

Recession Hits Engineering Industry

The object of this paper is to study whether there is recession¹ in the heavy engineering industry and if so, in which units and to what extent. Our Deputy Prime Minister Morarji Desai has admitted the existence of a "Slump" or a "Slackness in demand" in our economy, which is an important symptom of recession. As we find, some of the important industries like cotton, jute and coal are facing a crisis as a result of lack of demand and the worst hit has been the engineering industry. The lack of demand causes piling-up of unsold stocks, idle plant capacity, the increased cost of production, labour troubles because of increasing lay off and retrenchment and thus uncertain future for production and investment.

The term recession had not come into general use till the end of 1966. It is only since January, 1967, the term became popular when there was a fall in the seasonally adjusted index of industrial production, the seasonally adjusted index was down by 1.41% as compared with the Dec. 66 level and each month the talk about recession became louder and louder. In the month of June it reached its highest at 199.1 and the latest figure available for the month of October, 67 is 196.9. But this index suffers from a great limitation and that is, it gives us only an average idea about the production of various industries included in its computation. If we look at the following figures of the seasonally adjusted index of industrial production, we find that though there is no absolute fall in the aggregate level of production, yet the rate of growth has been declining.

1. 'The term recession can be correctly applied to a situation where there is an absolute fall in the level of production due not to bottlenecks on the supply side but to insufficient demand' (Research Bureau of the Economic Times).

(Base 1956=100)

	General Index (Seasonally adjusted)	% increase over previous year
1960	130.1	—
1961	141.0	8.4
1962	152.6	8.2
1963	165.8	8.7
1964	177.0	6.8
1965	186.9	5.6
1966	191.7	2.6

Figures from Monthly Statistics for Jan. & Feb.67.

Thus the above index merely shows the decline in the rate of growth of output and that too in general in all the industries included in it. Within the recession affected industries, the hard core is formed by the engineering industries (iron and steel industries, transport, equipment, electrical machinery and non-electrical machinery, etc.), which accounts for about 17% of the total weights. A 12% fall in the output of the engineering industries between Dec. 66 and May 67 forms the epicentre of recessionary trends in some of the key segments of the Indian industries. "A survey conducted by the Engineering Association of India during 1967 revealed that sales had fallen sharply in 38 industries out of the 84 covered in the analysis. These 38 industries included looms, complete ring spinning frames, carding engines, road rollers, steel castings, diesel engines (vehicular type) arc welding electrodes, trucks, trailers, mopeds and others." (Eastern Economist, Annual Number, 1968, p. 1211).

The recession started in the heavy engineering industry due to lack of Govt. orders and then it spread to a large part of the engineering industry. It is towards the end of 1965 the railways started cutting the orders on the manufacturers. A study of the annual reports of the various companies which submitted their reports after 1st January, 1967, made last year by the Research Bureau of the Economic Times also shows that Govt. reduced orders particularly for railways is one of the major causes of the present recession. Table 1 shows that the decline in the production of railway wagons is to the extent of 33.5% in 1966 as compared to 1965, and it is to the extent of 49.65% over a period of first seven months in 1967. It is interesting to note that though the production of railway wagons declined in 1966 as compared to 1965, we find an increase in installed capacity from 2450 to 2495 (monthly averages) over this period, with the result that the idle capacity as a percentage of total production capacity reached the extent of 44.25% in 66 as compared to 14.74% in 65. 'As the rate of growth of traffic during the Third Plan did not keep pace with the previous anticipations and as

the resources position was not definite, it was decided to proceed cautiously with the development of capacity for production of wagons. The wagon builders were informed in advance about the possible reduction of the off take. The production during 1966-67 was almost half of the previous year. This curtailment of programme resulted in idle capacity not only in the wagon building industry, but also in steel casting and forging industry'.¹ A beginning has been made to enter into the export market as we have been able to secure an export order worth rupees eight and a half crores from South Korea. Moreover, 'the Russian offer to contract for the supply from India of as many as 10,000 railway wagons annually for five years is a fact that can more than put India's engineering industry back on its feet. It is estimated that the contract will fetch Rs. 100 crores a year to the wagon builders if they produce the much more sophisticated Russian wagon than they have so far done for the Indian Railways and if the Hindustan Steel can produce the light alloy steels required for them'.²

In transport equipment in the case of motor vehicles, there is overall not even 1% decline in 66 as compared to 65. In 67 upto August the total production shows a decline to the extent of 1.83% as compared to 65. As a matter of fact, the production of cars, passenger buses, motor cycles and scooters has gone up. The production of ship building and repairing also shows an increase. But it is only in the case of trucks and jeeps, it has gone down. The production of trucks has declined to the extent of 8.15% in 66 as compared to 65, and in 67 upto Aug., the average decline is to the extent of 24.59% as compared to 65. In case of trucks the problem is the high cost of operation of which a large part is accounted for by the taxes. It is the complaint of the truck operating agencies (as public carriers) that the high cost of operation does not leave an adequate margin. In the case of jeeps the decline in production is to the extent of 6.52% as compared to 65 and in 67 upto Aug., the average decline is to the extent of 36.4% as compared to 65. Here a substantial part of the demand comes from the Govt. for military requirements and it is again due to reduced Govt. orders it is so.

Iron and Steel Basic Industries

As discussed above, 'the curtailment in the programme of railways resulted not only in idle capacity in the wagon building industry, but also in the steel casting and forging industry. The Indian Railways' requirements have so far accounted for nearly 30% of all the steel produced in the country and as much as 65% of the steel foundries'

1. Journal of Industry and Trade, Feb. 68.

2. Commerce, April 20, 1968; p. 1073.

output, the most important cause for the recession in these industries may well have been the drastic cut in the Railways' expansion plans'.¹ Table II shows that in case of rolling mill and foundry products of finished steel, the decline in output in 66 was only to the extent of 1% and 11.77% in 67 upto July as compared to 65. In the case of heavy structurals, however, the decline is quite high, i. e., to the extent of 11.09% in 66 and 57.48% in 67 upto July as compared to 65. At the same time we find an increase in the installed capacity in 67. Similar is the case with steel castings where the decline in 66 is to the extent of 8.98% and in 67 upto July 4.38% over 65.

Foundry Products

In case of foundry industry, lack of railway orders for sleepers and other equipment has caused a serious problem. In 1966, the railways did not place any orders since they have started importing steel sleepers. Even for 1967 an order for sleepers for 1.4 lakh tonnes did not solve the problem of idle plant capacity. As the capacity for constructing steel sleepers in public sector is coming up, an alternative for the foundry would be to export most of its output. But if we look at this problem from a closer angle what we find is that the problem is not of declining demand but of substitution effect, i. e., changing from cast iron sleepers to steel sleepers.

Steel Castings

The growth of this industry is closely linked with the manufacture of railway rolling stock, automobile and other industrial machinery. Steel castings are generally produced on jobbing basis except in cases where the production is to meet some captive requirements. There has been a fall in actual production during 1966, despite more number of units having entered into production. Recent decision of the railways to place order of an additional 16,000 wagons should give relief to the industry to some extent. Some of the older units, in order to diversify their range of production, have also started accepting orders for larger castings and some are reported to have produced castings upto 10 tons piece-weight. Others are stated to have taken steps towards the manufacture of some alloy steel castings for which they have got manufacturing facilities and technical know-how. As regards exports, the Engineering Export Promotion Council has made a projection of export potentialities of steel castings to the extent of Rs. 5 crores by 1970-71. Actual exports in 1966-67 are valued at Rs. 1.06 crores.

1. Commerce 20 April, 68, p. 1073.

Structurals

Structural fabrications are extensively used for all factory buildings, power and warehouses, hydro-electric and irrigation schemes and for power transmission. The current demand for heavy structurals is of the order of .92 lakh tonnes. In the case of heavy structurals units, while the idle capacity has not yet been reflected on the shop floors, work in the design offices has slackened and it would ultimately be reflected on shop floor also. 'All the concerned authorities for the implementation of approved projects in the public sector have been asked to place firm orders for their requirements of structurals. The panel for structural fabricating industry has obtained detailed information relating to the requirements of structural fabricating industry to tender for and undertake the necessary preparatory work. A recent issue of tenders for 1,50,000 tons of structurals (all light, medium and heavy) by the Bokaro Steel Plant is expected to ease the situation'¹.

As regards export potentialities of this item the industry has been advised to conduct a survey of foreign markets by sponsoring a team to work under the Engineering Export Promotion Council. The Joint Plant Committee has also evolved a scheme for reimbursing the difference between the domestic and international prices of steel and pig iron to fabricators of engineering goods for export. In 66-67 total exports of structurals and transmission towers valued at Rs. 33 lakhs (structurals Rs. 15 lakhs only) were effected. The target by 1970-71 as worked out by the Engineering Export Promotion Council is to the extent of Rs. 6 crores (for structurals Rs. 3 crores).

Industrial Machinery

In the case of industrial machinery also we find that recession has caught hold of certain sectors as e.g., industrial boilers, textile machinery and conveying machinery. In the case of cement mill machinery, sugar machinery and manufacture of machinery components, however, the production is on the increase, i.e., indicating no recession in these sectors. In the case of jute machinery the production shows a decline but there the problem is that of excess capacity for quite a long time. In the case of tea machinery, the production was at its lowest in 1964 but after that it has shown an increase in 65 and 66. In the case of industrial boilers we find that the production in 1966 has gone down by 21.25% as compared to 65 and in 67 upto July, there is a recovery as compared to 66. Similarly, in the case of textile machinery industry we find a decline in production in 66 and 67 as shown in Table

1. Journal of Industry and Trade, Feb. 68.

III. In case of conveying machinery, however, the production of lifts, cranes (other than mobile cranes) and conveyors has gone up. It is only in the case of hoist block (electric/air) the production has gone down in 1966 by 35.76% and in 67 upto July by 50.51% as compared to 65.

As the demand for most of the items of machinery has declined sharply, today, the manufacturers particularly in the private sector are fighting a battle for their existence. Textile industry has been facing the problem of shortage of raw cotton for sometime and as there has also been consideration of proposals like 'closure of mills once a week' by the federation of cotton mill owners', the process of rehabilitation and modernisation of obsolete and outdated equipment has slackened. Shortage of funds for rehabilitation and modernisation of obsolete and outdated equipment is also an important factor in the decline in demand for textile machinery. It has also exercised its influence on the demand for industrial boilers to some extent resulting in the decline in their output.

Some of the big units like Texmaco and Larsen and Toubro are resorting to diversification by making machinery for new industries where demand is still growing. Texmaco today manufactures textile machinery, sugar mill machinery, machine tools, railway wagons, steel castings, water-tube boilers, stationery boilers, barrage gates etc. They are preparing to add more items in their line of production. This while providing stability for the manufacturers, brings about increasing import substitution also in the field of industrial machinery.

Attempts are also being made to export the various types of industrial machinery like textile, sugar, paper, cement and chemical to developing countries such as Nigeria, U. A. R., Ghana, Kenya, Ceylon and other Asian and African countries. Some efforts have also been made to form consortia of various manufacturers of machinery for the supply of complete industrial plants on turnkey basis.¹ The Textile Machinery Manufacturers' Association proposes to send teams to east European as well as Middle East and African countries to explore prospects for exports. It also proposes to invite trade delegations from developing countries to sell the idea of establishing textile mills with our textile machinery. Some manufacturers have jointly submitted a tender through the S. T. C. for two complete cotton textile spinning and weaving plants invited by the Burmese Government..²

1. At present our annual exports of industrial plants are of the order of Rs. 34 crores.

Eastern Economist—Annual Number 1968, p. 1221.

The period of recession is, therefore, a period of readjustment for the manufacturers of machinery. They are shifting their capacity to achieve a balance between the existing requirements and projected demand.³

Electrical Machinery, Apparatus, Appliances & Supplies

In case of electrical machinery and apparatus, recession has been observed in a few items as, e. g., rubber and plastic insulated cables and flexibles, paper insulated power cables and arc welding electrodes. In other items, however, as power transformers, electric motors, conductors, winding wires, electrical lamps, water coolers, radio receivers, conduit pipes, plastic electric wiring accessories and motor starters the production does not show a tendency to decline over this period of recession.

As is clear from above, recession is reflected only in a few units of electrical machinery and apparatus. In the case of electrical cables and wires we find that whereas the production of conductors (aluminium) and winding wires has increased, the production of rubber and plastic insulated cables and flexibles and paper insulated power cables shows a decline. See Table IV for the decline in production of the above two types of cables. It thus shows a shift in the type of electrical cables which are more in demand rather indicating recession in this particular sector of the industry. Moreover, in 1966-67, the government permitted the import of electric cables valued at over Rs. 6 crores although the indigenous industry was having considerable idle capacity. Further, in the case of arc welding electrodes the production in 66 has gone down by 5.43% and in 67 upto July by 34.12% as compared to 65. But there does not seem to be any specific reasons to explain the decline in demand for this particular item.

Manufacture of Metal Products

In the case of metal products, production of items as fittings, fixtures and fasteners (e. g., bolts, nuts, chains, wires and wire products) steel files, thermos flasks, metal products (bright bars) showed an increase. In the case of hand tools and small tools as, e. g., hacksaw blades, we observe a decline in production to the extent of 42.79% in 66 and 18.89% in 67 upto August as compared to 65 level. In the case of enamelware also we observe a decline in production by 5.83% in 66 and by 14.83% in 67 upto July as compared to 65 (see Table V).

3. Eastern Economist—Annual Number 1968, p. 1217.

Causes

Some of the causes of the recession are failure of the monsoon and increase in the prices of agricultural products, cut in government orders, lack of demand, the indiscriminate licensing of industries often resulting in duplication of capacity in public and private sectors, fiscal and monetary policies of the Government, devaluation of the Indian rupee etc.

(a) *Failure of the Monsoon* : In general, a decline in demand is associated with the failure of monsoon in our country. Over the last two years agricultural production has declined resulting in increased prices of food products and thus a lower spending potential of people for other items. It explains, e. g., the reduced freight traffic for railways and reduced demand for other items like durable goods for consumption. But with a good harvest this year this problem should ease to some extent.

(b) *Cut in Government Orders* : As already discussed, the cut in railway orders for railway wagons, e. g., posed a serious problem for the wagon manufacturers and it also had its impact on the ancillary activities, like rolling mills, steel castings and steel forgings, track material and signal equipment. But as we have already seen that we have obtained an export order for wagons from South Korea of the value of Rs. eight and a half crores and also a contract with Russia of the export of 10,000 wagons for a period of five years is likely to be finalised. Moreover for 1968-69, the railways have decided to place orders for 16,000 wagons. However, this will be possible only if there is no bottleneck on the supply side. As stated in the report of Jessop & Co., the Chairman's statement reads :

"The Railway Board has asked us to reduce output by 23%. In actual fact, however, the operating cut increased to 20% as the wheels and axels with their rolling bears could not be made available by the Railway Board to match their output." So care must be taken to avoid any such bottlenecks on the supply side.

(c) *Creation of Excessive Capacity* : Creation of excessive capacity often leads to disequilibrium between demand and supply. The issue of industrial licenses without adequate care contributes to the industry's difficulties. It is more so if there is duplication of production capacity in the public sector when adequate capacity already exists in the private sector. In the foundry industry, e. g., the Govt. was too liberal in granting licenses to the private manufacturers without realising the total requirement of the industry. More so, the Government's proposal to start the production of items as pumps and compressors, fabrication shops for

fertilisers and chemicals, heavy plate vessels, foundry forge, Central foundry forge for heavy electricals at Hardwar, and a new foundry forge project at Wardha, when there is enough scope for expanding production in the private sector.

(d) *Devaluation of the rupee* : After devaluation imports of some of the items although indigenously produced, went up particularly in engineering and machine manufacturing industries. The liberalisation of import policy has to some extent impeded the industry's programme of import substitution. As already pointed out in the case of electric cables, e. g., the Govt. permitted the import valued at over Rs. 6 crores when sufficient production capacity existed at home.

(e) *Fiscal and Monetary Policies of the Govt* : The FICCI report in its analysis of recession has pointed out that increase in excise and customs duties and high rates of corporate taxation cause prices to rise and thus result in a declining demand. Moreover, the restrictive policy of the Reserve Bank last year, as increase in interest rates and liquidity ratio of banks and restriction of advances for trade and industry and against shares and commodities also added to the problem of decline in demand and production. No doubt, the problem of reducing the tax rates is a controversial issue and requires serious considerations in a developing economy like ours where taxes contribute a large part to the Government revenues. As regards the credit policy, we find that the Reserve Bank has recently announced a cut of 1% in the Bank rate with the object of making available the credit at a cheaper rate. Not only this, on July 31, 1967, the Reserve Bank had announced certain measures as liberal and cheap bank credit to priority sectors as exports, engineering and metallurgical industries, agricultural machinery and equipment, commercial vehicles and small scale industries.

In fact, at present, we are facing a dual problem of inflation and recession. No doubt, a good crop this year is likely to bring down the prices of food products and other items but at the same time the steps as deficit financing introduced in the recent budget may not enable us to bring down the prices of various commodities at low levels. In fact, out of the two evils, viz., recession and inflation, the former seems to be a greater evil than the latter and so the resumption of Govt. orders for railways and other items, even though by resorting to deficit financing is likely to be helpful in reviving the demand and combating recession.

A few Suggestions Considered

In order to combat recession various individuals and bodies have made different suggestions. Let us now consider some of these suggestions.

More Effective Utilisation of the Capacity

(a) An attempt should be made to complete the public sector projects already in hand, as early as possible. It is how the heavy and medium structural industry can be utilised more fully. It will not only minimise the impact of recession but also reduce the gestation period of the projects. Moreover, where excessive capacity already exists, e. g., structural fabrication, no new projects or further expansion schemes should be undertaken. The Govt.'s proposals, e. g., for steel foundries at Hardwar and Wardha, Varanasi, Bokaro and Rourkela should be cancelled or at least postponed so as to allow the existing producers in the field to continue. Now the Govt. is also proposing to start capacity for items such as pumps and compressors, steel castings, railway equipment etc. in the public sector when sufficient capacity already exists in the private sector. So such duplication of activity may only aggravate the situation.

(b) *Import Restrictions* : After devaluation, imports of certain items under liberalised import scheme is another factor causing a decline in internal demand of some of the items. Example of import of electric cables has already been cited. The remedy lies in not importing these items which are indigenously available. Imports should be allowed only of those raw materials and components which are essential for producing the desired goods. If it is done, besides saving foreign exchange it will also help the engineering and machine manufacturing industries to increase their production. An alternative can be to impose higher tariffs on import of such goods as are available in the home market so as to discourage their imports and thus in the long run the system of import licensing be replaced by a rational system of import tariffs.

(c) *Price Stability* : For reviving demand and combating recession one of the important measures considered is that of attaining price stability. Price level in our country has been rising particularly during the last two years because of shortfall of agricultural production due to failure of monsoon etc. This time a good crop is likely to bring down the prices not only of food products but also influence other prices to some extent. At the same time the Govt. should curtail non-productive expenditure on items as subsidies, community development, rural works etc. and also on new industrial projects with long gestation period and spend more on incomplete and short gestation and key projects. The Govt.'s expenditure will increase in reviving the Govt.'s orders for railways and other items. But the deficit financing to the extent of Rs. 290 crores in the recent budget may not help to bring down the prices. Dr.

V. K. R. V. Rao stated in a note to the Cabinet last year 'recession is a much more spurious matter than inflation.' Even if once we are in a position to hold the price line, recession may not be checked. In the era of planned economic development inflation has been there in varying degrees. Dr. Rao pointed out "if the recession is allowed to continue unchecked, then the plants in the giant public sector units like the Heavy Engineering Corporation may grind to a halt one day." Therefore, when we face the two evils, obviously recession has to be checked by making essential productive investments in the required areas even though we may have to resort to deficit financing to some extent which may aggravate the problem of holding the price line.

(d) *Reduction in Taxation* : In order to push up demand and production, the Committee of Federation has suggested some fiscal incentives. One is selective reduction of excise duties in respect of industrial raw materials, like pig iron, steel, chemicals etc., and finished products of everyday use as sewing machines, textiles etc. Another is reduction in company taxation so as to enable the manufacturers to face the economic recession through price reduction. But this suggestion of reducing company taxation and at the same time increasing Govt. expenditure on some of the productive items does not seem to be consistent. However, in the new budget with a view to improve the climate for saving, investment and export a few minor concessions have been given as abolition of the excess dividend tax and reduction of surtax on company profits from 35% to 25%.

(e) *Hire Purchase Facilities* : The Reserve Bank has already announced its liberal and cheap credit policy to priority sectors. Moreover, to revive the demand for producers' goods like machine tools and machinery by giving hire purchase and deferred payment facilities, recently the H. M. T. has started advertising hire purchase facilities for some of its machines. To make it effective advances can be given against such bills arising from hire-purchase agreements or secured loans.

(f) *Removal of Certain Controls* : The Committee of Federation has also advocated for the removal of certain controls as price control from those sectors which face recession as the fall in demand itself may result in lowering the prices or at least to check further rise in prices. Producers should be allowed to have a free hand to adjust their supply schedule according to demand to put the industry on a better footing by

1. Quoted in Capital 'Will Mr. Desai Succeed in Checking the Recession', 10 8.67.

increasing efficiency by improving the techniques of production and marketing. The industry should try out new goods, i. e. diversify its production, with the existing equipment to reduce the rigour of recession.

(g) *Export Incentives* : Efforts should be made to increase the exports where internal demand has declined as in the case of engineering goods. It can be done by providing some export incentives and facilities. The Reserve Bank's step to provide packing credit advances for export items has already been referred to. In the new budget a provision is being made granting for a subsidy towards interest charges on export finance provided by the banks. Some of the steps taken by the Engineering Export Promotion Council have also been mentioned earlier. Some of the difficulties as observed by U. N. Export Promotion Team which visited India early in 1967 are high cost of raw materials, uneconomic scale of production and lack of knowledge of our goods in other countries and also lack of quality control. To overcome such difficulties, quality control techniques and modern marketing devices are the measures to be adopted so as to increase our exports of engineering goods in foreign markets. During 1967, the Govt. took several measures to improve the competitive capacity of engineering goods. These measures included the enhancement of cash assistance for certain items, supply of steel at international prices and liberalisation of credit by the Reserve Bank. Besides this, there is still a demand for reducing shipping freights on many engineering goods as steel rails and steel wire ropes where freights seem to be higher as compared to other countries. To achieve the target for the export of engineering products which has been fixed at Rs. 100 crores by 1970-71, careful attempts are needed, as the export performance in 66-67 of fabricated engineering products was only of the value of about Rs. 30 crores at (or Rs. 20 crores predevaluation rates), though it was an improvement of 17% over 1964-65¹.

(h) *Rationalisation Measures* : Moreover, attempts should be made to reduce the cost of production by increasing efficiency by rationalising the manufacturing processes wherever possible. In cotton-textile industry, e.g., the process of installing automatic looms in place of nonautomatic looms has already been started. But, at present, financial difficulties in the initial investments are involved. Some form of credit policy for this purpose will not only help the textile industry but also the textile machinery industry. Thus rationalisation measures will help in reviving the demand by increasing the efficiency and enabling the producers to reduce prices.

1. Eastern Economist—Annual Number p. 1212.

Further, some degree of inventory control is also needed in industrial units. Perhaps due to import licensing and controls, producers want to carry the maximum available quantity of raw materials and other stores and this often results in high cost of inventories. Management has a role to play in such cases.

Last but not the least important is the rural sector. With the change in the terms of trade between industry and agriculture, the industry will have to cater to the needs of the rural sector also by making necessary changes in the pattern of production to meet their requirements. Attempts can also be made to induce the rural population to invest their surplus funds in industrial securities instead of keeping it otherwise although difficulties may have to be faced in this direction.

Various measures discussed above, if adopted, will help to combat recession in various sectors of the Indian economy particularly the engineering sector.

R. N. Goyale

(For tables please turn over)

TABLE I
Manufacturing—Manufacture of Transport Equipment
 (Monthly Averages)

Year	Manufacture of Railway Coaches and Wagons		Manufacture of Motor Vehicles		Trucks (Petrol & Diesel)		Jeeps and land rovers.	
	Manufacture of Railway Wagons	Idle capacity as % of total installed capacity	Installed Capacity (Total) Nos.	% decline in production as compared to 1965	Total Nos.	% decline in production as compared to 1965	Nos.	% decline in production as compared to 1965
1960	1855		4558		4343	1785	458	
1961	"		"		4526	1626	588	
1962	"		"		4812	1760	633	
1963	2206	27.52	9342		4358	1950	675	
1964	"	10.75	6192		5595	2357	866	
1965	2450	14.74	6049		6033	2514	874	
1966	2495	44.25	"	0.27	5938.5	2309	817	6.52
1967	"	57.84	6025	1.83	(Jan. to Aug.)	1895.75	555.88	36.4
(Jan. to July)	"					(Jan. to Aug.)	(Jan. to Aug.)	(Jan. to Aug.)

¹ Production is in terms of 4-Wheelers. Prior to January 1965 a small proportion consisted of 8 wheelers.

Source : Monthly Statistics of the Production of Selected Industries of India for July and August 1967.

TABLE II
Manufacturing—Iron and Steel Basic Industries
 (Monthly Averages)

Year	(i) Rolling Mill and Foundry Products except structurals			(ii) Iron and Steel Structural			(iii) Castings and Forgings			(iv) Ferro Alloy		
	FINISHED STEEL	HEAVY STRUCTURALS	STEEL CASTINGS	FINISHED STEEL	HEAVY STRUCTURALS	STEEL CASTINGS	FINISHED STEEL	HEAVY STRUCTURALS	STEEL CASTINGS	FINISHED STEEL	HEAVY STRUCTURALS	STEEL CASTINGS
1960	146.5	185.2	...	...	...	3344	2792	...	...	7.4	...	...
1961	303.2	233.2	...	...	...	3137	3137	...	...	9.4	...	...
1962	"	297.0	...	...	...	3887	3627	...	...	10.1	...	...
1963	N. A.	354.8	...	...	...	4903	4134	...	...	11.5	...	...
1964	"	361.8	...	...	...	7120	4497	...	...	12.4	...	...
1965	"	376.6	11093	8065	...	8916	4800	...	...	14.3	...	...
1966	"	372.7	1.04	7171	11.09	4369	4369	8.98	32.58	12.9	...	...
1967	"	332.29	11.77	11522	57.48	9545.71	4589.86	4.38	51.92	11.87	9.79	16.99
	(Jan. to July)		(Jan. to July)				(Jan. to July)			(Jan. to July)	(Jan. to (or 17%) July)	

Source : Monthly Statistics of the Production of Selected Industries of India for July and August, 1967

TABLE III
Manufacture of Machinery (Except Electrical Machinery)
 (Monthly Averages)

Years	Manufacture of Mining Machinery Haulages		Manufacture of Boilers and Steam Generating Plants Boilers (Industrial) ¹		Manufacture of Industrial Machinery Textile Machinery ²		Manufacture of Conveying Machinery (Hoist Block/Electric/Air)		
	Installed Capacity	Production (lakh rupees)	% decline in production as compared to 1965	Installed Capacity	Production (lakh rupees)	% decline in production as compared to 1965	Installed Capacity Nos.	Production	% decline in production as compared to 1965
1960	Made to order	Made to order	4.60						
1961	"	1.41	8.36		1.08				
1962	"	2.51	21.83		1.28				
1963	"	2.16	24.10		1.67				
1964	"	2.54	39.08		1.72				
1965	"	1.48	41.42		2.37		534	151	
1966	"	1.38	32.62	21.25	1.85	21.94	634	97	35.76
1967	"	1.39	40.43	2.39	1.35	43.04	834	74.73	50.51
		(Jan. to July)	(Jan. to July)		(Jan. to June)		(Jan. to July)		

¹ Boilers include the total of various types (a) Lancashire, (b) Vertical, (c) Water Tube and (d) others.
 Source :—Monthly Statistics of the Production of Selected Industries of India, for July and August, 1967.

² Source : Eastern Economist—Annual Number, 1968

TABLE IV

Manufacture of Electrical Machinery, Apparatus, Appliances and Supplies

(Monthly Averages)

Year	Manufacture of Electrical Cables and Insulated Wires				Arc Welding Electrodes			
	Rubber and Plastic Insulated Cables and Flexibles		Paper Insulated Power Cables		Arc Welding Electrodes		Arc Welding Electrodes	
	Installed capacity (lakh meters)	Production	% decline in production as compared to 1965	Installed Production (Kilo meters)	% decline in production as compared to 1965	Installed capacity (lakh R. metres)	Production	% decline in production as compared to 1965
1960	199.1	174.0		51.8		106.8	90.2	
1961	"	175.4		"		116.8	94.1	
1962	301.8	230.3		118.0		"	96.1	
1963	"	267.4		"		220.0	141.1	
1964	"	281.5		"		"	197.1	
1965	544.0	330.0		531.0		245.6	178.5	
1966	652.1	315.8	4.3	375.9	.16	261.2	168.8	5.43
1967	717.2	321.43	2.6	697.0	33.14	331.7	117.6	34.12
	(Jan. to July)			(Jan. to July)		(Jan. to July)		

Source : Monthly Statistics of the Production of Selected Industries of India, for July and August, 1967

TABLE V
Manufacture of Metal Products except Machinery and Transport Equipment (Monthly Averages)

Year	Hacksaw Blades		Manufacture of hand tools and small tools		Enamelling, Galvanising etc.	
	Installed Capacity (in hundreds)	Production	% decline in production as compared to 1965	Installed Capacity	Enamelware Production (thousand pieces)	% decline in production as compared to 1965
1960	31680	9779		2500	1179.1	
1961	"	16026		"	1956.8	
1962	37440	14577		2800	2402.3	
1963	"	17928		2810	2768.4	
1964	41849	24423		3110	2847.1	
1965	41923	26010		"	2995.3	
1966	36333	14879	42.79	"	2820.7	5.83
1967	"	21096.25 (Jan. to Aug.)	18.89	3382.17	2551 (Jan. to July)	14.83

Source : Monthly Statistics of the Production of Selected Industries of India for July and August, 1967.