

90 Bolts, nuts, screws, rivets, etc.

This Report on the Bolts, Nuts, Screws, Rivets, etc Industry relates to establishments engaged wholly or mainly in manufacturing bolts, nuts, screws, metal washers, rivets, split pins, cut nails, zinc nails, etc but excluding wire nails.

This industry corresponds to minimum list heading 393 in the Standard Industrial Classification (Revised 1968) which has been used for the first time as a basis of classification in the 1968 Census. The definition of this industry however is unchanged from the last detailed Census of Production for 1963 in which it was reported (Part 70).

There were no larger establishments in this industry in Northern Ireland in 1963 and 1968.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which appear on pages (i) to (iv),

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- (c) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).
- (d) Administrative, technical and clerical employees.
- (e) Excluding expenditure for establishments not yet in production.
- (f) Acquisitions less disposals.

TABLE 1 Industry summary, 1963 and 1968
United Kingdom (a) (b)

	Unit	All establishments		
		1963	1968	
Number of enterprises	No.	386	345	
Number of establishments	"	452	413	
Gross output	£'000	101,822	129,236	
Net output	"	52,543	64,607	
Net output per head	£	1,227	1,587	
Sales and work done	{ goods produced and work done (c) merchanted goods and canteen takings	£'000	94,568	118,893
		"	7,143	10,469
Purchases	{ materials for use in production and packaging and fuel goods for merchandising and canteen purchases	"	38,494	51,301
		"	7,658	9,245
Payments to other organisations	{ for work done on materials given out for transport by road by rail and other means excluding postal services	"	1,982	2,877
		"	1,050	1,121
		"		366
Stocks and work in progress				
Total stocks and work in progress	{ change during year at end of year	"	+ 17	+ 155
		"	26,712	31,753
Goods on hand for sale	{ change during year at end of year	"	- 217	- 663
		"	12,732	15,981
Work in progress	{ change during year at end of year	"	+ 329	+ 537
		"	4,413	6,359
Materials, stores and fuel	{ change during year at end of year	"	- 95	+ 280
		"	9,567	9,413
Number employed on average during the year	{ total, including working proprietors operatives other employees (d)	Th.	42.8	40.7
		"	34.1	31.8
		"	8.3	8.6
Wages and salaries	{ of operatives of other employees (d)	£'000	20,034	26,746
		"	7,289	9,953
Capital expenditure (e)				
Total	"	4,000	4,510	
New building work	"	648	540	
Land and existing buildings (f)	"	- 283	83	
Plant and machinery (f)	"	3,411	3,549	
Vehicles (f)	"	225	338	

(a) For 1968, estimates for establishments not making satisfactory returns and for small establishments, from which only employment data were collected, accounted for 7 per cent. of the total figures in which they were incorporated; of this, unsatisfactory returns accounted for 2 per cent. For 1963 the comparable figures were 6 per cent. and 1 per cent. respectively.

(b) The following information relates to small establishments (employing fewer than 25 persons) in this industry. It includes an estimate for small establishments not making satisfactory returns.

	1963	1968
Number of establishments	264	241
Average number employed:		
Working proprietors	328	229
Other persons employed	2,055	2,100

Footnotes continued on page 90/2.

TABLE 2 Analysis by size of establishment within the industry, 1968

(i) Output and employment

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Estab-lish-ments	Enter-prises (b)	Total number employed on average during the year (a)	Gross output	Net output	Net output per head
	Number	Number	Number	£'000	£'000	£
1-5	51	50	159	..	..	..
6-10	58	58	450	..	..	..
11-24	88	87	1,525	..	..	..
25-49	37	35	1,452	3,809	1,826	1,258
50-99	41	41	2,715	8,772	4,187	1,542
100-199	34	30	4,731	16,380	7,738	1,636
200-299	16	11	3,844	13,178	6,204	1,614
300-399	7	5	2,470	6,961	3,282	1,329
400-499	7	5	2,979	8,937	4,722	1,585
500-749	7	6	3,962	11,165	5,843	1,475
750-999	5	5	4,080	13,682	7,701	1,888
1,000 and over	6	6	11,516	36,993	18,446	1,602
Unsatisfactory returns	56	55	816	..	..	..
Total	413	345	40,699	129,236(c)	64,607(c)	1,587(c)

(ii) Employees, wages and salaries

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Employees		Wages and salaries		Wages and salaries per head	
	Oper-atives	Others (d)	Oper-atives	Others (d)	Oper-atives	Others (d)
	Number	Number	£'000	£'000	£	£
1-5	..	..	..	..	..	..
6-10	..	..	..	..	..	..
11-24	..	..	..	..	..	..
25-49	1,206	219	832	259	690	1,181
50-99	2,255	437	1,698	517	753	1,183
100-199	3,724	994	2,960	1,130	795	1,137
200-299	3,145	695	2,372	727	754	1,047
300-399	2,084	381	1,670	432	801	1,135
400-499	2,441	538	1,974	600	809	1,115
500-749	3,023	939	2,551	1,102	844	1,174
750-999	2,849	1,231	2,920	1,579	1,025	1,283
1,000 and over	8,944	2,572	7,972	2,947	891	1,146
Unsatisfactory returns	..	..	..	..	..	..
Total	31,822(c)	8,575(c)	26,746(c)	9,953(c)	840(c)	1,161(c)

(a) Including working proprietors.

(b) The sum of the figures for the size groups exceeds the total for the industry to the extent that enterprises made returns for establishments in more than one size group.

(c) Including estimates for establishments employing fewer than 25 persons and for establishments not making satisfactory returns.

(d) Administrative, technical and clerical employees.

TABLE 3 Percentage analysis of employees, by age and sex, 1969 (a)

All establishments: United Kingdom

Ages	Males	Females	All employees
	Per cent.	Per cent.	Per cent.
Under 18	3	2	5
18 and over	62	33	95
All ages	65	35	100

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) at June 1969, the earliest date for which the information is available on the basis of the Standard Industrial Classification, (Revised 1968).

Footnotes to Table 4.

(a) Some establishments employing fewer than 25 persons were included in returns for larger establishments. These amounted to 6 establishments in 1968 and 10 in 1963.

(b) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).

(c) This is the ratio of total sales of principal products by the industry to total sales of goods produced and work done.

(d) Administrative, technical and clerical employees.

(e) Excluding expenditure for establishments not yet in production.

TABLE 4 Analysis of larger establishments, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom (a)

	Unit	1963	1968	
Number of enterprises	No.	129	110	
Number of establishments	"	189	166	
Gross output	£'000	95,384	120,180	
Net output	"	49,221	60,080	
Net output per head	£	1,227	1,587	
Sales and work done	{ goods produced and work done (b)	£'000	88,588	110,562
	{ merchanted goods and canteen takings	"	6,691	9,735
Index of specialisation (c)	Per cent.	91	90	
Purchases	{ materials for processing and packaging, and fuel	£'000	36,060	47,706
	{ goods for merchenting and canteen purchases	"	7,174	8,597
	{ for work done on materials given out for transport	"	1,857	2,675
Payments to other organisations	{ by road	"	1,043	
	{ by rail and other means excluding postal services	"	984	340
Stocks and work in progress				
Goods on hand for sale	{ change during year	"	- 203	- 616
	{ at end of year	"	11,927	14,861
Work in progress	{ change during year	"	+ 308	+ 499
	{ at end of year	"	4,134	5,913
Materials, stores and fuel	{ change during year	"	- 89	+ 261
	{ at end of year	"	8,962	8,754
Number employed on average during the year	{ total, including working proprietors	No.	40,104	37,847
	{ operatives	"	32,160	29,757
	{ other employees (d)	"	7,872	8,018
Wages and salaries	{ of operatives	£'000	18,909	25,011
	{ of other employees (d)	"	6,882	9,307
Wages and salaries per head	{ operatives	£	588	840
	{ other employees (d)	"	874	1,161
Capital expenditure (e)				
New building work	£'000	607	502	
Land and existing buildings	{ acquisitions	"	658	289
	{ disposals	"	924	211
Plant and machinery	{ acquisitions	"	3,425	3,804
	{ disposals	"	230	504
Vehicles	{ acquisitions	"	324	493
	{ disposals	"	113	179

For notes to this table - see page 90/5.

TABLE 5 Sales of principal products of the industry by larger establishments, including sales by establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom

	1963		1968			
	Quantity	Value	Quantity	Value	Enterprises	Enterprises
Iron and steel	Th.tons	£'000	Th.tons	£'000	Number	Number
Bifurcated rivets made from wire	{ 0.8 ..	{ 295 429	{	{ 554 ..	{ * ..	{ * ..
Boot and shoe grindery	2.4	464	..	538	6	6
Cut nails	7.6	546	..	718	*	*
Cut tacks	..	318	3.2	..	..	..
Rivets			Mn.			
Tubular rivets	..	529	{ 291 ..	{ 518 197	{ 9 ..	{ 10 ..
Other rivets (excluding bifurcated rivets made from wire)			Th.tons			
Of ½ inch diameter or over	5.7	418	..	358	10	10
Under ½ inch diameter	{ 4.4 ..	{ 583 348	{ 4.8 ..	{ 932 ..	{ 16 ..	{ 19 ..
Washers (excluding washers assembled with bolts, etc)	{ 16.5 ..	{ 816 1,715	{ 10.6 ..	{ 927 2,845	{ 38 ..	{ 43 ..
Bolts, whether threaded or not, bolt ends, hexagon or square head set screws and screw studs, hexagon and square nuts, whether tapped or not, and washers assembled with any of these articles	Mn. Th.tons		Mn. Th.tons			
Bright	{ 578 15.3 450 2.4 4,682 ..	{ 4,178 1,661 643 4,682	{ 346 5.3 66.8 10.3	{ 1,671 420 2,197 1,024	{ 37 ..	{ 49 ..
Black or metal coated (but not painted, japanned or otherwise coated, except with metal)	{ 1,898 67.4 .. 48.4	{ 14,556 6,657 1,265	{ 1,590 35.0 .. 43.9	{ 5,525 6,821	{ 32 ..	{ 39 ..
High tensile	{ 740 14.4 1,207 2.9(a)	{ 4,664 3,454 644 3,122	{ 1,372 40.5 .. 19.6	{ 11,489 2,048 2,005	{ 32 ..	{ 45 ..
All other kinds	{	{	{ 232 3.8 .. 2.8	{ 1,953 586 1,877	{ 27 ..	{ 37 ..
Other set screws, screw studs and screws for metal (including self-tapping screws), and nuts and washers when assembled with any of these articles						
High tensile socket screws	..	..	..	4,410	8	10
Machine screws and self-tapping screws	{ 3,750 11.7 5,711	{ 3,700 5,909 2,598	{ 6,652 14.6	{ 6,979	{ 15	{ 20
All other kinds	{	{	{	{ 7,312	{ 28	{ 32
Screws for wood and screw hooks, screw rings and screw knobs						

Continued on next page.

TABLE 5 (continued)

	1963		1968		Enter-prises	Enter-ies
	Quantity	Value	Quantity	Value		
Iron and steel (continued)		£'000	Mn.	Th.tons	£'000	Number
Nuts whether tapped or not, when not assembled with other articles						
Pressed and forged nuts		(b)	2,547	14.2	4,143	19
			..	5.1	747	
Stiff nuts incorporating any thread locking or frictional device				544	7.9	4,094	10
All other kinds			183	2.6	1,319	17
			15.1	..	36	
			..	..	1,158	27
Aluminium, copper, brass and other copper alloys, including nickel silver and cupro-nickel, but excluding other nickel alloys						
	Th.cwt.		Th.cwt.			
Nails and tacks	9.4	214	4.7		238	* *
Rivets (other than tubular) and washers (c)		2,399	33.6		2,538	20
	..			..	604	
Tubular rivets			Mn.		4,666	8
			3,089			9
Screws for wood and screw hooks, screw rings and screw knobs	Mn.		Mn.	Th.cwt.		
	41.2	88	696	2.0	1,887	* *
	62.7	1,418	..	..
Bolts, and nuts and washers when assembled therewith (d)						
Screws for metal (including self-tapping screws), and nuts and washers when assembled therewith	{ 412	1,161	458	19.5	867	23
	{ ..	347	..	..	1,204	
Nuts whether tapped or not, when not assembled with other articles						29
Other manufactures						
Screw machine products (eg turned screws, rivets, washers) not elsewhere specified						
	Mn.		Mn.			
Of iron and steel	280	1,060	1,221		3,296	26
	..	2,429	..		1,484	
Of other metals	662	1,432	1,181		3,397	30
	..	3,091	..		1,180	
Taper pins of all metals			..		1,523	7
Other products		4,393	..		1,631	11
Scrap metal sold						
	Th.tons		Th.tons			
Iron and steel	85.9	728	82.5		738	86
			..		105	
Brass	5.8	864	5.6		1,627	48
Other metals	0.8	61	..		379	40
	..	130				46

TABLE 5 (continued)

	1963		1968		Enter-prises	Enter-ies
	Quantity	Value	Quantity	Value		
Work done		£'000		£'000		
General and jobbing work (including repair work)		332		613	9	10
Other work done		13		256	13	14
Total		84,353		103,632	..	..
Sales in other industries (see Table 6)		3,711		3,737	..	..
Principal products of this industry sold by establishments in the industry		80,642		99,895	110	147(e)

(a) Amended figure.

(b) Not recorded separately for 1963.

(c) For 1963 aluminium washers were excluded.

(d) For 1963 described as bolts and nuts of brass and other copper alloys.

(e) This figure represents the total number of returns made for larger establishments in this industry which is less than the total number of establishments shown in Table 4 on account of combined returns covering more than one establishment.

TABLE 6 Sales of principal products of the industry by larger establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963		1968	
	Value	Value	Entries	Principal industries in which produced (a)
	£'000	£'000	Number	
Iron and steel				
Boot and shoe grindery, nails, tacks and rivets (including tubular rivets and bifurcated rivets manufactured from wire)	948	892	*	44,71,82,97
Washers (other than washers assembled with bolts, etc)	412	165	15	64,66,82,97
Bolts and nuts of all descriptions, set screws, screw studs, screws for metal (including self-tapping screws) and taper pins of various metals	2,352	2,680	32	44,66,88,95
Total	3,712	3,737	..	

(a) The references given are to the list of industries at the front of this report.

TABLE 7 Sales of other than principal products by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963	1968
	Value	Value
	£'000	£'000
Plant and machinery, including parts	703	869
Parts and accessories of motor vehicles and tractors	857	1,933
Manufactures of iron and steel		
Nails, tacks, staples, wire and all other manufactures of wire	390	532
Railway spikes	166	81
Tools, implements and builders ironmongery	1,452	840
Stampings, pressings and steel forgings, other than drop forgings	842	1,020
Other manufactures of iron and steel, and non-ferrous metals, not elsewhere specified	1,550	3,175
Other products	1,737	1,264
Services rendered to other organisations (a)	247	952
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	6,464	9,358
Canteen takings	228	378
Total	14,636	20,402

(a) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered to other organisations.

TABLE 8 Production of certain principal products of the industry by larger establishments, 1963 and 1968

This table is not applicable to this industry.

TABLE 9 Purchases by larger establishments of selected principal products of the industry, 1968

This table is not applicable to this industry.

TABLE 10 Purchases by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom

	1963		1968	
	Quantity	Cost	Quantity	Cost
Materials for use in production	Th.tons	£'000	Th.tons	£'000
Steel				
Ingots, blooms, billets, slabs, (including sheet/plate mill slabs and sheet bars)	14.6	704	..	571
Bars and rods				
Wire rods	163	9,937	83.3	5,532
Alloy steel bars			..	2,613
Other bars			..	1,920	89.7	5,378
Iron and steel not elsewhere specified except finished parts, wire and scrap	..		42.5	2,094
Light metals and non-ferrous metals in all forms except finished parts, wire and scrap			..	721
Aluminium and aluminium alloys	..	463	..	295
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys and cadmium copper) (a)	10.0	2,656	9.2	4,674
Copper (including cadmium copper) (b)	..	108	..	268
Wire				
Steel (single wire)	131	9,157	112	8,715
Aluminium and aluminium alloys		(c)	1.3	681
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys and cadmium copper) (a)	5.8	1,807	3.9	2,053
Copper (including cadmium copper) (b)		(c)	0.8	444
General chemicals (d)				
Inorganic (including inorganic gases)	..	178	..	196
Organic (including organic gases)			..	24
Other (eg mixtures of inorganic and organic chemicals)			..	44
Water		(c)	..	82
Lubricating oils and greases (including cutting oils and emulsions)	1,174	273	1,673	429
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement	..	87	Th.cwt.	23
Tyres and other spare parts for firms' own road goods vehicles	..	2,268	..	90
Other	..		..	3,656
All other materials for use in production	..	3,178	..	4,890
Packaging materials				
Paper and board				
Boxes, cartons, drums and canisters (with or without metal ends) of paper and cardboard	..	788	..	692
Fibreboard packing cases	..		..	185
Jute and hessian piece goods, sacks and bags	..	231	..	240
All other packaging materials	..	103	..	225

Continued on next page.

TABLE 10 (continued)

	1963		1968	
	Quantity	Cost	Quantity	Cost
Fuel and electricity (e)	Th.tons	£'000	Th.tons	£'000
Coal	42.4	195	34.8	161
Coke (including screenings) and manufactured fuel	3.7	33	..	20
	Th.gal.		Th.gal.	
Derv fuel and motor spirit for use in road vehicles	691	125	643	175
Other liquid fuels (including creosote/pitch mixtures, etc and liquefied petroleum gases)	{ 5,855 ..	{ 291 56	{ 5,933	{ 339
	Th.therms		Th.therms	
Gas	{ 4,990 ..	{ 317 74	{ 1,859 ..	{ 151 256
	Th.kWh		Th.kWh	
Electricity	176,158	1,112	{ 116,323 ..	{ 849 810
All other fuels	..	(c)	..	129
Total cost of materials and fuel		36,060		47,706
Goods purchased for merchanting		6,928		8,230
Canteen purchases		246		367
Total cost of purchases		43,234		56,302

(a) For 1963 'Cadmium copper' was not specifically excluded.

(b) For 1963 'Cadmium copper' was not specifically included but blister was excluded.

(c) Not recorded separately for 1963.

(d) For 1963 described as 'Heavy chemicals'.

(e) Owing to the risk of disclosure of information relating to individual firms the quantity of electricity generated in 1968 cannot be given. For 1963 the quantity recorded was 606 Th.kWh.

TABLE 11 Transport costs and employment of larger establishments, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	Unit	1963	1968
Average number mainly employed on transport	No.	408	394
Transport costs			
Wages and salaries	£'000	331	366
Derv fuel and motor spirit	"	125	175
Tyres and other spare parts for road goods vehicles	"	..	90
Payments to other organisations for transport	"	{ 984	{ 1,043
			{ 340
Costs of operating road goods vehicles			
Insurance	"	20	24
Vehicle licences	"	13	32
Depreciation	"	142	141
Payments to other organisations for repairs and maintenance	"	36	62
Total	"	1,651 ^(a)	2,273

(a) Excluding tyres and other spare parts for road goods vehicles, not collected separately for 1963.

TABLE 12 Payments for certain services, etc by larger establishments, 1963 and 1968 (a)

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	Amounts payable	
	1963	1968
Repairs and maintenance to	£'000	£'000
Buildings	342	314
Road goods vehicles	36	62
Plant, machinery and other capital equipment	623	1,112
Insurance, licensing and depreciation of road goods vehicles (b)	175	197
Rates, excluding water rates	568	815
Hire of plant and machinery	155	448
Postage, telephone, telegrams, cables and telex (c)	316	488
Total	2,216	3,436

(a) No deduction is made for these payments to arrive at the figures of net output given in this report.

(b) For details see Table 11.

(c) Excluding telex for 1963.

TABLE 13 Percentage analysis of twelve-month periods covered by returns from larger establishments, 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

Year ended	Percentage of total returns received	Percentage of total number employed
1968	Per cent.	Per cent.
April (a)	0.7	0.3
May	1.4	0.6
June	8.2	6.7
July	7.5	6.4
August	3.4	4.5
September	9.5	4.9
October	0.7	0.1
November	1.4	0.6
December	46.3	64.4
1969		
January	2.0	3.6
February	3.4	0.8
March	14.3	5.9
April (b)	1.4	1.2
	100	100

(a) From 6 April.

(b) To 5 April.