



BRIEFING PAPER

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Manufacturing: international comparisons

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Summary

This note uses [UN Conference on Trade and Development](#) (UNCTAD) data to compare manufacturing in different countries over the past 45 years. The most recent data from this source are for 2015. \$ figures are in 2005 prices using 2005 exchange rates.

Manufacturing output in 2015:

- Chinese manufacturing output was the highest in the world, \$2.0 trillion.
- USA manufacturing output totalled \$1.9 trillion, the second highest in the world.
- The UK's manufacturing output was \$244 billion, the 9th highest in the world.

Manufacturing as a proportion of economic output:

- Manufacturing as a proportion of total economic in Taiwan was the highest of the 20 biggest manufacturing countries in 2015 (31%).
- This was above the other major Asian manufacturing nations: South Korea (29%), China (27%), Indonesia (22%), Japan (19%) and India (16%).
- In the UK, manufacturing accounted for 10% of the economy.

Manufacturing output per head:

- Of the 20 largest manufacturing nations in the world, the largest in terms of manufacturing output per head of population was Switzerland in 2015, \$11,100.
- In the UK, manufacturing output per head was \$3,700, but note that the population and total manufacturing output in the UK is far larger than in Switzerland.

UK manufacturing ranking:

- The UK has fallen down the world rank of manufacturing nations in the last decade. Having been the 5th or 6th biggest manufacturer in terms of total output between 1970 and 2004, the UK is now 9th.
- The USA was the world's largest manufacturer between 1970 and 2013. It is now the second biggest, having been overtaken by China in 2014.

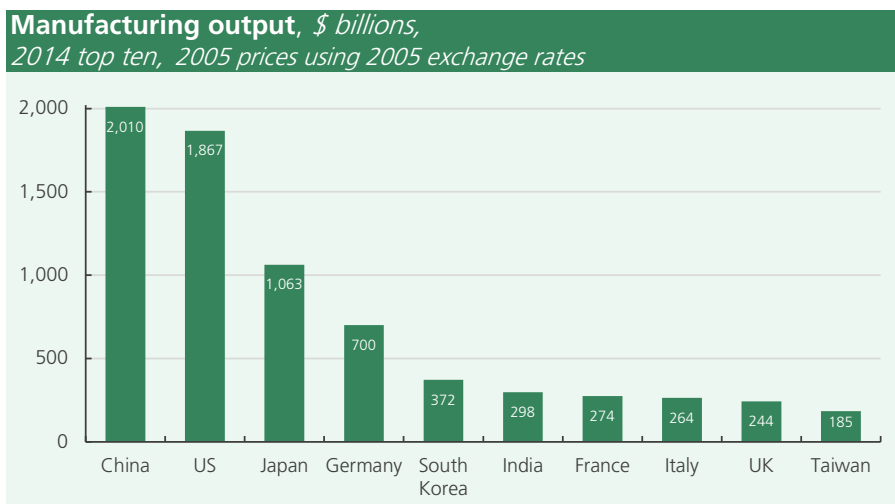
1. Manufacturing output

Manufacturing output in 2015					
<i>\$US in 2005 prices using 2005 exchange rates</i>					
	Manufacturing output			% of national output	% of world manufacturing
	Rank in world	\$ billions	Per head, \$		
China	1	2,010	1,400	27%	20%
United States	2	1,867	5,800	12%	18%
Japan	3	1,063	8,300	19%	10%
Germany	4	700	8,600	23%	7%
South Korea	5	372	7,400	29%	4%
India	6	298	200	16%	3%
France	7	274	4,100	11%	3%
Italy	8	264	4,400	16%	3%
United Kingdom	9	244	3,700	10%	2%
Taiwan	10	185	7,900	31%	2%
Mexico	11	175	1,400	19%	2%
Spain	12	153	3,300	14%	2%
Canada	13	148	4,100	11%	1%
Brazil	14	146	700	11%	1%
Russian Federation	15	139	1,000	11%	1%
Turkey	16	125	1,600	18%	1%
Indonesia	17	115	400	22%	1%
Poland	18	100	2,600	20%	1%
Switzerland	19	93	11,100	18%	1%
Netherlands	20	88	5,200	12%	1%

Source: UN Conference on Trade and Development (UNCTAD)
Rank out of 237 countries

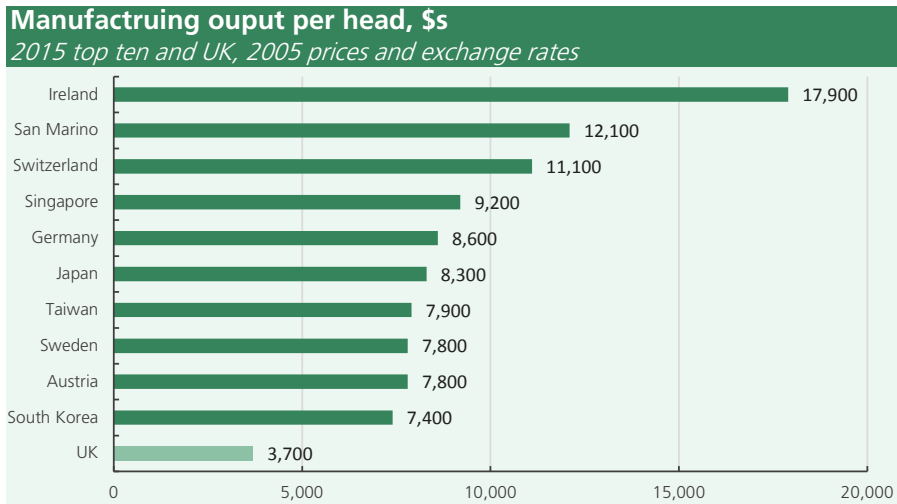
UK manufacturing output totalled \$244 billion in 2015. This was below manufacturing output in the other major European economies, Germany, France and Italy.

The UK accounted for 2% of the world manufacturing output. Between them, the US, China, Japan and Germany accounted for 55% of world manufacturing output.



The manufacturing output of the countries featured in the chart above accounted for 84% of world manufacturing output in 2015.

2. Manufacturing output per head



Per head, manufacturing output in the UK was \$3,700 in 2015, below many advanced economies, such as Germany (\$8,600), Japan (\$8,300), and the US (\$5,800).

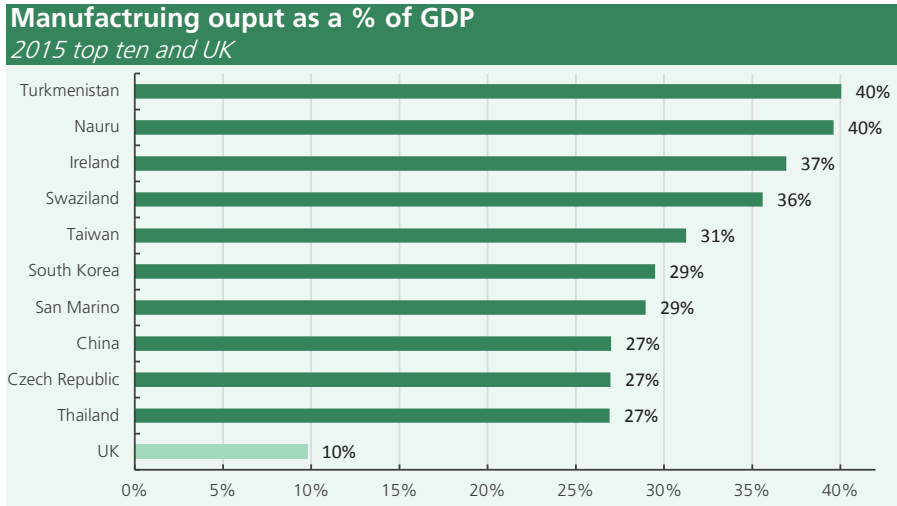
Ireland's extremely high manufacturing output per head of population is due to the fact that the legal ownership of a large number of multinational companies is registered in Ireland. According to international economic accounting rules, the economic contribution of these entities must be counted in Ireland, even though their economic activity may actually take place elsewhere.¹

Some of the countries featured in the chart above have low total manufacturing output, such as San Marino (£400 million), but also very small populations meaning that manufacturing output per head is high.

Although China has a huge manufacturing output (around \$2 trillion) it also has a very large population, so manufacturing output per head is lower than in many countries: \$1,400 in 2015, 48th in the world.

¹ For further information please see the OECD article, [Are the Irish 26.3% better off?](#), October 2016

3. Manufacturing output as % of national economic output



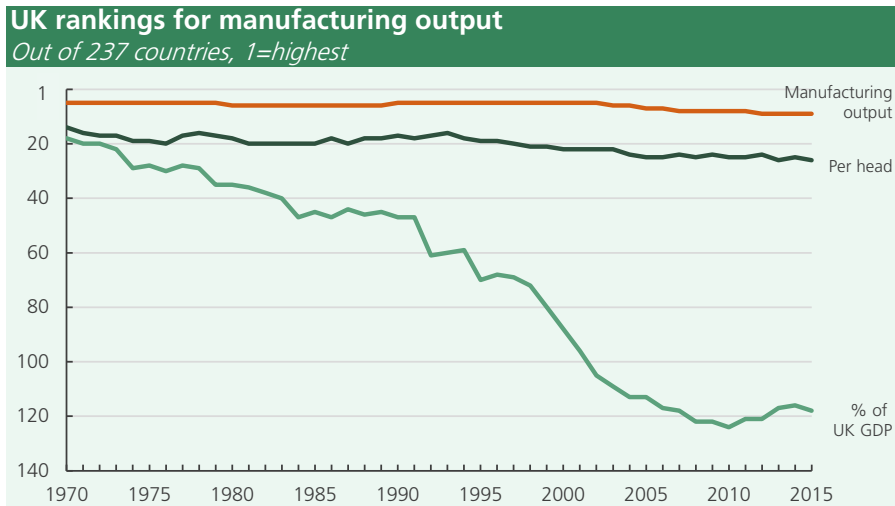
Manufacturing in the UK was 11% of GDP in 2015.

Many countries in which manufacturing accounts for a high proportion of economic output are developing countries with relatively low total economic output.

Nauru, the country with the second highest proportion of GDP accounted for by manufacturing in the world, has one of the smallest economies in the world. Swaziland and San Marino have similarly small overall economies, but are also unusually reliant on manufacturing.

By contrast, China's economy is among the largest in the world, but the enormous manufacturing sector in that country means that China appears in the chart above.

4. UK manufacturing output: historic rankings



In terms of manufacturing output, per head manufacturing output and manufacturing as a % of GDP, the UK was in the top 20 in the world in 1970.

The UK's overall manufacturing output is still the 9th largest in the world. But the UK's rank in terms of per head manufacturing has fallen to 26th in the world, and in terms of manufacturing as a % of GDP, the UK has fallen to 118th in the world.

5. Manufacturing output: international comparisons since 1970

International comparisons of manufacturing output: 1970, 1980, 1990, 2000, 2010 and 2015; top 20 countries in 2015

\$US in 2005 prices using 2005 exchange rates

	Manufacturing output (\$ billions)						Manufacturing output (Rank out of 237)						Manufacturing output as a % of national output					
	1970	1980	1990	2000	2010	2015	1970	1980	1990	2000	2010	2015	1970	1980	1990	2000	2010	2015
China	..	..	..	..	1,373	2,010	..	..	..	..	2	1	..	..	..	..	32%	27%
United States	696	828	1,062	1,567	1,778	1,867	1	1	1	1	1	2	24%	21%	18%	15%	12%	12%
Japan	318	491	785	859	1,036	1,063	4	2	2	2	3	3	34%	27%	26%	21%	20%	19%
Germany	368	440	519	550	616	700	2	3	3	3	4	4	34%	29%	28%	23%	22%	23%
South Korea	5	22	70	167	314	372	42	26	12	7	5	5	19%	24%	27%	29%	31%	29%
India	18	26	54	96	215	298	22	23	16	12	9	6	16%	19%	20%	18%	17%	16%
France	122	166	191	245	258	274	6	7	7	6	7	7	22%	20%	18%	16%	11%	11%
Italy	112	204	254	289	269	264	7	5	4	4	6	8	26%	27%	22%	20%	16%	16%
United Kingdom	173	197	237	258	238	244	5	6	5	5	8	9	28%	23%	20%	15%	10%	10%
Taiwan	5	19	42	76	153	185	41	29	19	15	10	10	30%	36%	33%	26%	30%	31%
Mexico	38	75	92	143	149	175	14	12	11	10	12	11	18%	19%	20%	20%	17%	19%
Spain	58	92	114	149	149	153	10	10	8	9	11	12	25%	23%	20%	18%	13%	14%
Canada	62	88	110	165	136	148	9	11	9	8	14	13	22%	19%	17%	19%	11%	11%
Brazil	38	92	94	113	146	146	13	9	10	11	13	14	27%	31%	26%	16%	15%	11%
Russian Federation	..	..	..	90	125	139	..	..	..	13	15	15	..	..	..	22%	15%	11%
Turkey	13	22	43	66	100	125	26	27	18	18	16	16	21%	22%	29%	22%	18%	18%
Indonesia	..	..	..	..	90	115	..	..	..	..	17	17	..	..	..	..	23%	22%
Poland	10	16	12	38	77	100	29	31	42	24	20	18	31%	31%	31%	18%	18%	20%
Switzerland	45	52	60	68	86	93	11	14	13	17	18	19	23%	24%	21%	19%	19%	18%
Netherlands	37	45	59	79	84	88	15	15	15	14	19	20	26%	19%	19%	15%	12%	12%

Source: UN Conference on Trade and Development (UNCTAD)

Notes: Rank out of 237 countries; World average is the unweighted mean of all countries in the world; .. indicates data not available

6. Note on sources

Similar data to those used in this note are also available from other sources, such as the World Bank and the OECD. Due to methodological and definitional differences, different sources should not be directly compared.

UNCTAD data are used here because they are figures on manufacturing output are available for all countries in the world (unlike in the OECD data) and on a consistent basis going back to 1970 (unlike the World Bank data).

The figures in this note are in US dollars, converted from national currencies using 2005 exchange rates. The figures are in 2005 prices. This means that price inflation and fluctuations in the strength of local currencies are not reflected in the data in this note.

Manufacturing is defined using the [International Standard Industrial Classification of all Economic Activities](#) (ISIC), revision 3.1, Section D. Some slight local variations in the definition of manufacturing mean that comparisons should be made with caution.

The measure of economic output used here is Gross Value Added, which measures total economic output of part of the economy, minus any costs incurred in production.

Data is missing for some countries for a number of different reasons, including the fact that the country may not have existed in its current form in the past, or that it did not have a fully functioning statistical agency until more recently.

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