

93 Jewellery and precious metals

This Report on the Jewellery and Precious Metals Industry relates to establishments engaged wholly or mainly in smelting, refining etc, gold, silver and platinum, etc, cutting and polishing precious stones; manufacturing ornaments of gold, silver, pewter, or plated with gold, silver, etc; and in manufacturing jewellery, coins and medals. The Royal Mint is included.

This industry corresponds to minimum list heading 396 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 Industry corresponds to Jewellery, Plate and Refining of Precious Metals Industry (Part 73) in the Reports on the last detailed Census of Production for 1963, except that tableware of metals other than of gold or platinum, finished spoons and forks and blanks therefor; and knives, complete with blades, plated with precious metals formerly included in this industry are now included in the Report on the Cutlery, Spoons, Forks and Plated Tableware, etc, Industry (Part 89) while imitation, fashion and costume jewellery formerly included in this industry are now included in the Report on the Miscellaneous Manufacturing Industries (Part 150).

Throughout this Report, the figures given for 1963 have been reclassified, as far as possible, according to the Standard Industrial Classification (Revised 1968) so that data for 1963 and 1968 are on the same industrial basis. However the reclassification of small firms, which provided limited information only, has been arbitrary.

In the jewellery and plate section of this industry, where small establishments account for a relatively large proportion of employment and output, establishments employing fewer than twenty-five persons were asked to complete a simplified version of the full census form for 1968. For 1963 a sample of small firms in the jewellery and plate section of this industry was asked to complete the simplified census form, the remainder being required only to give information on employment and description of business.

There were no small 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.	725	629
Number of establishments	"	769	666
Gross output	£'000	402,940	226,072
Net output	"	25,591	42,377
Net output per head	£	1,291	2,321
Sales and work done	£'000	119,383	211,046
	"	281,748	10,375
Purchases	"	87,620	169,593
	"	287,530	8,789
Payments to other organisations	"	2,758	5,043
	"	129	324
	"		136
Stocks and work in progress	"	+ 2,499	+ 4,842
Total stocks and work in progress	"	22,060	41,290
	"	+ 1,694	+ 2,321
Goods on hand for sale	"	9,494	9,322
	"	+ 116	+ 2,330
Work in progress	"	2,721	17,927
	"	+ 689	+ 191
Materials, stores and fuel	"	9,844	14,040
	Th.	19.8	18.3
Number employed on average during the year	"	13.8	12.4
	"	5.0	5.2
	£'000	8,531	11,242
Wages and salaries	"	4,982	6,807
	"	1,247	5,620
Total	"	335	1,999
New building work	"	119	81
Land and existing buildings (f)	"	834	3,304
Plant and machinery (f)	"	197	236
Vehicles (f)	"		

(a) For 1968 estimates are based on returns covering 88 per cent. of the employment shown. For 1963, where only a sample of small establishments were asked to supply the full range of information, the corresponding figure was 78 per cent.

(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	629	556
Average number employed:		
Working proprietors	770	654
Other persons employed	4,495	3,529

Footnotes continued on page 93/2.

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)	Establishments		Total number employed on average during the year (a)	Gross output	Net output	Net output per head
	Number	Enterprises (b)				
	Number	Number	Number	£'000	£'000	£
1-5	125	125	392	..	..	..
6-10	79	79	637	..	..	..
11-24	95	93	1,586	..	..	..
25-49	40	40	1,442	8,731	2,916	2,022
50-199	38	37	3,572	34,840	7,320	2,049
200-299	4	4	959	10,826	2,164	2,256
300-499	5	4	2,049	24,785	5,936	2,897
500 and over	6	3	5,347	29,575	14,252	2,665
Unsatisfactory returns	274	265	2,277	..	..	..
Total	666	629	18,261	226,072(c)	42,377(c)	2,321(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	
	Operatives	Others (d)	Operatives	Others (d)	Operatives	Others (d)
	Number	Number	£'000	£'000	£	£
1-5	..	..	..	..	..	..
6-10	..	..	..	..	..	..
11-24	..	..	..	..	..	..
25-49	1,049	354	925	484	882	1,366
50-199	2,655	887	2,000	1,095	754	1,234
200-299	589	370	553	465	940	1,258
300-499	1,413	636	1,285	886	909	1,393
500 and over	3,458	1,889	3,581	2,753	1,036	1,457
Unsatisfactory returns	..	..	..	..	..	..
Total	12,367(c)	5,169(c)	11,242(c)	6,807(c)	909(c)	1,317(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 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	3	6
18 and over	60	34	94
All ages	63	37	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 5 establishments in 1968 and 9 in 1963.
- (b) The method of classifying returns to sub-divisions of the industry is explained in the notes; the characteristic products of each sub-division are identified in Table 5(ii).
- (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) Direct sales of goods (excluding canteen takings) made to, and work done for, the general public by larger establishments are included. These amounted to £12,000 in 1968. Similar information is not available for 1963.
- (e) Characteristic products relate only to sub-divisions of the industry.
- (f) For sub-divisions of the industry, this is the ratio of sales of characteristic products to total sales of goods produced and work done. For the industry as a whole, this is the ratio of total sales of principal products by the industry to total sales of goods produced and work done.
- (g) Administrative, technical and clerical employees.
- (h) Excluding expenditure for establishments not yet in production.
- (i) Acquisitions less disposals.

TABLE 4 Analysis of larger establishments, 1963 and 1968
Establishments employing 25 or more persons: Analysis of returns received, United Kingdom (a)

	Unit	Sub-divisions of the industry (b)				Total		
		Refined precious metals 01		Jewellery, etc 02		1963	1968	
		1963	1968	1963	1968			
Number of enterprises	No.	8	9	101	67	109	76	
Number of establishments	"	25	23	118	75	143	98	
Gross output	£'000	355,109	155,881	24,797	38,520	379,906	194,400	
Net output	"	9,510	21,053	10,019	11,680	19,529	32,732	
Net output per head	£	1,645	2,976	1,170	1,838	1,361	2,437	
Sales and work done	£'000	goods produced and work done (c) (d)	81,633	153,675	21,578	28,058	103,211	181,733
		merchanted goods and canteen takings	272,555	2,142	2,821	5,910	275,376	8,052
Sales of characteristic products	"	68,554	129,656	20,043	25,908	(e)	(e)	
Index of specialisation (f)	Per cent.	84	84	93	92	88	88	
Purchases	£'000	materials for use in production and packaging, and fuel	71,864	129,568	11,860	20,639	83,724	150,208
		goods for merchandising and canteen purchases	272,366	1,919	2,381	4,931	274,746	6,850
Payments to other organisations	"	for work done on materials given out	1,701	3,520	711	1,124	2,412	4,217
		for transport by road	52		60		111	126
		by rail and other means excluding postal services						
Stocks and work in progress	"							
Goods on hand for sale	"	change during year	+ 856	+ 201	+ 404	+ 2,231	+ 1,260	+ 2,433
		at end of year	5,060	1,627	2,231	4,872	7,291	6,499
Work in progress	"	change during year	+ 65	- 137	- 7	+ 2,320	+ 59	+ 2,183
		at end of year	1,471	12,587	869	3,984	2,340	16,570
Materials, stores and fuel	"	change during year	+ 383	+ 179	+ 233	- 145	+ 617	+ 34
		at end of year	5,570	5,835	2,587	5,592	8,157	11,428
Number employed on average during the year	No.	total, including working proprietors	5,781	7,074	8,564	6,356	14,345	13,430
		operatives	3,856	4,355	6,617	4,847	10,473	9,202
		other employees (g)	1,925	2,711	1,861	1,447	3,786	4,158
Wages and salaries	£'000	of operatives	2,642	4,183	3,821	4,193	6,462	8,377
		of other employees (g)	2,177	3,827	1,596	1,885	3,773	5,713
Wages and salaries per head	£	operatives	685	961	577	865	617	909
		other employees (g)	1,131	1,412	858	1,303	997	1,374
Capital expenditure (h)	"							
New building work	£'000	170	431	136	1,449	306	1,880	
Land and existing buildings	"	acquisitions	61	12 (i)	25	77 (i)	86	117
		disposals	44		159		203	28
Plant and machinery	"	acquisitions	518	1,764	281	1,375	800	3,139
		disposals	14	14	10	72	24	86
Vehicles	"	acquisitions	63	128	122	105	184	233
		disposals	21	36	54	53	74	89

For notes to this table - see page 93/5.

TABLE 5(i) Estimates of total sales of principal products of the Jewellery and Plate section of this industry, 1963 and 1968 (a)

All establishments: United Kingdom

	All establishments (b)		Small establishments in the industry (c)	
	1963	1968	1963	1968
	£'000	£'000	£'000	£'000
Jewellery, gem set or not (excluding imitation jewellery)	16,572(d)	20,828	6,695(d)	8,549
Goldsmiths' and silversmiths' wares not elsewhere specified (including thread, lace and braid but excluding tableware, other than of gold and platinum, cutlery and watch cases) (e)	6,146	7,927	1,766	1,244
Stampings, findings and other semi-processed goods (excluding blanks for spoons and forks)	2,659	2,641	1,849	2,778
Diamonds and other precious and semi-precious stones and pearls, cut or otherwise worked	3,982	5,545	1,126	4,578
Other products (including waste products) (f)	4,814	14,343	127	678
Work done, other than repair work	2,757	2,380	2,478	1,888
Total	36,930	53,664	14,041	19,715

(a) Including estimates for establishments not making satisfactory returns.

(b) Including sales of principal products of the industry by larger establishments, but not by small establishments, classified to other industries. For a detailed analysis of sales by larger establishments see Table 5(ii).

(c) Excluding small establishments included in returns made by larger establishments.

(d) For 1963 includes imitation jewellery, which for 1968 is included in the Report on the Miscellaneous Manufacturing Industries (Part 150).

(e) Tableware of metals, other than of gold or platinum, finished spoons and forks and blanks thereof and knives complete with blades plated with precious metals are included in the Report on the Cutlery, Spoons, Forks and Plated Tableware, etc Industry (Part 89). Watch cases are included in the Report on the Watches and Clocks Industry (Part 68).

(f) Including any sales by small establishments, of goods other than principal products of the industry, but excluding merchanted goods, canteen takings and the value of services rendered to other organisations.

TABLE 5(ii) 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

Industry sub-division (a)	1963		1968			
	Quantity	Value	Quantity	Value	Enter-prises	Entries
01	Th. fine oz. troy	£'000	£'000	Number	Number	
Precious metals refined						
Gold						
Refined in bars, grain, etc	2,382	23,573(b)	..	15,363	7	9
Rolled gold sheet, other sheet, gold leaf, wire, tube, strip and other semi-processed forms	1,297	765	}	2,664	5	5
	..	615				
Alloys in sheet, wire, tube, strip and other semi-processed forms	782	6,458	..	9,052	*	5
Platinum, palladium, rhodium, iridium, osmium and ruthenium and alloys thereof	..	26,926	..	76,194	5	7
Silver	Th. oz. troy					
Refined in bars, grain, etc	9,289	4,117(b)	..	17,519	13	13
Fine silver sheet, wire and other semi-processed forms	5,350	2,626	..	6,189	*	6
Alloys in sheet, wire, tube, strip and other semi-processed forms	17,984	6,544	..	11,789	*	5
Total precious metals refined		71,624		138,771	..	..
02			Th. oz. troy			
Jewellery, gem set or not (excluding imitation jewellery) (c)						
Of platinum	1.0	97	0.3	18	}	13
	..	94	..	86		
Of gold (including gold and platinum combined)	118	2,392	289	5,203	}	47
	..	3,184	..	4,005		
Of silver, whether or not covered with other precious metals	92.2	211	179	387	}	30
	..	322	..	538		
Of base metals covered with precious metals	..	428	..	303	17	17
Other	..	2,829(d)	..	523	10	10
02						
Goldsmiths' and silversmiths' wares not elsewhere specified (including thread, lace and braid but excluding tableware other than of gold and platinum, cutlery and watch cases) (e)						
Of gold or platinum and silver whether or not covered with other precious metals (eg cigarette cases, compacts, pencils)	..	1,096	..	1,136	19	19
Of metals other than gold, platinum or silver, whether or not covered with precious metals						
Metal watch bands	..	(f)	..	945	5	5
Other goods						
Of silver plate on nickel silver	..	652	..	434	12	12
Of other metals	..	1,183	..	579	10	10

TABLE 5(ii) (continued)

Industry sub-division (a)	1963		1968			
	Quantity	Value	Quantity	Value	Enter-prises	Entries
02		£'000		£'000	Number	Number
Diamonds and other precious and semi-precious stones and pearls, cut or otherwise worked	..	2,767	..	870	*	*
02	Th. oz. troy					
Stampings, findings and other semi-processed goods (excluding blanks for spoons and forks)						
Of precious metals	132	434	}	610	9	10
	..	66				
Of other metals	..	292	..	415	9	9
02						
Coinage	..	3,773	..	11,445	*	5
Total jewellery and plate		19,820		27,497	..	..
Other products	..	3,436(g)	..	1,249	6	8
Waste products			Th. oz. troy			
Precious metals	131	329	179	579	}	42
	..	226	..	685		
Other (including concentrates, metallic residues, etc)	..	77	..	121	24	24
Work done, other than repair work		545		712	12	12
Total		96,057		169,614	..	..
Sales in other industries (see Table 6)		5,200		10,801	..	..
Principal products of this industry sold by establishments in the industry		90,858		158,813	76	82(h)

(a) The number given is that of the sub-division of which the item is a characteristic product. The sales shown are total sales by larger establishments, not merely sales by establishments classified to the sub-division.

(b) Revised figure.

(c) Imitation jewellery is included in the Report on the Miscellaneous Manufacturing Industries (Part 150).

(d) For 1963 includes some unclassified and imitation jewellery.

(e) Tableware of metals other than of gold or platinum, finished spoons and forks and blanks thereof and knives complete with blades plated with precious metals are included in the Report on the Cutlery, Spoons, Forks and Plated Tableware, etc Industry (Part 89). Watch cases are included in the Report on the Watches and Clocks Industry (Part 68).

(f) Not recorded separately for 1963.

(g) For 1963 includes some unclassified goldsmiths' and silversmiths' wares.

(h) 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	
Precious metals of gold, platinum, palladium and silver, refined and in semi-processed forms	3,378	8,142	6	48,49,149
Goldsmiths' and silversmiths' wares (including thread, lace and braid but excluding tableware other than of gold and platinum and watch cases)	518	350	9	89,97
Other products	1,304	2,309	7	48,65,97
Total	5,200	10,801	..	

(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		
Cutlery and tableware	651	141		
Non-ferrous metals and manufactures thereof	2,362	3,741		
Other products	7,885	16,410		
Repair work on customers' goods, including remounting and mounting of loose stones	535	617		
Services rendered to other organisations (a)	920	2,013		
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	275,266(b)	7,902		
Canteen takings	110	149		
Total	287,729(b)	30,974		

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

(b) Revised figure.

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		£'000		£'000
Precious metal concentrates and gold in all forms	..	38,705	..	94,066
Platinum (including commercial platinum), palladium, rhodium, iridium, osmium, ruthenium and alloys thereof	..	18,444	..	14,768
Silver				
Unrefined	..	5,204	..	1,944
Refined in bars, grain, etc	..	7,659	..	16,606
Fine silver sheet, wire and other semi-processed forms	..	724	..	622
Alloys in sheet, wire, tube, strip and other semi-processed forms	..	453	..	792
Light metals and non-ferrous metals in all forms except finished parts, wire and scrap				
Brass and other copper alloys (including cupro-nickel, but excluding nickel silver, and all other nickel alloys and cadmium copper) (a)	Th.tons 2.1	1,113	..	1,279
Nickel silver	..	46	..	132
Nickel and nickel alloys (excluding nickel silver and cupro-nickel)	..	711	Th.tons 0.6 ..	589 66
Copper (including cadmium copper) (b)	3.6	859	9.6	4,726
Stampings, findings and other semi-processed goods				
Of precious metals	..	138	..	115
Of other metals	..	185	..	4,283
Diamonds, uncut	..	2,784	..	1,016
Other precious and semi-precious stones and pearls, unset	..	1,053	..	1,107
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement				
Tyres and other spare parts for firms' own road goods vehicles	..	170	..	34
Other	..	..	..	452
All other materials for use in production	..	4,402	..	5,964
Packaging materials				
Paper and board				
Boxes, cartons, drums and canisters (with or without metal ends) of paper and cardboard and fibreboard packing cases	..	130	..	157
Wrapping and packing paper (including paper coated with plastics and any laminates incorporating paper but not metal) (c)	..	70	..	24
All other packaging materials	..	85	..	147
Fuel and electricity (d)				
Coal	6.4	53	2.0	12
Coke (including screenings) and manufactured fuel	1.7	20	..	116

TABLE 10 (continued)

	1963		1968	
	Quantity	Cost	Quantity	Cost
		£'000	Th.gal.	£'000
Fuel and electricity (d) (continued)				
Derv fuel and motor spirit for use in road vehicles	..	82	216	51
Other liquid fuels (including creosote/pitch mixtures, etc, and liquefied petroleum gases)	Th.gal. 5,188	162	8,898	285(e)
Gas	Th.therms 2,282	141	946 ..	74 160
Electricity	Th.kWh 48,214	329	Th.kWh 25,945 ..	204 420
Total cost of materials and fuel		83,724		150,208
Goods purchased for merchandising		274,586		6,611
Canteen purchases		160		239
Total cost of purchases		358,470		157,058

- (a) For 1963 nickel silver and cadmium copper were not specifically excluded.
(b) For 1963 cadmium copper was not specifically included but blister was excluded.
(c) For 1963 moulded pulp units, labels and other packaging materials of paper, cardboard and fibre-board (except multiwall sacks) were specifically included.
(d) Owing to the risk of disclosure of information relating to individual establishments, total quantities of electricity generated in firms' own establishments in 1963 cannot be given. None was recorded for 1968.
(e) For 1968 may include a small amount of fuels not covered by specific headings.

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.	102	106
Transport costs			
Wages and salaries	£'000	86	123
Derv fuel and motor spirit	"	82	51
Tyres and other spare parts for road goods vehicles	"	..	34
Payments to other organisations for transport	"	111	301
{ by road	"		
{ by rail and other means excluding postal services	"		126
Costs of operating road goods vehicles			
Insurance	"	6	5
Vehicle licences	"	4	10
Depreciation	"	31	33
Payments to other organisations for repairs and maintenance	"	17	14
Total	"	338(a)	697

(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	104	215
Road goods vehicles	17	14
Plant, machinery and other capital equipment	410	748
Insurance, licensing and depreciation of road goods vehicles (b)	41	49
Rates, excluding water rates	268	438
Hire of plant and machinery	32	42
Postage, telephone, telegrams, cables and telex (c)	199	338
Total	1,071	1,844

(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)	6.0	3.4
May	1.2	1.0
June	1.2	0.6
July	4.8	1.6
August	1.2	0.2
September	0.0	0.0
October	0.0	0.0
November	0.0	0.0
December	48.3	22.0
1969		
January	6.0	3.5
February	4.8	2.5
March	26.5	65.2
April (b)	0.0	0.0
	100	100

(a) From 6 April.

(b) To 5 April.