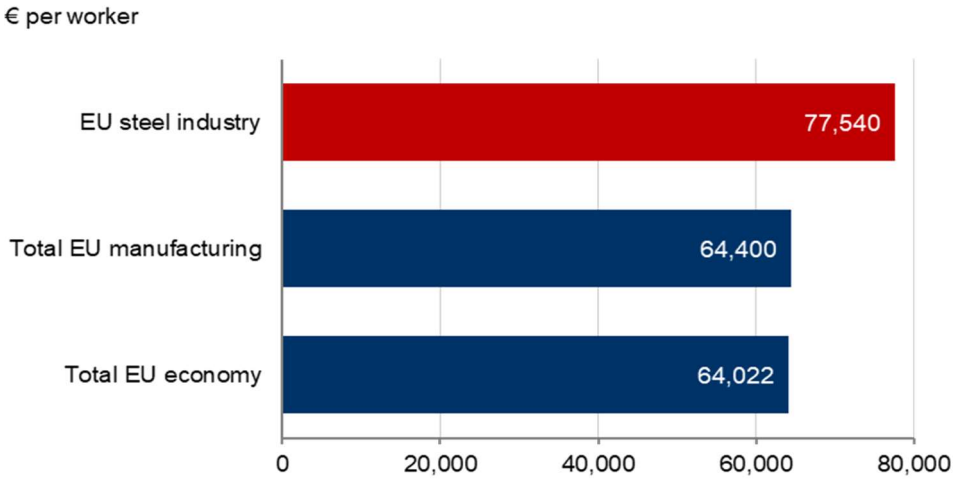
Fig. 11. Industry jobs by country



Source: Eurostat; Oxford Economics

Taking the European steel industry's GVA performance and employment together, its productivity (GVA per job) reached over €77,000 in 2017 (see Fig. 12). While employment increased compared with the previous year, this rise was significantly outpaced by the jump in production and associated GVA. This took industry productivity to 20 percent more than the average for all EU manufacturing, and 21 percent more than across the EU economy as a whole.

Fig. 12. Industry GVA per worker in context

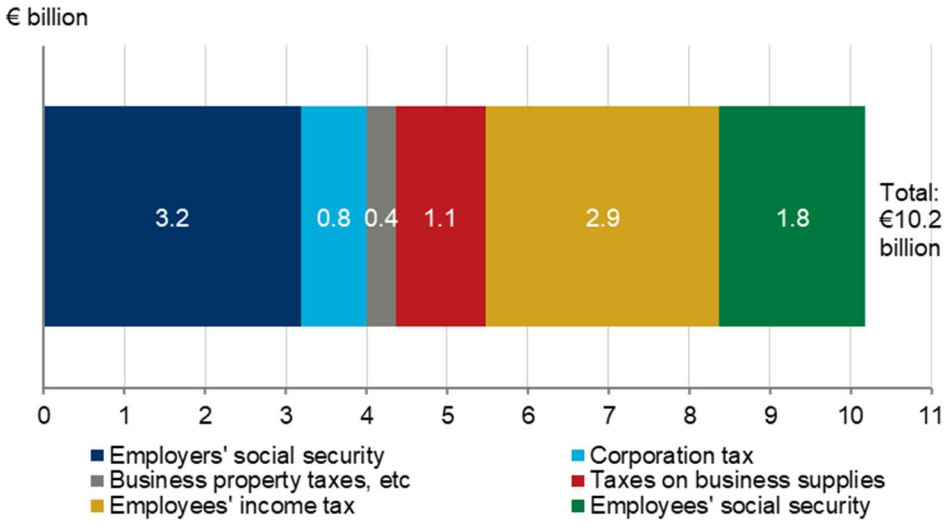


Source: Eurostat; Oxford Economics

2.4 DIRECT TAX CONTRIBUTION

In 2017, EU steel businesses and employees paid €10.2 billion in taxes of various kinds to national governments.[6] The values shown in Fig. 13 mean that employer taxes accounted for 31 percent of the estimated total, other business taxes for 23 percent, and employee taxes for the remaining 46 percent.

Fig. 13. Industry tax payments by type



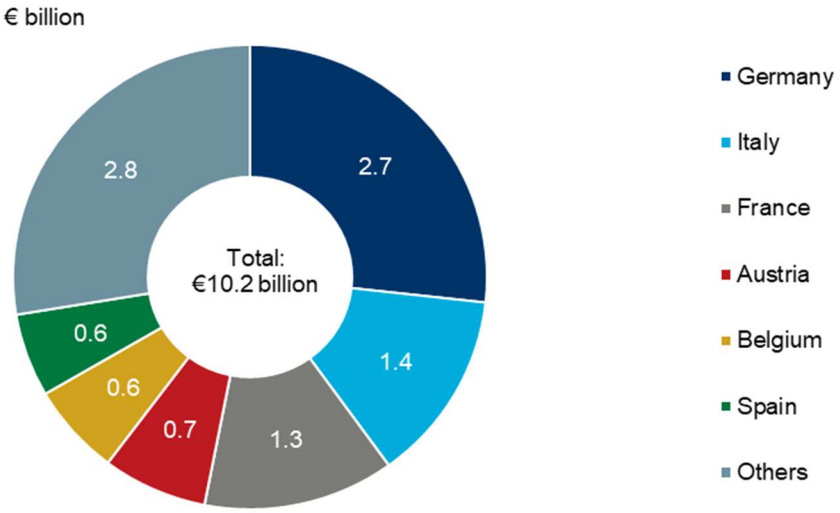
Source: Oxford Economics

[6] The tax figures in this report have been modelled by Oxford Economics based on the split in each sector's sales receipts between procurement, wages, social contributions, capital depreciation, and net profits, and various tax-to-income and tax-to-spending ratios sourced mainly from the OECD. They are not based on any data specifically relating to the industry, or to individual firms. Taxes on business-to-business transactions are allocated to the purchaser. Net sales taxes collected by businesses, but targeting household spending, are allocated to the final consumer, and so only captured in the 'induced' (employee spending) channel described in the next chapter.

The steel industry's direct tax contribution therefore amounted to 40 percent of its direct contribution to GVA. That compares with an estimated average of 35 percent of the relevant tax base across the EU economy as a whole.[7] This above-average ratio mainly reflects the impact of above-average wages on the effective rates of employer and employee income tax and social security payments.

Taking all of these direct tax payments together, Germany accounts for the largest share of the €10.2 billion, at 27 percent of the EU-wide total (Fig. 14). This is followed by Italy and France (13 percent each), and then Austria, Belgium and Spain (6-7 percent each). In total, these tax revenues would be sufficient to cover the full-time wages of broadly 250,000 full-time professionals in the teaching, health and social care sectors across the EU, including around 45,000 in Germany, and over 30,000 in each of Italy and France.[8]

Fig. 14. Overall industry tax payments by country



Source: Oxford Economics

2.5 PROCUREMENT OF GOODS AND SERVICES FROM OTHER SECTORS

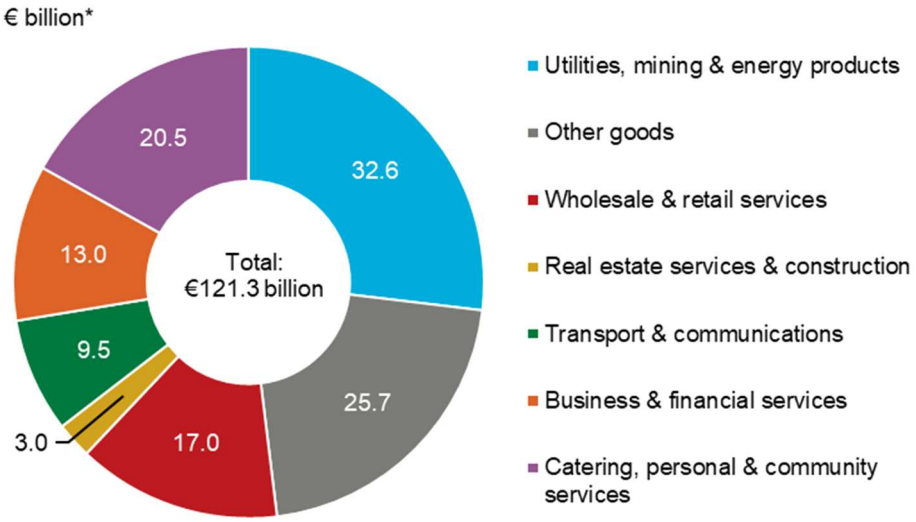
In total, businesses in the European steel sector purchased €122.4 billion of raw materials, energy supplies, other goods, and services, from other industries in 2017. Of this amount, the suppliers received an estimated €121.3 billion, after allowing for transactions taxes. Some 27 percent of the net-of-tax 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 (see Fig. 15).[9]

[7] Oxford Economics estimate based on Eurostat and OECD data. This relates to total EU taxes and social security contributions, excluding taxes on products purchased by households, as a share of total GVA (not GDP). The excluded taxes do not feature in the direct tax calculation.

[8] Based on the mean pay of full-time professional staff across the education, health and social work sectors in the Eurostat 2014 Structure of Earnings survey, uprated to 2017 values in line with average hourly pay for that sector, also sourced from Eurostat. Professionals in these sectors include teachers, doctors, and nurses.

[9] The industry classification used here is the OECD's now-supplanted 'ISIC rev 3' system, which is the basis for the Oxford Economics Global Industry Model. Details can be found in Appendix 3.

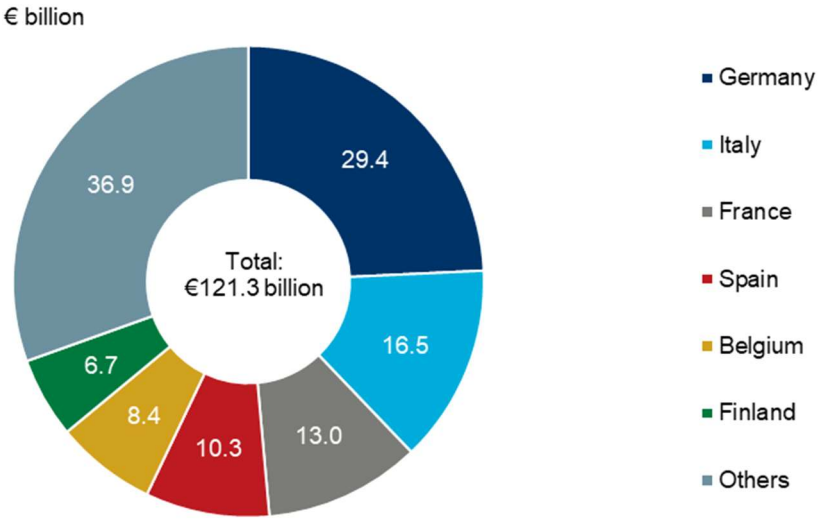
Fig. 15. Procurement by product type



Source: Oxford Economics * Net-of-tax amounts received by the suppliers

The German steel industry accounts for 24 percent of all of these purchases by value, the Italian industry for 14 percent, and French steel manufacturing for 11 percent (see Fig. 16). Spain, Belgium and Finland follow at between nine and six percent each.

Fig. 16. Procurement by country of purchaser



Source: Oxford Economics

2.6 CAPITAL EXPENDITURE

In 2017, these businesses also spent €3.9 billion on tangible capital items, excluding purchases of land and existing buildings (see Fig. 17). 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 57 percent of this capital expenditure was accounted for by firms in Germany, Italy, and Austria.

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 impacts calculated, which reflect the impact of procurement of non-capital items only.

Fig. 17. Capital expenditure by country and category

€ billion in 2017	Value[1]
Germany	1.1
Italy	0.7
Austria	0.4
Spain	0.3
United Kingdom	0.3
Poland	0.2
Belgium	0.2
Others	0.7
Total EU	3.9
Of which:	
Machinery & equipment	3.5
Construction & alterations to buildings	0.4

[1] Figures relate to gross capital expenditure, excluding purchases of land, existing buildings and intangible assets.

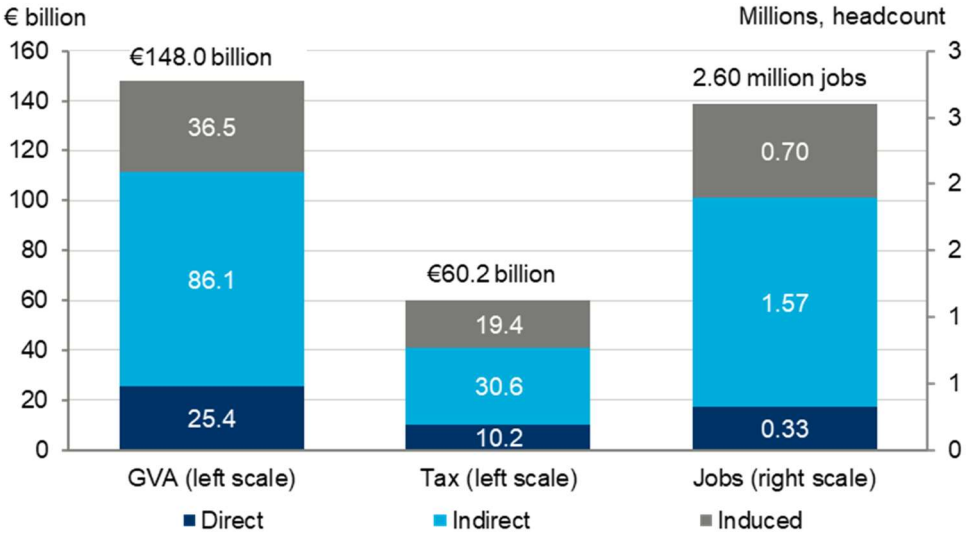
Source: Oxford Economics estimates based mainly on Eurostat's 'Annual detailed enterprise statistics for industry'.

3. THE EU STEEL INDUSTRY'S WIDER ECONOMIC FOOTPRINT

This chapter describes the 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 €148.0 billion in 2017, associated with 2.60 million jobs and €60.2 billion of tax revenues (see Fig. 18). The indirect and induced impacts are greater than the direct impact, reflecting the high share of total production value accounted for by content procured from other sectors.

Fig. 18. The European steel industry's economic footprint across the EU



Source: Oxford Economics

Within the total economic contribution, indirect GVA was worth €86.1 billion. Consequently, the 'type I' GVA multiplier—the ratio of direct plus indirect GVA to direct GVA alone—can be put at 4.4 (see Fig. 19). This is high by the standards of a typical manufacturing industry. With an associated 1.57 million indirect jobs in the EU supply chains, the equivalent multiplier for jobs is 5.8. The jobs multiplier is even higher than the GVA multiplier, as GVA per head in the steel industry itself is greater than that sustained by the sector's EU-wide supply chain.

The contribution of the indirect channel to tax revenues is put at €30.6 billion. The associated tax multiplier of 4.0 is a little lower than the GVA multiplier, as lower income per worker in the supply chain reduces the average tax-to-income ratio, relative to that in the steel sector itself.

Induced impacts, meanwhile, comprise €36.5 billion of GVA, an associated 701,000 jobs, and €19.4 billion of tax revenues. Taking these impacts into account too, the 'type II' GVA multiplier—the ratio of the total GVA contribution to direct GVA alone—works out at 5.8. The corresponding jobs multiplier is 7.9, and the tax multiplier, 5.9.

Fig. 19. Industry multipliers

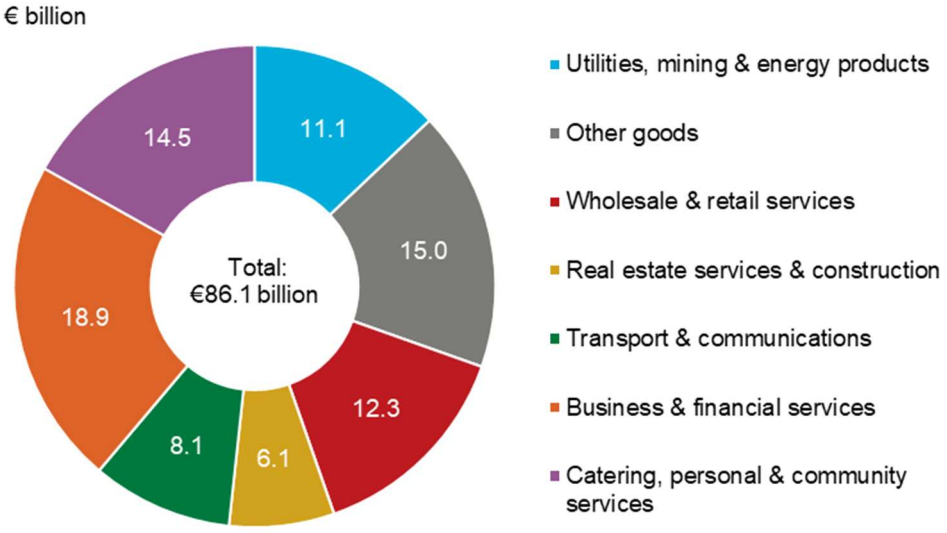
	'Type I' muliplier	Type II' multiplier
Multiplier for GVA	4.4	5.8
Multiplier for jobs	5.8	7.9
Multiplier for tax	4.0	5.9

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.

3.1 INDIRECT IMPACTS

Of the €86.1 billion of GVA supported by the European steel industry's procurement, utilities, mining and energy products account for 13 percent of the total, and other goods—such as fabricated metal products, chemical products, and machine parts—for 17 percent (see Fig. 20). The remaining 70 percent is spread across a range of service sectors, with business and financial services accounting for 22 percent of the total.

Fig. 20. Indirect GVA impact by industry of supplier

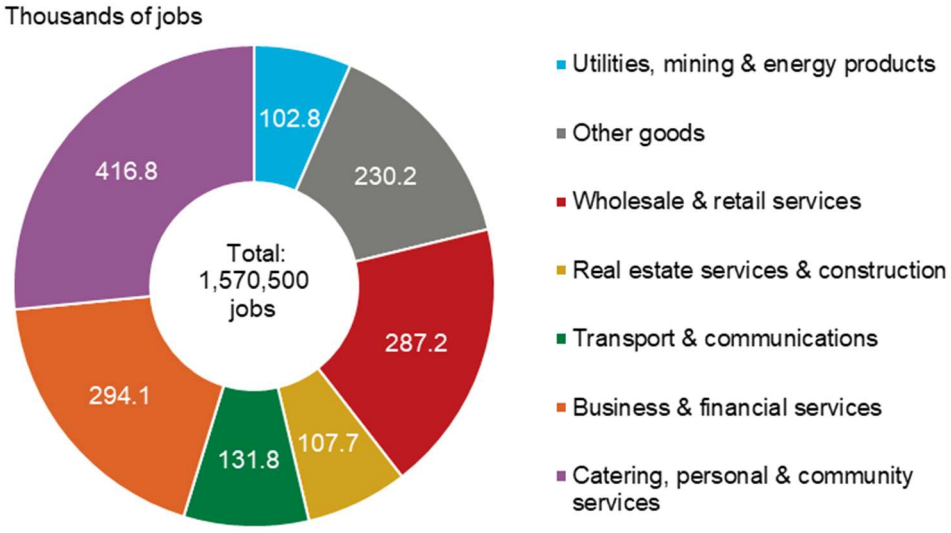


Source: Oxford Economics

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 (as shown in Fig. 15 in Section 2.5). In part, this reflects the relative importance of the sector's imports of these products from outside of the EU, including mined ores most notably. 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 (see Fig. 21). The importance of utilities, mining and energy products (seven percent) is significantly reduced, while that of catering and community services (27 percent) is boosted, relative to the shares of indirect GVA.

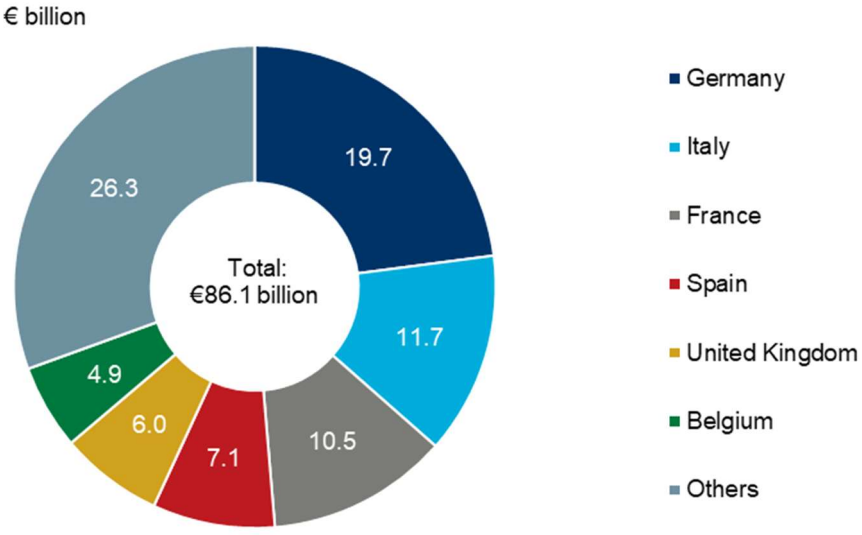
Fig. 21. Indirect employment impact by industry of supplier



Source: Oxford Economics

German suppliers benefit the most from the European steel industry's procurement, in terms of absolute GVA value, at €19.7 billion or 23 percent of the total indirect impact (see Fig. 22). Italy (14 percent) and France (12 percent) are ranked next, followed by Spain, the UK and Belgium (5-7 percent each).

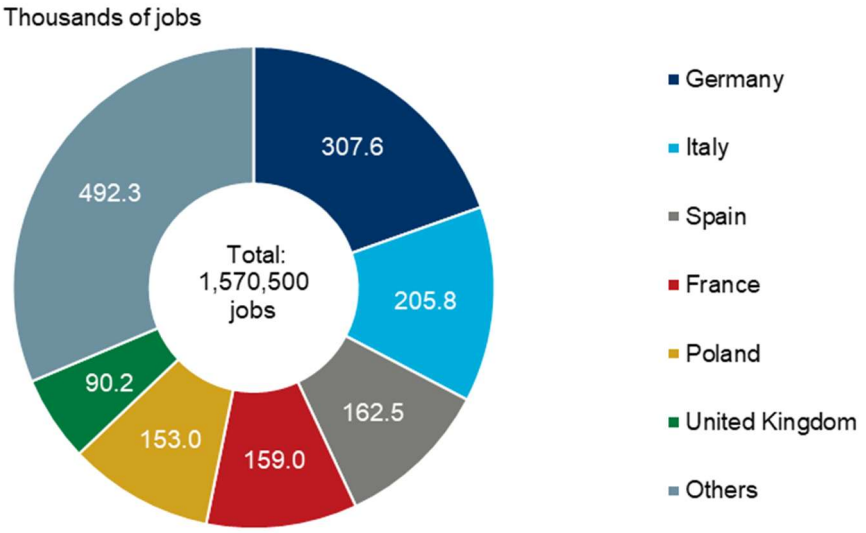
Fig. 22. Indirect GVA impact by country of supplier



Source: Oxford Economics

However, the pattern for jobs is again somewhat different, with Poland accounting for 10 percent of the total, on a par with Spain and France (see Fig. 23). Germany (20 percent) again ranks first, with Italy (13 percent) second, and the UK (six percent) sixth.

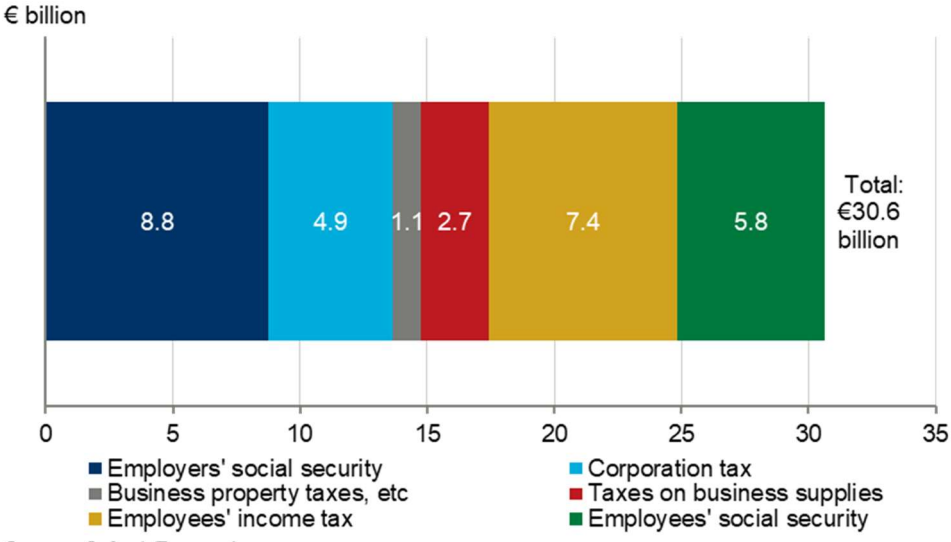
Fig. 23. Indirect employment impact by country of supplier



Source: Oxford Economics

Turning to taxes paid in the steel sector's EU supply chain, employer taxes account for 29 percent of the €30.6 billion total, other business taxes for 28 percent, and employee taxes for 43 percent (see Fig. 24).

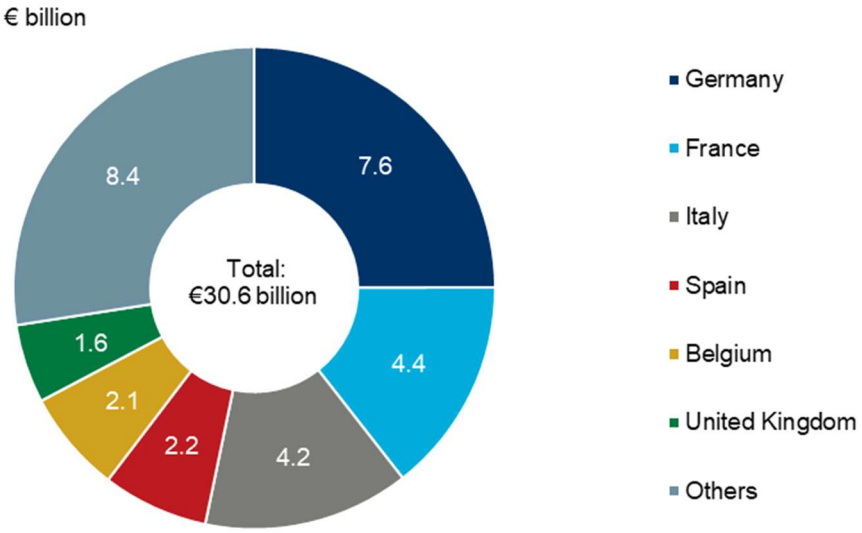
Fig. 24. Indirect tax contribution by type of tax



Source: Oxford Economics

By country, taxes collected by the German authorities account for 25 percent of the EU-wide total, followed by France and Italy (14 percent each), and then Spain, Belgium and the UK (five to seven percent each)—see Fig. 25.

Fig. 25. Indirect tax contribution by country



Source: Oxford Economics

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 €36.5 billion of GVA per year, supporting 700,800 jobs and €19.4 billion of tax revenues.

Induced GVA is equivalent to around a third of the total direct and indirect GVA impacts (Fig. 26). The pattern of this GVA by industry of supplier 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.

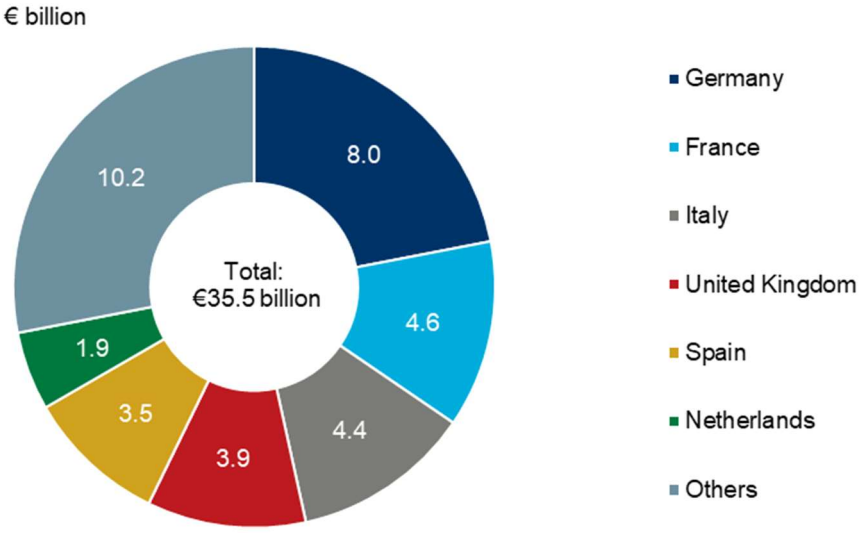
Fig. 26. Induced impacts by broad industrial sector

	GVA	Jobs
Utilities, mining & energy products	5%	2%
Other goods production	18%	19%
Wholesale & retail services	14%	17%
Real estate activities & construction	22%	20%
Transport & communications	8%	6%
Business & financial activities	18%	13%
Catering, personal & community services	15%	23%
Total induced impact	100%	100%
Induced impact as % direct plus indirect impacts	33%	37%

Source: Oxford Economics

By country, Germany has the largest share of induced GVA (22 percent), followed by France (13 percent), Italy (12 percent), the UK (11 percent), Spain (nine percent), and the Netherlands (five percent) (see Fig. 27).

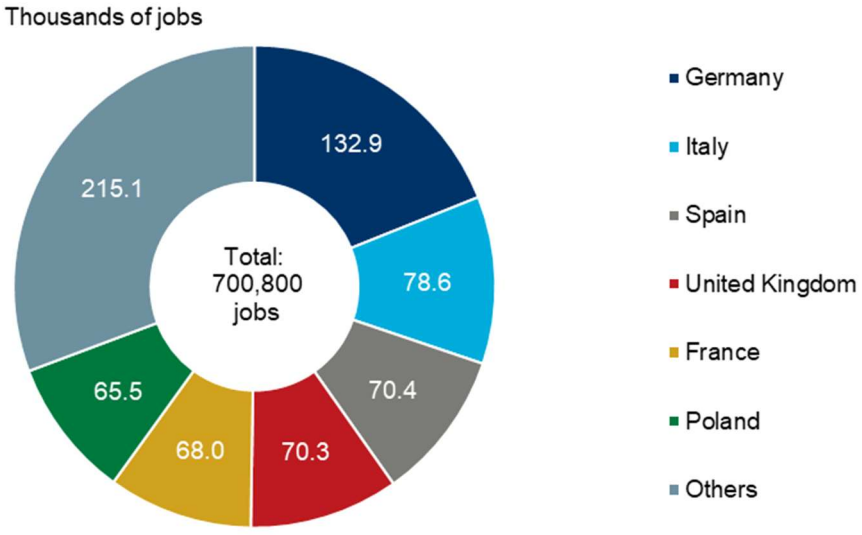
Fig. 27. Induced GVA impact by country



Source: Oxford Economics

The pattern of induced jobs is rather different. Although Germany (19 percent) again leads the way on this score, the country is followed here by Italy, Spain, the UK, France, and Poland (9-11 percent each) (Fig. 28).

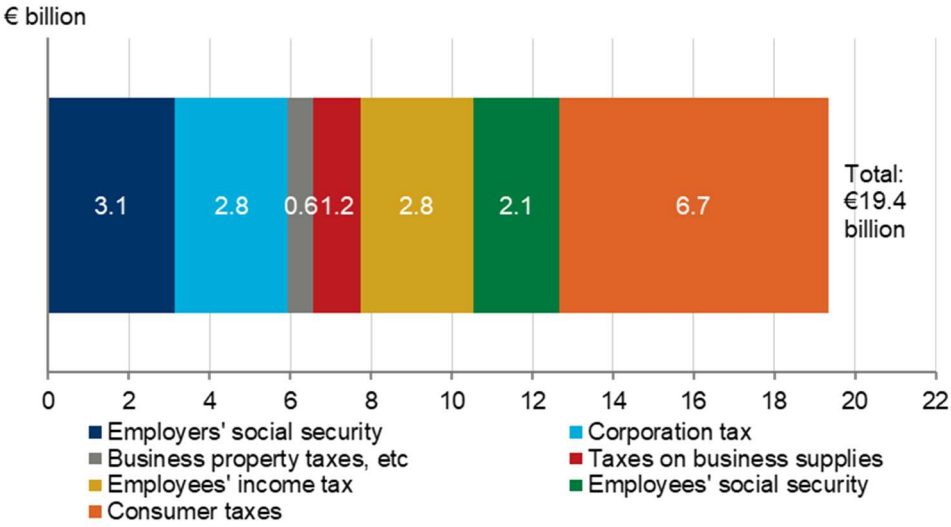
Fig. 28. Induced jobs impact by country



Source: Oxford Economics

For the purposes of this analysis, all taxes on employee spending are included in the induced channel. These amounted to €6.7 billion in 2017, or 35 percent of the overall induced tax impact (see Fig. 29). Employer taxes, meanwhile, accounted for 16 percent of that total, other business taxes for 24 percent, and employee taxes for 25 percent.

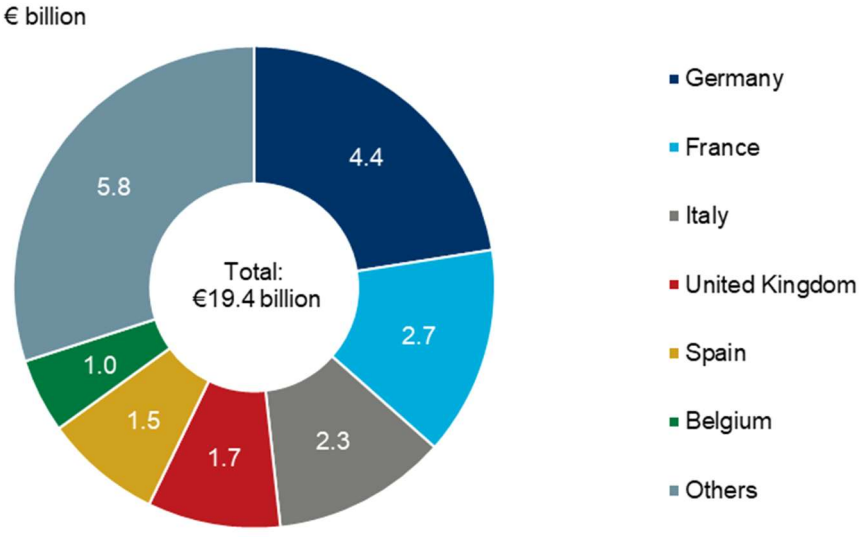
Fig. 29. Induced tax contribution by type of tax



Source: Oxford Economics

By country, Germany raised the most in induced taxes, accounting for 23 percent of the total (see Fig. 30). This was followed by France (14 percent), Italy (12 percent), the UK (nine percent), Spain (eight percent), and Belgium (five percent).

Fig. 30. Induced tax contribution by country

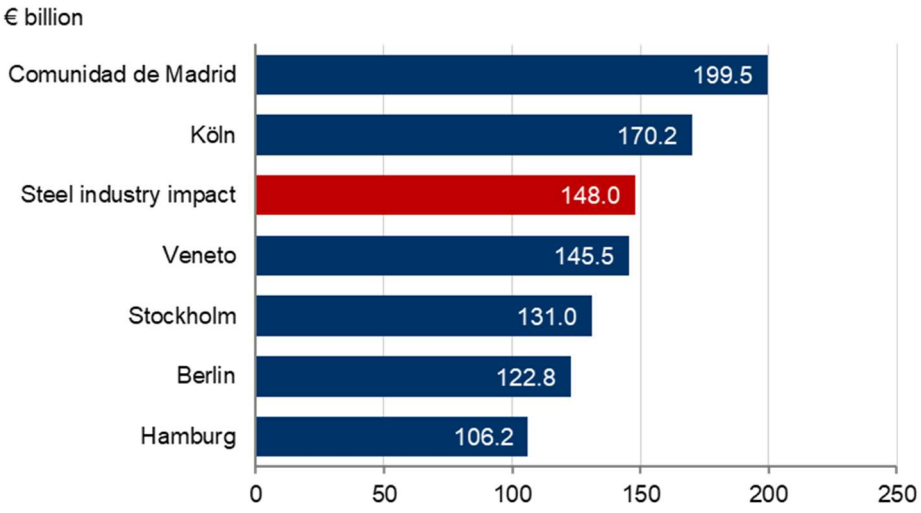


Source: Oxford Economics

3.3 TOTAL ECONOMIC CONTRIBUTION

The total economic contribution of €148.0 billion in terms of GVA, and 2.60 million jobs, is equivalent to around 1.1 percent of all EU GVA and 1.2 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 metropolitan regions around Venice, Stockholm, Berlin, and Hamburg (see Fig. 31).

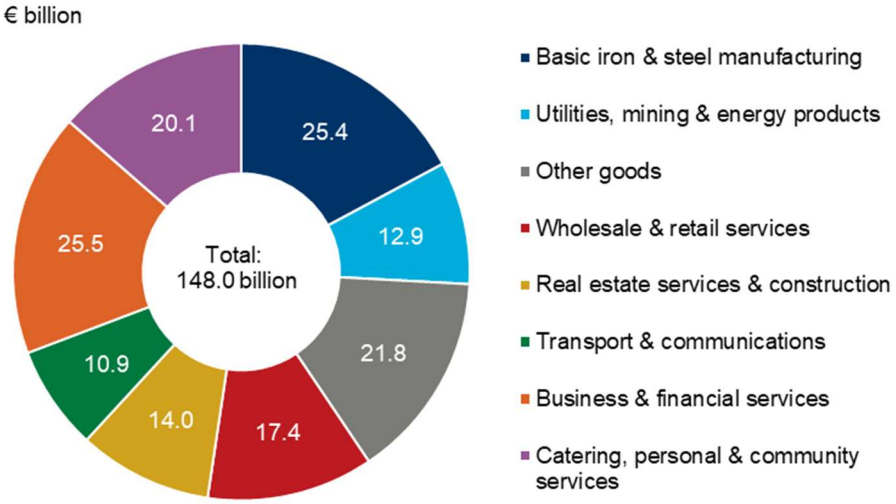
Fig. 31. Total GVA contribution relative to the GVA of selected regions



Source: Oxford Economics. Eurostat regional GDP data is converted to GVA using national ratios.

By industry, basic iron and steel manufacturing—i.e. the direct impact in this study—accounts for a comparatively modest 17 percent of the total, with utilities, mining and energy products accounting for nine percent, and all other goods production for 15 percent (see Fig. 32). The remainder is spread across the various service sectors, with business and financial services accounting for 17 percent of the overall total.

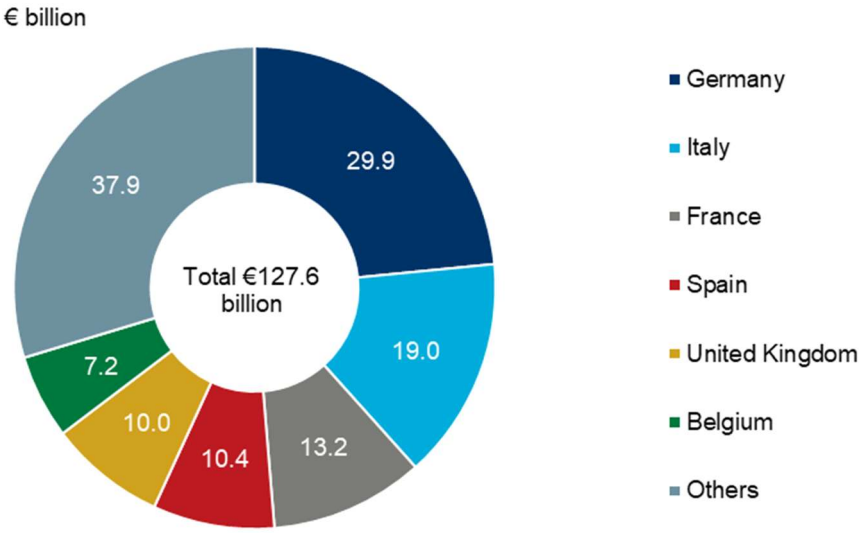
Fig. 32. Total GVA contribution by broad industrial sector



Source: Oxford Economics

The largest total GVA contributions by country are found in Germany (23 percent of the EU total), Italy (13 percent) and France (11 percent), followed by Spain and the UK (eight percent each), and Belgium (five percent) (see Fig. 33). As a share of national GVA, the total GVA impact is highest in Finland (2.5 percent), Slovakia (2.2 percent), Slovenia (2.1 percent), Belgium (2.0 percent), and Austria (2.0 percent).

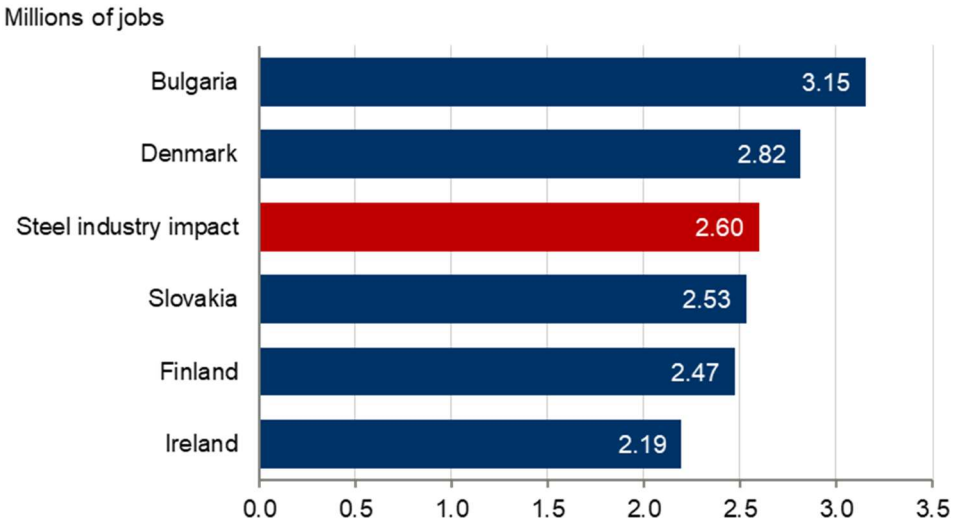
Fig. 33. Total GVA contribution by country



Source: Oxford Economics

Turning to the total contribution to employment, the 2.60 million jobs figure is higher than the number of jobs in each of, for example, Slovakia, Finland, and Ireland (see Fig. 34).

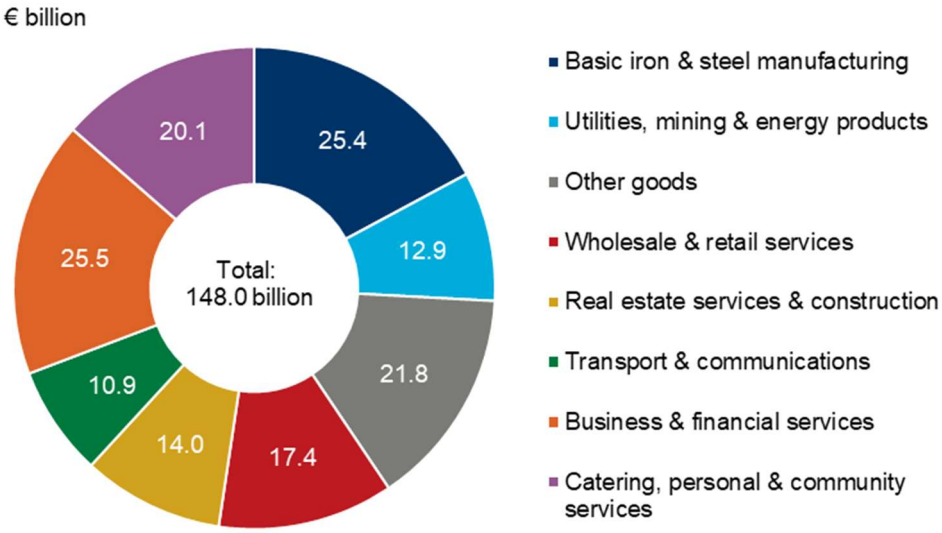
Fig. 34. Total jobs contribution relative to jobs in selected countries



Source: Eurostat; Oxford Economics

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 five percent, and all other goods production for 14 percent (see Fig. 35). The remainder is accounted for mainly by services sectors, including catering, personal and community services (22 percent), wholesale and retail services (16 percent), and business and financial activities (15 percent).

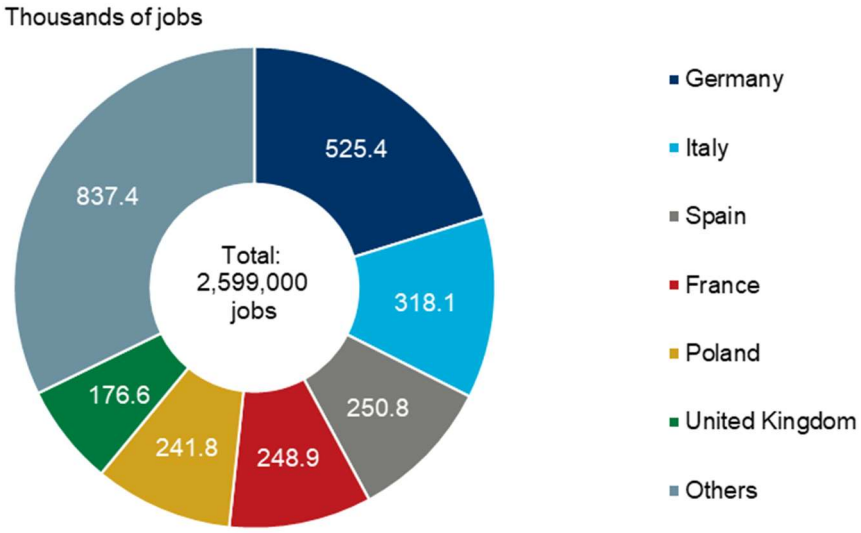
Fig. 35. Total employment contribution by broad industrial sector



Source: Oxford Economics

The greatest number of jobs supported by the European steel industry is found in Germany (at 20 percent of the EU-wide total), followed by Italy (12 percent), Spain (10 percent), France (10 percent), Poland (nine percent), and the UK (seven percent) (see Fig. 36). As a share of total national employment, the total jobs contribution is highest in Finland (2.7 percent), Luxembourg (2.7 percent), Belgium (2.2 percent), Czech Republic (2.1 percent), Slovakia (1.9 percent), Slovenia (1.9 percent), and Austria (1.9 percent).

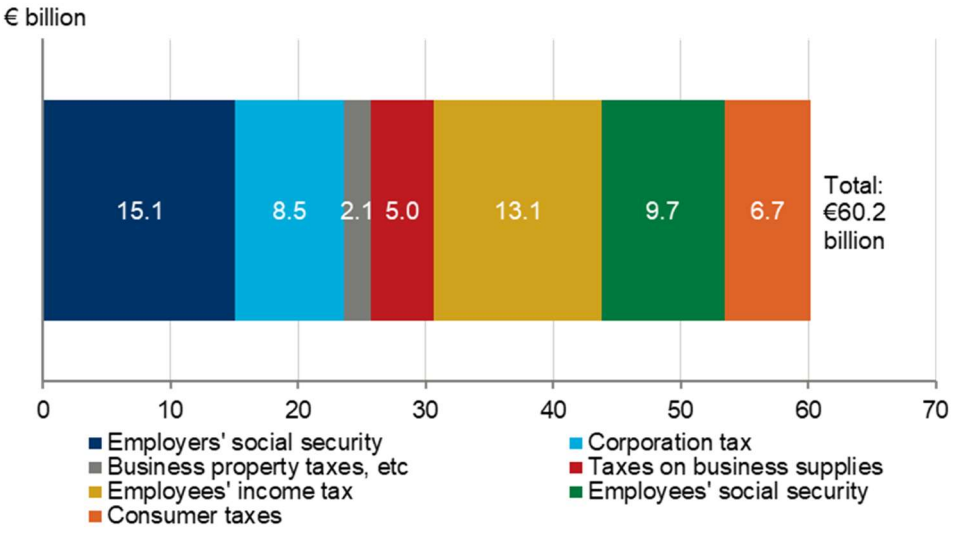
Fig. 36. Total employment contribution by country



Source: Oxford Economics

Of the total contribution to EU tax revenues of €60.2 billion, employer taxes account for 25 percent, other business taxes for 26 percent, employee taxes for 38 percent, and consumer taxes (on employee spending) for 11 percent (see Fig. 37).

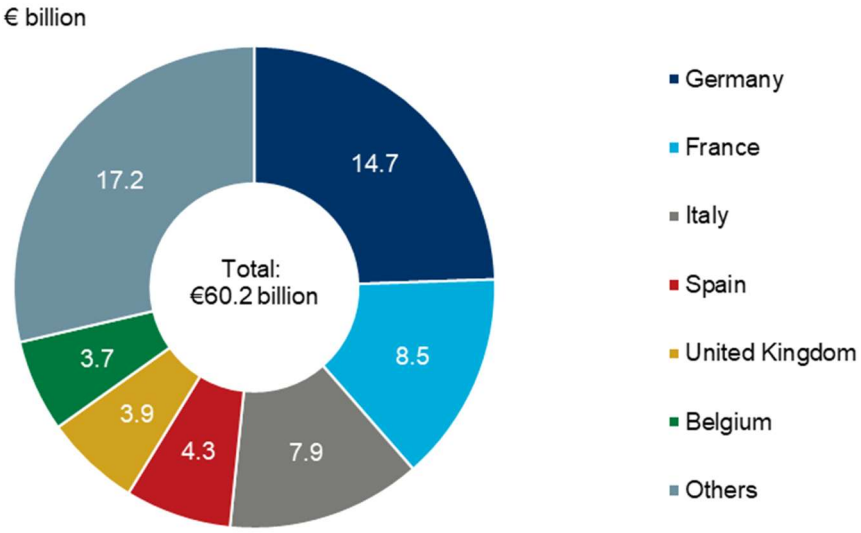
Fig. 37. Total tax contribution by type of tax



Source: Oxford Economics

By country, Germany accounts for 24 percent of the total contribution to EU taxes (see Fig. 38). This is followed by France (14 percent), Italy (13 percent), Spain (seven percent), the UK (six percent), and Belgium (six percent).

Fig. 38. Total tax contribution by country



Source: Oxford Economics

Across the EU as a whole, the total annual tax contribution accounts for some 1.0 percent of tax and social security revenues from sources of all kinds. It is sufficient to fund the average pay of very broadly 1.5 million full-time education, health and social care professionals—or one in thirty of all professional and support workers involved in those activities. This total would include around 250,000 staff in Germany, and 200,000 in each of France and Italy.

4. THE IMPACT OF KEY CUSTOMER SECTORS

This chapter describes the activities of four key steel-using sectors, namely the manufacture of metal products, mechanical machinery, and motor vehicles, together with construction.

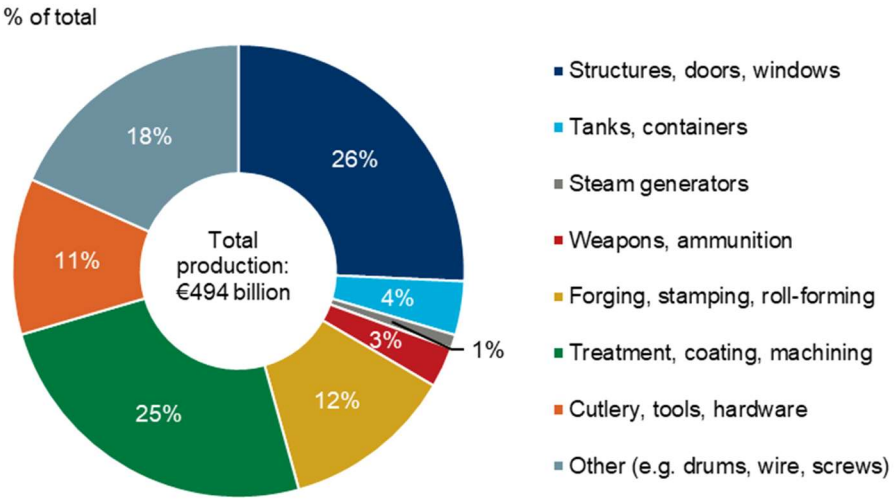
After describing these sectors' direct economic impacts, the chapter goes on to quantify their wider economic footprint across the EU in 2017, and to give a broad indication of the share of that activity that might be said to be 'facilitated' by the use of EU-produced steel.

4.1 THE ACTIVITIES OF FOUR KEY STEEL-USING INDUSTRIES

4.1.1 Metal product manufacturing

The 'fabricated metal products' industry includes manufacturers of all products whose main material input is metal of some kind, other than machinery of various types, and excluding activities classified as 'basic metal manufacturing' (such as steel pipes and tubes, and metal casting). The sector manufactures equipment, from steam generators to hand tools, that is essential for the operations of a wide range of enterprises, as well as items used by individuals in their everyday life, from central heating radiators to door locks and cutlery.

Fig. 39. Breakdown of metal product manufacturing production in 2017



Source: Eurostat; Oxford Economics

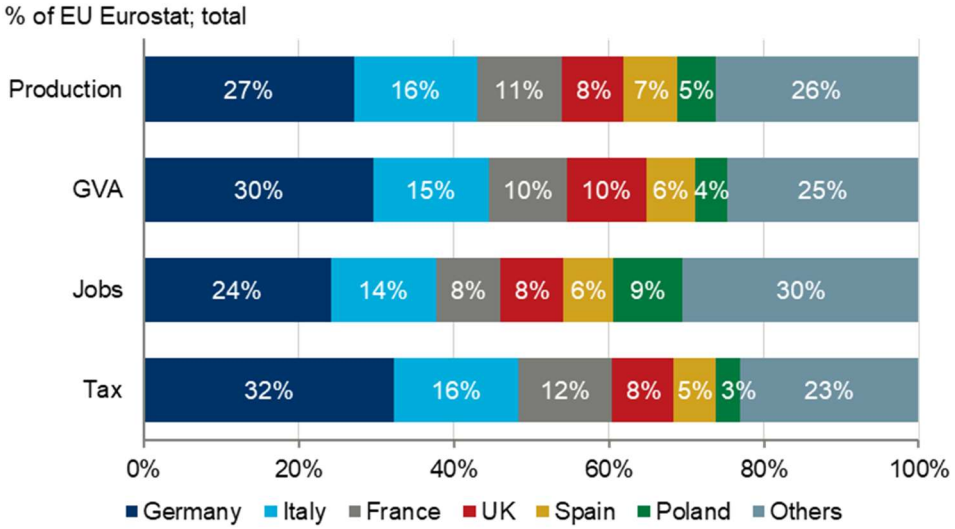
Overall, the total value of EU-28 production of fabricated metal products in 2017 amounted to €494 billion, equivalent to 7.0 percent of all manufacturing production across the EU.[10] The share by sub-sector is shown in Fig. 39. Intermediate work on metals, including forging, stamping, roll-forming, treatment,

[10] Figures for the three manufacturing sectors in this chapter are based on Eurostat's 'Annual detailed statistics for enterprise' dataset.

coating and machining, accounts for just over a third of activity, with output of final products accounting for the remainder. Of these, structures, windows and doors account for 26 percent of sector-wide turnover, and cutlery, tools and hardware for 11 percent.

This amount of production supported €185 billion of direct gross value added in 2017, and provided 3.75 million jobs. The sector also generated €67 billion in tax payments across the EU. The distribution by country is shown in Fig. 40.

Fig. 40. Metal product manufacturing direct impacts by country



Source: Eurostat; Oxford Econom

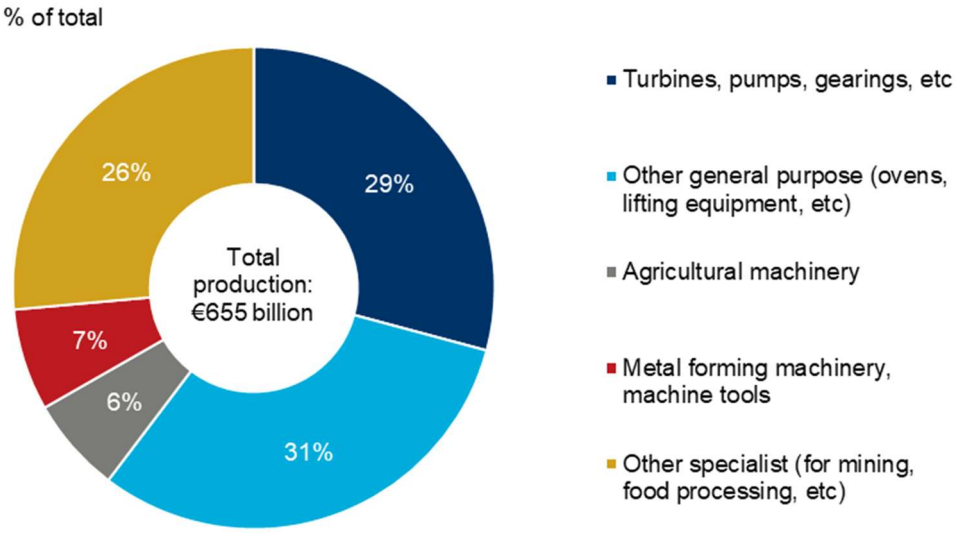
4.1.2 Mechanical machinery manufacturing

Mechanical machinery encompasses a wide range of equipment, defined as all machinery other than products classified as electrical or electronic equipment, optical or precision instruments, or transport equipment. Most of this equipment is used in industries of various kinds, most notably other manufacturing sectors, together with construction, mining, agriculture, and forestry. Tractors, bulldozers and excavators are produced by manufacturers in this sector, as are cranes, lifts and pallet trucks.

In 2017, turnover in this sector totalled €655 billion, equivalent to 9.3 percent of total EU-wide manufacturing production. General purpose machinery accounts for 60 percent of the total, including turbines, pumps and gearings, as well as ovens, lifting equipment, office equipment, power-driven hand tools and cooling equipment (see Fig. 41). Machinery designed for particular sectors of industry makes up the remainder, with agricultural and forestry equipment accounting for six percent of the overall total, and metal forming machinery and machine tools for seven percent.

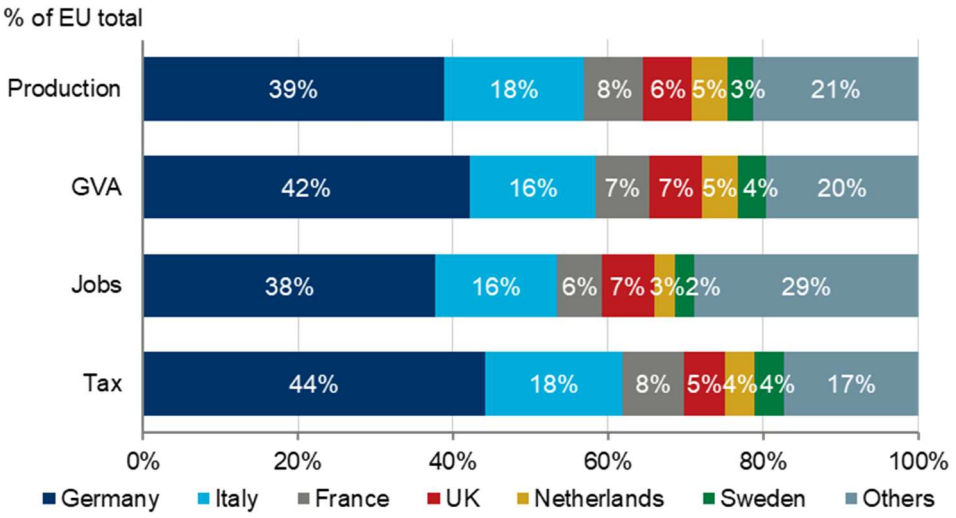
This work supported €218 billion of GVA, 3.00 million jobs, and €85 billion in tax revenues. The distribution of these totals by country is shown in Fig. 42.

Fig. 41. Breakdown of mechanical machinery production in 2017



Source: Eurostat; Oxford Economics

Fig. 42. Mechanical machinery manufacturing direct impacts by country



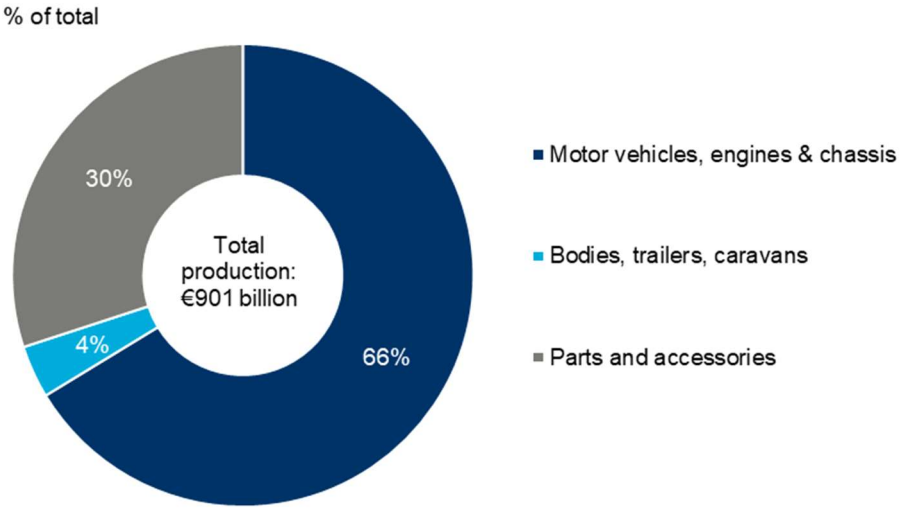
Source: Eurostat; Oxford Economics

4.1.3 Motor vehicle manufacturing

The motor vehicle manufacturing sector includes the manufacture of cars, vans, trucks, lorries, buses and coaches, but not motor cycles, together with the manufacture of bodies for those vehicles, trailers, semi-trailers and caravans, and electrical, electronic and other vehicle parts and accessories.

In 2017, total production amounted to €901 billion, with Fig. 43 showing the breakdown by sub-sector. It should be noted that the manufacture of complete engines is included in the 'motor vehicles' sub-sector rather than in 'parts and accessories', and that manufacture of the chassis (the essential undercarriage) is also allocated to 'motor vehicles', rather than to 'vehicle bodies'. As a result, this sub-sector accounts for two thirds of total production by value.

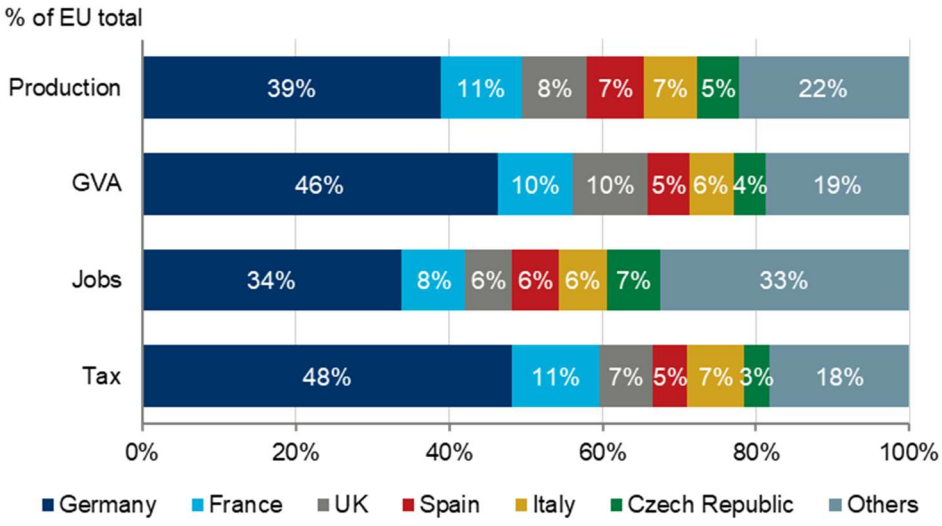
Fig. 43. Breakdown of motor vehicle manufacturing production in 2017



Source: Eurostat; Oxford Economics

This production supported €208 billion of GVA, 2.57 million jobs, and €85 billion of tax revenues. The distribution by country is shown in Fig. 44.

Fig. 44. Motor vehicle manufacturing direct impacts by country



Source: Eurostat; Oxford Econom

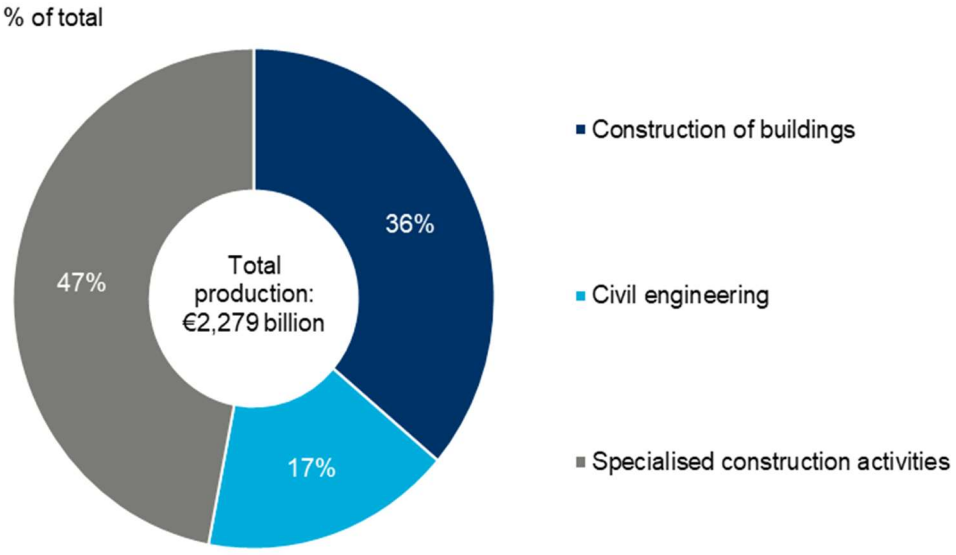
4.1.4 Construction

Steel is used in a wide range of construction activities, being intrinsic to the building of homes, office blocks, schools and hospitals, and to the construction of a range of structures such bridges, pylons and transmitters. It is also used in scaffolding and builders' tools.

In 2017, EU construction sector turnover amounted to €2.28 trillion. Some 47 percent of this was accounted for by specialised construction activities, including demolition and site preparation, electrical and plumbing work, plastering, joinery and painting, and roofing activities (see Fig. 45). Thirty-six percent was accounted for by construction of residential and other buildings, and

17 percent by civil engineering projects, including roads and railways, airports and ports, and infrastructure to the supply electricity, gas, and water. [11]

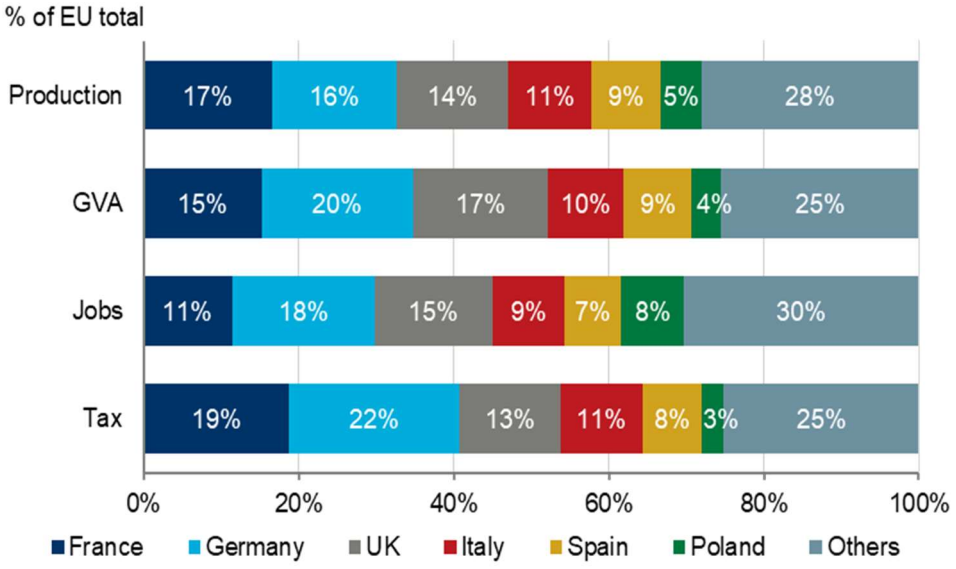
Fig. 45. Breakdown of construction sector production in 2017



Source: Eurostat; Oxford Economics

This production supported €737 billion of GVA, 15.3 million jobs, and €268 billion of tax revenues. The distribution of this activity by country is shown in Fig. 46.

Fig. 46. Construction sector direct impacts by country



Source: Eurostat; Oxford Economics

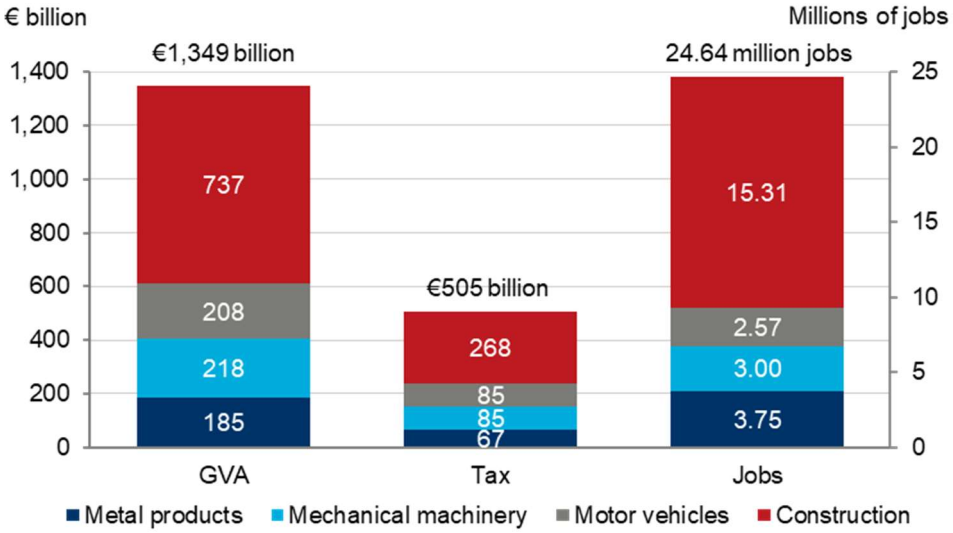
[11] The construction sector data in this section draw on a range of Eurostat datasets, including the National Accounts and Labour Force Survey databases as well as the Structural Business Statistics (SBS) database.

4.1.5 The combined direct impact of the key customer sectors

Taking the four customer sectors together, the total contribution to EU-28 GVA amounted to €1.35 trillion in 2017 (see Fig. 47). This was associated with 24.6 million jobs and generated €505 billion in tax revenues. As a share of economy-wide activity, the customer sectors account for 9.8 percent of GVA, 11.1 percent of employment, and 10.5 percent of non-consumer tax revenues.

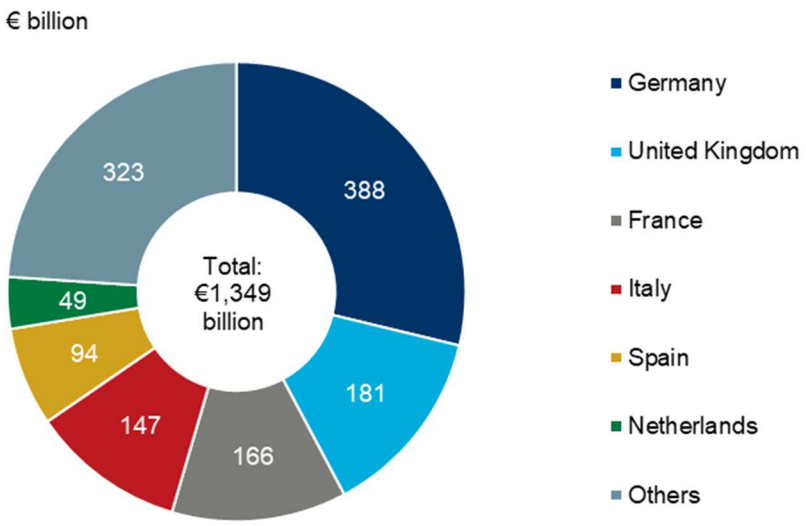
By sector, construction accounted for 55 percent of GVA, with the three manufacturing sectors accounting for around 15 percent each. The pattern of tax revenues by sector was similar to that. But in terms of jobs, construction accounted for 62 percent, metal products for 15 percent, mechanical machinery for 12 percent, and motor vehicle manufacture for 10 percent.

Fig. 47. The direct economic impact of the key customer sectors



Source: Eurostat; Oxford Economics

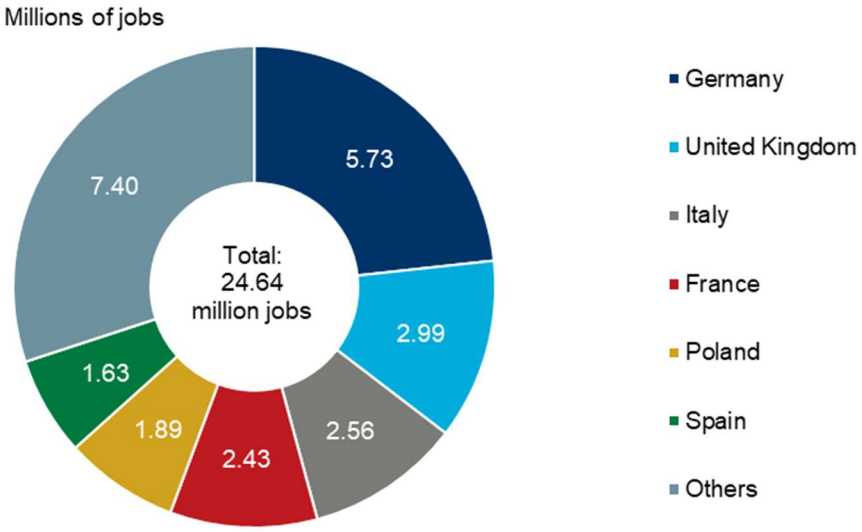
Fig. 48. Customer sector direct GVA by country



Source: Eurostat; Oxford Economics

By country, Germany accounts for 29 percent of the EU-wide GVA of the customer sectors, the UK for 13 percent, France for 12 percent, and Italy for 11 percent (see Fig. 48). Spain (seven percent) and the Netherlands (four percent) follow. But the pattern of jobs is somewhat different, reflecting both general differences in GVA per job between countries, and the relative importance of the various customer sectors within the total (see Fig. 49). Here, Germany accounts for 23 percent of the total, followed by the UK (12 percent), France and Italy (10 percent each), Poland (eight percent), and Spain (seven percent).

Fig. 49. Customer sector direct employment by country



Source: Eurostat; Oxford Economics

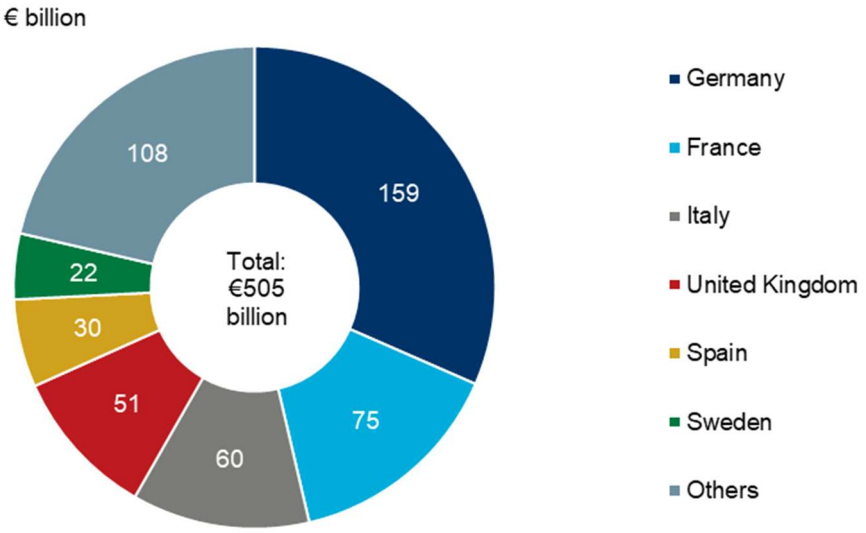
Regarding tax payments, employers' social security contributions account for 31 percent of the overall total, taxes on business profits, property and purchases for 21 percent, and employees' income tax and social security contributions for 49 percent (see Fig. 50).

Fig. 50. Customer sector direct tax payments by type of tax

Source: Oxford Economics

Germany accounts for nearly a third (32 percent) of the total EU-wide tax contribution, France for 15 percent, and Italy for 12 percent (see Fig. 51). These are followed by the UK (10 percent), Spain (six percent) and Sweden (four percent).

Fig. 51. Customer sector direct tax payments by country



Source: Oxford Economics

4.2 THE WIDER ECONOMIC FOOTPRINT OF THE CUSTOMER SECTORS

The analysis in this section sets out the impact of the customer sectors on an 'additional and consolidated' basis, that is:

- 'Additional' in the sense that the indirect and induced impacts exclude all effects on and via the steel industry.
- 'Consolidated' in the sense that indirect and induced impacts on and via any of the other customer sectors are also excluded.

The total calculated impact across the four sectors, on this basis, is therefore completely additional to the impact of the steel sector, set out in Chapter 3, with no 'double counting' of any monetary values or jobs. Unadjusted as well as adjusted customer sector values can be found in the tables in Appendix 1.

4.2.1 Metal product manufacturing

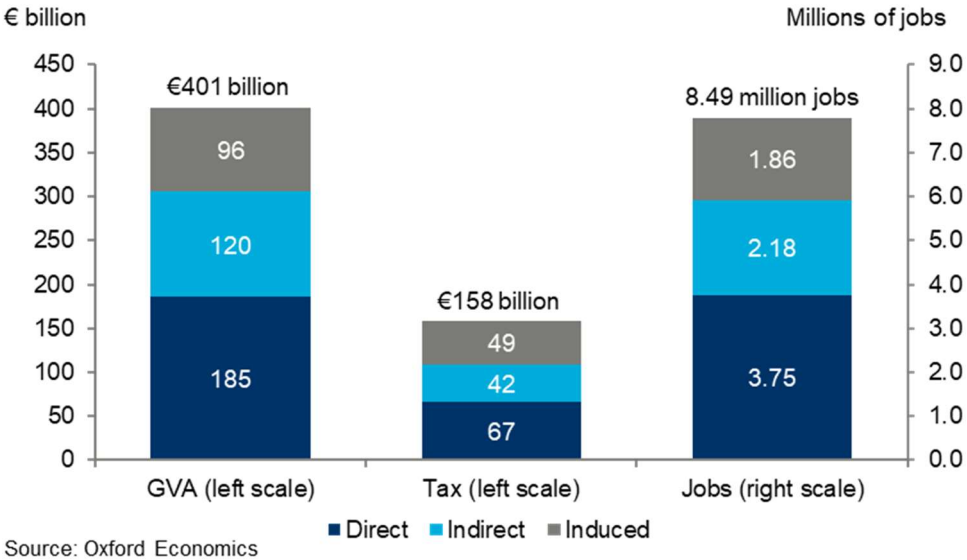
In 2017, the indirect GVA of the EU metal product manufacturing sector amounted to €120 billion, supporting 2.18 million jobs and generating €42 billion of tax revenues, while the induced impact comprised €96 billion of GVA, 1.86 million jobs and €49 billion of taxation—excluding impacts on and via the steel sector, and on and via the other customer sectors (see Fig. 52).

Together with the direct impact set out in Section 4.1, the total economic impact of this sector, therefore works out at €401 billion of GVA, supporting 8.49 million jobs and generating €158 billion of tax revenues.

The additional consolidated GVA impact of the EU metal products sector amounts to 2.9 percent of EU-wide GVA, while the number of associated jobs

supported through the three channels on this basis accounts for 3.5 percent of all jobs. The €158 billion tax impact represents 2.6 percent of all EU-wide tax revenues.

Fig. 52. Additional, consolidated impact of metal product manufacturing

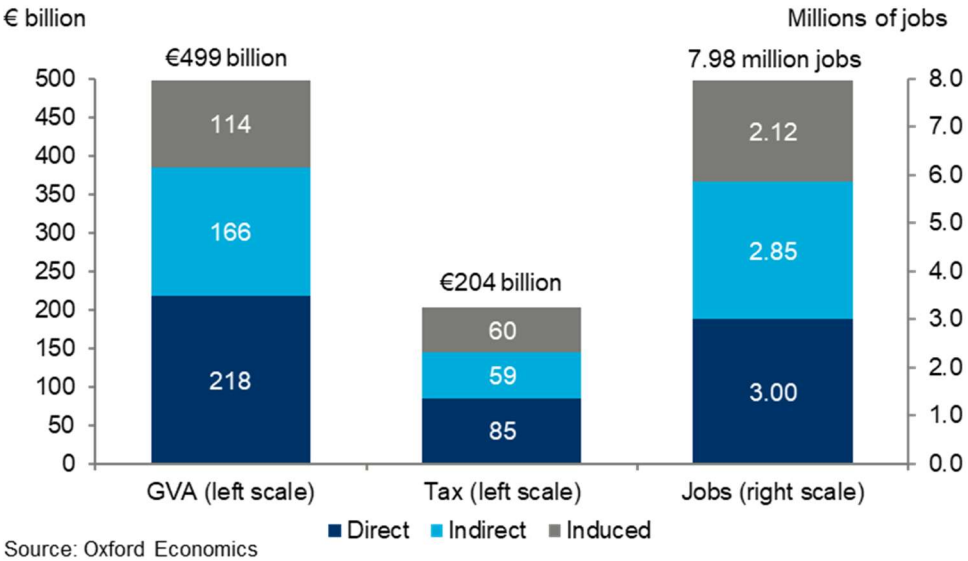


Source: Oxford Economics

4.2.2 Mechanical machinery manufacturing

The indirect GVA of the EU mechanical machinery manufacturing sector, meanwhile, amounted to €166 billion in 2017, associated with 2.85 million jobs and generating €59 billion of tax revenues on the adjusted basis (see Fig. 53). The induced impact was €114 billion in terms of GVA, supporting 2.12 million jobs and €60 billion of tax.

Fig. 53. Additional, consolidated impact of mechanical machinery



Source: Oxford Economics

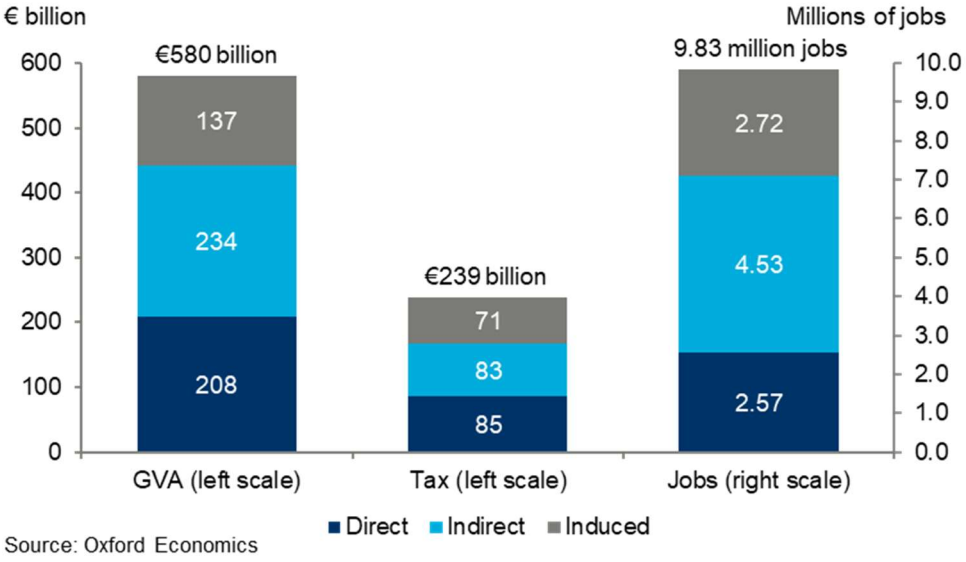
Including the direct effect too, the total impact is €499 billion of GVA, supporting 7.98 million jobs and €204 billion of taxation. This accounts for 3.6 percent of EU-wide GVA and employment, and for 3.4 percent of all EU taxes.

4.2.3 Motor vehicle manufacturing

For the motor vehicle manufacturing sector, the net indirect impact can be put at €234 billion of GVA, 4.53 million jobs, and €83 billion of tax revenues (see Fig. 54). The net induced impact amounts to €137 billion of GVA, supporting 2.72 million jobs and €71 billion of tax payments.

This takes the total economic impact, across the three channels and on the additional and consolidated basis, to €580 billion of GVA, 9.83 million jobs, and €239 billion of tax. Those amounts equate to 4.2 percent, 4.4 percent, and 4.0 percent, of the respective EU economy-wide values.

Fig. 54. Additional, consolidated impact of motor vehicle manufacturing



Source: Oxford Economics

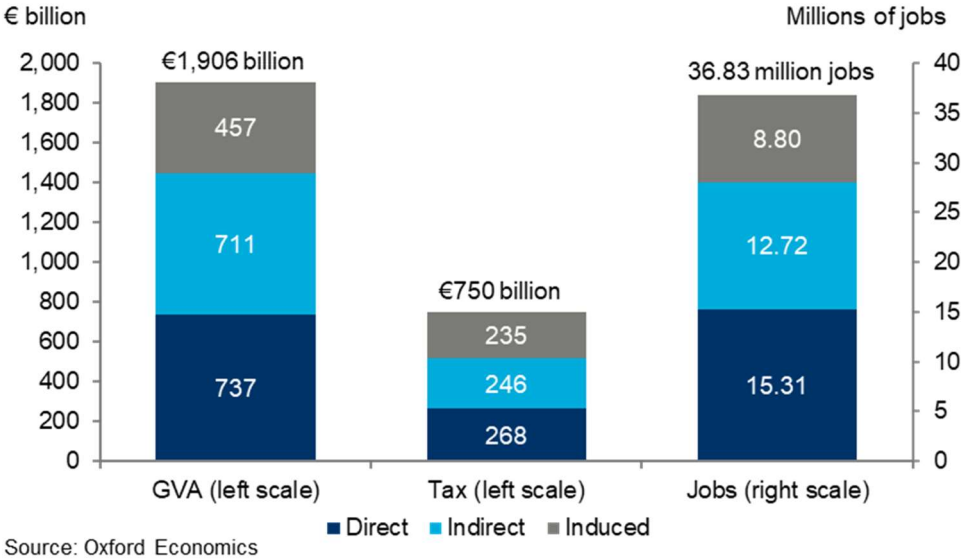
4.2.4 Construction

The monetary and employment impacts of the construction sector, taking all three channels of impact together and on the adjusted basis used here, exceed those of the other three sectors combined by around 30 percent in the case of GVA, 45 percent in the case of employment, and 25 percent in the case of taxation.

The net indirect effect of the EU construction sector can be put at €711 billion of GVA, 12.72 million jobs, and €246 billion of taxation, whilst net induced GVA is estimated to be €457 billion, supporting 8.80 million jobs and generating €235 billion of taxation (see Fig. 55).

That takes the total contribution to €1.91 trillion of GVA, associated with 36.83 million jobs and €750 billion of taxes. This is equivalent to 13.9 percent, 16.6 percent, and 12.5 percent, respectively, of the corresponding EU-wide values.

Fig. 55. Additional, consolidated impact of construction



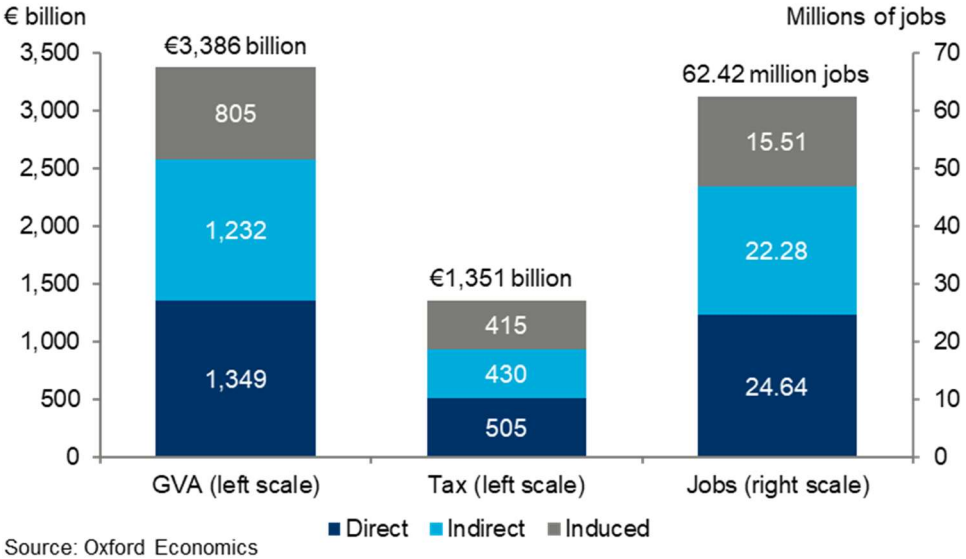
Source: Oxford Economics

4.2.5 Total consolidated impact of the customer sectors

Fig. 56 shows the additional economic impact of the four customer sectors combined. It can be seen that the additional indirect impact amounts to €1.23 trillion of GVA, supporting 22.28 million jobs across other non-steel sectors in the EU economy, and €430 billion in tax payments. The induced effects are €805 billion of GVA, 15.51 million jobs, and €415 billion of taxation.

The total additional GVA impact across all three channels therefore amounts to €3.39 trillion annually, or 24.6 percent of all EU-wide GVA. The total employment impact, of some 62.42 million posts, is equivalent to 28.2 percent of all EU-wide employment. And the overall net tax impact of the four customer sectors, at €1.35 trillion per year, accounts for 22.5 percent of all tax revenues across the EU.

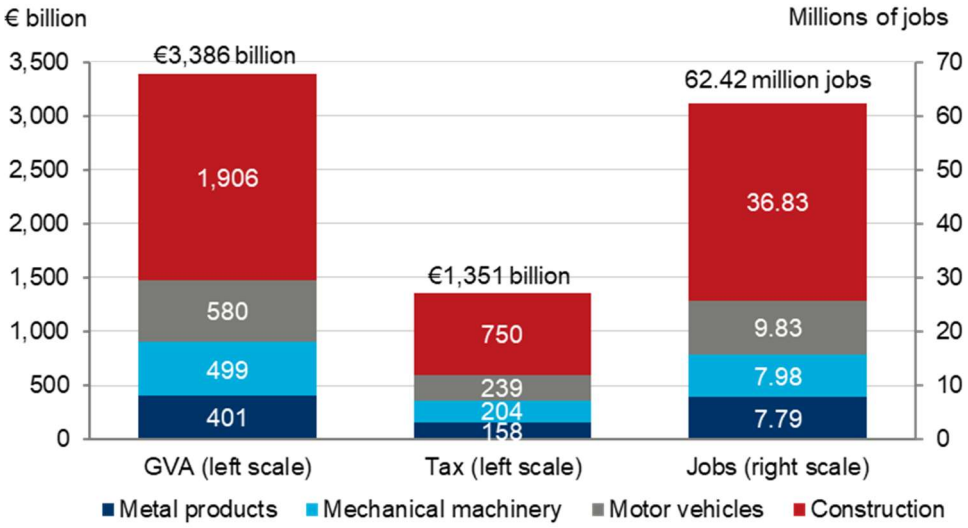
Fig. 56. Total additional, consolidated impact of the four customer sectors



Source: Oxford Economics

Fig. 57 shows the contribution of the separate customer sectors, on this additional and consolidated basis.

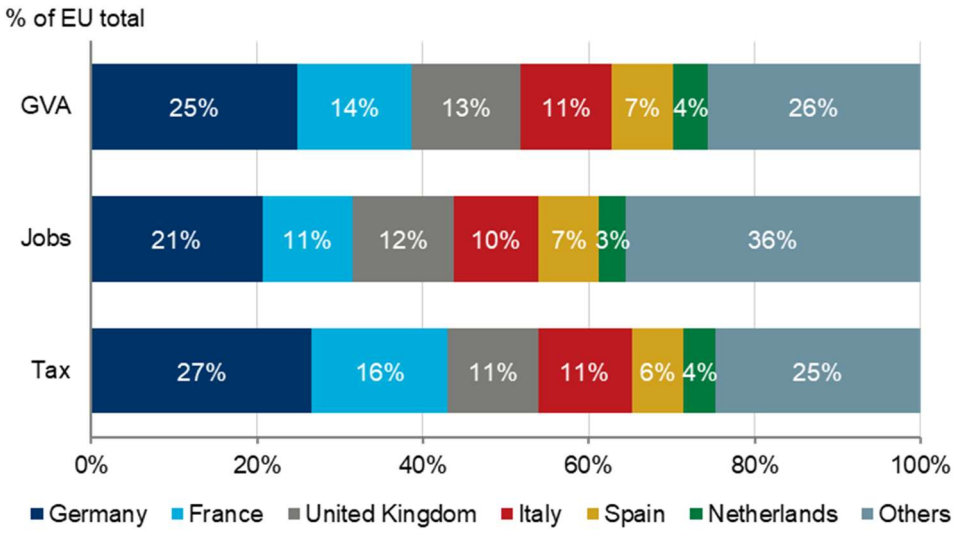
Fig. 57. Additional, consolidated customer impacts by sector



Source: Oxford Economics

By country of production, Germany accounts for 25 percent of this total net contribution to GVA, for 21 percent of jobs, and for 27 percent of taxation, with France, the UK and Italy each accounting for 10-16 percent of those measures (see Fig. 58). Spain accounts for 6-7 percent of these metrics, and the Netherlands for 3-4 percent. Of the countries not featured separately in the chart (as the ranking relates to GVA), Poland accounts for eight percent of EU-wide employment supported by the customer sectors, and Sweden for four percent of the taxes generated by that activity.

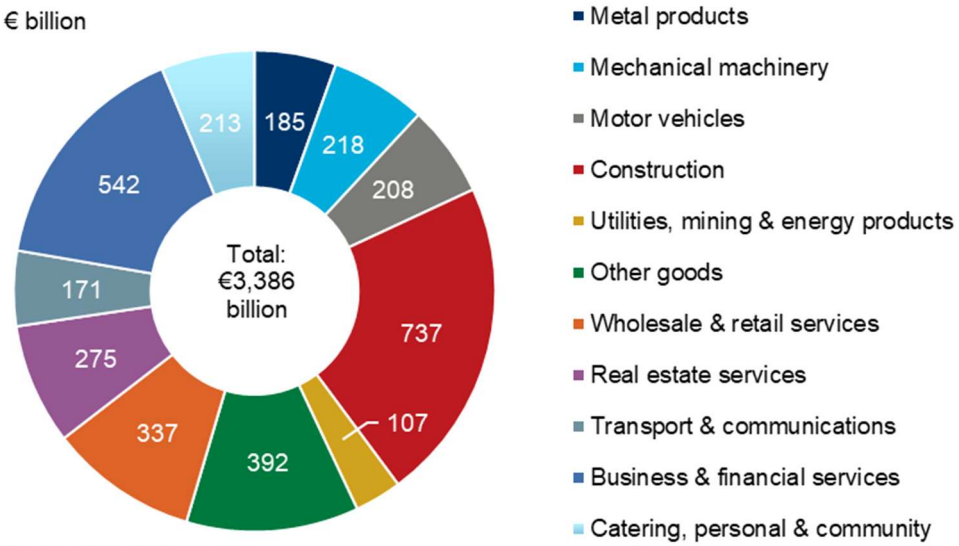
Fig. 58. Total additional customer sector impacts by country



Source: Oxford Economics

By broad industry of production, direct construction activity accounts for 22 percent of the total additional GVA impact of the customer sectors, and direct activity of the three manufacturing customer sectors for 18 percent (see Fig. 59). The remaining 60 per cent is accounted for by the indirect and induced impacts. Here, business and financial services account for 16 percent of the total GVA impact, wholesale and retail services for 10 percent, and real estate services (mainly property rental) for eight percent.

Fig. 59. Total additional customer sector GVA impact by industry group



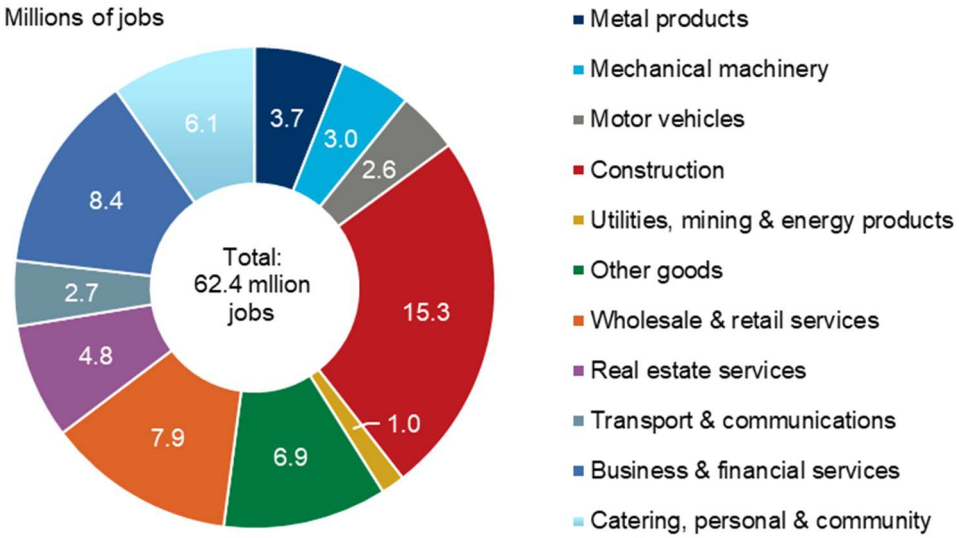
Source: Oxford Economics

'Other goods'—non-energy goods excluding steel and customer sector products—account for 12 percent of the total GVA impact. Here, building and wood products benefit from construction sector demand, electrical and electronic equipment, and rubber and plastic products, from use by the manufacturing customer sectors (especially vehicle makers), food processing and agricultural produce from the induced channel, and chemicals and pharmaceuticals from a combination of the indirect and induced effects.

Of the 62.4 million non-steel-related jobs supported by this activity, 25 percent are in construction, and 15 percent in the three manufacturing customer sectors (see Fig. 60). Business and financial services, and wholesale and retail services, each account for 13 percent of the total, 'other goods' for 11 percent, and catering, personal and community services for 10 percent.

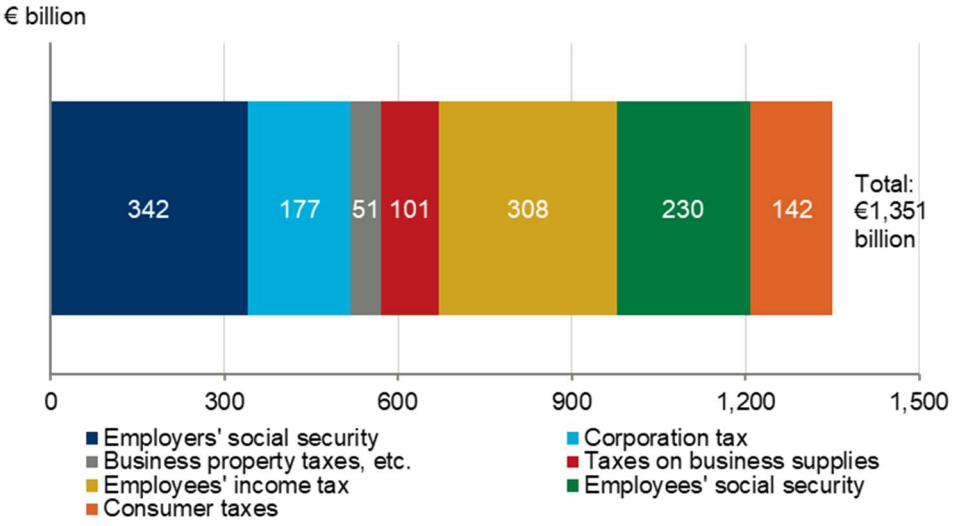
Finally, out of the total additional customer sector tax impact of €1.35 trillion, 25 percent is accounted for by employers' social security, 24 percent by taxes on business profits, property and purchases, 40 percent by employee tax and social security contributions, and 11 percent by consumer taxes on employee spending (see Fig. 61).

Fig. 60. Total additional customer sector jobs impact by industry group



Source: Oxford Economics

Fig. 61. Total additional customer sector tax impact by type of tax



Source: Oxford Economics

4.3 THE ROLE OF STEEL IN ENABLING CUSTOMER-DRIVEN ACTIVITY

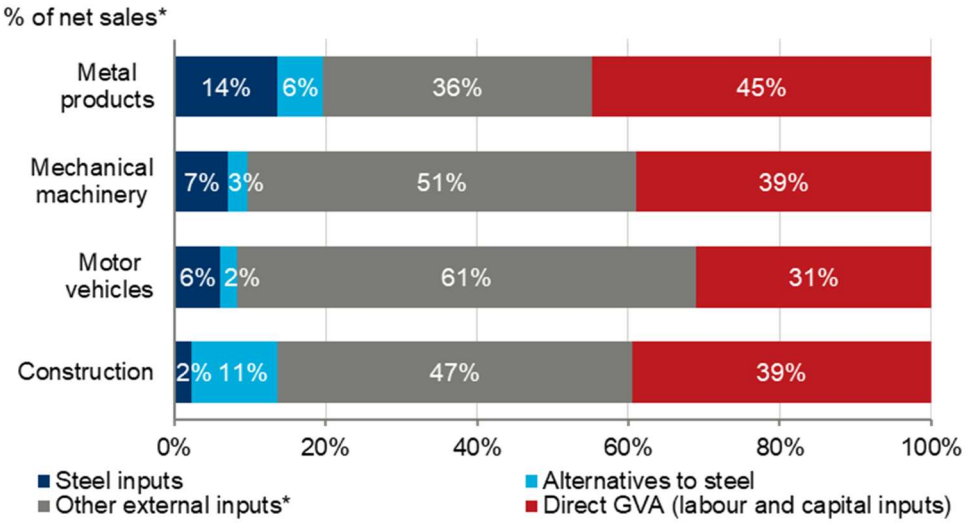
It would of course be wrong to claim that the customer sectors could not operate at all in the absence of steel. But there is a sense in which at least a share of their activity could be said to be 'facilitated' by use of that metal, over and above the simple value of steel embedded in their output. For most of the customer sectors' production, either steel, or some alternative input performing the same function, is absolutely essential.

4.3.1 The importance of steel inputs to the customer sectors

Fig. 62 sets out very broad estimates of how net sales by each customer sector (i.e. excluding transactions between firms within the sector) are likely to break

down, in aggregate across the EU-28.[12] The four categories are steel inputs, 'alternatives to steel', other external inputs, and the customer sector's own (direct) GVA, which comprises labour and capital inputs.

Fig. 62. Estimated use of inputs by the customer sectors



Source: Oxford Economics * Sales and inputs exclude transactions within each customer industry.

For these purposes, steel inputs into the metal products sector include all steel counted in 'basic metals', including fittings and cast steel. Steel inputs into the other customer sectors also include steel content embedded in metal products purchased by those sectors.

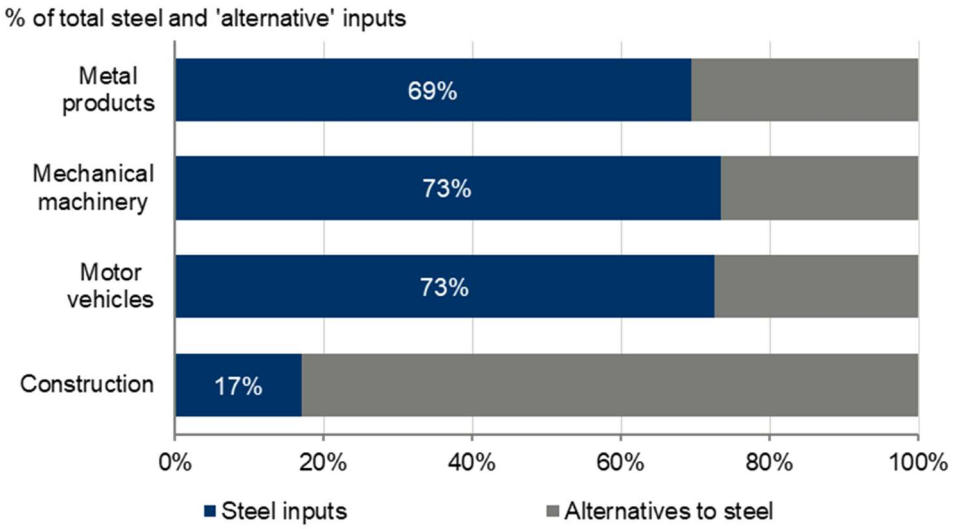
'Alternatives to steel' are as follows:

- For metal product manufacturing customers, non-ferrous metals, including non-ferrous cast metal products.
- For mechanical machinery and motor vehicles, the above inputs, plus non-ferrous metal content embedded in metal products used.
- For construction, all of the above inputs, plus non-metallic mineral products (bricks, concrete, cement, etc), and wood products.

On this basis, steel inputs account for 14 percent of the final value of metal products, for 6-7 percent of mechanical machinery and motor vehicles, and for two percent construction work. But as either steel or one of the 'alternative' inputs is essential for this activity, there is a sense in which a share of the remaining value—the customers' own GVA, plus the 'other' external inputs embedded in their output—is 'enabled' by the use of steel. If that share were taken to be the steel share of 'steel and alternative' inputs, then steel would account for just over two thirds of the remaining value in the manufacturing sectors, and for around one sixth of that in construction (see Fig. 63).

[12] As explained in Appendix 2, the estimated split between inputs of steel and other metals is based on data for a limited number of economies from across the globe, namely the US, Japan, UK, Canada, and Australia. The consequent estimates in this section should therefore be seen as only a very broad approximation of the shares of EU customer sector activity potentially 'enabled' by the use of steel.

Fig. 63. Steel share of customer sectors' steel and 'alternative' inputs

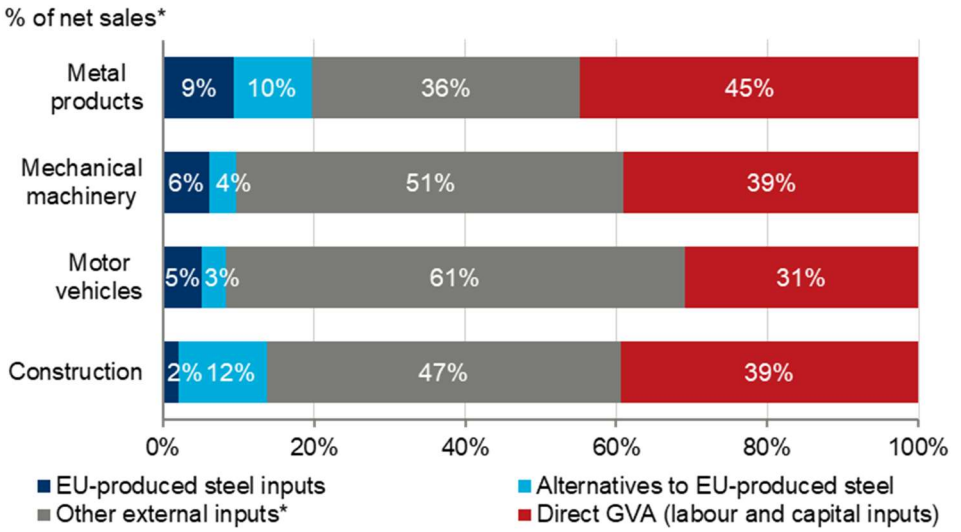


Source: Oxford Economics

4.3.2 The role of EU-produced steel in enabling customer-related activity

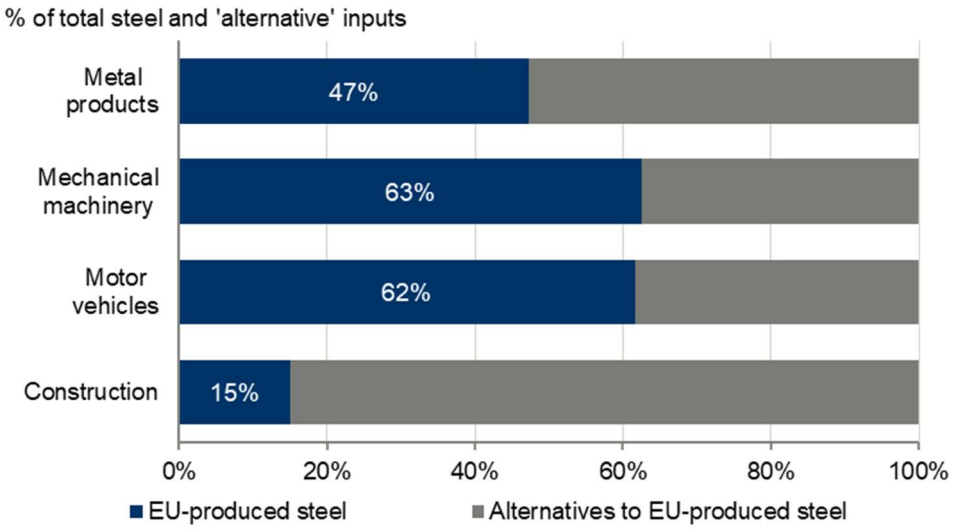
Figs. 64 and 65 re-work the above estimates to show the role of EU-produced steel, with non-EU steel counted in the 'alternatives' group. EU-produced steel accounts for just under a half of the 'steel and alternatives' resource group in the case of metal products, for just over three-fifths in the case of mechanical machinery and motor vehicles, and for just under one sixth in the case of construction.

Fig. 64. Estimated use of inputs by the customer sectors



Source: Oxford Economics * Sales and inputs exclude transactions within each customer industry.

Fig. 65. EU-produced steel as a share of all steel and 'alternative' inputs

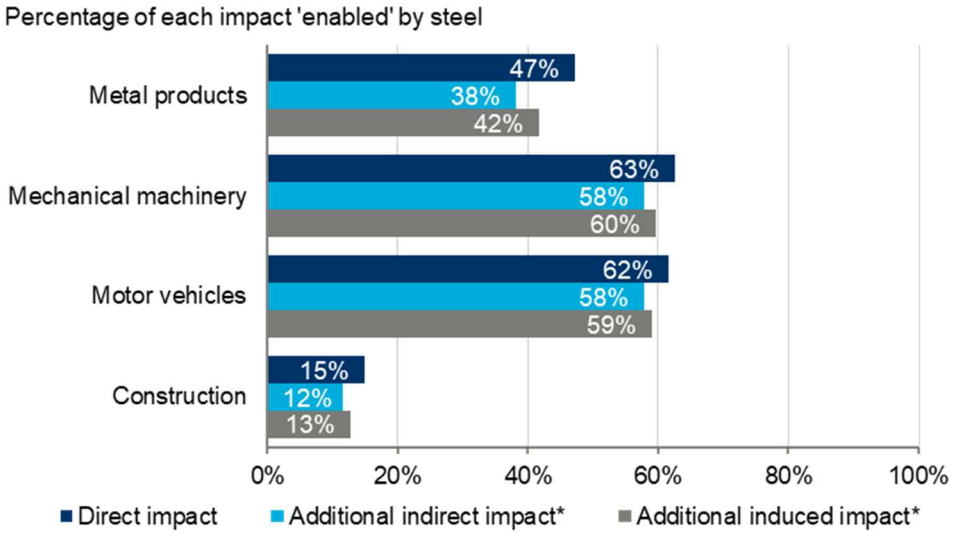


Source: Oxford Economics

These shares could arguably be described as the share of the customer sectors' direct GVA that is 'enabled' by EU-produced steel, in which case the share of the direct jobs and tax contributions enabled by that steel would be of a similar magnitude. This share might also be seen as approximating:

- The 'EU-steel-enabled' share of the additional (non-steel) indirect impact, excluding that part of the indirect impact that is due to the customers' purchases of 'alternative materials'.
- The 'EU-steel-enabled' share of the additional induced impact, excluding that part of the induced impact that is due to the spending of workers in the 'alternative materials' supply chain.

Fig. 66. Share of customer impacts arguably 'enabled' by EU steel



Source: Oxford Economics * Impacts excluding those on and via steel and on and via each other

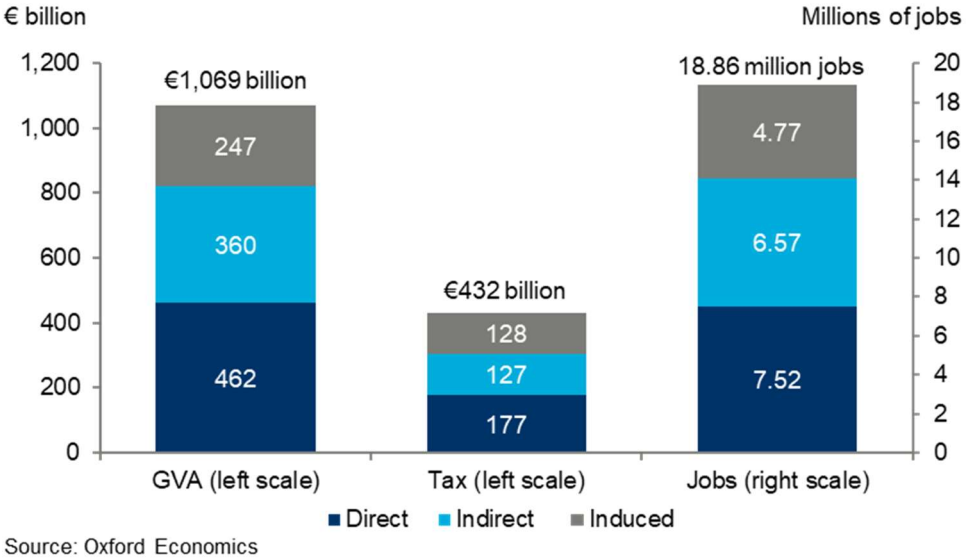
Applying these assumptions to the customer sectors' additional (non-steel) impacts (on the consolidated basis) results in the impact shares shown in Fig. 66, and the values shown in Figs. 67 and 68.

Fig. 67. Customer impacts arguably 'enabled' by the use of EU steel

	Metal products	Mechan-ical machinery	Motor vehicles	Construc-tion	Total
GVA impact, € billion					
Direct	88	137	128	110	462
Indirect	46	96	135	82	360
Induced	40	68	81	58	247
Total	173	301	345	251	1,069
% of additional customer impact[1]	*43%*	*60%*	*59%*	*13%*	*32%*
Employment impact, millions					
Direct	1.77	1.88	1.58	2.29	7.52
Indirect	0.83	1.65	2.62	1.47	6.57
Induced	0.78	1.26	1.61	1.12	4.77
Total	3.37	4.79	5.81	4.88	18.86
% of additional customer impact[1]	*43%*	*60%*	*59%*	*13%*	*30%*
Tax impact, € billion					
Direct	31	53	53	40	177
Indirect	16	34	48	29	127
Induced	21	36	42	30	128
Total	68	123	142	99	432
% of additional customer impact[1]	*43%*	*60%*	*60%*	*13%*	*32%*

[1] Percentage of overall customer impact on the additional (ex-steel) and consolidated basis.

Fig. 68. Potential 'steel enabled' customer-related impacts by channel



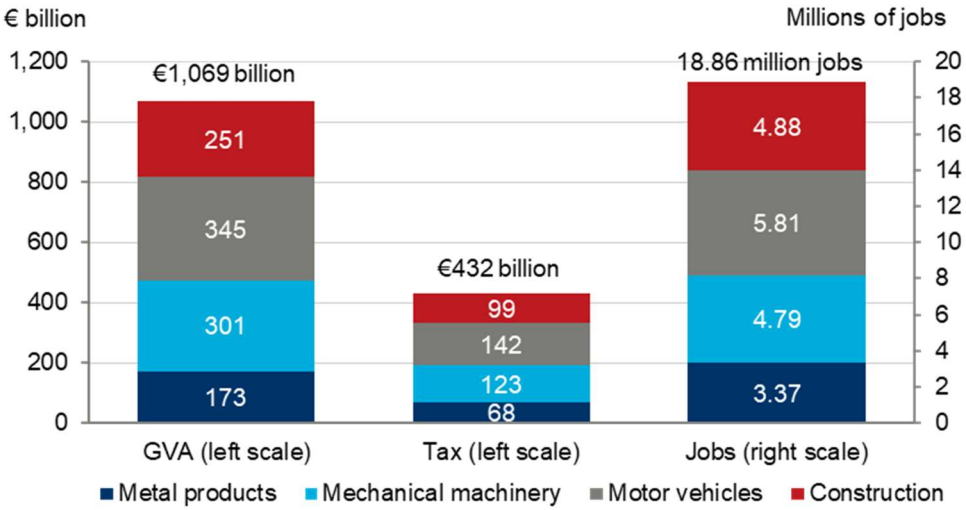
Source: Oxford Economics

On this view, across the four customer sectors together and including their impacts through the three channels, the EU steel industry could be said to 'facilitate' an additional €1.07 trillion of European GVA, supporting 18.86 million jobs and generating €432 billion of tax revenues. This means that approaching a third of these customers sectors' additional (non-steel) impacts could be said to be 'enabled' by the use of EU-produced steel.

By customer sector, around 60 percent of the total economic impact of the EU motor vehicle and mechanical machinery manufacturing sectors is arguably 'enabled' by the use of EU-produced steel, together with 43 percent of the total economic impact of metal product manufacturing, and 13 percent of the total impact of the EU construction industry.

As a result, motor vehicles account for 32 percent of the total 'EU-steel-enabled' GVA impact, mechanical machinery for 28 percent, construction for 23 percent, and metal product manufacture for 16 percent (see Fig. 69). The tax impacts show a very similar pattern. The share of the total jobs impact is slightly higher than the share of the total GVA impact, for construction and metal product manufacture, with the reverse true for mechanical machinery.

Fig. 69. Potential 'steel enabled' customer-related impacts by sector



Source: Oxford Economics

5. 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) Direct jobs figures are provided by EUROFER. Tax estimates are modelled by Oxford Economics based on tax-to-income and tax-to-spending ratios sourced from the OECD. Other values are from Eurostat's 'Annual detailed enterprise statistics' dataset, or Oxford Economics' estimates based on that. Shares of national manufacturing are based on the same Eurostat dataset, while data on national economies—used to estimate industry shares in those economies—is taken from the Eurostat 'main GDP aggregates', 'Labour Force Survey', and 'annual government finance statistics' datasets.

(2) No direct impact is shown for six countries, namely Cyprus, Estonia, Ireland, Latvia, Lithuania and Malta, as the EUROFER dataset shows only a handful of jobs in Estonia and does not cover the other states. The Eurostat dataset is consistent with steel having no significant presence in any of those states, although it is not shown to be completely absent in Ireland, Malta and (possibly) Latvia.

(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. For Romania and Bulgaria, the total value of production per worker is somewhat closer to the EU average than the very low value for measured GVA per worker.

(4) Figures for steel industry capital spending cover gross spending on plant, machinery and equipment, and on construction activity. Spending on land, existing buildings, and intangible assets is excluded.

(5) 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 by country of purchaser (calculated as the difference between total production and GVA), will give some indication of each national industry's relative contribution to the indirect economic impact across the Union.

(6) Direct and indirect tax impacts include taxes on employees, employers and businesses. But these tax impacts do not cover taxes levied on the consumer spending of employees, which are all counted in the induced channel. So while the total tax contribution is shown in the tables as a share of total national taxation, the direct tax contribution is shown as a share of national taxation excluding taxes on consumer spending.

(7) The additional economic footprint of the key European steel-using sectors excludes impacts on and via the steel sector, and impacts on and via any of the other key steel-using sectors.

EUROPEAN UNION

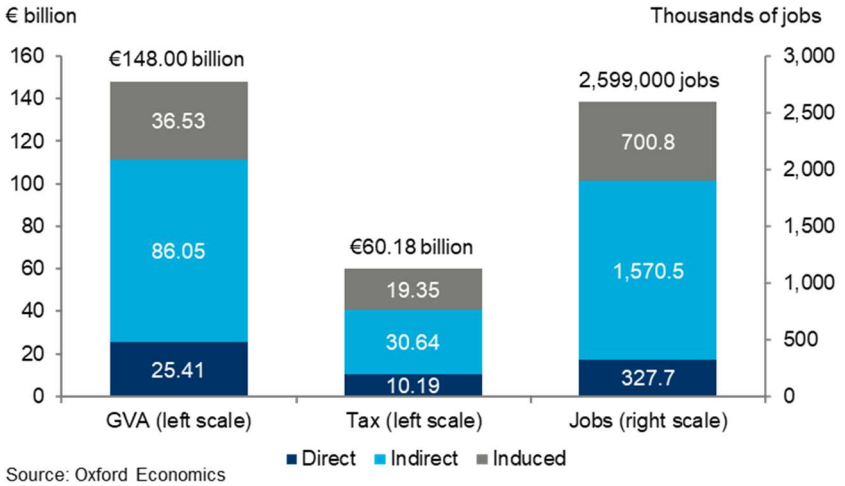
Fig. 70. The steel industry's direct economic contribution

Total EU	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	147.79	25.41	327.70	10.19	3.92	5.8
Rank out of EU-28	-	-	-	-	-	-

Total EU	Share of total EU manufacturing industry			Share of total EU economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	2.11%	1.28%	1.07%	0.18%	0.15%	0.21%
Rank out of EU-28	-	-	-	-	-	-

Total EU	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	100.0%	100.0%	100.0%	100.0%	77,543	100%

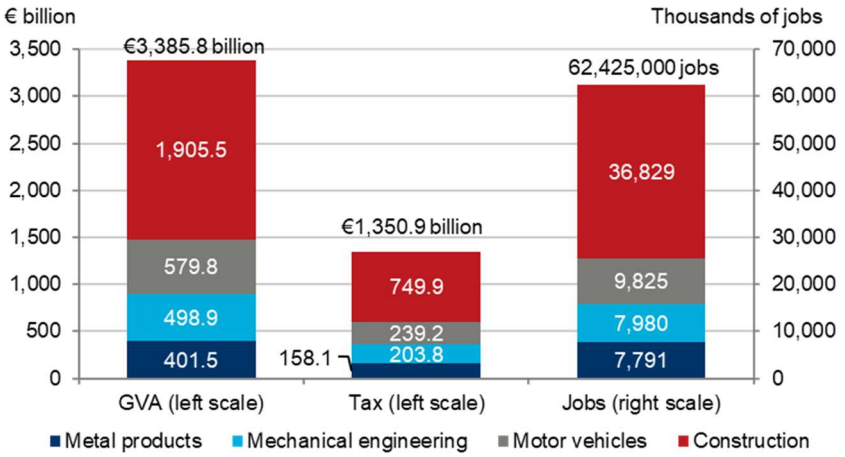
Fig. 71. The European steel industry's economic footprint across the EU



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % total EU economy
GVA	100.0%	1.08%
Jobs	100.0%	1.17%
Tax	100.0%	1.00%
	Rank	Rank
GVA	-	-
Jobs	-	-
Tax	-	-

Fig. 72. The additional footprint of key European steel-using sectors across the EU



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % total EU economy
GVA	100.0%	24.6%
Jobs	100.0%	28.1%
Tax	100.0%	22.5%
	Rank	Rank
GVA	-	-
Jobs	-	-
Tax	-	-

AUSTRIA

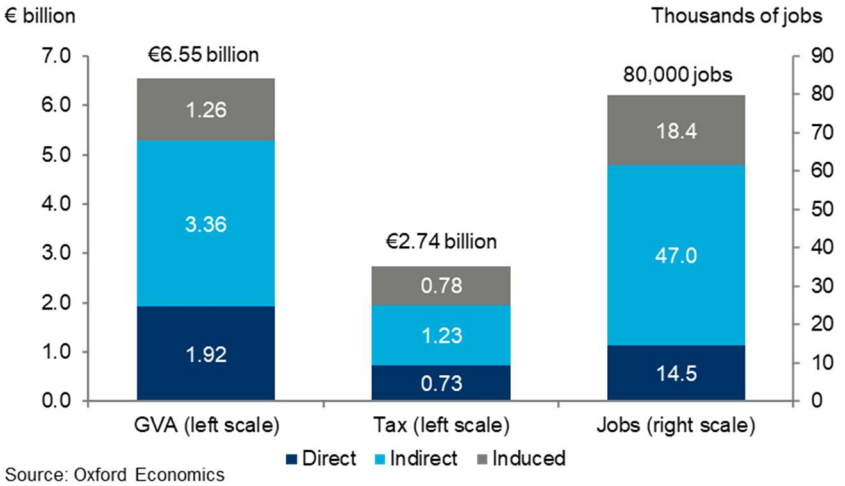
Fig. 73. The steel industry's direct economic contribution

Austria	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	7.17	1.92	14.49	0.73	0.42	3.7
Rank out of EU-28	8	3	10	4	3	21

Austria	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	3.97%	3.32%	2.27%	0.58%	0.35%	0.59%
Rank out of EU-28	4	3	4	2	4	2

Austria	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	4.8%	7.6%	4.4%	7.2%	132,755	171%

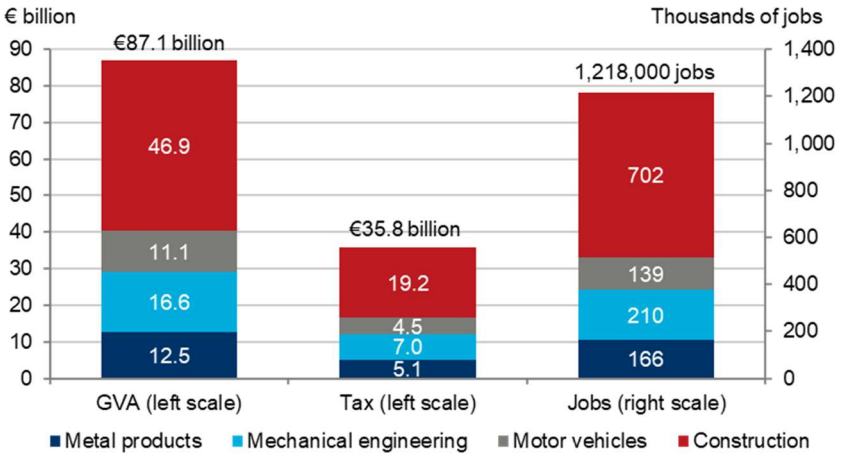
Fig. 74. The European steel industry's economic footprint in Austria



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	4.4%	1.98%
Jobs	3.1%	1.91%
Tax	4.5%	1.77%
	Rank	Rank
GVA	9	5
Jobs	11	7
Tax	7	5

Fig. 75. The additional footprint of key European steel-using sectors in Austria



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	2.6%	26.4%
Jobs	2.0%	29.1%
Tax	2.7%	23.2%
	Rank	Rank
GVA	9	11
Jobs	12	9
Tax	10	10

BELGIUM

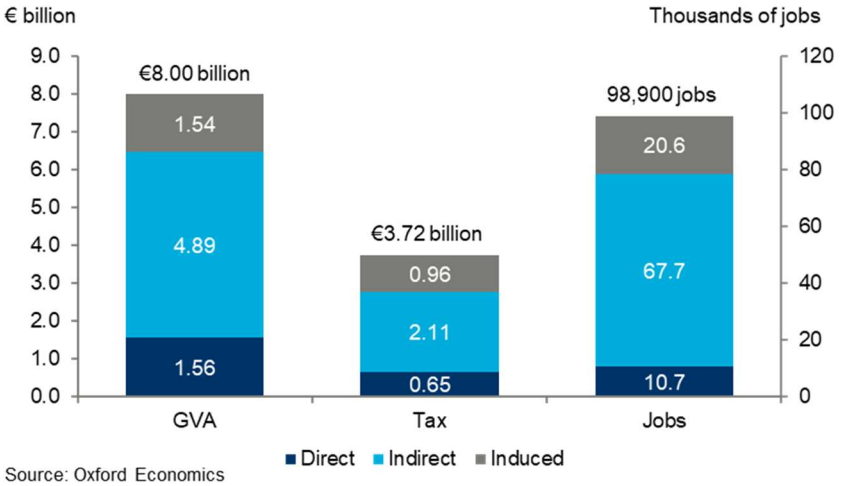
Fig. 76. The steel industry's direct economic contribution

Belgium	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	9.97	1.56	10.67	0.65	0.23	6.4
Rank out of EU-28	5	7	12	5	7	8

Belgium	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	3.90%	2.58%	2.11%	0.40%	0.23%	0.40%
Rank out of EU-28	5	5	6	6	9	7

Belgium	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	6.7%	6.1%	3.3%	6.4%	146,462	189%

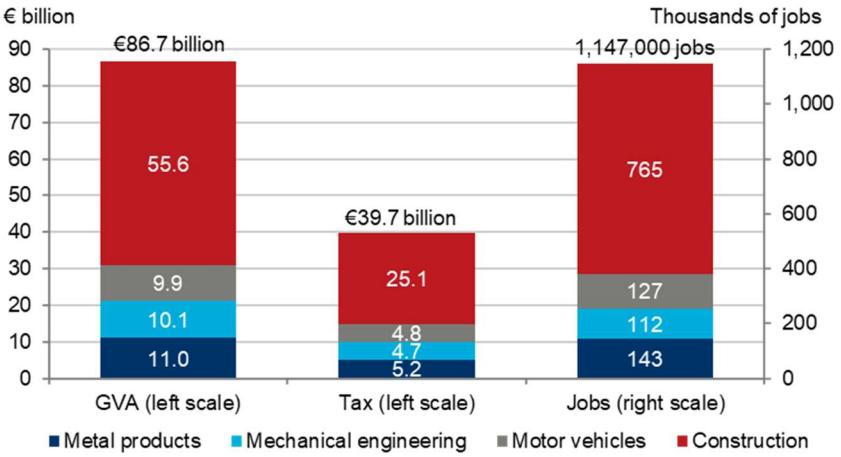
Fig. 77. The European steel industry's economic footprint in Belgium



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	5.4%	2.04%
Jobs	3.8%	2.16%
Tax	6.2%	1.89%
	Rank	Rank
GVA	6	4
Jobs	8	3
Tax	6	4

Fig. 78. The additional footprint of key European steel-using sectors in Belgium



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	2.6%	22.1%
Jobs	1.8%	25.0%
Tax	2.9%	20.2%
	Rank	Rank
GVA	10	19
Jobs	13	16
Tax	8	16

BULGARIA

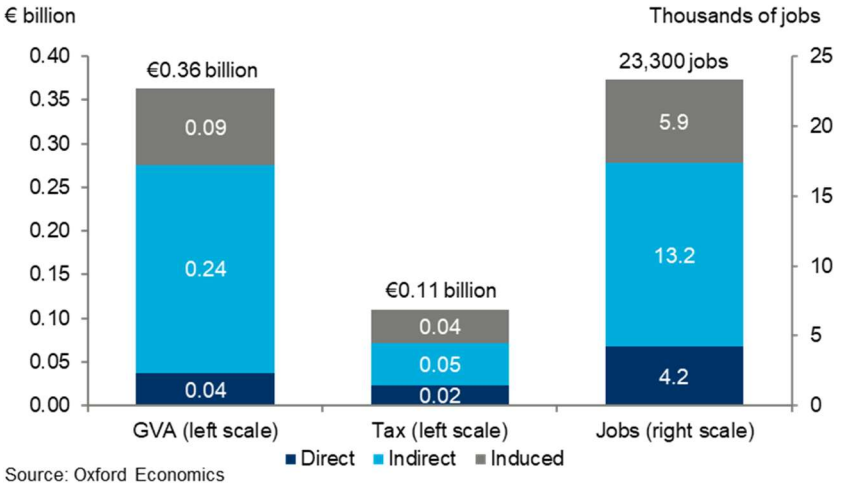
Fig. 79. The steel industry's direct economic contribution

Bulgaria	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	0.48	0.04	4.20	0.02	0.00	12.8
Rank out of EU-28	20	21	18	21	21	1

Bulgaria	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.50%	0.46%	0.76%	0.08%	0.14%	0.22%
Rank out of EU-28	16	20	15	17	13	13

Bulgaria	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.3%	0.1%	1.3%	0.2%	8,908	11%

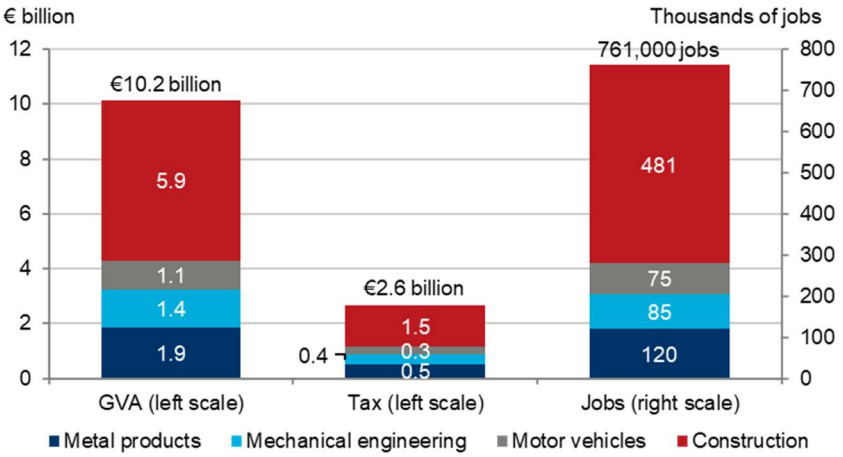
Fig. 80. The European steel industry's economic footprint in Bulgaria



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.2%	0.81%
Jobs	0.9%	0.76%
Tax	0.2%	0.72%
	Rank	Rank
GVA	22	18
Jobs	17	18
Tax	22	18

Fig. 81. The additional footprint of key European steel-using sectors in Bulgaria



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.3%	22.7%
Jobs	1.2%	24.8%
Tax	0.2%	17.4%
	Rank	Rank
GVA	21	17
Jobs	16	18
Tax	23	22

CROATIA

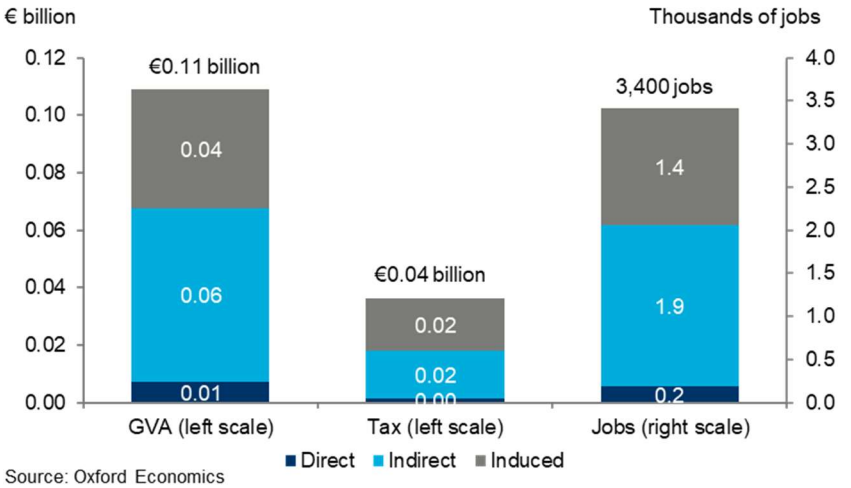
Fig. 82. The steel industry's direct economic contribution

Croatia	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	0.01	0.01	0.19	0.00	0.00	1.8
Rank out of EU-28	22	22	22	22	22	22

Croatia	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	0.07%	0.12%	0.07%	0.02%	0.01%	0.01%
Rank out of EU-28	22	22	22	22	22	22

Croatia	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.0%	0.0%	0.1%	0.0%	38,170	49%

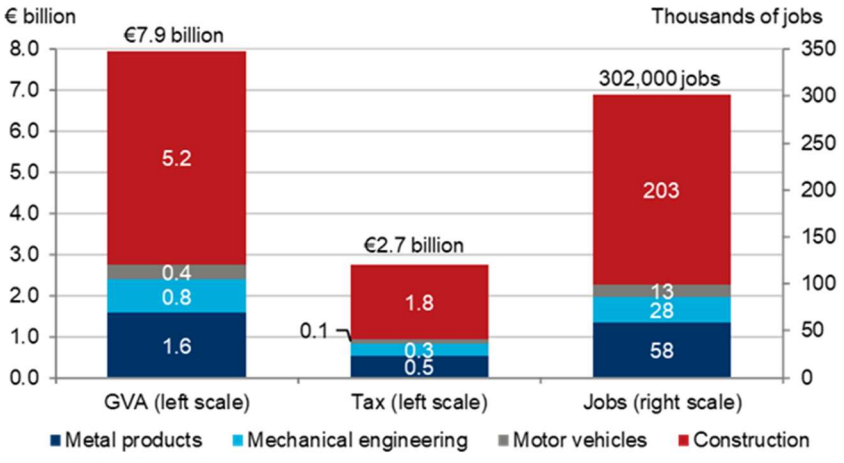
Fig. 83. The European steel industry's economic footprint in Croatia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.07%	0.27%
Jobs	0.13%	0.21%
Tax	0.06%	0.20%
	Rank	Rank
GVA	24	26
Jobs	24	28
Tax	23	28

Fig. 84. The additional footprint of key European steel-using sectors in Croatia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.2%	19.6%
Jobs	0.5%	18.9%
Tax	0.2%	14.8%
	Rank	Rank
GVA	24	22
Jobs	22	25
Tax	22	26

CYPRUS

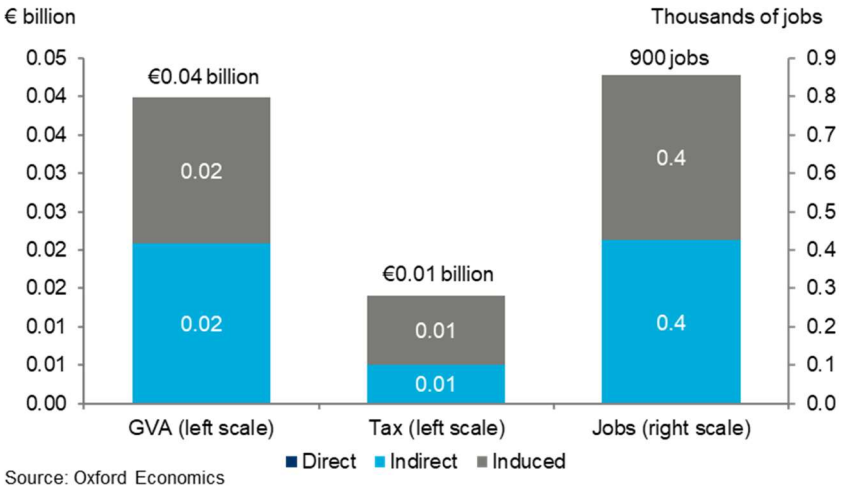
Fig. 85. The steel industry's direct economic contribution

Cyprus	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Cyprus	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Cyprus	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	-	-	-	-	-	-

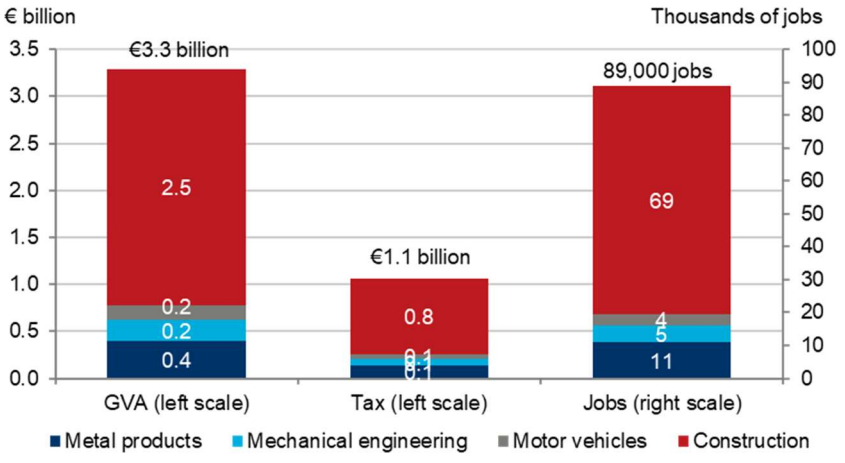
Fig. 86. The European steel industry's economic footprint in Cyprus



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.03%	0.23%
Jobs	0.03%	0.23%
Tax	0.02%	0.21%
	Rank	Rank
GVA	27	28
Jobs	27	27
Tax	27	27

Fig. 87. The additional footprint of key European steel-using sectors in Cyprus



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.1%	19.3%
Jobs	0.1%	24.0%
Tax	0.1%	16.0%
	Rank	Rank
GVA	27	24
Jobs	26	21
Tax	27	24

CZECH REPUBLIC

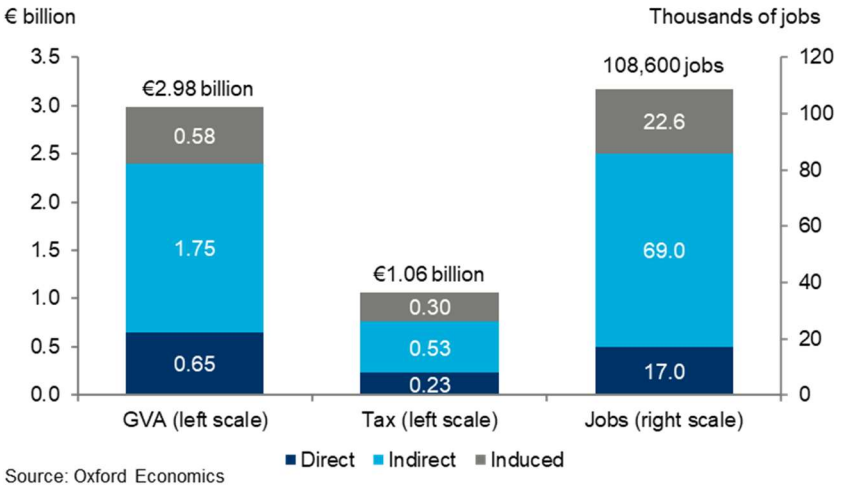
Fig. 88. The steel industry's direct economic contribution

Czech Republic	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	3.66	0.65	17.00	0.23	0.11	5.7
Rank out of EU-28	12	12	7	12	9	10

Czech Republic	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	2.16%	1.56%	1.29%	0.38%	0.33%	0.44%
Rank out of EU-28	12	10	10	7	5	6

Czech Republic	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	2.5%	2.5%	5.2%	2.2%	38,052	49%

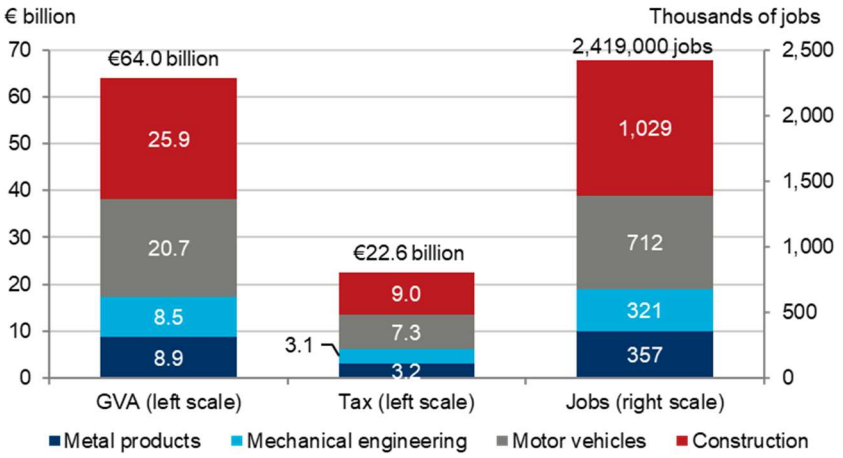
Fig. 89. The European steel industry's economic footprint in the Czech Republic



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	2.0%	1.73%
Jobs	4.2%	2.13%
Tax	1.8%	1.57%
	Rank	Rank
GVA	12	6
Jobs	7	4
Tax	12	6

Fig. 90. The additional footprint of key European steel-using sectors in the Czech Republic



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	1.9%	37.2%
Jobs	3.9%	47.5%
Tax	1.7%	33.3%
	Rank	Rank
GVA	11	2
Jobs	8	1
Tax	12	3

DENMARK

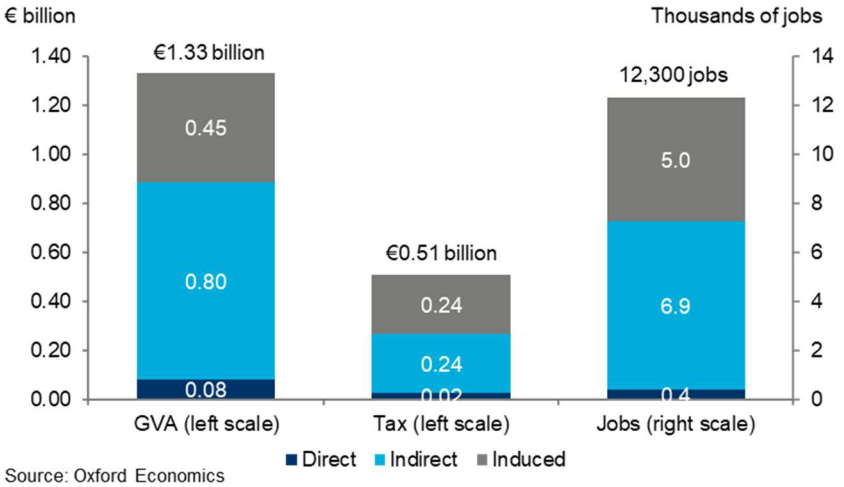
Fig. 91. The steel industry's direct economic contribution

Denmark	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	0.42	0.08	0.39	0.02	0.00	5.27
Rank out of EU-28	21	20	21	20	20	14

Denmark	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	0.41%	0.23%	0.13%	0.03%	0.01%	0.02%
Rank out of EU-28	21	21	21	21	21	21

Denmark	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.3%	0.3%	0.1%	0.2%	204,673	264%

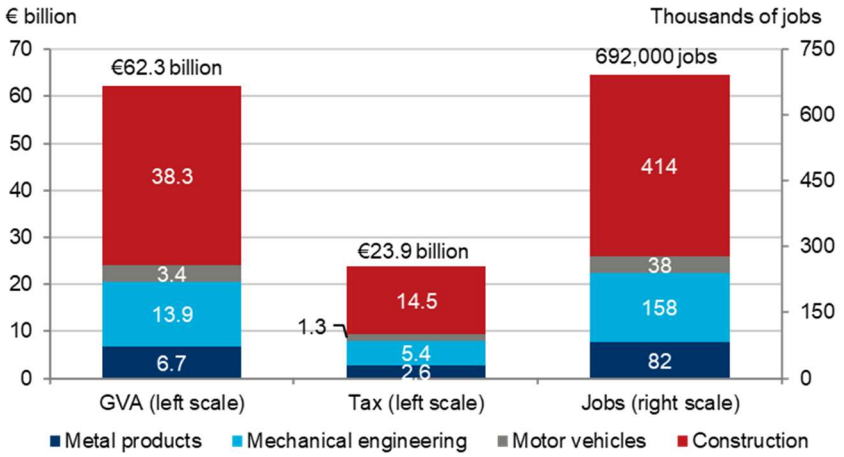
Fig. 92. The European steel industry's economic footprint in Denmark



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.9%	0.52%
Jobs	0.5%	0.45%
Tax	0.8%	0.38%
	Rank	Rank
GVA	16	20
Jobs	20	20
Tax	16	22

Fig. 93. The additional footprint of key European steel-using sectors in Denmark



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	1.8%	24.5%
Jobs	1.1%	25.3%
Tax	1.8%	17.8%
	Rank	Rank
GVA	12	12
Jobs	17	15
Tax	11	21

ESTONIA

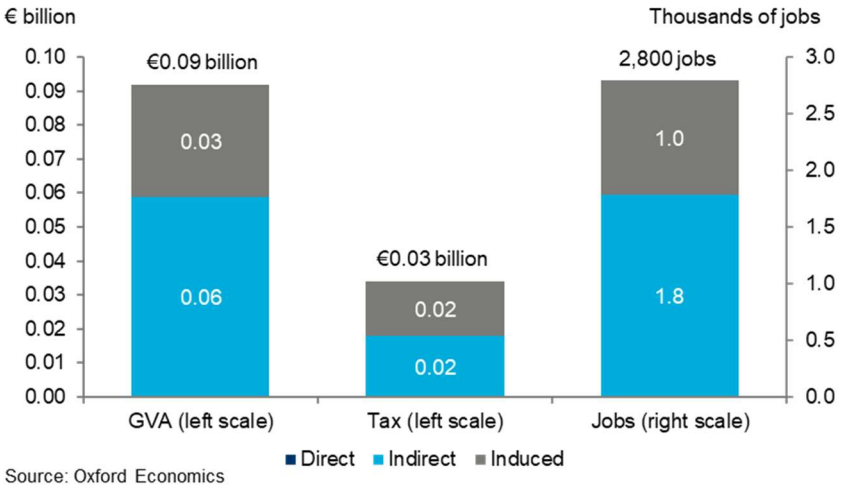
Fig. 94. The steel industry's direct economic contribution

Estonia	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Estonia	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Estonia	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	-	-	-	-	-	-

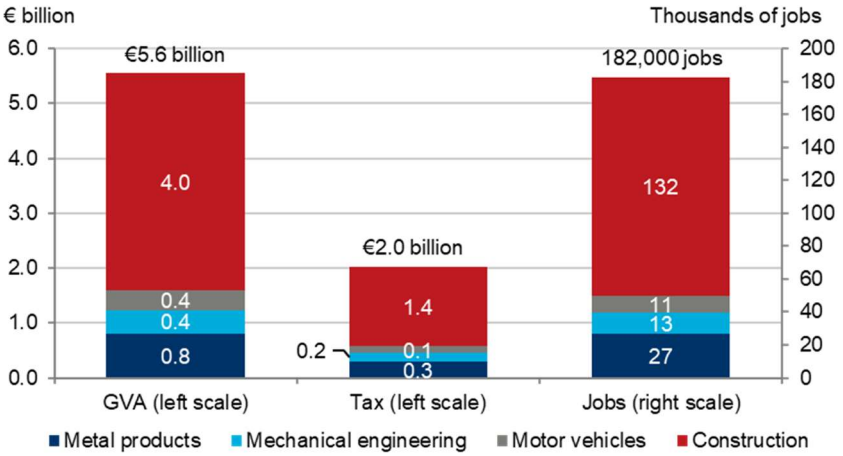
Fig. 95. The European steel industry's economic footprint in Estonia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.06%	0.45%
Jobs	0.11%	0.45%
Tax	0.06%	0.44%
	Rank	Rank
GVA	25	22
Jobs	25	21
Tax	24	20

Fig. 96. The additional footprint of key European steel-using sectors in Estonia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.2%	27.1%
Jobs	0.3%	29.1%
Tax	0.1%	26.0%
	Rank	Rank
GVA	25	9
Jobs	25	8
Tax	25	7

FINLAND

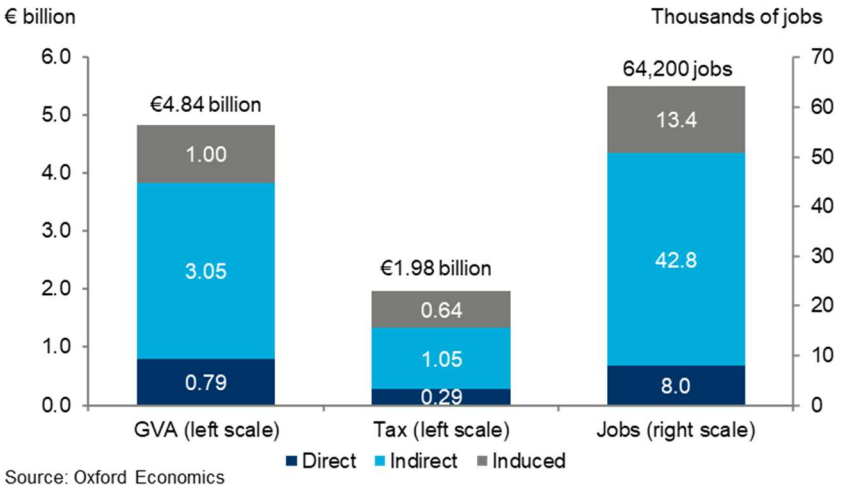
Fig. 97. The steel industry's direct economic contribution

Finland	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	7.53	0.79	7.99	0.29	0.10	9.5
Rank out of EU-28	7	11	14	11	10	4

Finland	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	6.76%	2.65%	2.46%	0.41%	0.33%	0.39%
Rank out of EU-28	2	4	3	5	6	8

Finland	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	5.1%	3.1%	2.4%	2.8%	99,020	128%

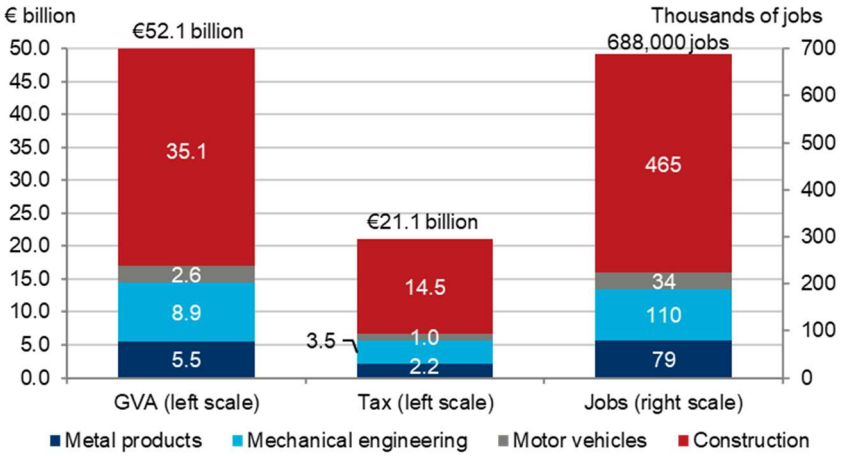
Fig. 98. The European steel industry's economic footprint in Finland



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	3.3%	2.50%
Jobs	2.5%	2.67%
Tax	3.3%	2.04%
	Rank	Rank
GVA	11	1
Jobs	13	1
Tax	11	3

Fig. 99. The additional footprint of key European key steel-using sectors in Finland



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	1.5%	26.9%
Jobs	1.1%	28.6%
Tax	1.6%	21.8%
	Rank	Rank
GVA	14	10
Jobs	18	10
Tax	13	12

FRANCE

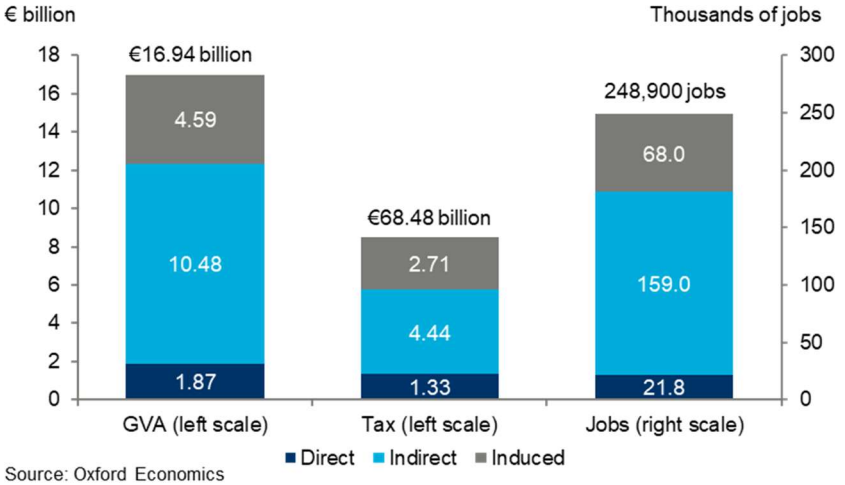
Fig. 100. The steel industry's direct economic contribution

France	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	15.20	1.87	21.80	1.33	0.06	8.1
Rank out of EU-28	3	4	5	3	13	6

France	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.71%	0.82%	0.74%	0.09%	0.08%	0.15%
Rank out of EU-28	14	16	17	15	17	16

France	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	10.3%	7.4%	6.7%	13.0%	85,975	111%

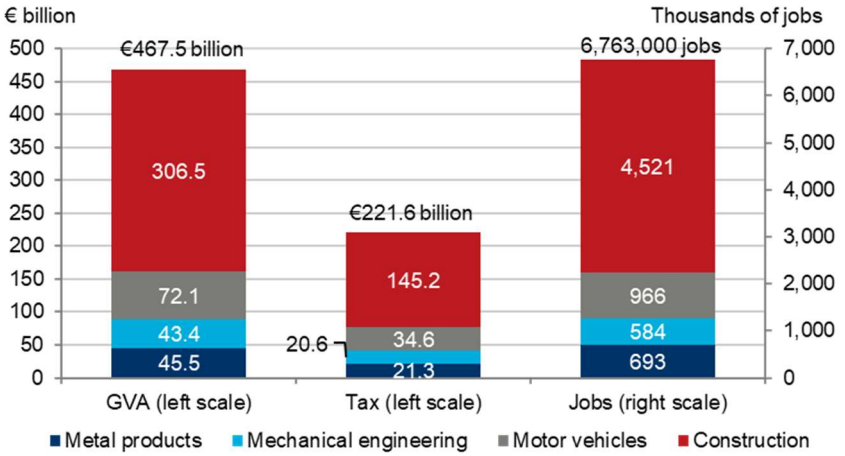
Fig. 101. The European steel industry's economic footprint in France



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	11.4%	0.83%
Jobs	9.6%	0.94%
Tax	14.1%	0.80%
	Rank	Rank
GVA	3	17
Jobs	4	17
Tax	2	17

Fig. 102. The additional footprint of key European steel-using sectors in France



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	13.8%	22.9%
Jobs	10.8%	25.5%
Tax	16.4%	20.8%
	Rank	Rank
GVA	2	16
Jobs	3	14
Tax	2	15

GERMANY

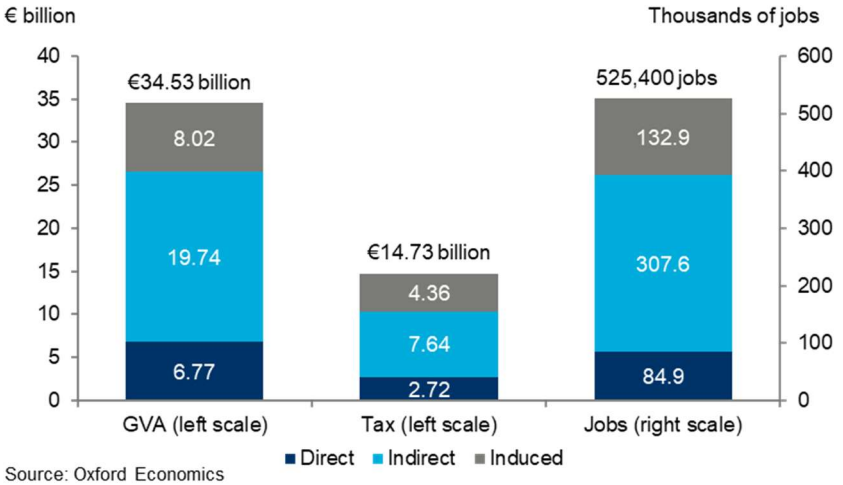
Fig. 103. The steel industry's direct economic contribution

Germany	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	36.29	6.77	84.93	2.72	1.11	5.4
Rank out of EU-28	1	1	1	1	1	13

Germany	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.98%	1.19%	1.16%	0.23%	0.21%	0.26%
Rank out of EU-28	13	13	11	10	10	10

Germany	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	24.6%	26.6%	25.9%	26.7%	79,729	103%

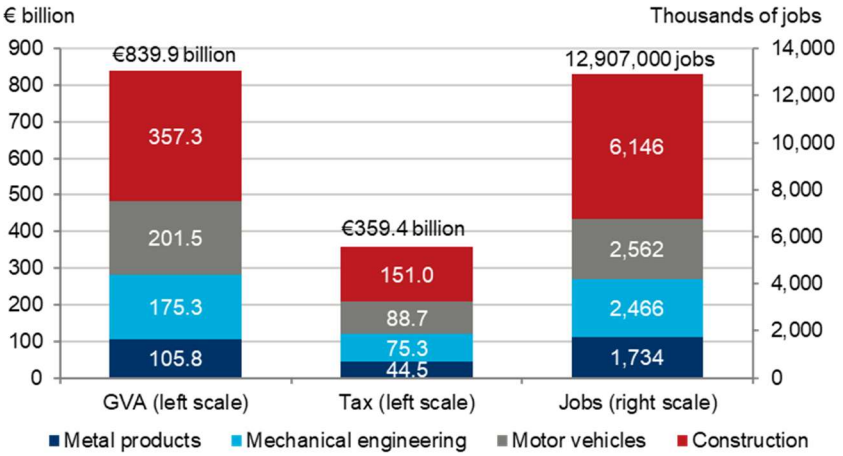
Fig. 104. The European steel industry's economic footprint in Germany



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	23.3%	1.17%
Jobs	20.2%	1.30%
Tax	24.5%	1.15%
	Rank	Rank
GVA	1	11
Jobs	1	12
Tax	1	11

Fig. 105. The additional footprint of key European steel-using sectors in Germany



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	24.8%	28.4%
Jobs	20.7%	31.9%
Tax	26.6%	28.0%
	Rank	Rank
GVA	1	8
Jobs	1	6
Tax	1	5

GREECE

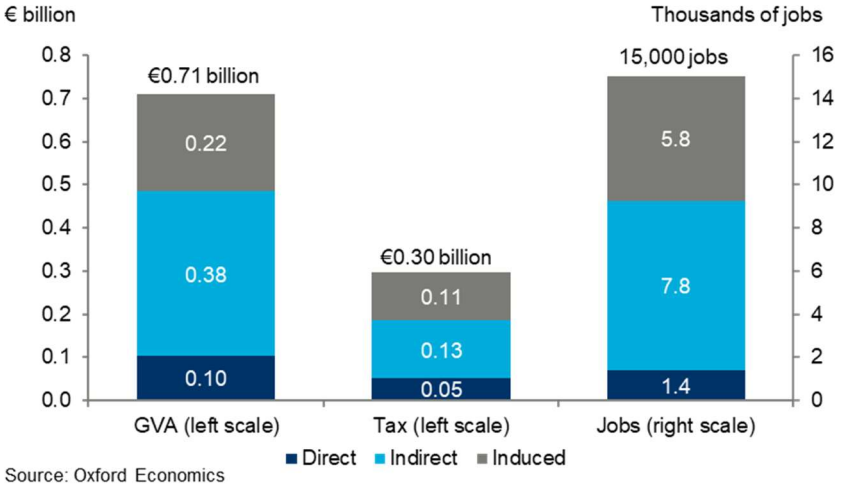
Fig. 106. The steel industry's direct economic contribution

Greece	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	0.49	0.10	1.40	0.05	0.00	4.7
Rank out of EU-28	19	19	19	18	19	16

Greece	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.11%	0.92%	0.44%	0.07%	0.04%	0.10%
Rank out of EU-28	20	14	19	20	19	18

Greece	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.3%	0.4%	0.4%	0.5%	73,604	95%

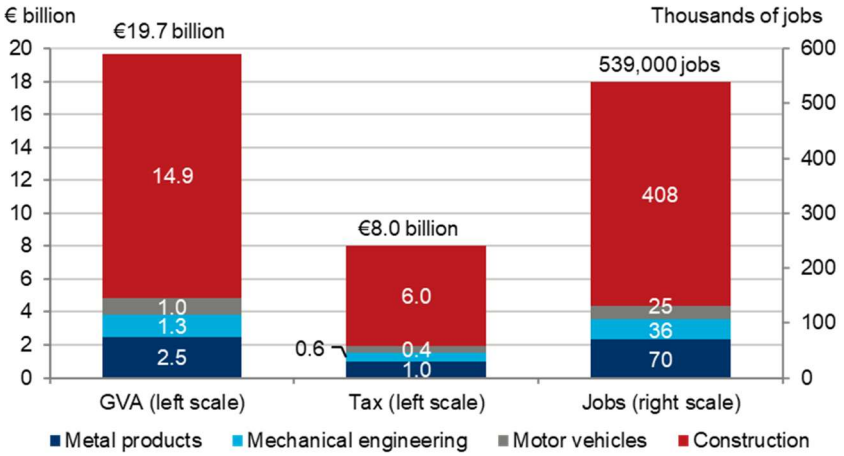
Fig. 107. The European steel industry's economic footprint in Greece



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.5%	0.45%
Jobs	0.6%	0.41%
Tax	0.5%	0.42%
	Rank	Rank
GVA	21	21
Jobs	19	22
Tax	19	21

Fig. 108. The additional footprint of key European steel-using sectors in Greece



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.6%	12.5%
Jobs	0.9%	14.6%
Tax	0.6%	11.4%
	Rank	Rank
GVA	19	27
Jobs	19	28
Tax	19	28

HUNGARY

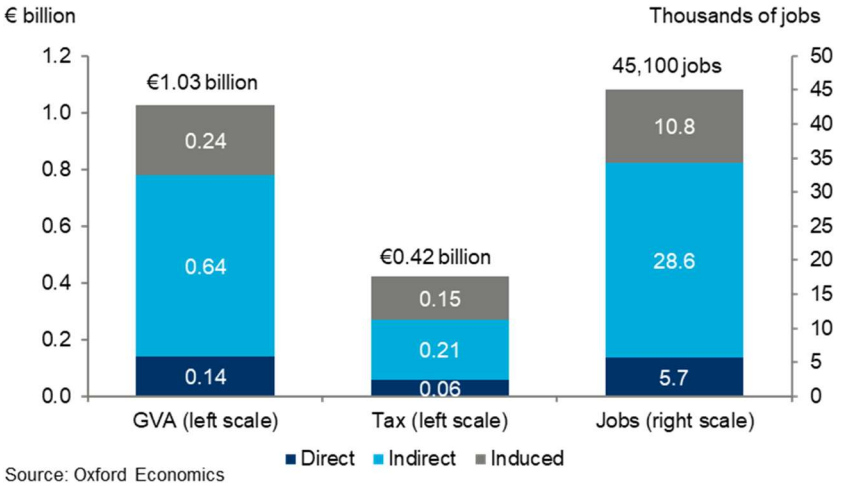
Fig. 109. The steel industry's direct economic contribution

Hungary	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	1.21	0.14	5.67	0.06	0.06	8.7
Rank out of EU-28	15	17	15	16	12	5

Hungary	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.22%	0.59%	0.75%	0.13%	0.13%	0.18%
Rank out of EU-28	19	18	16	14	14	15

Hungary	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.8%	0.5%	1.7%	0.6%	24,592	32%

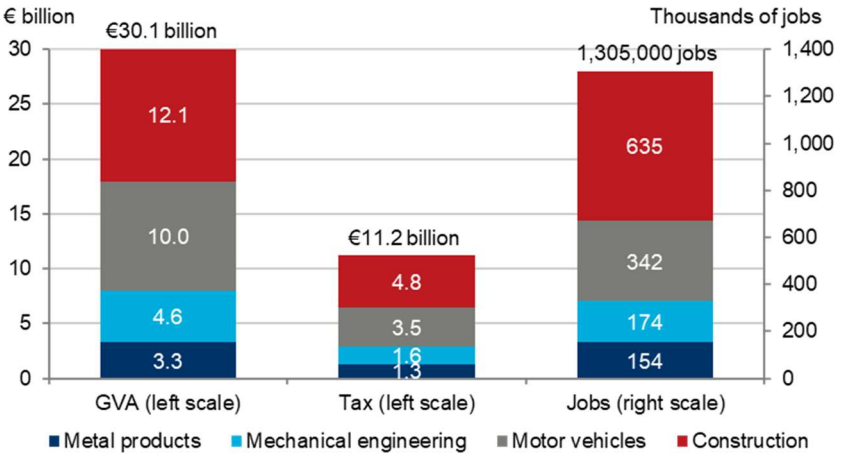
Fig. 110. The European steel industry's economic footprint in Hungary



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.7%	0.98%
Jobs	1.7%	1.03%
Tax	0.7%	0.89%
	Rank	Rank
GVA	17	15
Jobs	15	14
Tax	17	15

Fig. 111. The additional footprint of key European steel-using sectors in Hungary



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.9%	28.7%
Jobs	2.1%	29.8%
Tax	0.8%	23.6%
	Rank	Rank
GVA	17	6
Jobs	11	7
Tax	16	9

IRELAND

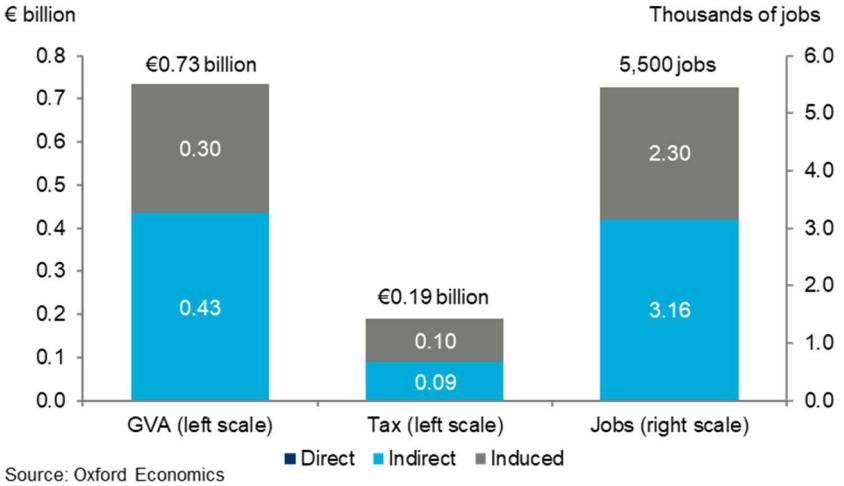
Fig. 112. The steel industry's direct economic contribution

Ireland	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Ireland	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Ireland	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	-	-	-	-	-	-

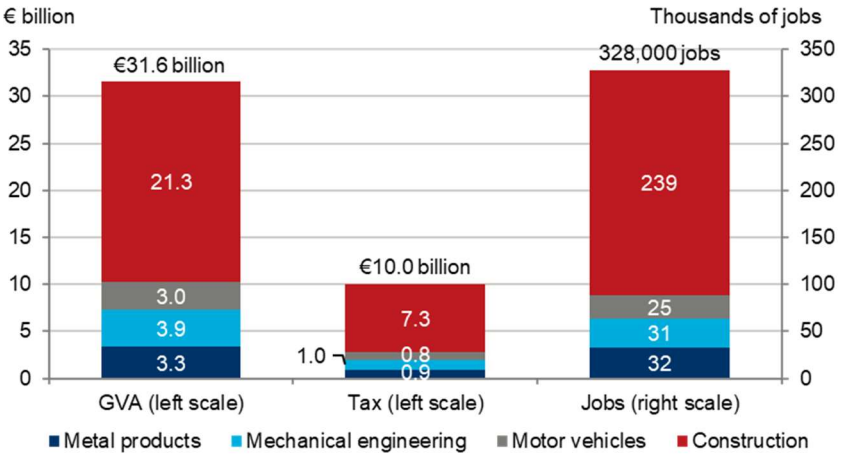
Fig. 113. The European steel industry's economic footprint in Ireland



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.5%	0.27%
Jobs	0.2%	0.26%
Tax	0.3%	0.28%
	Rank	Rank
GVA	19	27
Jobs	22	26
Tax	21	24

Fig. 114. The additional footprint of key European steel-using sectors in Ireland



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.9%	11.5%
Jobs	0.5%	15.4%
Tax	0.7%	14.8%
	Rank	Rank
GVA	15	28
Jobs	20	27
Tax	18	25

ITALY

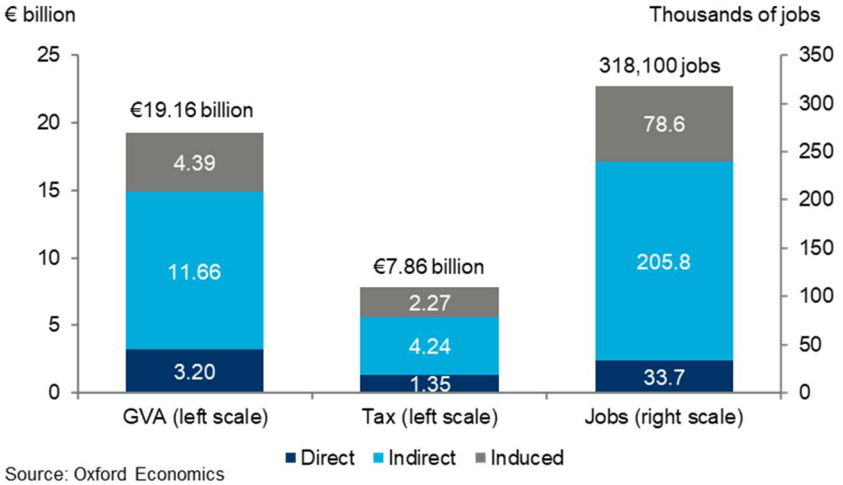
Fig. 115. The steel industry's direct economic contribution

Italy	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	19.83	3.20	33.67	1.35	0.70	6.2
Rank out of EU-28	2	2	2	2	2	9

Italy	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	2.24%	1.39%	0.91%	0.21%	0.15%	0.23%
Rank out of EU-28	10	12	13	11	11	12

Italy	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	13.4%	12.6%	10.3%	13.3%	95,062	123%

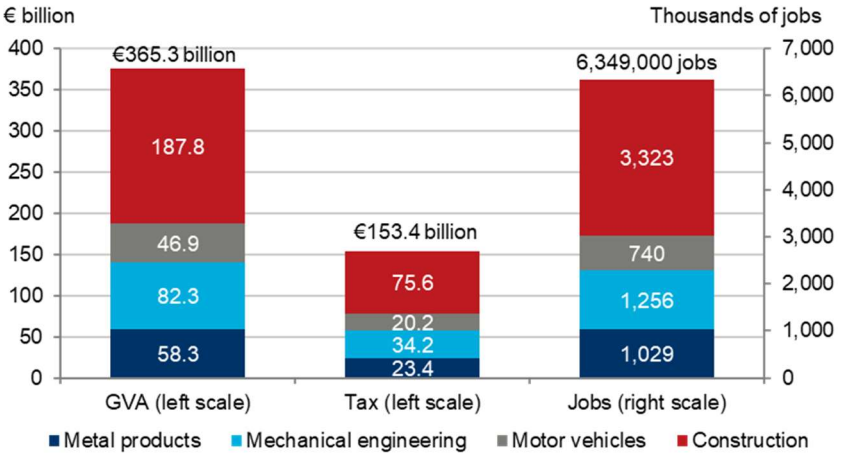
Fig. 116. The European steel industry's economic footprint in Italy



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	13.0%	1.25%
Jobs	12.2%	1.42%
Tax	13.1%	1.08%
	Rank	Rank
GVA	2	10
Jobs	2	10
Tax	3	13

Fig. 117. The additional footprint of key European steel-using sectors in Italy



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	11.1%	24.3%
Jobs	10.2%	28.3%
Tax	11.4%	21.1%
	Rank	Rank
GVA	4	13
Jobs	4	11
Tax	3	14

LATVIA

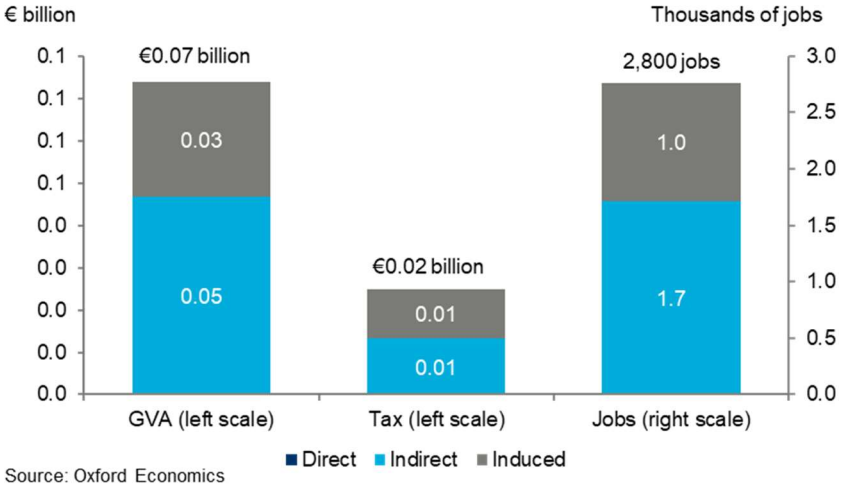
Fig. 118. The steel industry's direct economic contribution

Latvia	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Latvia	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Latvia	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	-	-	-	-	-	-

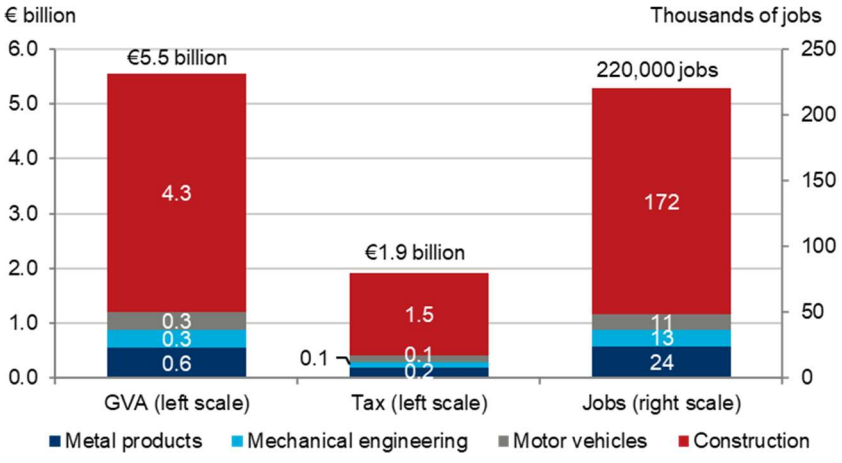
Fig. 119. The European steel industry's economic footprint in Latvia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.05%	0.31%
Jobs	0.11%	0.32%
Tax	0.04%	0.30%
	Rank	Rank
GVA	26	23
Jobs	26	23
Tax	26	23

Fig. 120. The additional footprint of key European key steel-using sectors in Latvia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.2%	23.5%
Jobs	0.4%	25.6%
Tax	0.1%	22.8%
	Rank	Rank
GVA	26	14
Jobs	24	13
Tax	26	11

LITHUANIA

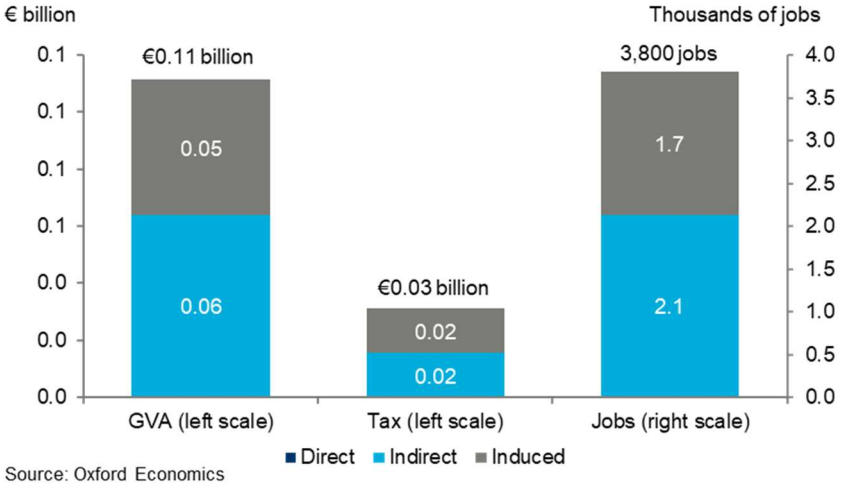
Fig. 121. The steel industry's direct economic contribution

Lithuania	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Lithuania	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Lithuania	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	-	-	-	-	-	-

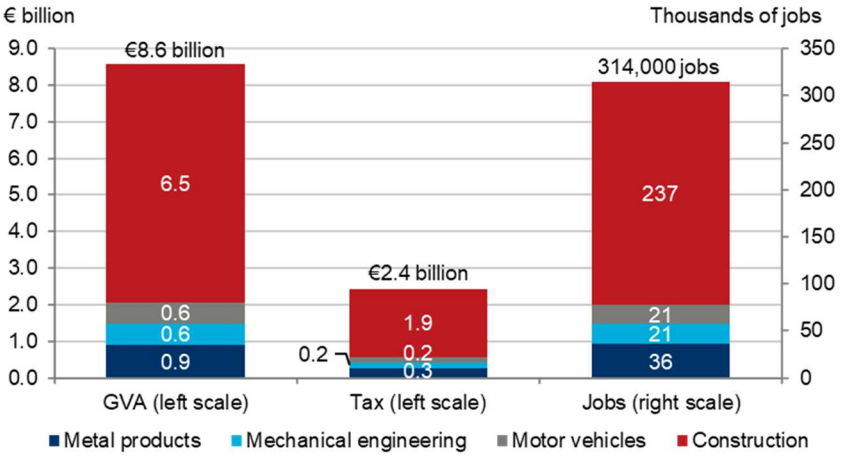
Fig. 122. The European steel industry's economic footprint in Lithuania



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.08%	0.29%
Jobs	0.15%	0.29%
Tax	0.05%	0.25%
	Rank	Rank
GVA	23	24
Jobs	23	25
Tax	25	26

Fig. 123. The additional footprint of key European key steel-using sectors in Lithuania



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.3%	22.6%
Jobs	0.5%	24.1%
Tax	0.2%	19.6%
	Rank	Rank
GVA	23	18
Jobs	21	20
Tax	24	17

LUXEMBOURG

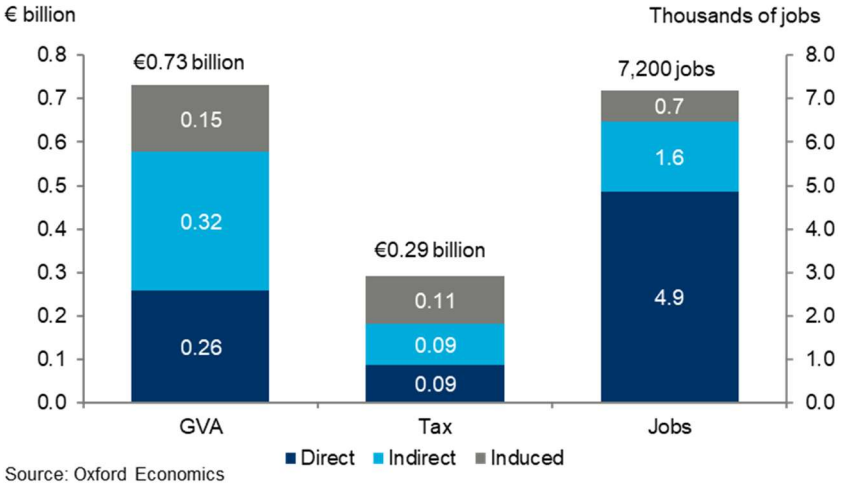
Fig. 124. The steel industry's direct economic contribution

Luxembourg	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	1.02	0.26	4.85	0.09	0.01	3.9
Rank out of EU-28	17	14	16	15	17	20

Luxembourg	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	8.95%	7.90%	14.11%	0.51%	1.80%	0.52%
Rank out of EU-28	1	1	1	3	1	3

Luxembourg	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.7%	1.0%	1.5%	0.9%	53,067	68%

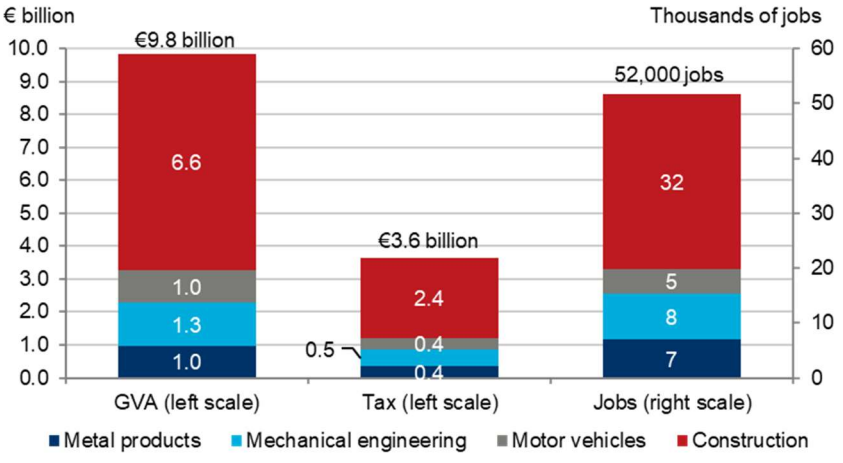
Fig. 125. The European steel industry's economic footprint in Luxembourg



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.5%	1.46%
Jobs	0.3%	2.67%
Tax	0.5%	1.36%
	Rank	Rank
GVA	20	8
Jobs	21	2
Tax	20	9

Fig. 126. The additional footprint of key European steel-using sectors in Luxembourg



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.3%	19.6%
Jobs	0.1%	19.1%
Tax	0.3%	16.8%
	Rank	Rank
GVA	22	23
Jobs	27	24
Tax	21	23

MALTA

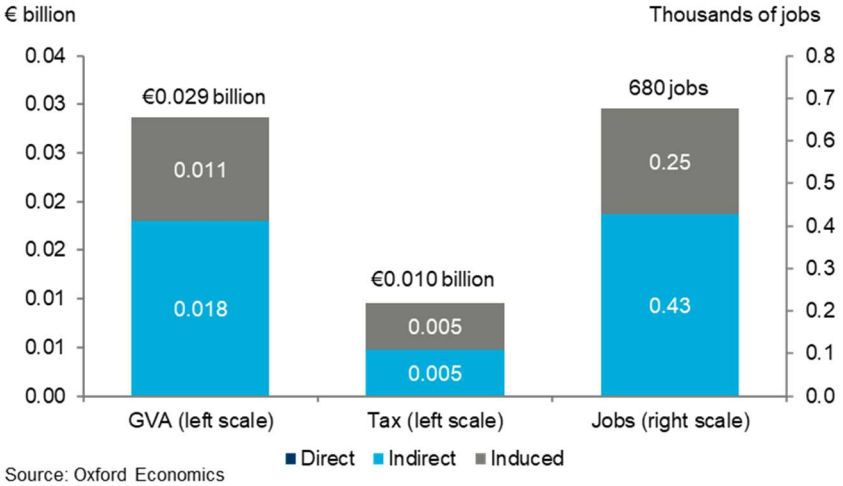
Fig. 127. The steel industry's direct economic contribution

Malta	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Malta	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	-	-	-	-	-	-
Rank out of EU-28	-	-	-	-	-	-

Malta	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	-	-	-	-	-	-

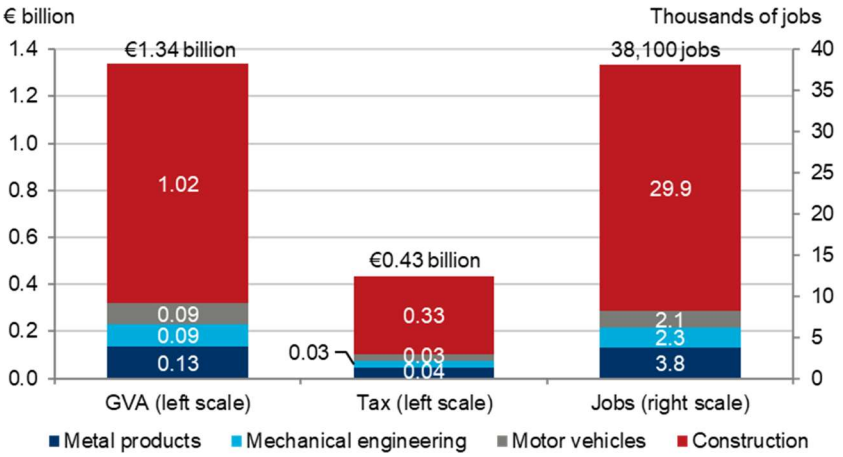
Fig. 128. The European steel industry's economic footprint in Malta



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.02%	0.29%
Jobs	0.03%	0.31%
Tax	0.02%	0.26%
	Rank	Rank
GVA	28	25
Jobs	28	24
Tax	28	25

Fig. 129. The additional footprint of key European steel-using sectors in Malta



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.04%	13.4%
Jobs	0.06%	17.6%
Tax	0.03%	11.8%
	Rank	Rank
GVA	28	26
Jobs	28	26
Tax	28	27

NETHERLANDS

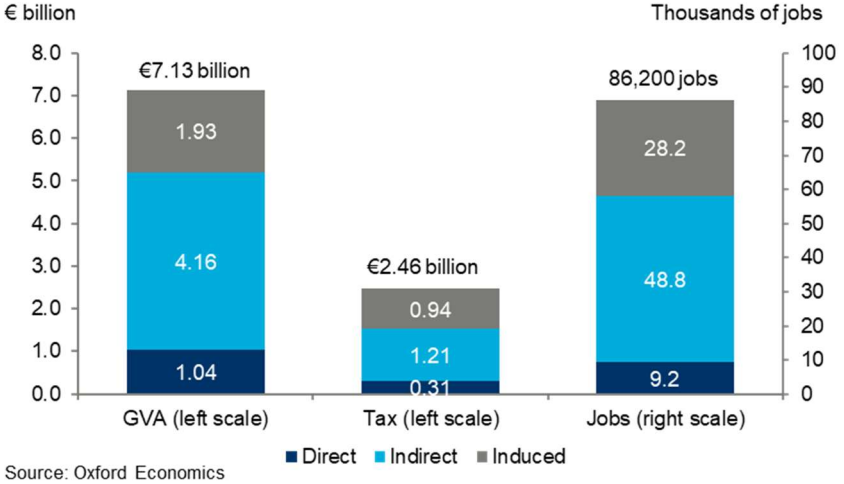
Fig. 130. The steel industry's direct economic contribution

Netherlands	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	5.07	1.04	9.24	0.31	0.03	4.9
Rank out of EU-28	11	10	13	9	15	15

Netherlands	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.60%	1.43%	1.32%	0.16%	0.11%	0.13%
Rank out of EU-28	15	11	9	13	15	17

Netherlands	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	3.4%	4.1%	2.8%	3.1%	112,505	145%

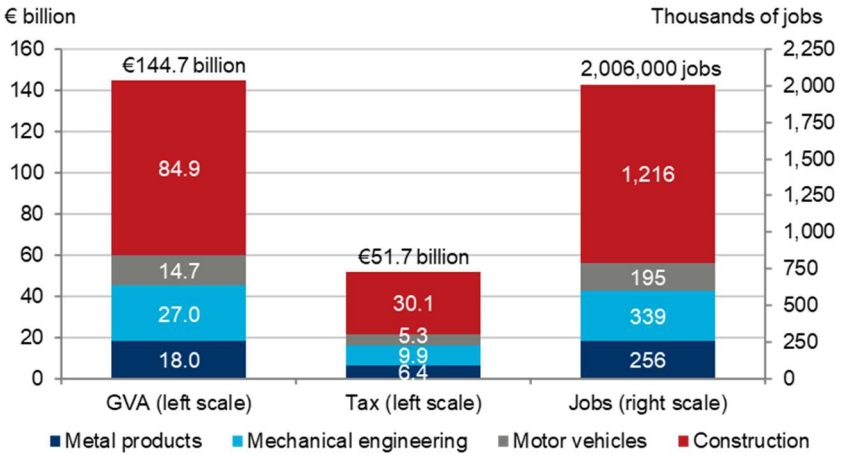
Fig. 131. The European steel industry's economic footprint in the Netherlands



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	4.8%	1.08%
Jobs	3.3%	1.03%
Tax	4.1%	0.86%
	Rank of 28	Rank of 28
GVA	7	13
Jobs	10	15
Tax	9	16

Fig. 132. The additional footprint of key European steel-using sectors in the Netherlands



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	4.3%	21.9%
Jobs	3.2%	24.0%
Tax	3.8%	18.1%
	Rank	Rank
GVA	6	20
Jobs	9	22
Tax	7	20

POLAND

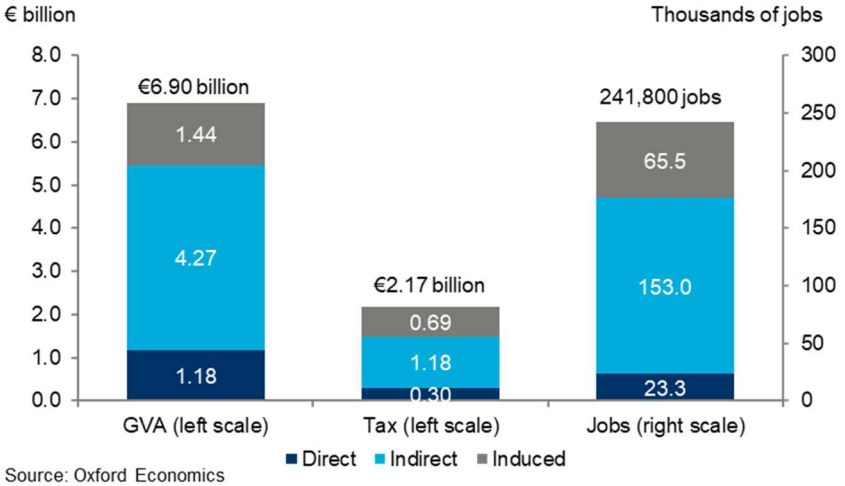
Fig. 133. The steel industry's direct economic contribution

Poland	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	6.47	1.18	23.30	0.30	0.25	5.5
Rank out of EU-28	9	9	3	10	6	12

Poland	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	2.20%	1.65%	0.88%	0.29%	0.14%	0.25%
Rank out of EU-28	11	8	14	9	12	11

Poland	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	4.4%	4.7%	7.1%	2.9%	50,761	65%

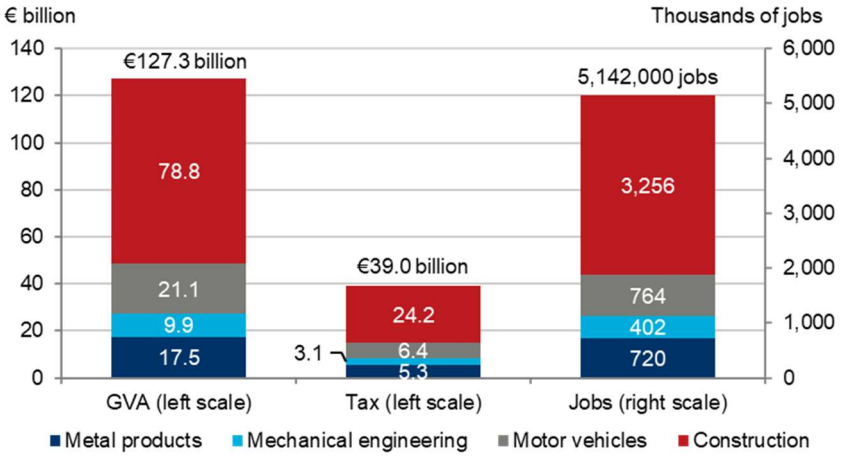
Fig. 134. The European steel industry's economic footprint in Poland



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	4.7%	1.68%
Jobs	9.3%	1.50%
Tax	3.6%	1.36%
	Rank	Rank
GVA	8	7
Jobs	5	9
Tax	10	8

Fig. 135. The additional footprint of key European steel-using sectors in Poland



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	3.8%	31.0%
Jobs	8.2%	32.0%
Tax	2.9%	24.5%
	Rank	Rank
GVA	8	4
Jobs	5	5
Tax	9	8

PORTUGAL

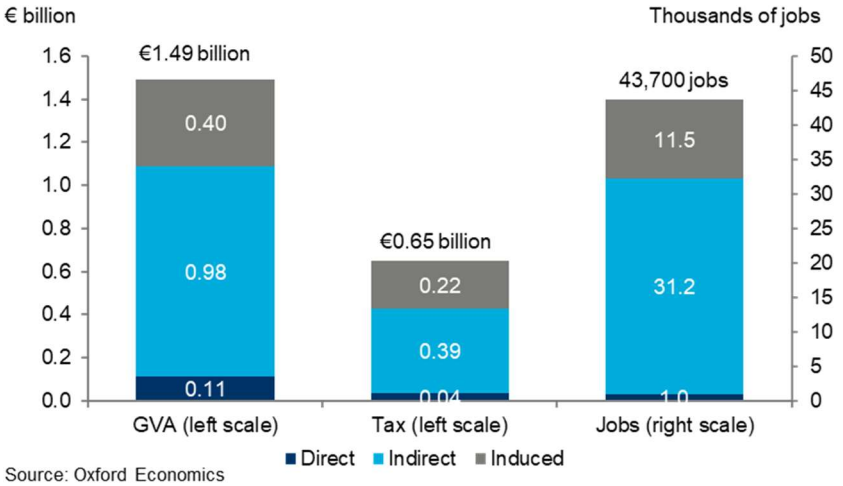
Fig. 136. The steel industry's direct economic contribution

Portugal	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	1.21	0.11	1.00	0.04	0.04	10.7
Rank out of EU-28	16	18	20	19	14	3

Portugal	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.41%	0.51%	0.14%	0.07%	0.02%	0.07%
Rank out of EU-28	17	19	20	19	20	20

Portugal	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.8%	0.4%	0.3%	0.4%	112,506	145%

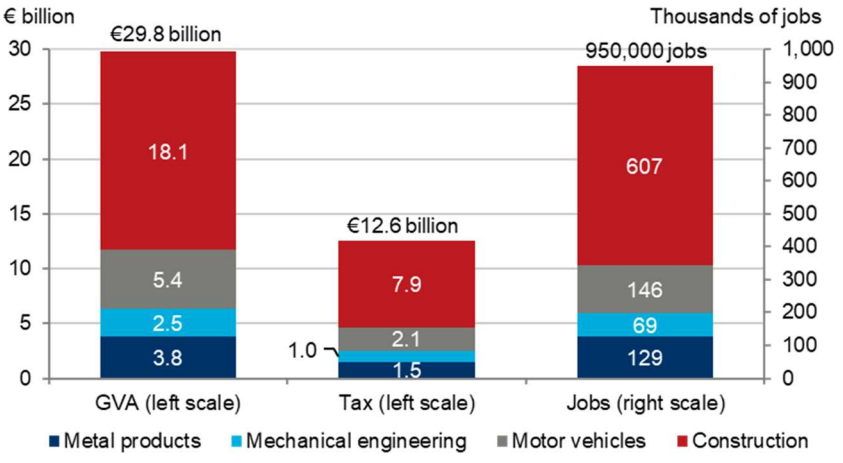
Fig. 137. The European steel industry's economic footprint in Portugal



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	1.0%	0.88%
Jobs	1.7%	0.97%
Tax	1.1%	0.97%
	Rank	Rank
GVA	15	16
Jobs	16	16
Tax	14	14

Fig. 138. The additional footprint of key European steel-using sectors in Portugal



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.9%	17.7%
Jobs	1.5%	21.0%
Tax	0.9%	18.8%
	Rank	Rank
GVA	18	25
Jobs	15	23
Tax	15	18

ROMANIA

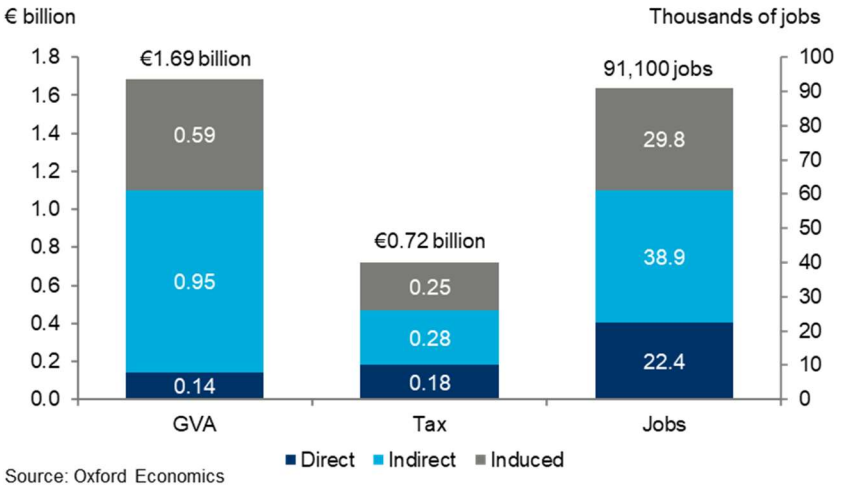
Fig. 139. The steel industry's direct economic contribution

Romania	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	1.79	0.14	22.35	0.18	0.06	12.4
Rank out of EU-28	14	16	4	13	11	2

Romania	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	2.30%	0.77%	1.84%	0.08%	0.27%	0.49%
Rank out of EU-28	9	17	8	16	8	4

Romania	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	1.2%	0.6%	6.8%	1.8%	6,449	8%

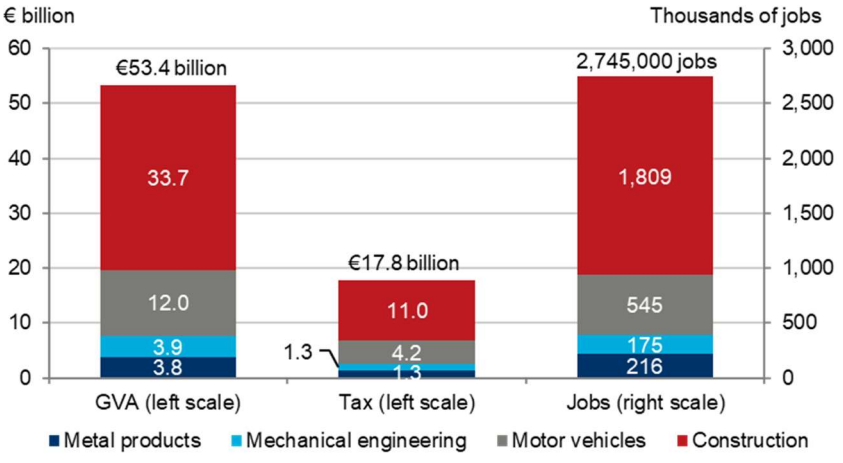
Fig. 140. The European steel industry's economic footprint in Romania



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	1.1%	0.99%
Jobs	3.5%	1.09%
Tax	1.2%	1.54%
	Rank	Rank
GVA	13	14
Jobs	9	13
Tax	13	7

Fig. 141. The additional footprint of key European steel-using sectors in Romania



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	1.6%	31.5%
Jobs	4.4%	32.8%
Tax	1.3%	38.2%
	Rank	Rank
GVA	13	3
Jobs	7	4
Tax	14	1

SLOVAKIA

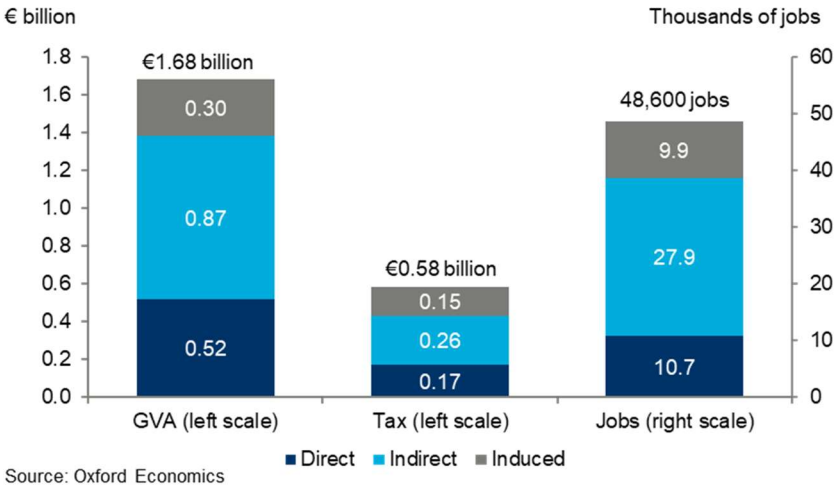
Fig. 142. The steel industry's direct economic contribution

Slovakia	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	2.93	0.52	10.73	0.17	0.02	5.7
Rank out of EU-28	13	13	11	14	16	11

Slovakia	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	4.05%	3.78%	2.14%	0.68%	0.43%	0.76%
Rank out of EU-28	3	2	5	1	3	1

Slovakia	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	2.0%	2.0%	3.3%	1.7%	48,245	62%

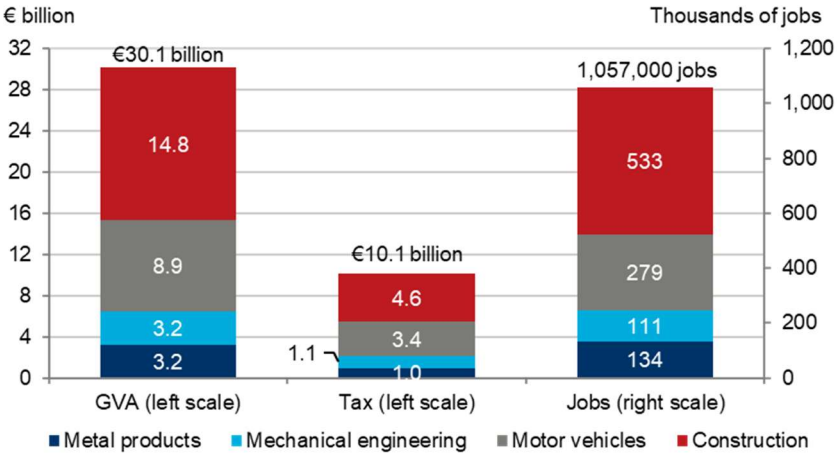
Fig. 143. The European steel industry's economic footprint in Slovakia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	1.1%	2.20%
Jobs	1.9%	1.94%
Tax	1.0%	2.08%
	Rank	Rank
GVA	14	2
Jobs	14	5
Tax	15	2

Fig. 144. The additional footprint of key European steel-using sectors in Slovakia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.9%	39.4%
Jobs	1.7%	42.3%
Tax	0.7%	36.1%
	Rank	Rank
GVA	16	1
Jobs	14	2
Tax	17	2

SLOVENIA

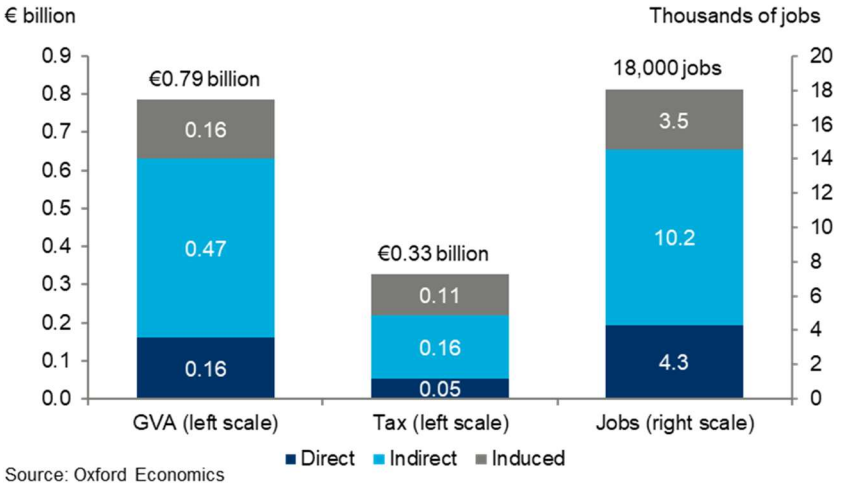
Fig. 145. The steel industry's direct economic contribution

Slovenia	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	0.72	0.16	4.30	0.05	0.00	4.5
Rank out of EU-28	18	15	17	17	18	19

Slovenia	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	2.69%	1.88%	2.10%	0.43%	0.46%	0.47%
Rank out of EU-28	7	7	7	4	2	5

Slovenia	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	0.5%	0.6%	1.3%	0.5%	37,631	49%

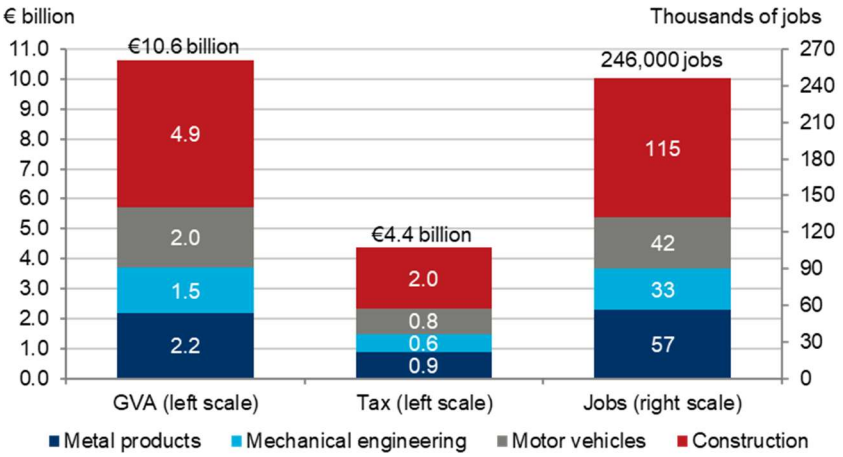
Fig. 146. The European steel industry's economic footprint in Slovenia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.5%	2.11%
Jobs	0.7%	1.91%
Tax	0.5%	2.09%
	Rank	Rank
GVA	18	3
Jobs	18	6
Tax	18	1

Fig. 147. The additional footprint of key European steel-using sectors in Slovenia



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	0.3%	28.4%
Jobs	0.4%	26.1%
Tax	0.3%	27.8%
	Rank	Rank
GVA	20	7
Jobs	23	12
Tax	20	6

SPAIN

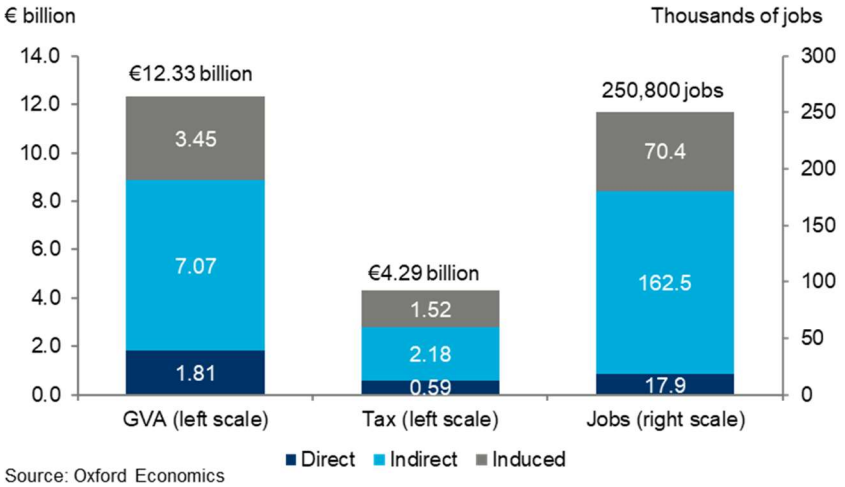
Fig. 148. The steel industry's direct economic contribution

Spain	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	12.21	1.81	17.92	0.59	0.29	6.7
Rank out of EU-28	4	5	6	6	4	7

Spain	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	2.54%	1.58%	0.94%	0.17%	0.10%	0.19%
Rank out of EU-28	8	9	12	12	16	14

Spain	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	8.3%	7.1%	5.5%	5.8%	100,977	130%

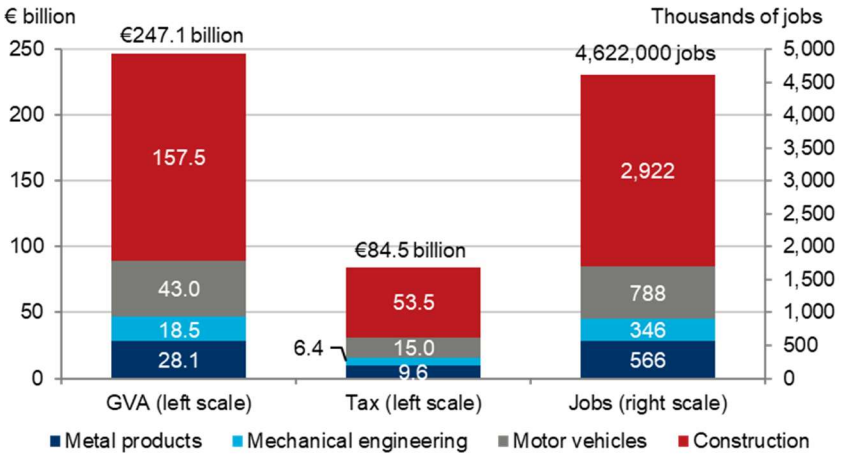
Fig. 149. The European steel industry's economic footprint in Spain



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	8.3%	1.17%
Jobs	9.7%	1.35%
Tax	7.1%	1.09%
	Rank	Rank
GVA	4	12
Jobs	3	11
Tax	4	12

Fig. 150. The additional footprint of key European steel-using sectors in Spain



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	7.3%	23.4%
Jobs	7.4%	24.8%
Tax	6.3%	21.4%
	Rank	Rank
GVA	5	15
Jobs	6	17
Tax	5	13

SWEDEN

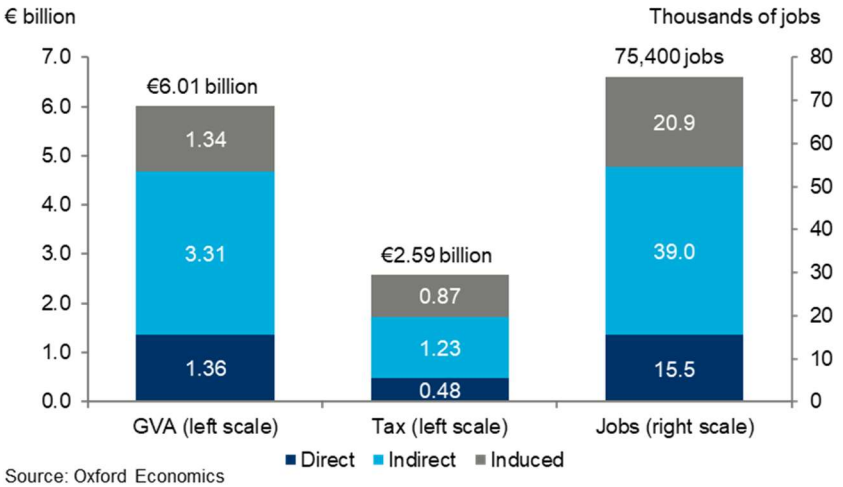
Fig. 151. The steel industry's direct economic contribution

Sweden	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	6.13	1.36	15.50	0.48	0.16	4.5
Rank out of EU-28	10	8	9	8	8	18

Sweden	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	3.29%	2.38%	2.60%	0.32%	0.32%	0.28%
Rank out of EU-28	6	6	2	8	7	9

Sweden	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	4.1%	5.4%	4.7%	4.7%	87,970	113%

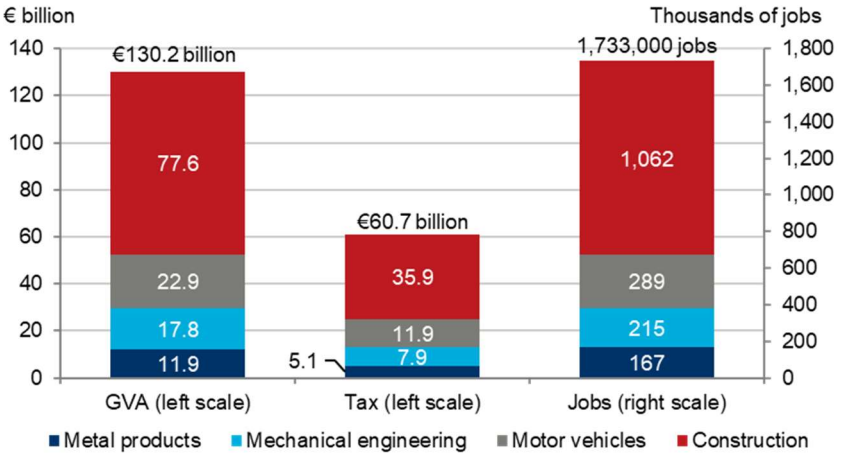
Fig. 152. The European steel industry's economic footprint in Sweden



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	4.1%	1.43%
Jobs	2.9%	1.56%
Tax	4.3%	1.23%
	Rank	Rank
GVA	10	9
Jobs	12	8
Tax	8	10

Fig. 153. The additional footprint of key European steel-using sectors in Sweden



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	3.8%	31.0%
Jobs	2.8%	35.8%
Tax	4.5%	28.8%
	Rank	Rank
GVA	7	5
Jobs	10	3
Tax	6	4

UNITED KINGDOM

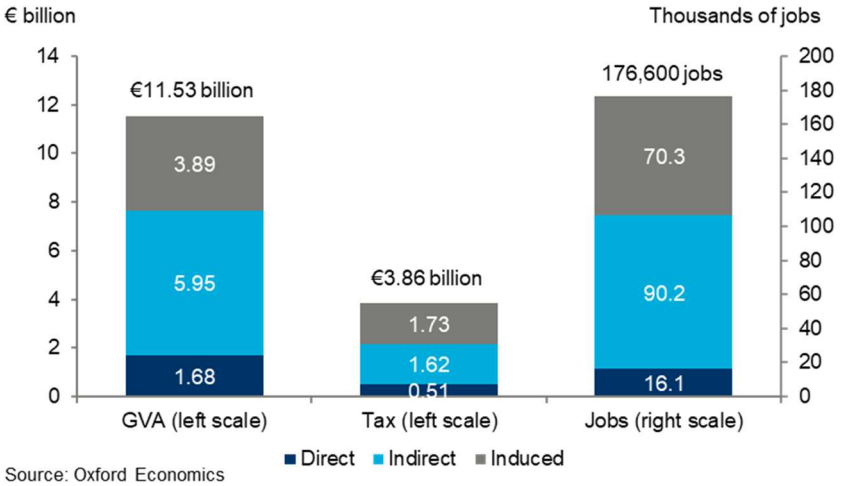
Fig. 154. The steel industry's direct economic contribution

United Kingdom	Levels in 2017					Ratio of production value to gross value added
	Value of production (€ billion)	Gross value added (€ billion)	Employment (thousands)	Taxation (€ billion)	Capital spending (€ billion)	
Value	7.98	1.68	16.12	0.51	0.25	4.7
Rank out of EU-28	6	6	8	7	5	17

United Kingdom	Share of natonal manufacturing industry			Share of natonal economy		
	Value of production	Gross value added	Employment	Gross value added	Employment	Taxation (ex. consumer)
Value	1.31%	0.84%	0.63%	0.08%	0.05%	0.08%
Rank out of EU-28	18	15	18	18	18	19

United Kingdom	Share of total EU steel sector value				GVA per worker	
	Value of production	Gross value added	Employment	Taxation	€	As % EU average
Value	5.4%	6.6%	4.9%	5.0%	104,516	135%

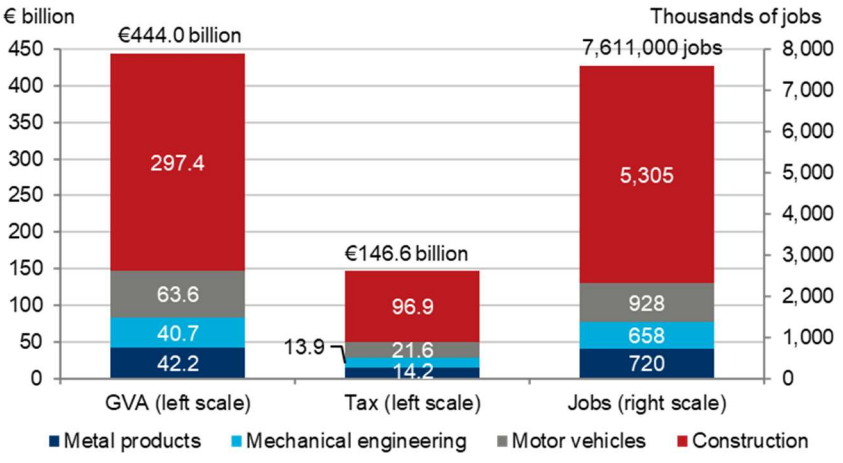
Fig. 155. The European steel industry's economic footprint in the UK



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	7.8%	0.55%
Jobs	6.8%	0.57%
Tax	6.4%	0.48%
	Rank	Rank
GVA	5	19
Jobs	6	19
Tax	5	19

Fig. 156. The additional footprint of key European steel-using sectors in the UK



Source: Oxford Economics

	Total impact as % total EU impact	Total impact as % national economy
GVA	13.1%	21.3%
Jobs	12.2%	24.7%
Tax	10.8%	18.4%
	Rank	Rank
GVA	3	21
Jobs	2	19
Tax	4	19

APPENDIX 1: RESULTS TABLES

STEEL SECTOR IMPACTS

Fig. 157. Total GVA contribution by channel, country and broad industrial sector

€ billion	Direct impact	Indirect impact[1]	Induced impact[1]	Total impact
Austria	1.9	3.4	1.3	6.5
Belgium	1.6	4.9	1.5	8.0
Bulgaria	0.0	0.2	0.1	0.4
Croatia	0.0	0.1	0.0	0.1
Cyprus	0.0	0.0	0.0	0.0
Czech Republic	0.6	1.8	0.6	3.0
Denmark	0.1	0.8	0.4	1.3
Estonia	0.0	0.1	0.0	0.1
Finland	0.8	3.0	1.0	4.8
France	1.9	10.5	4.6	16.9
Germany	6.8	19.7	8.0	34.5
Greece	0.1	0.4	0.2	0.7
Hungary	0.1	0.6	0.2	1.0
Ireland	0.0	0.4	0.3	0.7
Italy	3.2	11.7	4.4	19.3
Latvia	0.0	0.0	0.0	0.1
Lithuania	0.0	0.1	0.0	0.1
Luxembourg	0.3	0.3	0.2	0.7
Malta	0.0	0.0	0.0	0.0
Netherlands	1.0	4.2	1.9	7.1
Poland	1.2	4.3	1.4	6.9
Portugal	0.1	1.0	0.4	1.5
Romania	0.1	1.0	0.6	1.7
Slovakia	0.5	0.9	0.3	1.7
Slovenia	0.2	0.5	0.2	0.8
Spain	1.8	7.1	3.5	12.3
Sweden	1.4	3.3	1.3	6.0
United Kingdom	1.7	6.0	3.9	11.5
European Union	25.4	86.1	36.5	148.0
Of which: by broad sector				
Basic iron & steel manufacturing	25.4	-	-	25.4
Utilities, mining & energy products	-	11.1	1.7	12.9
Other goods production	-	15.0	6.7	21.8
Wholesale & retail services	-	12.3	5.2	17.4
Real estate activities & construction	-	6.1	8.0	14.0
Transport & communications	-	8.1	2.8	10.9
Business & financial activities	-	18.9	6.6	25.5
Catering, personal & community services	-	14.5	5.6	20.1

[1] 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 steel industry on activity across the EU.

Fig. 158. Total employment contribution by channel, country and broad industrial sector

Thousands of jobs	Direct impact	Indirect impact[1]	Induced impact[1]	Total impact
Austria	14.5	47.0	18.4	80.0
Belgium	10.7	67.7	20.6	98.9
Bulgaria	4.2	13.2	5.9	23.3
Croatia	0.2	1.9	1.4	3.4
Cyprus	0.0	0.4	0.4	0.9
Czech Republic	17.0	69.0	22.6	108.6
Denmark	0.4	6.9	5.0	12.3
Estonia	0.0	1.8	1.0	2.8
Finland	8.0	42.8	13.4	64.2
France	21.8	159.0	68.0	248.9
Germany	84.9	307.6	132.9	525.4
Greece	1.4	7.8	5.8	15.0
Hungary	5.7	28.6	10.8	45.1
Ireland	0.0	3.2	2.3	5.5
Italy	33.7	205.8	78.6	318.1
Latvia	0.0	1.7	1.0	2.8
Lithuania	0.0	2.1	1.7	3.8
Luxembourg	4.9	1.6	0.7	7.2
Malta	0.0	0.4	0.2	0.7
Netherlands	9.2	48.8	28.2	86.2
Poland	23.3	153.0	65.5	241.8
Portugal	1.0	31.2	11.5	43.7
Romania	22.4	38.9	29.8	91.1
Slovakia	10.7	27.9	9.9	48.6
Slovenia	4.3	10.2	3.5	18.0
Spain	17.9	162.5	70.4	250.8
Sweden	15.5	39.0	20.9	75.4
United Kingdom	16.1	90.2	70.3	176.6
European Union	327.7	1,570.5	700.8	2,599.0
Of which: by broad sector				
Basic iron & steel manufacturing	327.7	-	-	327.7
Utilities, mining & energy products	-	102.8	15.0	117.8
Other goods production	-	230.2	132.5	362.7
Wholesale & retail services	-	287.2	117.6	404.7
Real estate activities & construction	-	107.7	140.7	248.3
Transport & communications	-	131.8	42.6	174.5
Business & financial activities	-	294.1	93.7	387.7
Catering, personal & community services	-	416.8	158.8	575.5

[1] 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 steel industry on activity across the EU.

Fig. 159. Total tax contribution by channel, country and type of tax

€ billion	Direct impact	Indirect impact[1]	Induced impact[1]	Total impact
Austria	0.73	1.23	0.78	2.74
Belgium	0.65	2.11	0.96	3.72
Bulgaria	0.02	0.05	0.04	0.11
Croatia	0.00	0.02	0.02	0.04
Cyprus	0.00	0.01	0.01	0.01
Czech Republic	0.23	0.53	0.30	1.06
Denmark	0.02	0.24	0.24	0.51
Estonia	0.00	0.02	0.02	0.03
Finland	0.29	1.05	0.64	1.98
France	1.33	4.44	2.71	8.48
Germany	2.72	7.64	4.36	14.73
Greece	0.05	0.13	0.11	0.30
Hungary	0.06	0.21	0.15	0.42
Ireland	0.00	0.09	0.10	0.19
Italy	1.35	4.24	2.27	7.86
Latvia	0.00	0.01	0.01	0.02
Lithuania	0.00	0.02	0.02	0.03
Luxembourg	0.09	0.09	0.11	0.29
Malta	0.00	0.00	0.00	0.01
Netherlands	0.31	1.21	0.94	2.46
Poland	0.30	1.18	0.69	2.17
Portugal	0.04	0.39	0.22	0.65
Romania	0.18	0.28	0.25	0.72
Slovakia	0.17	0.26	0.15	0.58
Slovenia	0.05	0.16	0.11	0.33
Spain	0.59	2.18	1.52	4.29
Sweden	0.48	1.23	0.87	2.59
United Kingdom	0.51	1.62	1.73	3.86
European Union	10.18	30.64	19.35	60.18
Of which:				
Employers' social security contributions	3.19	8.76	3.14	15.09
Corporation tax	0.82	4.90	2.80	8.52
Taxes on business property, etc	0.36	1.11	0.64	2.11
Taxes on business supplies	1.12	2.66	1.18	4.96
Employees' income tax	2.89	7.42	2.77	13.08
Employees' social security contributions	1.81	5.79	2.14	9.74
Consumer taxes (on employee spending)	-	-	6.68	6.68

[1] 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 steel industry on activity across the EU.

Fig. 160. Direct impacts as a percentage of total national values

	Direct GVA impact as % manufact-uring GVA	Direct GVA impact as % national GVA	Direct jobs impact as % manufact-uring jobs	Direct jobs impact as % national jobs	Direct tax impact as % national non-consumer taxes
Austria	3.32%	0.58%	2.27%	0.35%	0.59%
Belgium	2.58%	0.40%	2.11%	0.23%	0.40%
Bulgaria	0.46%	0.08%	0.76%	0.14%	0.22%
Croatia	0.12%	0.02%	0.07%	0.01%	0.01%
Cyprus	-	-	-	-	-
Czech Republic	1.56%	0.38%	1.29%	0.33%	0.44%
Denmark	0.23%	0.03%	0.13%	0.01%	0.02%
Estonia	-	-	-	-	-
Finland	2.65%	0.41%	2.46%	0.33%	0.39%
France	0.82%	0.09%	0.74%	0.08%	0.15%
Germany	1.19%	0.23%	1.16%	0.21%	0.26%
Greece	0.92%	0.07%	0.44%	0.04%	0.10%
Hungary	0.59%	0.13%	0.75%	0.13%	0.18%
Ireland	-	-	-	-	-
Italy	1.39%	0.21%	0.91%	0.15%	0.23%
Latvia	-	-	-	-	-
Lithuania	-	-	-	-	-
Luxembourg	7.90%	0.51%	14.11%	1.80%	0.52%
Malta	-	-	-	-	-
Netherlands	1.43%	0.16%	1.32%	0.11%	0.13%
Poland	1.65%	0.29%	0.88%	0.14%	0.25%
Portugal	0.51%	0.07%	0.14%	0.02%	0.07%
Romania	0.77%	0.08%	1.84%	0.27%	0.49%
Slovakia	3.78%	0.68%	2.14%	0.43%	0.76%
Slovenia	1.88%	0.43%	2.10%	0.46%	0.47%
Spain	1.58%	0.17%	0.94%	0.10%	0.19%
Sweden	2.38%	0.32%	2.60%	0.32%	0.28%
United Kingdom	0.84%	0.08%	0.63%	0.05%	0.08%
European Union	1.28%	0.18%	1.07%	0.15%	0.21%

Fig. 161. Total impacts as a percentage of total national values

	Total GVA impact as % national GVA	Total jobs impact as % national jobs	Total tax impact as % total national taxes
Austria	1.98%	1.91%	1.77%
Belgium	2.04%	2.16%	1.89%
Bulgaria	0.81%	0.76%	0.72%
Croatia	0.27%	0.21%	0.20%
Cyprus	0.23%	0.23%	0.21%
Czech Republic	1.73%	2.13%	1.57%
Denmark	0.52%	0.45%	0.38%
Estonia	0.45%	0.45%	0.44%
Finland	2.50%	2.67%	2.04%
France	0.83%	0.94%	0.80%
Germany	1.17%	1.30%	1.15%
Greece	0.45%	0.41%	0.42%
Hungary	0.98%	1.03%	0.89%
Ireland	0.27%	0.26%	0.28%
Italy	1.25%	1.42%	1.08%
Latvia	0.31%	0.32%	0.30%
Lithuania	0.29%	0.29%	0.25%
Luxembourg	1.46%	2.67%	1.36%
Malta	0.29%	0.31%	0.26%
Netherlands	1.08%	1.03%	0.86%
Poland	1.68%	1.50%	1.36%
Portugal	0.88%	0.97%	0.97%
Romania	0.99%	1.09%	1.54%
Slovakia	2.20%	1.94%	2.08%
Slovenia	2.11%	1.91%	2.09%
Spain	1.17%	1.35%	1.09%
Sweden	1.43%	1.56%	1.23%
United Kingdom	0.55%	0.57%	0.48%
European Union	1.08%	1.17%	1.00%

CUSTOMER SECTOR IMPACTS

In the tables incorporating indirect and induced impacts further below, 'total' impacts include impacts on and via the steel manufacturing sector, while 'additional' impacts exclude those effects. 'Unconsolidated' impacts include impacts on and via the other customer sectors, while 'consolidated' impacts exclude those impacts. Totals across the four sectors are only meaningful on the consolidated basis, and so are not included in the unconsolidated tables.

(a) Direct impacts

Fig. 162. Customer sector direct GVA impacts

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	6.2	7.5	3.6	21.0	38.3
Belgium	4.4	3.7	2.2	20.5	30.8
Bulgaria	0.9	0.5	0.3	1.8	3.5
Croatia	0.8	0.3	0.1	2.1	3.2
Cyprus	0.1	0.0	0.0	0.8	0.9
Czech Republic	4.9	3.7	8.8	9.2	26.6
Denmark	2.5	5.0	0.3	13.4	21.3
Estonia	0.4	0.1	0.1	1.5	2.1
Finland	2.6	4.0	0.5	13.8	20.9
France	18.9	15.0	20.4	112.1	166.5
Germany	55.1	92.1	96.4	144.3	387.9
Greece	0.9	0.3	0.0	3.7	4.8
Hungary	1.7	2.2	4.6	4.5	12.9
Ireland	1.2	1.3	0.1	6.9	9.5
Italy	27.3	35.4	12.0	72.2	147.0
Latvia	0.2	0.1	0.1	1.4	1.8
Lithuania	0.3	0.2	0.1	2.5	3.1
Luxembourg	0.2	0.4	0.0	2.6	3.3
Malta	0.0	0.0	0.0	0.4	0.4
Netherlands	6.9	10.2	2.6	29.3	48.9
Poland	7.9	3.2	6.9	28.5	46.5
Portugal	2.4	0.9	1.3	6.8	11.4
Romania	1.2	1.2	4.1	10.5	17.0
Slovakia	1.5	1.3	3.0	6.3	12.1
Slovenia	1.2	0.6	0.7	2.1	4.6
Spain	11.6	6.4	11.2	64.8	93.9
Sweden	5.2	7.8	8.3	26.7	48.1
United Kingdom	18.9	14.8	20.2	127.5	181.5
European Union	185.5	218.2	208.1	737.0	1,348.8

Fig. 163. Customer sector direct jobs impacts

Thousands of jobs	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	77	82	34	342	534
Belgium	57	30	29	318	434
Bulgaria	62	33	24	234	354
Croatia	34	12	3	107	157
Cyprus	3	1	0	31	35
Czech Republic	197	130	177	391	895
Denmark	36	56	4	168	264
Estonia	14	4	3	57	78
Finland	41	48	9	187	284
France	307	173	213	1,740	2,433
Germany	904	1,133	869	2,826	5,732
Greece	31	11	2	149	193
Hungary	81	64	98	303	546
Ireland	16	11	3	129	159
Italy	511	470	163	1,415	2,559
Latvia	11	4	2	63	80
Lithuania	16	7	5	99	128
Luxembourg	4	4	0	14	22
Malta	2	1	0	15	18
Netherlands	92	84	23	409	607
Poland	335	130	203	1,223	1,891
Portugal	87	24	37	307	455
Romania	98	52	185	696	1,032
Slovakia	76	45	77	244	443
Slovenia	34	15	15	53	117
Spain	241	105	158	1,128	1,632
Sweden	73	72	80	342	567
United Kingdom	308	202	154	2,325	2,990
European Union	3,750	3,003	2,570	15,315	24,637

Fig. 164. Customer sector direct tax impacts

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	2.3	3.0	1.3	7.8	14.3
Belgium	1.9	1.7	1.1	8.3	13.1
Bulgaria	0.2	0.1	0.1	0.4	0.8
Croatia	0.2	0.1	0.0	0.6	1.0
Cyprus	0.0	0.0	0.0	0.2	0.2
Czech Republic	1.7	1.3	2.9	3.1	9.0
Denmark	0.8	1.6	0.1	4.3	6.9
Estonia	0.1	0.0	0.0	0.5	0.6
Finland	0.9	1.4	0.2	5.2	7.6
France	8.1	6.8	9.8	50.1	74.8
Germany	21.5	37.5	41.1	59.2	159.4
Greece	0.3	0.1	0.0	1.6	2.0
Hungary	0.6	0.6	1.2	1.6	3.9
Ireland	0.3	0.3	0.0	2.7	3.3
Italy	10.6	15.0	6.3	28.4	60.3
Latvia	0.1	0.0	0.0	0.5	0.6
Lithuania	0.1	0.0	0.0	0.6	0.8
Luxembourg	0.1	0.1	0.0	0.8	1.0
Malta	0.0	0.0	0.0	0.1	0.1
Netherlands	2.0	3.3	0.8	8.6	14.8
Poland	2.0	0.9	1.8	7.7	12.5
Portugal	0.8	0.3	0.5	3.0	4.7
Romania	0.4	0.4	1.5	3.0	5.3
Slovakia	0.4	0.4	1.4	1.8	4.0
Slovenia	0.4	0.2	0.3	0.7	1.6
Spain	3.6	2.1	3.8	20.2	29.8
Sweden	1.9	3.2	5.0	12.1	22.3
United Kingdom	5.3	4.4	6.0	35.0	50.7
European Union	66.5	85.0	85.4	268.3	505.3

(b) Total unconsolidated impacts

Fig. 165. Customer sector total GVA impacts (unconsolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion
Austria	15.1	21.1	16.5	54.5
Belgium	13.9	13.3	13.5	64.7
Bulgaria	2.1	1.7	1.4	6.7
Croatia	1.7	1.0	0.5	5.9
Cyprus	0.4	0.3	0.2	2.8
Czech Republic	10.6	11.9	25.2	31.6
Denmark	7.6	15.8	4.9	43.3
Estonia	0.9	0.6	0.5	4.4
Finland	6.7	11.1	4.0	40.9
France	53.7	56.9	92.8	351.2
Germany	124.6	217.5	256.4	427.6
Greece	2.9	1.8	1.5	16.8
Hungary	3.9	5.8	12.7	14.5
Ireland	3.8	4.7	3.9	23.4
Italy	67.9	107.7	68.4	225.2
Latvia	0.7	0.4	0.4	4.9
Lithuania	1.0	0.7	0.7	7.2
Luxembourg	1.2	1.7	1.4	7.3
Malta	0.2	0.1	0.1	1.1
Netherlands	21.0	32.6	20.7	98.6
Poland	20.9	14.4	28.8	92.2
Portugal	4.4	3.3	6.6	20.7
Romania	4.7	5.2	14.5	38.8
Slovakia	4.0	4.8	11.3	17.4
Slovenia	2.6	2.1	2.8	6.1
Spain	34.4	25.8	54.1	180.3
Sweden	14.4	22.2	28.1	89.1
United Kingdom	47.7	50.9	77.8	326.7
European Union	472.9	635.6	749.8	2,204.0
Of which:				
Direct impact	185.5	218.2	208.1	737.0
Indirect impact	163.8	255.2	344.6	884.5
Induced impact	123.6	162.1	197.2	582.5

Fig. 166. Customer sector total jobs impacts (unconsolidated)

Thousands of jobs	Metal products	Mechanical machinery	Motor vehicles	Construc-tion
Austria	200	268	208	801
Belgium	178	151	170	874
Bulgaria	136	106	97	531
Croatia	63	35	18	223
Cyprus	12	6	5	75
Czech Republic	420	447	879	1,242
Denmark	91	178	53	465
Estonia	29	17	13	146
Finland	93	136	53	534
France	807	768	1,244	5,122
Germany	2,004	3,059	3,326	7,135
Greece	79	46	35	451
Hungary	179	222	445	732
Ireland	35	38	31	254
Italy	1,191	1,672	1,093	3,935
Latvia	27	17	15	190
Lithuania	40	26	25	260
Luxembourg	8	10	6	35
Malta	4	3	3	32
Netherlands	296	414	274	1,399
Poland	851	581	1,072	3,791
Portugal	143	91	180	674
Romania	256	236	656	2,041
Slovakia	158	161	356	618
Slovenia	65	46	58	138
Spain	687	482	991	3,334
Sweden	198	270	355	1,208
United Kingdom	810	824	1,158	5,787
European Union	9,062	10,305	12,820	42,027
Of which:				
Direct impact	3,750	3,003	2,570	15,315
Indirect impact	2,926	4,298	6,381	15,573
Induced impact	2,387	3,005	3,869	11,139

Fig. 167. Customer sector total tax impacts (unconsolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion
Austria	6.2	8.9	6.7	22.4
Belgium	6.5	6.3	6.4	29.3
Bulgaria	0.6	0.5	0.4	1.7
Croatia	0.6	0.4	0.2	2.0
Cyprus	0.1	0.1	0.1	0.9
Czech Republic	3.8	4.2	8.9	11.0
Denmark	3.0	6.2	1.9	16.4
Estonia	0.3	0.2	0.2	1.6
Finland	2.6	4.4	1.6	16.7
France	25.1	26.9	44.2	166.1
Germany	52.5	93.4	112.1	181.0
Greece	1.2	0.7	0.6	6.9
Hungary	1.5	2.1	4.5	5.7
Ireland	1.0	1.3	1.0	7.8
Italy	27.4	44.6	29.0	90.9
Latvia	0.2	0.1	0.1	1.7
Lithuania	0.3	0.2	0.2	2.1
Luxembourg	0.4	0.6	0.5	2.7
Malta	0.0	0.0	0.0	0.4
Netherlands	7.4	11.9	7.5	35.0
Poland	6.4	4.5	8.8	28.4
Portugal	1.7	1.4	2.7	8.9
Romania	1.6	1.8	5.1	12.7
Slovakia	1.2	1.6	4.2	5.4
Slovenia	1.0	0.9	1.2	2.5
Spain	11.7	8.9	18.8	61.2
Sweden	6.1	9.8	14.3	40.9
United Kingdom	16.0	17.3	26.4	106.7
European Union	186.7	259.0	307.4	869.2
Of which:				
Direct impact	66.5	85.0	85.4	268.3
Indirect impact	58.1	91.7	122.9	309.0
Induced impact	62.1	82.2	99.1	291.8

(c) Total consolidated impacts

Fig. 168. Customer sector total GVA impacts (consolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	13.7	17.4	11.8	47.6	90.5
Belgium	12.6	10.9	10.7	56.7	90.9
Bulgaria	2.0	1.4	1.1	5.9	10.4
Croatia	1.6	0.8	0.4	5.2	8.0
Cyprus	0.4	0.2	0.2	2.5	3.3
Czech Republic	9.4	8.9	21.2	26.2	65.6
Denmark	7.0	14.0	3.5	38.5	63.1
Estonia	0.8	0.4	0.4	4.0	5.6
Finland	6.1	9.2	2.9	35.5	53.7
France	49.4	45.7	74.7	310.0	479.7
Germany	112.4	180.0	206.4	361.4	860.1
Greece	2.8	1.5	1.1	14.8	20.2
Hungary	3.5	4.8	10.2	12.3	30.7
Ireland	3.5	4.0	3.1	21.4	32.1
Italy	61.4	84.6	48.7	190.0	384.6
Latvia	0.6	0.3	0.3	4.3	5.6
Lithuania	0.9	0.6	0.6	6.5	8.7
Luxembourg	1.1	1.4	1.1	6.6	10.2
Malta	0.1	0.1	0.1	1.0	1.4
Netherlands	19.1	27.7	15.4	85.7	147.8
Poland	18.4	10.4	21.7	79.5	130.1
Portugal	4.1	2.7	5.6	18.3	30.6
Romania	4.1	4.1	12.4	34.0	54.7
Slovakia	3.5	3.4	9.1	15.0	31.0
Slovenia	2.3	1.6	2.1	5.0	11.0
Spain	31.3	20.1	45.0	159.7	256.2
Sweden	12.9	18.4	23.6	78.4	133.3
United Kingdom	43.9	41.7	64.9	298.5	449.0
European Union	428.9	516.5	598.2	1,924.5	3,468.1
Of which:					
Direct impact	185.5	218.2	208.1	737.0	1,348.8
Indirect impact	140.9	179.4	248.0	724.8	1,293.1
Induced impact	102.5	118.8	142.1	462.7	826.1

Fig. 169. Customer sector total jobs impacts (consolidated)

Thousands of jobs	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	181	220	149	712	1,262
Belgium	162	122	136	779	1,199
Bulgaria	126	89	78	482	776
Croatia	59	29	13	203	305
Cyprus	11	5	4	70	90
Czech Republic	375	335	728	1,041	2,479
Denmark	85	159	39	416	699
Estonia	27	13	11	133	184
Finland	86	114	38	470	709
France	746	616	1,002	4,569	6,933
Germany	1,830	2,534	2,631	6,204	13,199
Greece	76	39	27	408	549
Hungary	161	180	349	642	1,332
Ireland	33	32	26	240	331
Italy	1,083	1,296	772	3,360	6,509
Latvia	25	13	12	172	222
Lithuania	37	22	21	237	317
Luxembourg	8	9	5	32	53
Malta	4	2	2	30	38
Netherlands	269	347	203	1,224	2,044
Poland	755	422	788	3,285	5,251
Portugal	136	73	152	613	974
Romania	230	185	562	1,820	2,797
Slovakia	142	117	286	539	1,084
Slovenia	59	35	44	116	254
Spain	631	379	829	2,965	4,804
Sweden	179	222	298	1,071	1,770
United Kingdom	746	675	948	5,321	7,691
European Union	8,263	8,283	10,152	37,154	63,853
Of which:					
Direct impact	3,750	3,003	2,570	15,315	24,637
Indirect impact	2,521	3,074	4,764	12,936	23,296
Induced impact	1,992	2,207	2,818	8,903	15,920

Fig. 170. Customer sector total tax impacts (consolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	5.6	7.3	4.8	19.5	37.2
Belgium	5.9	5.1	5.1	25.6	41.8
Bulgaria	0.5	0.4	0.3	1.5	2.7
Croatia	0.5	0.3	0.1	1.8	2.8
Cyprus	0.1	0.1	0.1	0.8	1.1
Czech Republic	3.4	3.2	7.5	9.2	23.2
Denmark	2.7	5.5	1.4	14.6	24.1
Estonia	0.3	0.2	0.1	1.4	2.0
Finland	2.4	3.6	1.1	14.6	21.8
France	23.1	21.7	35.8	146.8	227.4
Germany	47.2	77.3	90.7	152.7	367.9
Greece	1.1	0.6	0.4	6.0	8.2
Hungary	1.4	1.7	3.6	4.8	11.5
Ireland	0.9	1.1	0.8	7.3	10.1
Italy	24.7	35.1	20.9	76.5	157.2
Latvia	0.2	0.1	0.1	1.5	1.9
Lithuania	0.3	0.2	0.2	1.9	2.5
Luxembourg	0.4	0.5	0.4	2.5	3.8
Malta	0.0	0.0	0.0	0.3	0.4
Netherlands	6.7	10.1	5.6	30.4	52.8
Poland	5.6	3.3	6.6	24.5	40.0
Portugal	1.6	1.1	2.2	8.0	12.9
Romania	1.4	1.4	4.4	11.1	18.4
Slovakia	1.1	1.2	3.5	4.7	10.4
Slovenia	0.9	0.7	0.9	2.1	4.5
Spain	10.7	7.0	15.7	54.2	87.6
Sweden	5.5	8.1	12.3	36.2	62.1
United Kingdom	14.7	14.2	22.0	97.3	148.3
European Union	169.2	211.0	246.6	757.7	1,384.4
Of which:					
Direct impact	66.5	85.0	85.4	268.3	505.3
Indirect impact	49.8	64.0	87.8	251.4	452.9
Induced impact	52.8	61.9	73.4	238.0	426.2

(d) Additional unconsolidated impacts

Fig. 171. Customer sector additional GVA impacts (unconsolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion
Austria	13.7	19.6	15.4	53.2
Belgium	12.1	11.8	12.3	62.8
Bulgaria	2.0	1.6	1.3	6.6
Croatia	1.7	1.0	0.5	5.8
Cyprus	0.4	0.2	0.2	2.7
Czech Republic	9.9	11.1	24.5	30.9
Denmark	7.3	15.5	4.7	42.9
Estonia	0.9	0.6	0.5	4.4
Finland	6.0	10.4	3.6	40.2
France	49.1	52.7	88.8	345.2
Germany	116.5	208.8	249.0	419.7
Greece	2.6	1.5	1.3	16.7
Hungary	3.7	5.6	12.4	14.3
Ireland	3.6	4.6	3.8	23.2
Italy	64.0	103.2	65.3	221.1
Latvia	0.6	0.4	0.4	4.8
Lithuania	1.0	0.7	0.7	7.2
Luxembourg	1.1	1.5	1.3	7.2
Malta	0.1	0.1	0.1	1.1
Netherlands	19.7	31.4	19.7	97.3
Poland	19.7	13.4	27.8	90.9
Portugal	4.1	3.1	6.3	20.3
Romania	4.3	4.8	14.0	38.3
Slovakia	3.7	4.4	10.9	17.1
Slovenia	2.4	1.9	2.7	5.9
Spain	30.7	22.9	51.1	176.5
Sweden	13.2	21.0	27.1	87.7
United Kingdom	45.7	48.9	76.0	324.7
European Union	439.7	602.7	721.8	2,168.8
Of which:				
Direct impact	185.5	218.2	208.1	737.0
Indirect impact	139.9	231.7	324.9	861.4
Induced impact	114.3	152.8	188.8	570.4

Fig. 172. Customer sector additional jobs impacts (unconsolidated)

Thousands of jobs	Metal products	Mechanical machinery	Motor vehicles	Construc-tion
Austria	182	249	193	783
Belgium	157	133	156	849
Bulgaria	129	98	92	527
Croatia	62	33	17	223
Cyprus	11	6	4	74
Czech Republic	396	418	853	1,218
Denmark	88	175	51	462
Estonia	28	17	13	145
Finland	85	127	47	525
France	743	710	1,190	5,039
Germany	1,887	2,933	3,220	7,022
Greece	72	40	31	449
Hungary	170	211	434	721
Ireland	34	36	30	253
Italy	1,123	1,595	1,041	3,864
Latvia	26	16	15	189
Lithuania	38	25	25	259
Luxembourg	7	9	6	35
Malta	4	3	3	32
Netherlands	280	398	261	1,383
Poland	807	540	1,032	3,739
Portugal	134	83	171	664
Romania	239	217	633	2,020
Slovakia	149	150	345	607
Slovenia	62	42	55	135
Spain	612	423	932	3,258
Sweden	183	255	343	1,191
United Kingdom	777	793	1,129	5,756
European Union	8,487	9,735	12,321	41,422
Of which:				
Direct impact	3,750	3,003	2,570	15,315
Indirect impact	2,527	3,905	6,045	15,194
Induced impact	2,210	2,827	3,706	10,913

Fig. 173. Customer sector additional tax impacts (unconsolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion
Austria	5.6	8.3	6.2	21.8
Belgium	5.7	5.5	5.9	28.4
Bulgaria	0.5	0.4	0.4	1.7
Croatia	0.6	0.3	0.2	2.0
Cyprus	0.1	0.1	0.1	0.9
Czech Republic	3.5	4.0	8.6	10.8
Denmark	2.8	6.0	1.8	16.3
Estonia	0.3	0.2	0.2	1.6
Finland	2.3	4.1	1.4	16.5
France	23.0	24.9	42.4	163.2
Germany	49.1	89.7	109.0	177.7
Greece	1.0	0.6	0.5	6.8
Hungary	1.4	2.0	4.4	5.6
Ireland	1.0	1.2	1.0	7.8
Italy	25.7	42.7	27.7	89.2
Latvia	0.2	0.1	0.1	1.7
Lithuania	0.3	0.2	0.2	2.1
Luxembourg	0.4	0.6	0.5	2.7
Malta	0.0	0.0	0.0	0.4
Netherlands	7.0	11.5	7.1	34.6
Poland	6.0	4.2	8.5	28.0
Portugal	1.6	1.2	2.5	8.8
Romania	1.4	1.6	4.9	12.5
Slovakia	1.1	1.5	4.1	5.3
Slovenia	1.0	0.8	1.1	2.4
Spain	10.5	7.9	17.8	59.9
Sweden	5.6	9.3	13.8	40.3
United Kingdom	15.3	16.6	25.7	106.1
European Union	173.2	245.6	296.0	854.8
Of which:				
Direct impact	66.5	85.0	85.4	268.3
Indirect impact	49.2	83.0	115.6	300.4
Induced impact	57.5	77.6	95.0	286.1

(e) Additional consolidated impacts

Fig. 174. Customer sector additional GVA impacts (consolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	12.5	16.6	11.1	46.9	87.1
Belgium	11.0	10.1	9.9	55.6	86.7
Bulgaria	1.9	1.4	1.1	5.9	10.2
Croatia	1.6	0.8	0.4	5.2	7.9
Cyprus	0.4	0.2	0.2	2.5	3.3
Czech Republic	8.9	8.5	20.7	25.9	64.0
Denmark	6.7	13.9	3.4	38.3	62.3
Estonia	0.8	0.4	0.4	4.0	5.6
Finland	5.5	8.9	2.6	35.1	52.1
France	45.5	43.4	72.1	306.5	467.5
Germany	105.8	175.3	201.5	357.3	839.9
Greece	2.5	1.3	1.0	14.9	19.7
Hungary	3.3	4.6	10.0	12.1	30.1
Ireland	3.3	3.9	3.0	21.3	31.6
Italy	58.3	82.3	46.9	187.8	375.3
Latvia	0.6	0.3	0.3	4.3	5.5
Lithuania	0.9	0.6	0.6	6.5	8.6
Luxembourg	1.0	1.3	1.0	6.6	9.8
Malta	0.1	0.1	0.1	1.0	1.3
Netherlands	18.0	27.0	14.7	84.9	144.7
Poland	17.5	9.9	21.1	78.8	127.3
Portugal	3.8	2.5	5.4	18.1	29.8
Romania	3.8	3.9	12.0	33.7	53.4
Slovakia	3.2	3.2	8.9	14.8	30.1
Slovenia	2.2	1.5	2.0	4.9	10.6
Spain	28.1	18.5	43.0	157.5	247.1
Sweden	11.9	17.8	22.9	77.6	130.2
United Kingdom	42.2	40.7	63.6	297.4	444.0
European Union	401.5	498.9	579.8	1,905.5	3,385.8
Of which:					
Direct impact	185.5	218.2	208.1	737.0	1,348.8
Indirect impact	120.2	166.2	234.4	711.5	1,232.3
Induced impact	95.8	114.4	137.4	457.0	804.6

Fig. 175. Customer sector additional jobs impacts (consolidated)

Thousands of jobs	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	166	210	139	702	1,218
Belgium	143	112	127	765	1,147
Bulgaria	120	85	75	481	761
Croatia	58	28	13	203	302
Cyprus	11	5	4	69	89
Czech Republic	357	321	712	1,029	2,419
Denmark	82	158	38	414	692
Estonia	27	13	11	132	182
Finland	79	110	34	465	688
France	693	584	966	4,521	6,763
Germany	1,734	2,466	2,562	6,146	12,907
Greece	70	36	25	408	539
Hungary	154	174	342	635	1,305
Ireland	32	31	25	239	328
Italy	1,029	1,256	740	3,323	6,349
Latvia	24	13	11	172	220
Lithuania	36	21	21	237	314
Luxembourg	7	8	5	32	52
Malta	4	2	2	30	38
Netherlands	256	339	195	1,216	2,006
Poland	720	402	764	3,256	5,142
Portugal	129	69	146	607	950
Romania	216	175	545	1,809	2,745
Slovakia	134	111	279	533	1,057
Slovenia	57	33	42	115	246
Spain	566	346	788	2,922	4,622
Sweden	167	215	289	1,062	1,733
United Kingdom	720	658	928	5,305	7,611
European Union	7,791	7,980	9,825	36,829	62,425
Of which:					
Direct impact	3,750	3,003	2,570	15,315	24,637
Indirect impact	2,177	2,854	4,531	12,719	22,282
Induced impact	1,863	2,122	2,724	8,796	15,505

Fig. 176. Customer sector additional tax impacts (consolidated)

€ billion	Metal products	Mechanical machinery	Motor vehicles	Construc-tion	Total
Austria	5.1	7.0	4.5	19.2	35.8
Belgium	5.2	4.7	4.8	25.1	39.7
Bulgaria	0.5	0.4	0.3	1.5	2.6
Croatia	0.5	0.3	0.1	1.8	2.7
Cyprus	0.1	0.1	0.1	0.8	1.1
Czech Republic	3.2	3.1	7.3	9.0	22.6
Denmark	2.6	5.4	1.3	14.5	23.9
Estonia	0.3	0.2	0.1	1.4	2.0
Finland	2.2	3.5	1.0	14.5	21.1
France	21.3	20.6	34.6	145.2	221.6
Germany	44.5	75.3	88.7	151.0	359.4
Greece	1.0	0.6	0.4	6.0	8.0
Hungary	1.3	1.6	3.5	4.8	11.2
Ireland	0.9	1.0	0.8	7.3	10.0
Italy	23.4	34.2	20.2	75.6	153.4
Latvia	0.2	0.1	0.1	1.5	1.9
Lithuania	0.3	0.2	0.2	1.9	2.4
Luxembourg	0.4	0.5	0.4	2.4	3.6
Malta	0.0	0.0	0.0	0.3	0.4
Netherlands	6.4	9.9	5.3	30.1	51.7
Poland	5.3	3.1	6.4	24.2	39.0
Portugal	1.5	1.0	2.1	7.9	12.6
Romania	1.3	1.3	4.2	11.0	17.8
Slovakia	1.0	1.1	3.4	4.6	10.1
Slovenia	0.9	0.6	0.8	2.0	4.4
Spain	9.6	6.4	15.0	53.5	84.5
Sweden	5.1	7.9	11.9	35.9	60.7
United Kingdom	14.2	13.9	21.6	96.9	146.6
European Union	158.1	203.8	239.2	749.9	1,350.9
Of which:					
Direct impact	66.5	85.0	85.4	268.3	505.3
Indirect impact	42.2	59.1	82.7	246.4	430.3
Induced impact	49.4	59.7	71.0	235.2	415.3

Fig. 177. Customer sector additional GVA impacts (consolidated) by industry of producer

€ billion	Direct	Indirect	Induced	Total
Utilities, mining & energy products	-	68.6	38.5	107.1
Metal products	185.5	-	-	185.5
Mechanical machinery	218.2	-	-	218.2
Motor vehicles	208.1	-	-	208.1
Other goods	-	265.0	126.9	391.9
Wholesale & retail services	-	219.6	117.5	337.1
Real estate services	-	99.2	175.9	275.1
Construction	737.0	-	-	737.0
Transport & communications	-	106.7	64.1	170.8
Business & financial services	-	392.6	149.7	542.2
Catering, personal & community services	-	80.6	132.1	212.7
Total	1,348.8	1,232.3	804.6	3,385.8

Fig. 178. Customer sector additional jobs impacts (consolidated) by industry of producer

Thousands of jobs	Direct	Indirect	Induced	Total
Utilities, mining & energy products	-	669	322	991
Metal products	3,750	-	-	3,750
Mechanical machinery	3,003	-	-	3,003
Motor vehicles	2,570	-	-	2,570
Other goods	-	4,272	2,596	6,868
Wholesale & retail services	-	5,237	2,659	7,896
Real estate services	-	1,746	3,076	4,822
Construction	15,315	-	-	15,315
Transport & communications	-	1,754	982	2,737
Business & financial services	-	6,291	2,101	8,392
Catering, personal & community services	-	2,314	3,769	6,083
Total	24,637	22,282	15,505	62,425

Fig. 179. Customer sector additional tax impacts (consolidated) by type of tax

€ billion	Direct	Indirect	Induced	Total
Employers' social security contributions	154.7	122.2	64.8	341.8
Corporation tax	46.9	67.7	62.6	177.2
Taxes on business property, etc	16.0	19.8	15.2	51.0
Taxes on business supplies	41.3	34.6	25.0	101.0
Employees' income tax	143.1	104.6	59.9	307.7
Employees' social security contributions	103.3	81.2	45.5	230.0
Consumer taxes (on employee spending)	-	-	142.1	142.1
Total	505.3	430.2	415.2	1,350.7

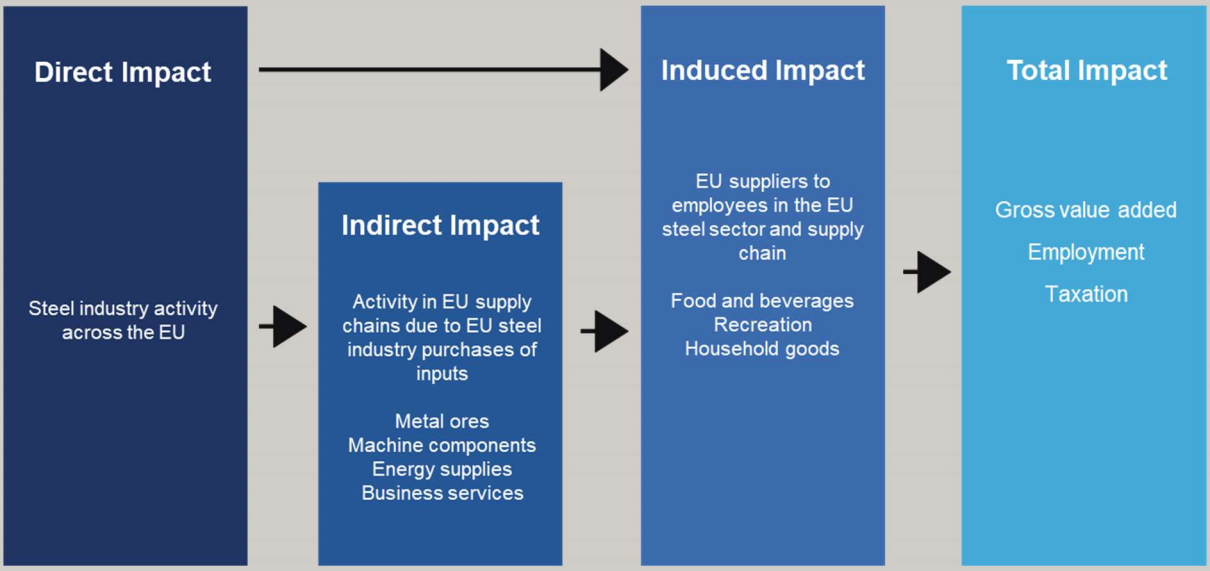
APPENDIX 2: METHODOLOGY

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 an industry's activities through three separate channels, which are as follows for the EU steel sector:

- 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. 180. Direct, indirect, induced and total economic impacts



STEEL INDUSTRY 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 (which is part of the wider 'Structural Business Statistics' database). The sector is defined by the 'NACE rev 2' classification code 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.

Direct tax impacts were estimated by splitting GVA between the different income elements (mainly employee compensation and gross profits), from the Eurostat dataset, and applying various tax-to-income ratios sourced from the OECD, to arrive at payments of income tax, corporation tax, social security contributions, and 'taxes on production' (mainly taxes on business property and vehicles). Taxes on business purchases (such road fuel duties and 'green' levies, but excluding VAT where that is reclaimed) were added in, based on the ratio of such taxes to total procurement for the 'basic metals' industries, as found in the OECD input-output tables.

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 Eurostat.
- The pattern of procurement for each country of purchaser was estimated, by 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.

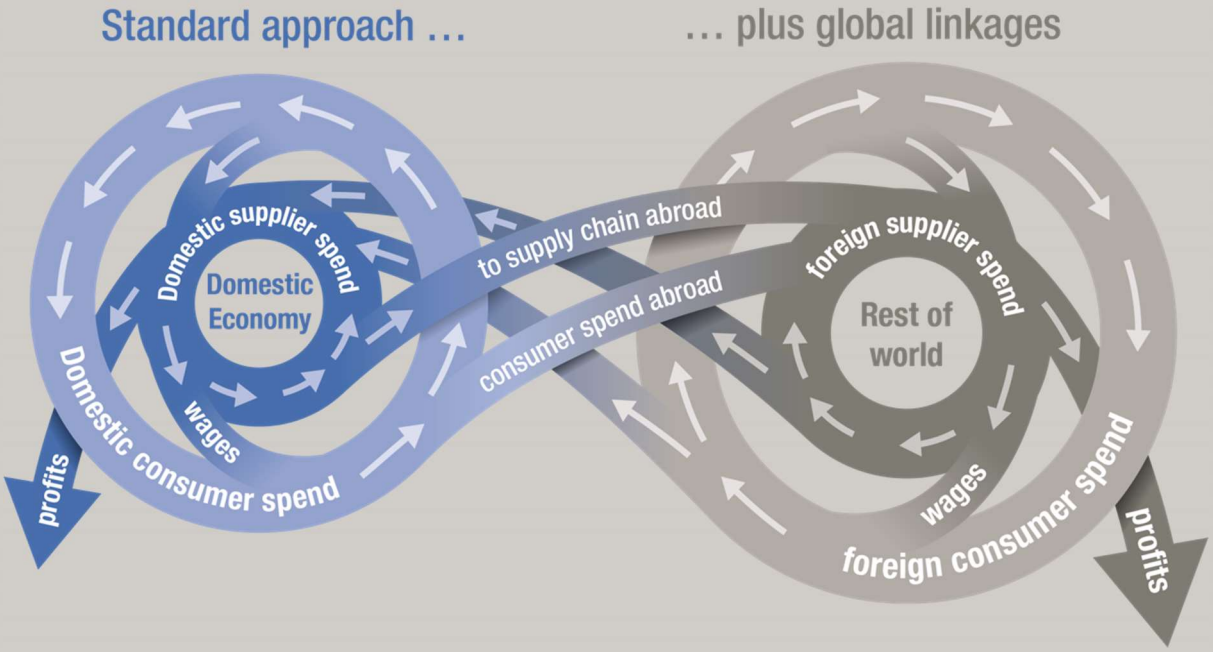
As the model includes a 'rest of the world' sector, the indirect impacts reflect:

- All transactions within each EU member state.
- All cross-border transactions within the EU.
- All purchases of EU supplies by businesses that are in the European steel industry's global 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 employee compensation (the major element of GVA, and found in the Eurostat dataset) as the starting point. Induced impacts reflect:

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

Fig. 181. The Oxford Economics Global Impact Model



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.

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. Tax impacts were worked out by splitting indirect and induced GVA in each country and industry into its major income components, based on ratios in the OECD input-output tables, and applying various tax-to-income and tax-to-spending ratios sourced from the OECD.

CUSTOMER SECTOR IMPACTS

Separate, standard customer sector impacts—i.e. on the total and unconsolidated basis—were worked out in essentially the same way as for the steel sector. The value of production, direct GVA and employment were based on Eurostat databases, and direct tax impacts modelled taking into account the split in GVA by major income component, and various tax-to-income and tax-to-spending ratios sourced from the OECD.

Procurement was taken to be the difference between the value of production and GVA, while the spending power of the sectors' own workforces was calculated taking into account employee compensation from Eurostat, and the employer and employee tax estimates. These values were fed into the model to arrive at the indirect and induced GVA impacts. Indirect and induced jobs and tax impacts were worked out from there.

Three further results sets were then developed, by adapting the model to exclude some transactions:

- Total consolidated customer sector impacts were measured by cutting all transactions benefiting any of the customer sectors out of the indirect and induced impact calculations.
- Additional unconsolidated customer sector impacts were measured by cutting all transactions benefiting the steel industry out of the indirect and induced impact calculations.
- Additional consolidated customer sector impacts were arrived at by cutting all transactions benefiting either the steel sector or any of the customer sectors out of the modelling.

In this last version of the model, all results are completely additional, with no part of the steel or customer sectors' direct impact counted again in any of the indirect or induced channels.

THE INDICATIVE SHARE OF CUSTOMER IMPACTS ARGUABLY 'ENABLED' BY EU STEEL

The share of impacts 'enabled' by EU steel is based on a view that, for these customers, either steel, or some alternative material performing the same function, is an absolutely essential component in their products. The 'alternative inputs' are taken to be non-ferrous metals in the case of metal product manufacture, mechanical machinery, and motor vehicle manufacture; and non-ferrous metals, wood products, and non-metallic mineral products (bricks, glass, cement, concrete, etc) for construction. Metal content embedded in metal products used by the last three sectors is also factored in.

The OECD input-output tables, and most tables published by EU national sources, treat 'basic metals' as a single combined sector, and so cannot be used to estimate the split in inputs between steel and its alternatives. Estimates of this split are therefore based on a limited number of more detailed nationally-sourced input tables from around the world, namely those for the US, Japan, UK, Canada, and Australia. The estimates should therefore be treated as a very approximate view of likely shares across the EU, and are not refined enough to capture variations that probably exist between different EU member states. The split between EU-produced and imported steel is assumed to be in line with the split for all metal procurement by the customer sectors, as found in the OECD input-output tables.

The EU steel industry's share of each customer sector's direct GVA is taken to be equal to the share of EU-produced steel in the total of all steel and alternative inputs. That share is also assumed to apply to the customer sectors' purchases of inputs other than steel or its alternatives, allowing a share of the sectors' indirect impacts to be attributed to steel. Shares of the induced impact are worked out from there, based on the relative importance of sector and supply chain employee spending power.

APPENDIX 3: INDUSTRIAL SECTORS

The indirect and induced impacts are based on the now-supplanted 'ISIC Revision 3' classification, as that is used in the OECD's set of linked 'input-output' tables. This table details that classification, together with the nearest equivalents in the latest 'NACE Revision 2' classification used by Eurostat.

Report category		ISIC Rev 3 code	Industrial sector	NACE Rev 2 (nearest equivalent)[1]
Mining, utilities & energy products		10-14	Mining and quarrying including oil and gas	05-09
		23	Coke, refined petroleum and nuclear fuel	19
		40-41	Electricity, gas and water supply	35-36
Other goods (Chapter 3)	Metal products manufacture	28	Fabricated metal products	25
	Mechanical machinery manufacture	29	Machinery and equipment not elsewhere classified	28
	Motor vehicle manufacture	34	Motor vehicles and parts; trailers	29
	Other goods (Chapter 4)	01-05	Agriculture, hunting, forestry and fishing	01-03
		15-16	Food products, beverages and tobacco	10-12
		17-19	Textiles, clothing, leather and footwear	13-15
		20	Wood and products of wood and cork	16
		21-22	Pulp, paper products, printing and publishing	17-18; 581
		24	Chemical products; pharmaceuticals	20-21
		25	Rubber and plastics products	22
		26	Non-metallic mineral products (bricks, etc)	23
		27	Basic metals	24
		30; 32-33	Computer, electronic and optical equipment	26
		31	Electrical machinery and apparatus	27
		35	Other transport equipment (aircraft, ships, rail)	30
		36-37	Furniture; other manufactured goods; recycling	31-32; 383
Wholesale & retail services		50-52	Wholesale and retail trade; repairs	45-47
Transport & communications		60-63	Transport and storage	49-52
		64	Post and telecommunications	53; 61
Business & financial services		65-67	Financial intermediation	64-66
		71	Renting of machinery and equipment	77
		72	Computer and related activities	62; 631
		73-74	R&D and other business activities	69-75; 78-82
Real estate & construction	Real estate services	70	Real estate activities (mainly property rental)	68
	Construction	45	Construction	41-43
Catering, personal & community services		55	Hotels and restaurants	55-56
		75	Public administration; defence; compulsory social security	84
		80	Education	85
		85	Health and social work	86-88
		90-93	Other community, social and personal services	37-39 (ex. 383); 582; 59-60; 639; 90-95
		95	Private households with employed persons	97

[1] Selected codes: 37-39: waste-related activities, of which 383: recycling; 581: book publishing; 582: software publishing; 59-60: TV and radio programme-making and broadcasting; 631: data processing; 639: news agencies; 90-95: arts, culture, recreation, membership organisations, repair of household goods, personal services (e.g. hairdressing).

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