

ECONOMIC AND SOCIAL COUNCIL



Distr.
GENERAL
E/CN.3/176
22 January 1954
ORIGINAL: ENGLISH

STATISTICAL COMMISSION
Eighth session
Item 6 of the provisional agenda

STATISTICS OF INDIVIDUAL INDUSTRIES (Memorandum prepared by the Secretary-General)

- 1. The potential scope of action by the Statistical Commission in respect of industrial statistics is defined by the International Standard Industrial Classification of all Economic Activities, approved by the Commission in May 1948 and subsequently published by the Secretariat, under the title above, in Statistical Papers, Series M, No. 4.
- 2. The classification system recommended in this study is applicable to all sectors of industry and all phases of the industrial process production, distribution and consumption. So far as particular phases are concerned, however, the attention of the Commission to date has been focussed primarily on various aspects of production.
- 3. Index numbers of industrial production were the subject of recommendations by the Commission at its Fifth Session, and a technical study on this subject (Studies in Methods, Series F, No.1) was subsequently prepared by the Statistical Office. The Commission's recommendations at later sessions led to special reports by the Statistical Office on International Standards in Basic Industrial Statistics (Statistical Papers, Series M, No. 17), and Industrial Censuses and Related Enquiries (Statistical Papers, Series F, No. 4).
- 4. Another phase of industry was covered by the Commission, at least incidentally, in its recommendations concerning statistics on international trade. These recommendations were subsequently embodied in Secretariat papers on Standard International Trade Classification (Statistical Papers, Series M, No. 10).

- 5. On a number of occasions the Commission has referred to stocks and consumption, two phases of industry on which current statistics are especially inadequate. Statistics on these subjects may be regarded either as general series, relating to industry as a whole, or subordinate series relating to particular branches of industry. It is therefore possible for the Commission, in considering the question of statistical standards in these fields, to handle stocks and consumption as independent subjects, like production or trade statistics, or in relation to particular branches of industry, such as iron and steel.
- 6. The second approach has certain advantages that the Commission may wish to consider. The data that are required on stock changes and consumption cover the whole range of industry; they thus vary widely and do not lend themselves readily to the over-all approach followed by the Commission in connexion with other phases of industry. These data are useful in any form, but they attain their greatest usefulness when integrated with data on production and international trade in related commodities. The process of integration can be applied to any commodity or sector of industry to produce a comprehensive balance sheet for the commodity or sector of industry with which it deals. It thus provides the statistical matrix needed in studying interrelationships of production, processing, trade and utilization.
- 7. Such a sector by sector approach to industry has been employed by the Statistical Office in connexion with certain studies of the fuel and power industries, the results of which appear in the Monthly Bulletin of Statistics (February 1952, November 1953, and March 1954), World Energy Supplies in Selected Years, 1929-1951 (Statistical Papers, Series J, No. 1), and (annually) in the Statistical Yearbook. In making these studies the Statistical Office found it possible to prepare, for each country, a number of annual balance sheets similar to the one for Australia shown in Annex 1. \(\frac{1}{2} \)

The tables constructed for other countries were in somewhat less final form, however.

- 8. It will be noted that columns in this sheet represent steps or stages in the production and distribution sequence, and correspond more or less with ISIC categories of economic activity. Columns 3-5, 8 and 9, 12, and 14-18 call for data from sources, while the remaining columns must usually be calculated.

 Lines in the table are, in effect, simple accounts for particular sources of energy. Most of the lines deal with commodities as reported in national statistics, and follow the SITC system. The remaining lines represent standard equivalents or aggregates of these commodities, calculated by use of the conversion factors shown in column 2.
- 9. A similar procedure of investigation was employed by the Statistical Office in a study of the Iron and Steel sector of industry, the results of which were published in the May 1953 issue of the Monthly Bulletin of Statistics. The balance sheets used in connexion with this study were similar to the U.K. sheet shown in Annex 2, although not filled out as completely. The similarity of this sheet to the fuel and power sheet will be noted: columns represent activities associated with the production and distribution of iron and steel, while lines represent accounts for particular commodities. Columns 5-7 and 12-22 in this case are compiled from sources, the remainder calculated. For purposes of comparison and aggregation, certain lines have been provided for calculation of crude steel or crude metal equivalents of intermediate and end products of tin industry.
- 10. The Statistical Office has thus far confined its investigations of particular sectors of industry to <u>fuel and power</u> and <u>iron and steel</u>. Other agencies and organizations, however, have successfully applied similar procedures to other sectors of industry. FAO, for example, has prepared food balance sheets which are similar in concept and form to the balance sheets described above, even though they deal with quite different commodities.
- 11. The Statistical Office has not attempted any systematic survey of the extent to which similar balance sheets have been prepared for other sectors of industry. The existence of consumption estimates for cotton, wool and other textile fibres, tobacco, lumber, paper, tin, and a wide variety of other products indicates that beginnings at least have been made on such presentations for most sectors of industry. Further examination of the work already done on particular sectors of industry should reveal the possibilities of extending this type of investigation, sector by sector, until all industry is covered.

- 12. The desirability of obtaining such coverage for all industry is indicated by the experience of the Statistical Office with its studies of fuel and power and iron and steel, which show that balance sheets of the sort appended, besides providing essential data on consumption, are useful.
 - (a) in showing relationships between complementary or competitive commodities, in each phase of production and distribution;
 - (b) in showing relationships between production, trade, stocks and utilization of particular commodities or groups of commodities;
 - (c) in verifying or correcting published data (incidentally to obtaining the necessary balances of materials);
 - (d) in locating gaps in the data available, and in some cases filling these gaps by calculations based on technical relationships;
 - (e) in assuring comparability of data, from year to year and from country to country.
- 13. The Statistical Office has also found that this approach to studies of particular industries is of considerable value in determining the proper classification of items covered by the SITC and ISIC, and in fitting the two systems together in a single, compatible scheme for given industries.
- 14. The Commission will wish to consider whether this approach is suitable for study with a view to subsequent development as a standard method of presentation of basic industrial statistics for individual industries.

FUEL AND PIWER SUPPLY

(Solid and liquid fuels in thousands of metric tons - gas in millions of cubic metres - electricity in millions of kilowatt hours)

COUNTRY AUSTRALIA

YEAR 1950/51 (to 30 June)

Part		CONV.		PRODUCTION	TRADE		SUPPLY		STOCKS		GROS	S CONSUMPTION		CONSUMED AS RAW MATERIAL					NET		
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A: Assumed

E: Estimated;

-: Nil or negligible;

a/ UN Statistical Yearbook 19...
b/ UN Monthly Bulletin of Statistics
c/ World Power Conference Statistical Yearbook.
d/ International Petroleum Trade
e/ ECE Monthly Bulletin of Coal Statistics
f/ Imperial Institute Statistical Summary 19...

g/ Oversea Trade, 1950/51

h/ Manufacturing Industries 1950/51 #31 E I. Light and Power Works

i/ Manufacturing Industries 1950/51 #30 G as Works

k/ Reported as Fuel, but Presumed Raw Material (on basis of gas output)

1/ Monthly Bulletin of Production Statist ics 12/52

m/ New South Wales Coal Statistics Period 13 1951

(): Excluded from vertical totals;

*: Production excluded;

**: including production

---: Unknown or not computed

 \underline{n} / production. 1950/51 Primary Industries (non-rural)

Production. 1950/51 Secondary Industries

q/ Adjustment for Product Exchange in Refining
T/ FAO Yearbook Forest Product Statistics, 1952
S/ FAO Yearbook Food and Agriculture, 1952: (Calculated from Sugar Prod. Data)
t/ New South Wales only
V/ Computed Horizontally; not corrected for exchange in Refining

IN THOUSANDS OF METRIC TONS

COUNTRY	UNITED KINGDOM
YEAR	1951

***************************************	LIE	E CO	N- COMPUTING	G PRODUCTION		TRADE		SUPPLY	STOCK	GROSS			PROCESSED IN					NET					
	1	VEF SIC	R—		IMPORTS	EXPORTS	NET IMPORTS		DECREASE	CONSUMPTION	SINTELING PLANTS	BLAST FURNACES	I RON FOUNDRIES	I RON FURNACES	WROUGHT IRON MILLS	STEEL FURNACES	HOT WORKING MILLS	COLD ROLLING AND DRAWING MILLS	TUBE WORKS	WIRE DRAWING MILLS	OTHER ESTABLISH- MENTS e	TOTAL	CONSUMPTION OUTSIDE IRON & STEEL INDUSTRY
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Ores: Iron ores (Actual	1	_		a 15014 4504	a 8888	-	8888 4888	23902 9392	-1543 - 534	22359 8858	a 4008	a 17609 6920	-	-	-	a 742	-				 	22359 8858	
Mn ores (Actual	3		 -	4504	4888 a 390	-	390	390	1	391	1533	a 390		-		a 1	_	_	_	_		391	_
(Mn content				-	183	-	183	183	- 57	F 183	a -	₽ 183	-	-	-	-	-			-	-	183 188	
Pyrites (Actual (Fe content	5 6	+-	+	a 16 7	96	-	229 96	245 103	- 5/	188	103	-	 -	 -	-		====	_		-		103	
Total (Actual	7	_	1+3+5	15030	9507		9507	24537	-1599	22938	4196	17999		-	-	743 405	_					22938 9144	
Sinter (Actual	9		2+4+6	4511 a 3663	5167	-	5167	9678 3663	- 534 - 71	9144 3592	1636	7103 a 3592			-	405						3592	_
(Met. content e		=		1867		19 -	_	1867	- 35	1832	_	1832	_	-		a 9270 /h	_	-			a 194	1832	
Scrap 1/2 Mill cinder slag (Actual	11	+-		12323	a 546	4 a 2	544	12867	a 397	13264 1402	a 22	a 839	a 2850	a 89		9270					194	13264 1402	
(Fe content ^c	13		_	654	_			654	_	654	209	445	_								a 357	654 11961	
Metallurgical coke Total metal in raw materials		+=	8+11+13	17488	5713	a 178	- 178 5711	16176 23199	50 - 137	16226 23062	1867	a 10446 8387	2850	89	-	9675					194	23062	4265 -
Pig iron: 2/ (Steel making		_		a 8136	a 296	a 16	280	8416	245	8661		-	a 673			a 7919	_	_	-	-	a 69	8661	_
(Foundry and For	3			a 1513	a 10	-	10	1523 993.9	380 625	1903 10564		-	a 1889 2562	a 5	-	7919	<u>-</u>				78	1903 10564	
(Total	19	+-	16 + 17	9649 a 210	306 a 102	16 a 3	290	309	- 59	250		-	2502	-		250	<u> </u>	_	_		-	250	_
Total Pig and Ferro—alloys				9859	408	19	389	10248	566	10814	-		2562	5		8169	_	_		-	78	10814	3659
Finished iron castings (Actua	1 21 t. F 22	1.1	40 -	3813 5338	а <u>ц</u> 6	a 158	- 154 - 215	3659 5123	 	3659 5123		 -	-			-							5123
Crude iron (Actual	23	1.		a 81	_	_		81		81	-	-			81	-		-	_		_	81	-
(C. Met. E		1.3		94 a 72	a 1	a 11	- 10	62	ļ	94		 -	-	 	94	 					-	94	62
Finished wrought iron (Actual	. E 26	-	30 -	94	1	14	- 13	81		81	-									-	_		81
Total finished iron (Actual		-			5	169	- 164	3721 5204		3721 5204		===			ļ <u>-</u>	 	<u> </u>		-	-	-		3721 5204
Crude steel: (ingots		+=		5432 a 15397	a 1	235	- 228 1	15398	a 417	15815		-		-		 	15815	-	_	_		15815	
(castings	30		-	a 492				492		492	-						492			-		492	-
Total crude steel 4 (Actual		1.1		a 15889	a 138	a 5	1 122	15890	417	16307		+	 	 		 	16307					16307	a 301
(c. st.	E. 33	-	-	188	155	6	133 149	301 337		301 337											_		337
Of which: coils for re-ro		+=							 					 		-					-		
Sections: (Heavy (Light	36										-												
(Total	37) a 5235	a 98	а 414	- 316	4919	15	4934		-		-	-	 						a 1013	a 3921
Tube rounds Wire rods	38			a 853	a 43	A CLUDED	W I T H 32	S E C T I 0 885	N S 1	886	- -									844		a 844	a 42
Irack material	40	_		a 542	a 1	a 188	- 187	355	- 5	350			-	-	-	-							a 350
Other (Tyres, wheels, a	(les) 41 42		- 20 37+38+39+40+4	a 226 41 6856	142	a 82	- 82 - 553	6303	-29 -18	115 6285	-	-				-				844		1857	a 115 4428
(c. st. E.	43		-	8227	170	834	- 664	7563	- 21	7542	-				-	-				1013	-	2228	5314
Hoops and strips of which: Tube strip	44		-	a 1041 a 461	a 20	a 51	- 31 - 14	1010 447	- 6	1004 447		 				-		-	447 447			а 805 а 447	a 199
Universals and plates	<u>m</u> 46)		1 0	ED WITH	SHEET	S		-				-		}	2					h
Sheets Total flats (Actual	47		- 35 44+46+47) a 4560 5601	113	a 480 531	- 387 - 418	4173 5183	14	4187 5191		 		 	-		<u>} 215</u>	762	447		-	3 977 1782	3210 3409
(c. st.	E. 49	_	_	7561	153	717	- 564	6997	11	7008									603			2406	4602
Finished steel castings	Act. 50 C.St.E 51	1.4		a 274 397	a 1	a 4	- 3	271 393	- 17 - 25	254 368		+											a 254
Steel forgings: (Actual	<u>in</u> 52	1.6		a 167	a 1	a 9	- 8	159		159			-									а ц	a 155
(C. St. Total hot worked (Actual			-	267 52 13066	395	15 1244	- 13 - 849	254 12217	- 27	254 12190			 		 	 					 	6 3643	248 8547
(c. st.	E. 55		1		481	1577	-1096	15544	- 35	15509	-		_									4640	10869
Hoops and strips, cold-rolled,				a 322	10 a 7	a 23	- 16	306 R O L L E D	- 17	289	E: Estima	ted	-: Neg	igible	:	Unknown or not	t computed	(): Excluded	from Totals		(Continued i	in Column 11)
cold-rolled sheets Tin-, Tern-and Black Plat	57 9 58			a 729	THE LUD	D E D W I T a 243	H H O T - 243	486	SHEETS - 1	485	couperb Au	D HOTEO		A = L	ine 54 + Line	65 - Line 54 c	ol. 23 B	= Line 55 + L	ine 66 - Line	55 col. 23			
Total flats (Actual	59	1.3		. 1051	7	266	- 259	792	- 18	774	SOURCES AN		earbook for 19	52 Part I			1	/ Incl. light	rails high so	need tool an	d magnet steel		
Steel tubes and fittings:	60 J 61		- 1419 9 359 - 350 1069 - 24 1045 a/ B. S.F. Statistical Yearbook for 1952 Part 1/ Incl. light rails, high speed, tool and magnet steel a 1112 a 15 a 393 - 378 734 - 734 b/ ECE Quarterly Bulletin of coal statistics No.1 (Stocks at cokeries only) m/ Incl. coated and cold rolled sheets																				
wire, plain	62 a 803 La 28 a 50 - 22 781 - 781 c/ Ref ned pig iron making																						
Total tubes and wire (Actu	al 63			1915 2490	<u>43</u> 56	443 576	- 400 - 520	1515 1970		1515 1970					pyrites: 42%;	residues: 55%		/ Incl. some d					
Total end products (Actu	al 65		59 + 63	2966	50	709	- 659	2307	- 18	2289	e/ Sin er: based on metal input of sintering plants f/ Col. 10: loss in weight due to processing; col. 12: pyrite residues g/ Net of small amounts processed in the iron and steel industry r/ Deliveries					ndustry							
(C. S	(c. St. E. 66 - 60 + 64 3909 65 935 - 870 3039 - 24 3015 1/ Coll 10: loss in weight due to processing; col. 12: pyrite residues					n the industry a	nd 106000 ton	ns approximately															
(C. St. E. S) 68 1.10 55 - 66 15909 B 546 2512 -1966 13943 B - 59 13884 B h/ Including steel works							of second ha																
Total finished iron and steel (Actual 69 - 27 + 67 16274 450 2122 -1672 14602 - 45 14557 j/ Plu 1832 metal content of sinter																							
(C.	Met.E. 70		28 + 68	22932	607	2998	-2391	20541	- 65	20476	k/ Est mat	ed; includes i	ron foundries										
1 SCRAP BY OR	1 SCRAP BY ORIGIN: 2 PIG IRON PRODUCTION: 3 FERRO-ALLOYS PRODUCTION: 4 CRUDE STEEL PRODUCTION: 5 Steel making: Basic 6782 - 6782 - 6782																						

PIG IRON PROD	UCTION:	
Steelmaking:		6782
gree making.	Hematite	4054
	Other	
Foundry:	001101 = = = =	1442
Forge:		71
Total		9649
Of which:		7
Refined		255
Iron)

5 SEMIS FOR EXPORT OR FOR WORKS WHOSE OUTPUT DOES NOT APPEAR ELSEWHERE

4 CRUDE STEEL PRODUCTION:

Basic Bessemer - 876

Acid Bessemer - 245

Open Hearth - 13754

Electric - 832

Other - 182

Total - 15889

Welded - - 1088

Seamless - 24

Total - 1112