

The Economic Impact of Tata Steel in Wales

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Introduction

In Summer 2011, the Welsh Economy Research Unit undertook an assessment of the economic and social impact of the operations of Tata Steel in Wales. Tata is the second largest steel producer in Europe and in the global top ten, and remains probably the most significant private sector employer in Wales—in terms of direct employment, indirect and supply chain impacts, and in the importance of its outputs in other UK manufactures. Despite significant employment decline since the 1970s, steel remains a key industrial sector in Wales, with the largest facility in Port Talbot, and with significant Tata facilities at Shotton on Deeside, Trostre and Llanwern (to this can be added the Celsa arc steel plant in Cardiff).

This report quantifies Tata's impact in Wales. The Input-Output Tables for Wales were used to examine the direct and 'multiplier' impacts of Tata Steel activities; that is to say the on-site employment, output and gross value-added (GVA) plus that generated across the Welsh economy as Tata buys goods and services from Welsh supply chains, and as Tata employees spend money in the region. This then is a timely update to earlier WERU work examining the economic significance of steel in Wales, using the same methodology and analytical tools¹.

Whilst steel in Wales brings many benefits, Tata plants emit significant levels of greenhouse gases. These carbon emissions are contextualised as highlighting the need for regional and national policymakers to work with Tata within an appropriate framework to continue to reduce environmental impact, and thus protect the viability of its plants in Wales.

Economic Impact Methodology & Data

The regional economic impacts of a single facility do not stop at the factory gates. The onsite employment and economic output are certainly important, typically the largest part of any regional impact, but there are important offsite benefits.

Traditional economic impact methodologies classify and measure these in two major streams. Firstly, there is the employment; output and value-added that is created in the supply chain to the facility. Here, then, there will be thousands of employees

and many millions of value-added created in firms supplying Tata – including at subcontractors used during the industrial processes and in transporting final products, as well as more generally in business services. These impacts travel back along supply chains as Tata's direct contractors themselves purchase inputs from other Welsh companies. Added to the above are economic impacts related to the re-spending of wages by Tata employees *and* employees in the Tata supply chain, again comprising additional economic demand and hence employment and value added in Wales. The sum of these two impact 'avenues' then comprise total offsite effects. These can be added to the onsite impacts to provide an indicative overall estimate of economic impact in terms of full-time equivalent employment and GVA.

Wales benefits from having a longstanding and well-developed modelling system that can value the multiplier benefits detailed above. The *Input Output Tables for Wales*² have been published by WERU for over a decade. They have been used to examine the economic impact of many Welsh sectors and economic activities, including coal, ports and (relevant here) steel, as well as non-traditional economic activities such as tourism and stadia.

Input-Output modelling has a number of limitations and restrictions. However, their continuous publication and improvement in Wales provides a way of measuring and assessing the importance of Welsh industries and activities that is consistent between different industries, and to some extent over time.

The modelling is 'data hungry', requiring good information on the purchases, wages and other business metrics of the facility or company in question. This information was gathered from Tata over Summer 2011 during a number of face-to-face interviews and other correspondence, and relates to the entirety of Tata operations across Wales – a novel analysis for the company itself. With the exception of some data on subcontractors, necessarily limited by third-party privacy considerations, we have therefore fully up-to-date, detailed and high quality information with which to inform the economic impact estimates presented below.

The Economic Impact of Tata Steel on Wales

Direct Impacts

Table 1 shows that overall some 8,000+ people are employed by Tata in Wales. These jobs are relatively highly paid. Tata pays a minimum of £14 per hour and employees are overwhelmingly full-time: less than 3% are part-time, compared with a Welsh average of 35% in 2010³. The quality of employment is no doubt causally linked to an average length of service of 16 years⁴.

These employees created around £2.5bn of industrial output in 2010, comprising around 8% of all industrial and extractive output in Wales and highlighting the importance of the firm in the Welsh industrial landscape.

Onsite GVA at Tata plants totals around £1.28bn⁵. This equates to roughly 3% of total Welsh GVA, almost certainly the largest direct GVA contribution of any private sector employer.

Indirect Impacts

To these above impacts can be added those in the supply chain, and through wage effects, as detailed in Section 2 above. Use of the Input-Output Tables for Wales suggests that a further £670m of economic output and £320m of GVA is created across Wales as a result of Tata activities (Table 2). Thus, the total economic impact of Tata stands at £3.2bn in Wales, with a supported GVA of £1.6bn.

Whilst these figures are significant, the extent to which Tata supports off-site employment is more significant still. The Input-Output modelling suggests that almost 10,000 full-time equivalent jobs are supported off-site in the Tata supply chain, and as those employed at Tata and in the supply chain spend their wages in Wales.

The 'employment multiplier' is thus 2.22, suggesting that every job at Tata supports another 1.22 employees throughout the Welsh economy. This employment multiplier is, along with oil refining, electricity generation and some food production, amongst the highest of all Welsh sectors, and with this number similar to those reported in earlier WERU steel reports.

The largest portion of the off-site impacts arise in private services in Wales (these including transport and

engineering). Interestingly, there are few supply links to other *manufacturers* in Wales, highlighting both the vertical integration of the company in Wales and the global nature of steel logistics operations. This position (and the overall level of economic impact) might change somewhat if the company is successful in once again sourcing its coal from Wales (rather than Australia) with the Margam Coal Development Project.

Depending on how one treats intra-company sales and intermediate products, Tata exports between 80%-95% of its output to markets outside Wales, thus earning inter-regional export revenues of between £2bn - £2.2bn for Wales.

Tata and Sustainable Development

The Tata plants in Wales, particularly the integrated Port Talbot mill, occupy a complex position within Wales' wider commitment to sustainable development and climate change mitigation. It is clear that the company is one of the largest sources of climate emissions in Wales. Despite significant and successful efforts to reduce these emissions – including the £60m investment in 2010 which saves 250,000 tonnes of CO₂ per annum – this position will likely remain unchanged for as long as the *current* plant operates in Wales.

The complexity arrives, first, in the form of the regulations under which Tata operates with regard to climate emissions. As a large emitter, these are governed by the European Union Emissions Trading System, with neither Westminster or the Welsh Government having a proactive remit. The second complexity arrives in the form of Welsh Government climate policy. As an EU-ETS signatory, Tata's emissions are not considered 'devolved': That is to say they do not count towards the Welsh Government's measure of the emissions for which it is responsible (more widely, the Welsh Government and Tata collaborate regularly on sustainability matters of course, for example in the area of land remediation and treatment of wastes).

This is not to say regional or UK government does not or cannot influence Tata operations. For example Tata in Wales spends around £150m on electricity, gas and water for Welsh operations. Here, the provision of lower carbon inputs – particularly electricity – might in the long run result in lower cost, more diverse and reliable supplies for Tata, improving the viability and longevity of plants in the UK⁶.

Turning to the specifically Welsh

Table 1 Tata Operations in Wales

Business	Locations	Nature of Business	Approx Direct Employees
Tata Steel Strip Products UK	Port Talbot Llanwern	Production of Hot Rolled Coil used in the construction, automotive, electrical / household appliances packaging and other industries	5,500
Tata Steel Colors	Shotton Tafarnbach	Production of coated & organic coated products for the construction, electrical appliance and other industries. NB: Shotton hosts the Sustainable Buildings Envelope Centre (SBEC) and the Photovoltaic (PV) research project	650
Tata Steel Packaging	Trostre, Llanelli	Steel for packaging applications – cans, boxes, trays, etc. Some other specialised markets	850
Cogent – shortly Tata Steel Electrical Steels	Orb, Newport, South Wales	Specialised grain-orientated steel for electrical applications including wind turbines	450
Colorsteels	Cross Keys	Coated strip steels for manufactured goods and the construction sector	120
Tata Steel Building Systems (Catnic)	Caerphilly	Steel lintels for building construction	100
Tata Steel Building Systems	Shotton	Profiled steel composite panels for walls and floors for commercial construction	100
Tata Steel Living Solutions	Shotton	Modular steel units for construction – currently not operating	100
*SPECIFIC	Baglan Innovation Centre	R&D into functional coatings for steel. A partnership project under the legal aegis of Swansea University	(50)
			~8,000
* Sustainable Product Engineering Centre for Innovative Functional Industrial Coatings			

context, it is worth remembering that the Government seeks to measure and reduce our environmental 'footprint' on a consumption, rather than production basis. This means that (through the Ecological Footprint) the government strives to reduce the global impact of all the resources we use, irrespective of whether they are Welsh or imported. From this perspective, the emissions of Tata should be considered in the light of the overwhelming proportion that comprises *exports* from Wales. On a consumption basis plant emissions might be considered after discounting those related to exported commodities – but with the corollary of course that we count the manufacturing and transport related emissions of all goods consumed by the people of Wales, irrespective of origin.

Leaving aside complex measurement issues, it is clear that steel production in Wales; indeed the UK and Europe; is under increasing pressure as a result of climate regulation and electricity costs currently unique to Europe. This position may not change for a number of years. Meanwhile, the carbon content of steel is chemically determined; unalterable by policy intervention or incremental technical development. Steel makers in Europe have made huge strides with

current technology to reduce emissions per tonne of product, but these improvements have largely run their course. A fundamental shift in steel technology is needed,; as recognised by the Europe-wide *Ultra Low Carbon Steel Consortium* of manufacturers (www.ulcos.org). Without losing sight of the short term, policymakers might consider how to best ensure Tata's first ultra low carbon steel mill in Europe is in the UK – indeed in Wales.

Summary

This project report has illustrated Tata's position as the most economically important private sector company in Wales. For every employee within Tata, another 1.2 jobs are supported throughout Wales, together totalling almost 18,000 full time equivalent jobs. The company supports £3.2bn of output and £1.6bn of value added in Wales, as well as contributing to the development of much needed innovation and R&D activities in the region.

Climate regulation and resource constraints bear down harder on steel makers in Europe than elsewhere. Whilst the Welsh Government does not have direct responsibility for regulating Tata in this regard, actions on sustainable development and in energy

supply (as far as is relevant) will have a potential impact – as will encouraging an appropriate, sophisticated and holistic debate on understanding climate emissions' impacts and responsibilities.

Wales has been lucky in retaining its major industrial actors through the 2007/8 Credit Crunch and subsequent recessions and volatility. As long as Tata plant and operations in Wales have the possibility of profitable use, they will remain. Encouraging a new, more sustainable generation of plants to be located here is the longer; more

difficult, yet potentially far more lucrative challenge.

Notes

¹ WERU (1994) The Economic Impact of Steel Production in South Wales, Welsh Economy Research Unit.

WERU (2001) The Economic Effects of Corus Restructuring in Wales. In Fairbrother, P. and Morgan, K. (eds) Steel Communities Study (Volume II), Cardiff University.

² available from www.weru.org.uk

³ http://www.wiserd.ac.uk/wp-content/uploads/2011/05/WISERD_RRS

[_002.pdf](#)

⁴ Tata Steel, 2011

⁵ Albeit with some uncertainty in this estimate as relevant taxes cannot be estimated at Wales level.

⁶ See Jones (2009) *Wales in the Energy Crunch*

<http://www.lulu.com/product/ebook/wales-in-the-energy-crunch/17544084>

Table 2: The Regional Economic Impact of Tata Steel

	Output (£m)	GVA (£m)	Jobs (FTE)
On-site	2,520	1,280	8,000
Off-site (Supply chain & wages effects)			
Manufacturing & Energy	91.1	23	370
Construction & Maintenance	109.2	40.8	1,680
Private Services	288.6	148.8	4,160
Public & Other Services	180.1	104.7	3,520
All Off-site	669	317.3	9,730
TOTAL ECONOMIC IMPACT	3,189	1,597	17,730
<i>Regional Multiplier</i>	<i>1.27</i>	<i>1.25</i>	<i>2.22</i>