

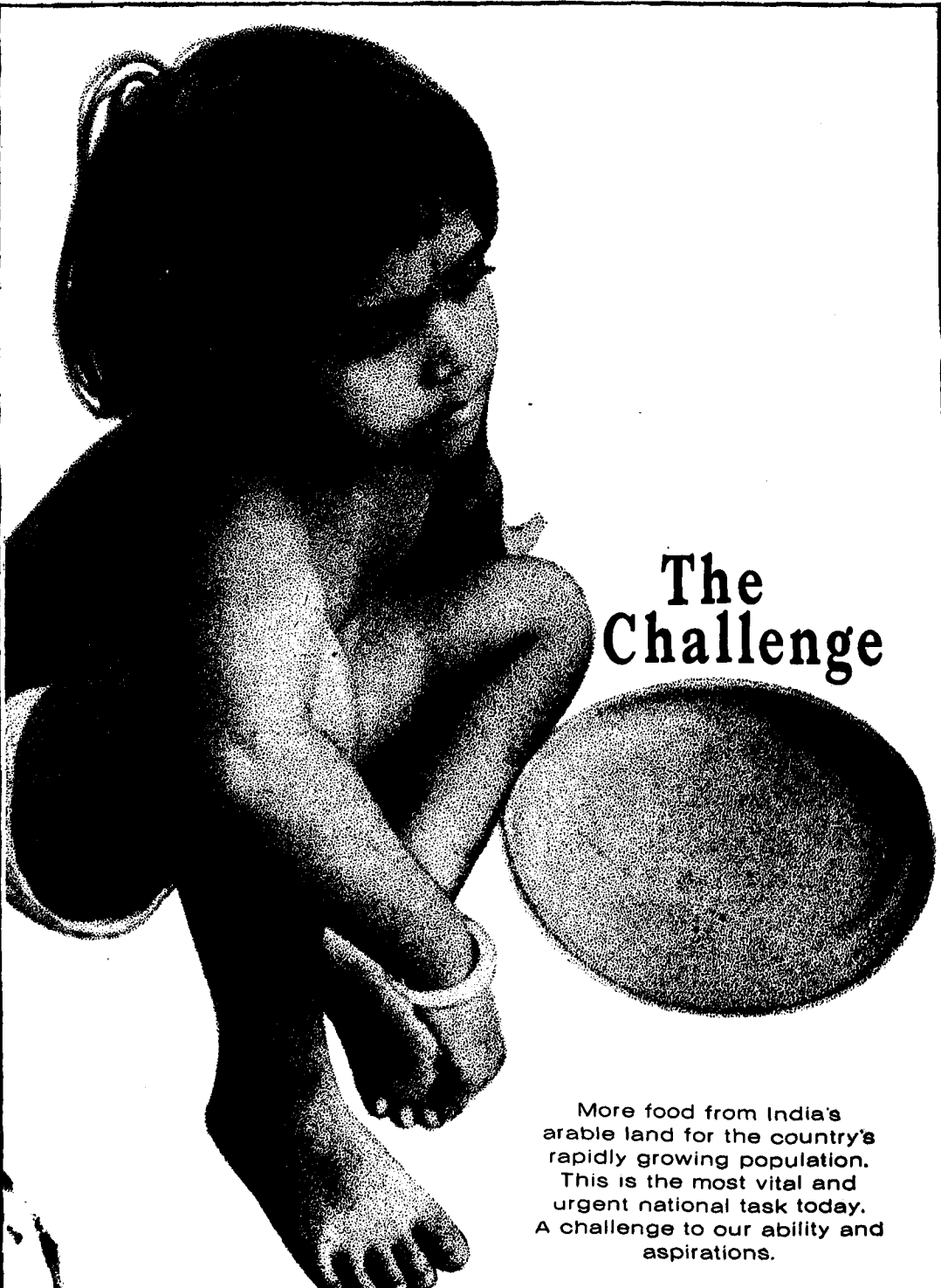
EASTERN ECONOMIST

Recession

Recovery

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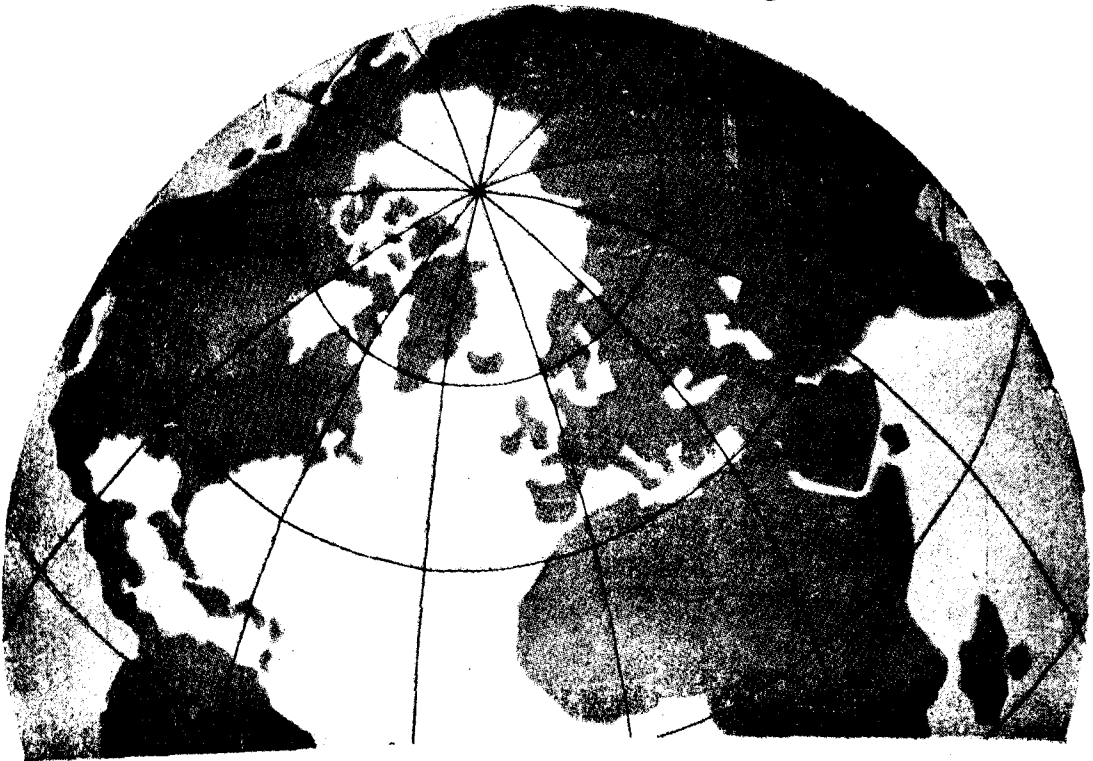


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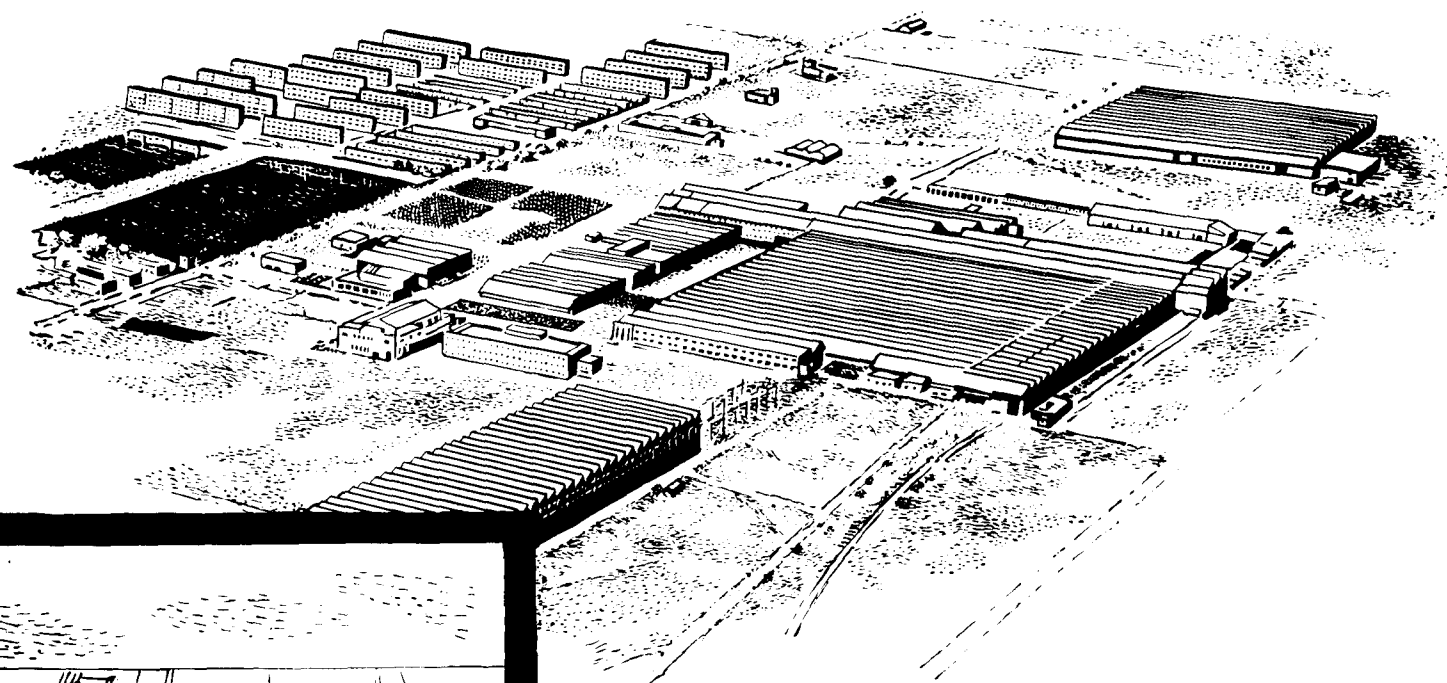
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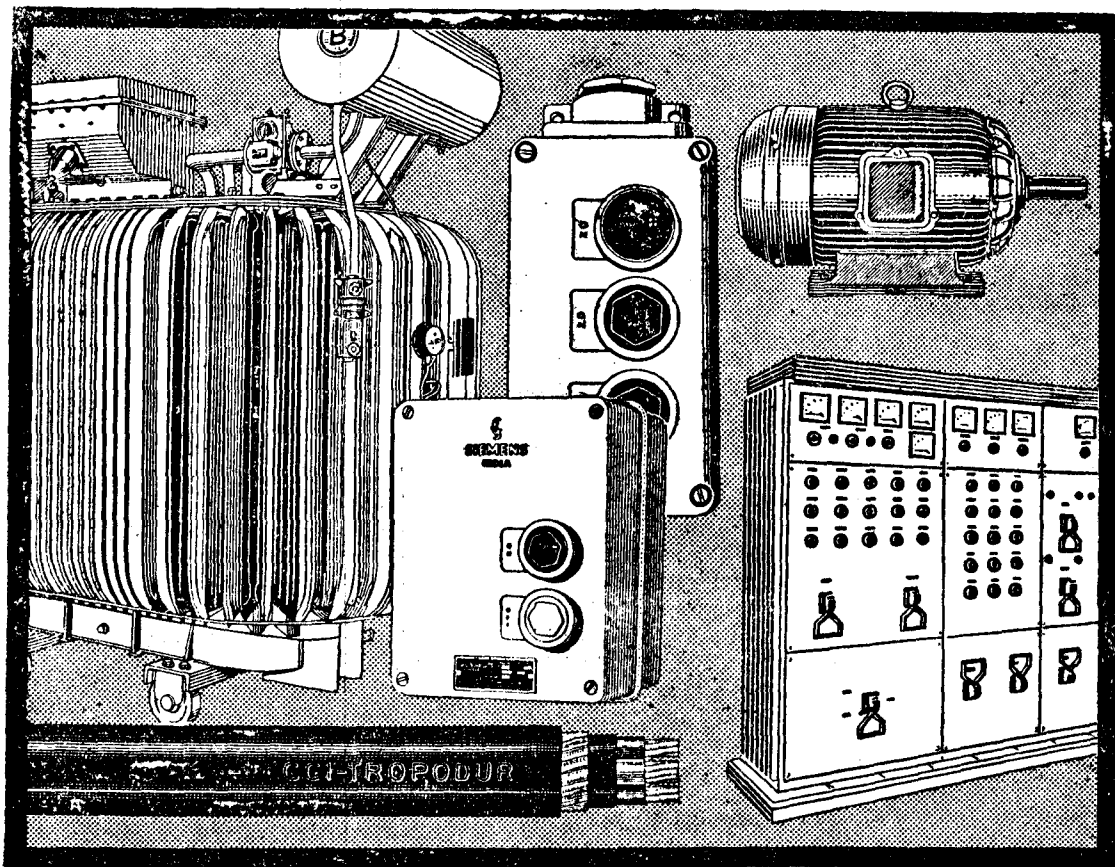
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EASTERN ECONOMIST ANNUAL NUMBER 1968

DECEMBER 29, 1967 PRICE Rs. 10

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THE POLITICAL PERSPECTIVE

Post-Election India

THROUGHOUT THE last 12 months the stage of our national affairs was captured and dominated by the political developments spawned by the fourth general election.

The Congress party was shaken by its roots. It was thrown out of power, immediately after the general election or subsequently, in as many as nine states. At the centre it found its majority in the Lok Sabha considerably diminished so much so that even mature politicians, such as Rajaji, were tempted to speculate on an impending dissolution of Congress control over the Government of India. As it turned out, however, the Congress party was able to fare much better than its enemies hoped or its friends feared. Indeed, in at least one vital respect, it succeeded in re-asserting its primacy among our political parties. Within months after the general election it was proved beyond doubt that there was no group or possible grouping of opposition strength in the Lok Sabha which could be expected to challenge effectively the Congress power at the centre. It was shown that, outside the Congress party, political India was in a hopelessly divided and distracted state and that although the Congress party itself was plagued by domestic divisions, it was still the most coherent political apparatus in the nation. As a nation-wide, even if not still the national party, the Congress was first—and the rest nowhere.

There were other gains too from the Congress point of view. The Congress-governed states, as a class, presented a more stable and settled picture than the general run of states where non-Congress governments were in power. Congressmen could also have satisfaction that, following the sobering impact of the general election results, there was a lessening of intra-party tensions and conflicts in many states which greatly strengthened the authority and effectiveness of the Congress chief ministers in those states.

In contrast, the general run of non-Congress parties was not able to make much headway despite the fact that they were off to a good start as a result of the general election. The high hopes entertained by them of being able to reduce the Congress from the status of *primus inter pares* to that of *unus inter pares* remained entirely unfulfilled. The strategists of many of these parties thought that they could improve the position of the opposition forces, both individually and collectively, *vis-a-vis* the Congress through the mechanism of coalition governments in the states. But they were reckoning without their host. They did not realise that these coalitions could not hold together merely through a shared desire to keep the Congress out of power. There had to be a more positive agreement among them on the aims and means of concerted political action and more important still an ability to collaborate with one another in the detailed functioning of their coalition ministries. Because there was no such constructive bond, the coalition governments of non-Congress parties brought about no long-term political dividends.

On the contrary, these coalition ministries had hampered them in their quest for political viability. This was particularly the case in states such as Bihar, Uttar Pradesh and, to a less extent, Madhya Pradesh. In Punjab and Haryana, the situation was much worse. The non-Congress coalitions proved to be extremely unstable, opportunistic contrivances to an extent which discredited the very concept of coalition. As a result, there was a virtual breakdown of administration in the two states, leading to the dismissal of the coalition ministries by the governors concerned. In Haryana there was promulgation of President's rule pending a mid-term poll to be held some time next year, while in Punjab an attempt was initiated to give representative government another chance by allowing a

new grouping in the assembly to form a ministry with the support of the Congress party.

The history of coalition governments of non-Congress political parties in Kerala and West Bengal was somewhat different, but their careers and conduct also served to emphasize the non-viability of the coalition concept as postulated by the strategists of the political parties opposed to the Congress. In both states, the coalitions were virtually dominated by the forces of the left. While this gave these ministries a cohesive strength for the time being than was available to the ministries in Bihar, Uttar Pradesh and Madhya Pradesh, not to speak of Haryana or Punjab, it also sowed in them the seeds of ultimate disintegration by virtue of the fact that it was in the nature of the leftist forces to exploit the machinery and the opportunities of coalition for self-aggrandizement, both ideological and political. In Kerala, thanks to the communists having had the good fortune of finding in their leader and Chief Minister, Mr E. M. S. Namboodiripad, a tactician who knew the value of tact and the virtue of waiting, it was possible for them to postpone a showdown with the democratic imperatives of our Constitution. How long they would be able or willing to continue to do so is anybody's guess. Even as it was, Mr Namboodiripad was clearly undergoing terrific strain in fighting off the extremists of the Red camp.

Wrecking the Administration

In West Bengal, the communist movement did not have the benefit of a Namboodiripad. Instead they had Mr Jyoti Basu. When this leader of the CPI(M) became deputy chief minister of the non-Congress ministry in West Bengal, it was surely not for the purpose of wrecking the coalition ministry, but was with the object of wrecking the administration through a power struggle with the central government which might further the subversionist aims of the communist extremists. Whereas Mr Namboodiripad was interested in giving a communist-oriented administration to Kerala, while maintaining for the time being a working relationship with the central government, Mr Jyoti Basu had no such local or provisional ambitions. The fact that the chief minister and nominal leader of the West Bengal ministry, Mr Ajoy Mukherjee, an ex-Congressman (who had parted company with his former party as much in sorrow as in anger) was weak though well-intentioned, was no doubt a sore temptation to Mr Jyoti Basu to make an all-out bid for using the machinery of the state government for the political benefit and purposes of the CPI(M).

Once it got the feeling of having become entrenched in the state government, the CPI(M) was losing no time in ingratiating itself with all those sections of the population which had grievances, both real and imaginary, against the existing order. Whether it was the tribal people of Naxalbari, hungry for land or livelihood from land, or the restless workers in the industrial com-

plexes of West Bengal or the vast lower middle class caught between unemployment and rising prices, they were all grist to the mills of communist subversion and agitation. The Red strategy apparently was to achieve the gradual attrition of the law and order machinery, especially through the erosion of the centre's authority in the state and the progressive demoralisation of the political forces and economic classes opposed to the communist ideology.

Firm Handing

It is possible that at one stage the communists had entertained hopes of quick success, but thanks to the central government's firmness in dealing with the open resort to organized violence in Naxalbari, there had to be a change of tactics. The basic aim, however, endured. This and much more was evident from a statement which the disenchanted Mr Ajoy Mukherjee thought of making, before he changed his mind under communist persuasion or pressure about his earlier resolve to dissociate himself from his Red partners in the coalition and submit the resignation of his ministry. The following extracts from his statement are revealing and are worthy of being permanently recorded in the cautionary tale of our times:

"From the activities and professions of these parties (the CPI(M) or the left communist party and its associate parties) it is quite evident that they do not believe in parliamentary democracy and their main aim is to strengthen their own parties by taking advantage of ministership and assembly membership. To gain this end they do not flinch from intimidating and assaulting workers and supporters of other parties and even burn down homes of the poor...

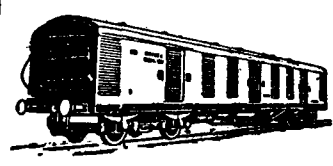
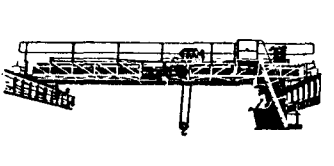
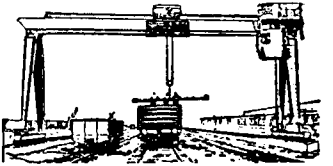
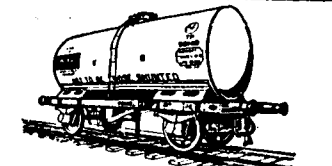
"This is being done in a planned, well thought-out manner. In the name of 'gana committees', intimidation, assaults and raids are being organised in different areas to create a reign of terror. Attempts are being made in a planned manner to render the administration and the police confused and in-

PARTY POSITION IN LOK SABHA

	1967*	1962
Number of seats**	520	494
Congress	283	361
Swatantra	44	18
Jana Sangh	32	14
DMK	25	7
SSP	20	6
CPI	23)	29
CPI (M)	19)	
PSP	14	12
Other parties and independents	54	47
Number of vacant seats	6	

* Position as on December 11, 1967.

** Excluding nominations.

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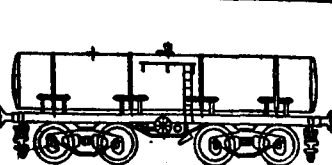
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active so that the anti-social activities of these parties could be carried on unhindered as far as possible.

"These parties have brought about a disaster in the industrial field in West Bengal by the use of force and even cruelty through gherao (forcible detention of persons) and other methods on the pretext of labour dispute. We wanted industrial expansion and more employment opportunities. But by the grace of these parties 60,000 to 70,000 workers are on the point of being unemployed, industry is shrinking and many medium and small industries are dying...."

"The left communists have openly announced that in the coming harvesting season they would forcibly harvest all paddy and share it among themselves. That it is the property of others means nothing to them. ... Attempts are being made to bring about a far more serious calamity. The left communists are pro-China. They want to enact a bloody revolution with the help of China. Brisk preparations are going on for this. If a bloody chaos begins in West Bengal with China's help, perhaps for 10 or 20 years Assam, Manipur, Tripura and part of Bihar and Orissa will become the play-field of the latest lethal weapons of foreign powers....."

"In the left communist party itself an ultra-left wing has grown.....Both the left and the ultra-left wings want to create chaos in West Bengal by inviting China and Pakistan. The only difference between them is that the left communists do not think that the time has come to start an armed revolution here by inviting China. They will have to wait and continue brisk preparations for some time more. While the ultra-left think that the time and opportunity have already arrived for the plunge....."

Governor's Action

Mr Ajoy Mukherjee had concluded his indictment with the assertion that there would be no safety in West Bengal nor security for India if the CPI(M) and its associate parties were allowed to remain in the state government any longer. But he himself lacked the stamina to stay the course he had indicated and it was left to the Governor of West Bengal to dismiss the United Front ministry and, in an attempt to continue representative government in the state without a mid-term election, install another ministry which may be able to function with the support of the non-communist parties in the assembly.

Thus, for various reasons, the experiment of the non-Congress parties to govern through coalition ministries in states where the Congress party had lost its majority was not a great success. But in two states, where merely opportunistic or unprincipled coalitions could be avoided, non-Congress parties were able to give a good account of themselves. These states were Madras and Orissa. In Madras, the DMK, which was the leader of an anti-Congress electoral alliance, had won for itself a sufficient number of seats in the assembly to be able to form a stable ministry on its own. As a result, it could assume effective responsibility for administration and summon sufficient authority to discharge this responsibility. The DMK has not been long enough in power for any useful assessment to be made of its performance as a ruling party. But it has given suffi-

cient indication of its potentialities as a well-organised and well-led political party dedicated to aims which are largely legitimate and pledged to means which are, on the whole, unobjectionable.

In Orissa too there has been an attempt at responsible government by a political party newly come to power. In this case, although the Swatantra Party, which is the effective authority in the Orissa government, does not possess an absolute majority as the DMK does in Madras, it has nevertheless been able to work generally and constructively with a fairly coherent team of non-Congress political parties. In one respect at least, the success of the Swatantra Party in Orissa is more significant than the success of the DMK in Madras state. Whereas the DMK is essentially a state party, which is inhibited by its own political framework from becoming an all-India or even an inter-state party, the Swatantra Party does not suffer from any such limitation. It is, in fact, already one of the major nation-wide parties in the country and perhaps the most effective opposition from the right to the Congress party. The Swatantra Party's progress in Orissa will, therefore, be watched with particular interest in terms of its implications for national politics.

DEFECTIONS IN STATE ASSEMBLIES

A little over nine per cent of the members elected to state legislatures have changed their loyalties since the elections. Of a total membership of 3,447 (excluding Himachal Pradesh and Tripura) 314 members have changed their parties or if they happened to be independents joined one party or the other during the last 10 months.

The largest number of defections—over 125—have been from the Congress. The two communist parties have been free of defections. Among the opposition parties the Swatantra Party had the largest number of defections, 24, followed by the Jana Sangh with 11.

Eight legislators elected on SSP ticket and six on PSP ticket have also changed sides. Similarly, 30 legislators elected on the ticket of regional or smaller parties have shifted their loyalties. One hundred and eight independents have joined one party or the other.

Nagaland, Kerala, Madras, and Maharashtra have been free of floor-crossings. Likewise, instances of floor-crossing have been negligible in Mysore, Jammu and Kashmir and Orissa. One member each in these states changed his affiliations. An independent elected to the Jammu and Kashmir Assembly joined the Congress, an independent in Orissa joined the PSP and an SSP member in Mysore defected to the Congress.—UNI.

THE POLITICAL PERSPECTIVE

Parties and Personalities

THE CONGRESS is still very much at the centre of our national politics. For how long it will remain so would depend primarily on the worth of its policies, particularly economic; but it will also be determined to an important extent by the personalities of its leaders. Historically, the Congress has drawn heavily on the charisma of its prophets, priests and kings. But with the death of Jawaharlal Nehru ended its race of Titans. The late Lal Bahadur Shastri was a man of quite moderate merit though quite skilful as a politician, as Mr Lyndon Bains Johnson was during certain stages of his career or Mr Harold Wilson will always be. But he was essentially a lieutenant come to act as a leader. A fortuitous concatenation of circumstances took him to a peak of popularity, both national and international, where he might not have stayed had he lived longer.

The Congress party's present president, Mr Kamaraj, is another example of how a series of helpful accidents could make for an individual's importance. Even at the height of his glory, as a much-advertised maker of prime ministers, Mr Kamaraj's seeming supremacy was not without its false pretences. In no sense an authentic national leader, his only firm political base was the popularity he had built up in Madras state during his chief ministership and—this is immeasurably more important—his iron grip over the party machine in that state. Mr Kamaraj took full advantage of these assets in working his way up through the Congress hierarchy, while other people, notably the late Jawaharlal Nehru, took equally full advantage of him for their own purposes. In other words, Mr Kamaraj could use people, but he was also used by people. This might suffice for much in political power-seeking, but it was not the stuff to shape a leader of heroic dimensions. This being the case, the circumstances in which another term of office became unavailable to him should have surprised nobody, not even Mr Kamaraj.

Unique Position

In the effective Congress leadership of today, Mrs Indira Gandhi occupies a unique position. The general election which humbled inconvenient stalwarts, such as Mr Kamaraj, Mr S. K. Patil, Mr Atulya Ghosh and Mr C. B. Gupta, helped her greatly in enlarging and strengthening her authority and influence in both government and party. The tortuous negotiations and hard bargaining which resulted in Mr Morarji Desai joining her second administration as Deputy Prime Minister (and Finance Minister) are also something which she has no reason to regret. It is true, of course, that Mrs Gandhi would rather not have had Mr Desai at all in her cabinet if she could have managed it, but in retrospect she could be thankful for the insistence on the part of Mr Kamaraj, Mr D. P. Mishra and Mr C. B. Gupta on Mr Desai being accommodated in the cabinet as Deputy Prime Minister. Mr Desai would no doubt have

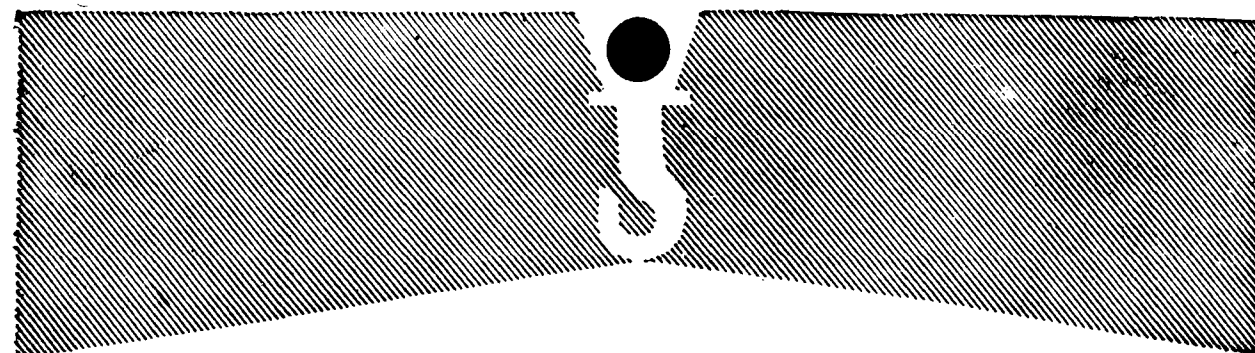
lost had he contested, but he would certainly have lived to fight another day—and that day might have come sooner than Mrs Gandhi expected.

As it is, Mrs Gandhi may be reasonably sure of the loyalty of a colleague who—whatever his private opinions may be on his own superior title to the prime ministership—is enough of a principled gentleman and disciplined party-man not to be continually conspiring against her leadership or encouraging others plotting for her overthrow. Again, in the wider context of the party rank and file, Mrs Gandhi continues to command an acceptability which ranges farther than that of any potential rival. In the nation too she can rely on an impressive expanse of general support to which few other Congress leaders could lay claim. More specifically she has the special advantage of being considered the least objectionable Congress Prime Minister by the greatest number of politicians of other parties, including chief ministers or ministers of non-Congress state governments.

Vulnerable to Dissipation

It must be recognised, however, that Mrs Gandhi's strength in the government, the party hierarchy, the Congress organisation or in the country is not such that it cannot be dissipated over a period through any demonstrable inability on her part to cope with the many national problems which tend to become national crises. Since her leadership of government is certainly not of the highest order, her invulnerability in her position, whether as Prime Minister or as the factual leader of the Congress party, cannot be taken for granted. At the time of writing, however, Mrs Gandhi, or at least the government of which she is the head, has taken two major decisions on public policy which suggests that any excessive pessimism about her ability or willingness to discharge vital responsibilities for the wellbeing of the country will be unwarranted.

There is, first, the dismissal of the United Front ministry in West Bengal. Had there been any further delay in preventing the left communists in that state from subverting the machinery of government for the purpose of preparing the ground for a communist type of revolution, the security and unity of our country would have been gravely imperilled. It is true that Mrs Gandhi hesitated to the last but, as the Prime Minister in a federal government, she had to avoid giving an impression that the powers or agencies of the central government were available for rooting out non-Congress ministries in the states. She had to make sure that the dismissal of the non-Congress ministry in West Bengal would not be seen as a partisan action of a Prime Minister belonging to the Congress party, but as the discharge by the central government of its obligation



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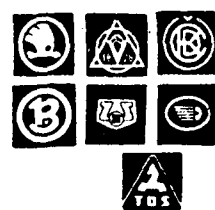
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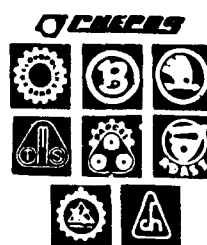
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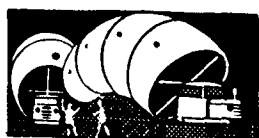
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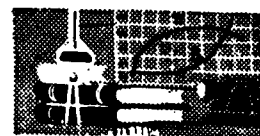
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to ensure that the Constitution was not violated or endangered in any part of the country by forces interested in availing themselves of the opportunities provided by democratic institutions and processes only for the purpose of destroying democracy itself. But once she was convinced—not least because of the clear-headed and strong-willed advocacy of the Deputy Prime Minister that the central government had to fulfil in a particular manner its responsibilities as much towards the people of West Bengal as towards the nation—she did act undeterred by the thought of the political storm which was bound to break out when a non-Congress ministry was dismissed in one of the states by a decision of the Congress government at the centre. Thereby the Prime Minister saw to it that the country was reassured on the point that she and her government might be depended upon to act with courage and determination and sense of duty when the unity and security of the nation were at stake.

A Blow for Unity

This estimate of Mrs Gandhi's capabilities is further strengthened by the way in which her government has sought to implement the assurances given by Jawaharlal Nehru to those sections of our people whose mother tongue is not Hindi that the policy of making Hindi the sole official language of the country will not be rushed through against their opposition or objections. The enactment of the Official Languages (Amendment) Bill in the session of Parliament just concluded is certainly a blow struck in the cause of national unity and the harmonious development of a national consensus on controversial issues and it should, therefore, enhance the prestige of Mrs Gandhi's administration and strengthen the people's trust in it. The Language issue is perhaps the most sensitive controversy in our current politics and almost every political party has been trying to exploit it for its partisan purposes. In the circumstances, the Congress party and the central government, under Mrs Gandhi's leadership, certainly deserves to be complimented on rising above factional considerations to that high level of statesmanship where the national good is the sole determinant of responsible government.

While Mrs Gandhi's leading position in our politics and government has been redeemed by these two spectacular exercises in firm, clean and good administration, the prestige and influence of the Deputy Prime Minister, Mr Morarji Desai, has been building up more gradually but also more steadily. While it is undoubtedly a weakness in Mr Desai that some of the views he holds are neither popular nor, perhaps, intrinsically sound, it is his strength that he does not compromise with his beliefs easily and that, on the contrary, he could often reject expediency as the first principle of government. We have already referred to the principled stand he took on the issue of the communist-dominated United Front ministry in West Bengal. Earlier, on the question of Hindi or the relevant

regional language being promoted as the medium of instruction in schools and colleges in place of English, Mr Desai proved himself capable of acting up to his beliefs. When the three-language formula was challenged by Mr M. C. Chagla, the then Foreign Minister, who left the government on that issue, Mr Desai insisted on the government standing by it on the simple and sufficient ground that, if the constitutional provision that English should ultimately cease to be the official language was to be honoured at all, steps had to be taken according to some definite time-schedule for replacing English as the medium of instruction.

Mr Desai has been often criticized as rigid and inflexible in his attitudes, but while he certainly swore by the three-language formula, it is interesting to note that he remained faithful to the government's policy on the official language as embodied in the bill recently adopted. In both cases, Mr Desai acted in the light of what he considered as the requirements of national unity. Nevertheless, it is obvious enough that in many parts of India, particularly in the south, Mr Desai does not command the kind of popularity or trust which is essential to the full realisation by him of a position of national leadership. Mr Desai has been and will always be an important leader of the Congress party or the government, but even in the event of his becoming Prime Minister at some future date, the precious mantle of national leadership will still elude him. In this sense, Mrs Gandhi, however far from perfect her title to this grand distinction may be, will be the last of our national leaders in any sense of the term.

If one were to think of an alternative to Mrs Gandhi as Prime Minister—this exercise is rather aca-



POLITICS—1967

demic at the present time and would remain so in the foreseeable future—the Home Minister, Mr Y. B. Chavan, would certainly be a more likely candidate than Mr Morarji Desai for the simple reason that age is against the latter. It is only in the improbable contingency of Mrs Gandhi's leadership of the Congress parliamentary party being effectively challenged, or the prime ministership falling vacant for any reason in the very near future, that Mr Desai's chances will have to be seriously considered. Otherwise, the possibilities of Mr Chavan would be so much more compelling. In any case, should sharp ideological or political differences develop in the party or Mrs Gandhi show great ineptitude in the conduct of the government in the coming years, the chances of Mr Chavan making a bid for the prime ministership about the time of the next general election cannot be ruled out. Meanwhile, it is clear that the Home Minister is not only content but glad to function as a very important member of the central cabinet.

The Triumvirate

Mr Chavan's greatest asset is that, apart from Mrs Gandhi and Mr Morarji Desai, he commands the largest and the most enthusiastic personal following of any member of the central government. In fact, the only three politically significant members in the present government are Mrs Indira Gandhi, Mr Morarji Desai and Mr Y. B. Chavan. We are deliberately omitting Mr Jagjivan Ram. We are aware that there is a notion that he has a significant political base in the Congress parliamentary party, but the following attributed to him seems to be largely fictional; it has, in any case, never been actually operative. Mr Jagjivan Ram, in other words, is something like a vested interest, looking formidable on paper, but quite vulnerable to attack. There is, therefore, not much doubt that all the elements of real political authority in the government are to be found in the persons of Mrs Gandhi, Mr Desai and Mr Chavan. In fact, whether it is deliberately planned or not, or whether they like it or not, these three have had to function as a triumvirate whenever major decisions of policy have had to be taken. It cannot be claimed that there is perfect understanding among them or even that they share a common approach or attitude towards many issues of public policy. Nevertheless, the sheer logic of political survival has impelled and compelled them to keep together in order that the government (and the Congress party) may be held together.

In the Congress party organisation, too, much the greater part of effective power seems destined to be contained within these three leaders. Mr S. Nijalingappa, who has been chosen to succeed Mr Kamaraj as Congress president, is certainly one of the more firmly established Congress party bosses at the state level. But he is still an unknown quantity in national terms. He also has the disadvantage that almost all the Congress chieftains in the national hierarchy of the party have individually begun claiming him as his (or

her) "man". This is not going to make it easy for Mr Nijalingappa to function as an independent Congress president. There will be considerable pressure on him, sooner or later, to associate himself with this or that Congress leader or group of leaders. Among the dangers to which he is exposed is the possibility that the Prime Minister may attempt to own him. Mr Nijalingappa may try to save himself from such a threat by an alliance with other Congress satraps. He might try to draw close to Mr Morarji Desai or he could establish an understanding with a combination in which Mr S. K. Patil, Mr Atulya Ghosh, Mr C. B. Gupta and Mr Kamaraj, or one or more of these men, may be present.

The fortunes of Mr Atulya Ghosh, of course, are bound up with the fortunes of the Congress party in the confused situation of West Bengal. As for Mr Kamaraj, such effectiveness as he may regain at the national level of the party will depend on how well and how soon the Congress organisation stages a come-back in the politics of Madras state. Right now, the outlook is not too bright. In the ordinary course, the Congress in Madras is unlikely to be able to make a significant bid for the control of the state government in the next 10 years. Even its long-term restoration would be conditioned by the extent of imaginative planning and hard work it is able and willing to put forth during these intervening years in re-energizing itself as a people's party, once

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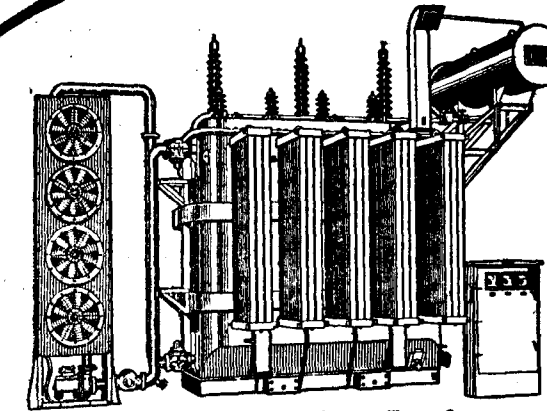
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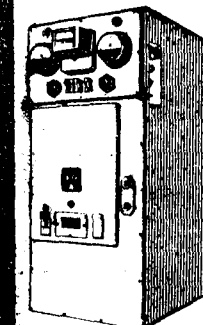
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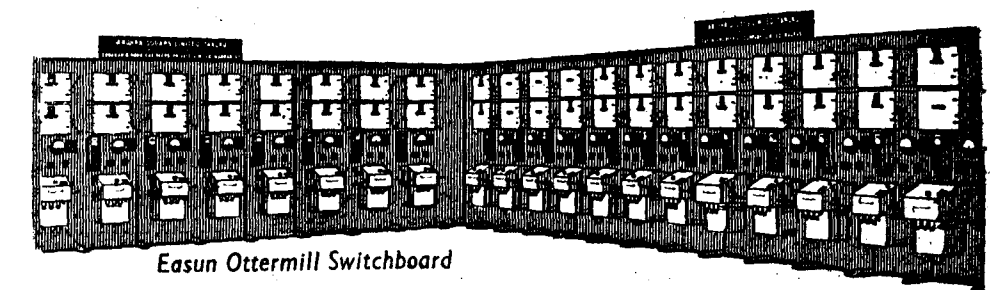
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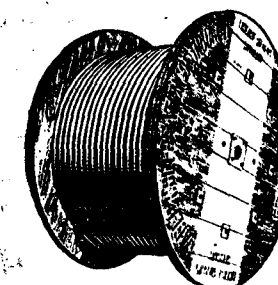


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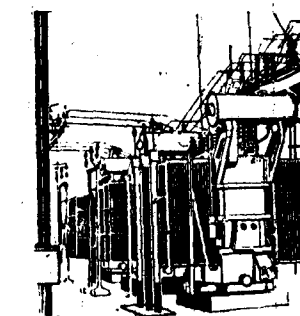
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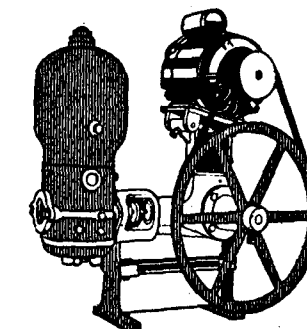
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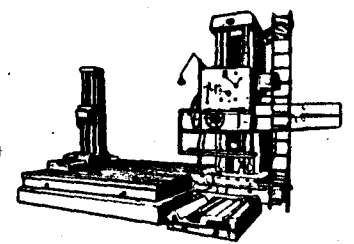
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again strong in the support of the masses and the respect of the classes. It could be too readily assumed that Mr Kamaraj should be able to take care of the mass aspect. He is after all 66 now and the prospects of a Congress restoration in Madras when he would be 76 may not be a sufficient incentive to him.

In any case, Mr Kamaraj would clearly need the vigorous collaboration of an associate of somewhat different talents who could revive the appeal the Congress party once had for the intelligentsia in the state. Here, it is a pity that Mr C. Subramaniam, who is perhaps best-fitted to serve this role, seems to have so easily tired of his role at the state level. Right now he seems to be spending his time hanging around in the corridors of power at the centre. Whether this profits him or not, it is unlikely to profit the party and may indeed contribute to its interests in Madras state going by default. It would have been a different matter had Mr C. Subramaniam taken his political courage in both hands and contested against the DMK candidate in the recent by-election in the Lok Sabha south Madras constituency. He could conceivably have won, in which case he could have re-entered the central cabinet and from that strategic position played an important supporting role to Mr Kamaraj in helping the Congress party along on its road to recovery in Madras politics. As it is, it is difficult to imagine that any southern leader, apart from Mr Nijalingappa, who will be the next Congress president, will be able to play a significant role at the national level of the Congress party for some time to come.

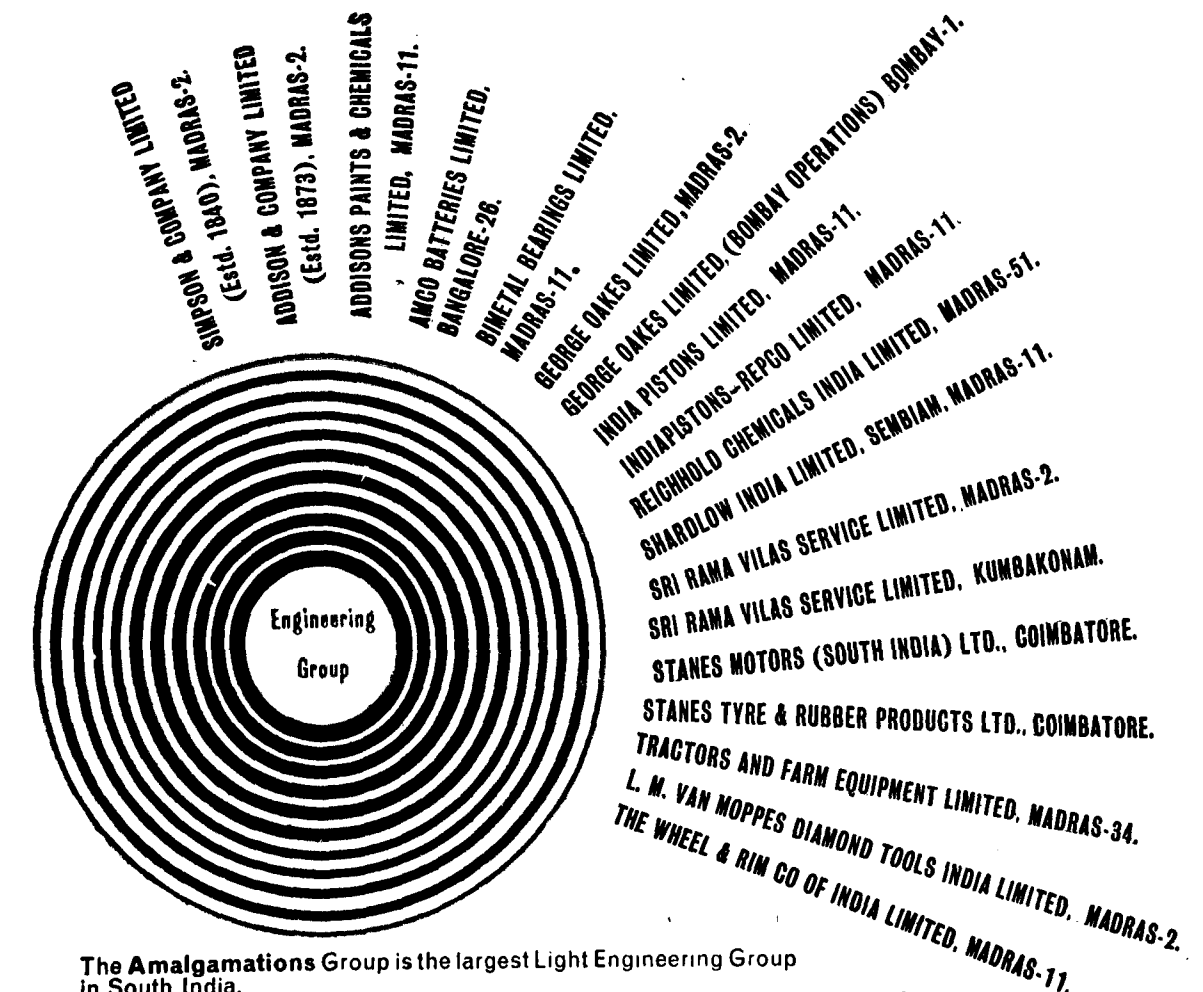
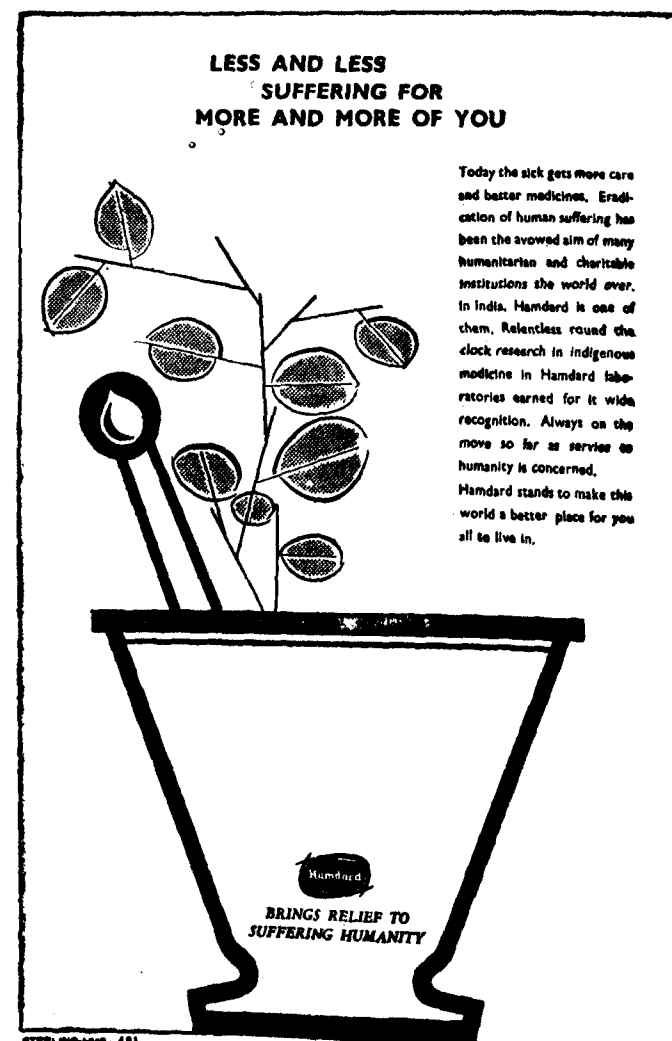
A Large Question Mark

Then there is Mr S. K. Patil, who is somewhat in the nature of a large question mark in the future of Congress politics. Mr Patil's political influence has survived to a remarkable extent his defeat in the last general election. But so far it has been large enough to be only of a nuisance value. He is hampered by the fact that there is a natural antagonism between him and Mr Chavan, who is still the most powerful political presence in his and Mr Patil's home state. But Mr Patil is helped, on the other hand, by the circumstance that a good part of the business world which is rather uneasy with and uncertain of Mr Chavan (who has tended to flirt with the leftist tendencies in his party on such issues as the nationalisation of banks) seems to be looking more and more to Mr S. K. Patil as its dependable advocate and ally in the higher councils of the Congress party. Mr Patil has made no secret of his desire to re-enter Parliament through the next convenient by-election and it can safely be said that, once he succeeds in doing this, he will not be content to remain a mere member of the Lok Sabha. Should Mr Patil find his way back to the central cabinet, the pattern of personal power-relationships in that body will clearly have to be re-drawn.

Whatever the trends in personal ambitions or rivalries among Congress chieftains may be, the party

itself has a more solid look at present than it had immediately before or after the general election. A schism in its leadership and in its ranks along the lines of the right and the left, which, for some time, has been the dream of the various non-Congress parties, appears improbable at least during the normal tenure of the current central cabinet. This is because both the rightists and the leftists among Congressmen are having the feeling of satisfaction that their respective points of view are being more or less well represented in the composition of the government. The rightists believe that so long as Mr Morarji Desai is in his commanding position in the cabinet, there cannot be any very considerable movement of government policy in a leftist direction. The leftist Congressmen, for their part, are encouraged to hope that Mr Chavan would be a steady influence against the undue corrosion of socialist values and standards.

It is possible, however, that the leftists within the Congress feel that they are at a disadvantage in terms of relative political weight. They seem to be nursing the hope that this relative weakness afflicting them could, however, be more than compensated on strategic occasions by the personal bias which they believe the Prime Minister has towards left-of-centre positions. In any case, the leftist Congressmen are only too well



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aware of the fact that in the case of a showdown within the party, they are likely to be outnumbered and driven to make common cause with communist groups at the risk of precipitating a coalescing of rightist non-Congress parties, such as the Swatantra and Jana Sangh, with a Congress party in which the rightists would have become supreme. It is because of these contingencies that, although left-wing Congressmen have been sniping at the leadership whenever such questions as the nationalisation of banks or the abolition of privy purses are raised, they have been stopping short of forcing the issue and have been consoling themselves with the expectation that, over a period, their constant pressure should succeed in bending the leadership in the direction of more socialist-motivated policies and programmes. The indications are that this kind of ideological in-fighting will continue within the Congress party without enforcing in the foreseeable future a polarization of factions climaxing in the splitting up of the Congress organisation along the lines of the right and the left.

Wishful Thinking

Most non-Congress parties, however, have so far been unable to reconcile themselves to this possibility. There is a distinct disposition in them to persist in wishful thinking. The rightist non-Congress parties, viz., the Swatantra and the Jana Sangh, are perhaps less realistic in this respect than the communists who do not seem to be banking to the same extent on a breakdown of the Congress front. The ideas of the Swatantra Party in this as well as in many other matters are being largely fashioned by its founder-leader, Rajaji. He seems to have become the prisoner of his conviction that, provided the Swatantra Party keeps on denouncing the "permit-licence raj" of the Congress governments, Congress power at the centre must give way sooner or later. The crushing defeats suffered by the Congress in the last general election seems to have confirmed him in his assessment. His one great anxiety seems to be that the communist movement in the country should not be permitted to profit from the manner of the Congress' dying. This is why he threw his weight in favour of the Swatantra Party approving of the dismissal of the United Front ministry in West Bengal, while recording its disapproval of the use of governors by the Congress government at the centre for overthrowing non-Congress ministries and installing what it called minority governments in their place.

Now in the 91st year of his life, Rajaji is, in many ways, the most significant personality in our national policies. He has been the first among the opponents of the Congress party to see that the policy described as "non-Congressism", i.e., keeping the Congress out of power wherever possible, will not be an adequate strategy for the post-general election situation and that the policy of non-Congressism should be combined with and, if necessary, suitably subordinated on occasions to a relentless political warfare against the communist movement. It is in line with this thought that he now

refuses to make a distinction between the left and the right communists and has demanded that the communist movement as such should be immediately banned in West Bengal and denied the facility of using the ballot-box for seizing government and exploiting its machinery and opportunities for subverting the democratic political system.

Marriage of Convenience

The ideological orientation which Rajaji has given to the Swatantra Party will outlast his physical presence at the helm of its affairs. At the same time, it will not do to ignore the fact that the Swatantra Party is far from being monolithic in its motivations and attitudes. There is a clear demarcation in its leadership serving to separate men with different political, social and economic backgrounds. The ex-Congressman, Mr N. G. Ranga (who seems to have been cast in the role of the virtually permanent chairman of the Swatantra Party) is primarily interested in the party fighting for a place in the sun for what he is fond of describing as "the self-employed" class of small peasants, small traders and small manufacturers. Mr Ranga does not and cannot speak the same language as the general secretary of the party, Mr N. Dandekar, an ex-ICS official, who was subsequently a corporate executive and whose concept of the Swatantra Party is that of a total rightist alternative to any form of state capitalism or socialism, be it the Congress type or any other. The Swatantra Party, therefore, may well prove to be a case of a marriage of convenience concocted with no assurance of conjugal harmony. For the time being, however, thanks to

RELATIVE STRENGTH* OF SWATANTRA PARTY AND JANA SANGH IN STATE ASSEMBLIES

State/Union Territory	Swatantra Party	Bharatiya Jana Sangh
STATE		
Andhra Pradesh	29	3
Assam	2	NII
Bihar	3	26
Gujarat	66	1
Haryana	3	12
Jammu & Kashmir	NII	3
Kerala	NII	NII
Madhya Pradesh	7	78
Madras	20	NII
Maharashtra	NII	4
Mysore	16	4
Orissa	49	NII
Punjab	NII	9
Rajasthan	48	22
Uttar Pradesh	12	98
West Bengal	1	1
UNION TERRITORY		
Goa, Daman & Diu	NII	NII
Himachal Pradesh	1	7
Manipur	NII	NII
Tripura	NII	NII
Total :	257	268

* After 1967 General Election.

Source : Report on the Fourth General Election in India, 1967.

the brilliant philosophic and intellectual formulations of Rajaji and his extraordinary vitality in projecting his ideas, the political association of Mr N. G. Ranga, the resources and enthusiasm of various ex-rulers and their circles and the highly competent parliamentary performances of Mr M. R. Masani and Mr N. Dandekar, the Swatantra Party is one of the most effective presences in our national politics. Broadly speaking, the Swatantra leadership has been making skilful use of the opportunities which have come its way since the last general election.

This is an achievement which seems to elude the Jana Sangh. Although, in the Lok Sabha, the Jana Sangh strength is less than that of the Swatantra Party, the former is much better represented in the state assemblies, especially in the Hindi-speaking region. This apart, the Jana Sangh is a people's organisation in a sense in which the Swatantra Party is not and may always find it difficult to be. The Jana Sangh's political programme has a mass appeal which is activated and maintained by a cadre of field workers nearly as dedicated as that of the Congress party in its days of glory. In fact, the only parties which are more efficiently serviced by their rank and file than the Jana Sangh are the two wings of the communist movement. In spite of these advantages, the Jana Sangh has failed to capitalise on its success in the general election to build for itself a position of major importance in the power-relationships among our political parties. This may be because the party does not have sufficient intellectual resources within its leadership to formulate clearly a programme of political action related to its proclaimed objectives or to the current economic or other requirements of the country.

Temperamental Differences

Lacking thus a sense of direction, the party's leadership has been consuming its time and energy in sorting out problems of personal adjustment. In this way, there has been a confrontation between Mr Balraj Madhok, the president of the party (who is being succeeded in that office in the new year by Mr Deendayal Upadhyaya) and Mr A. B. Vajpayee, who leads its parliamentary wing. The differences between them seem to be as much of temperament as of diverging views of party strategy. Through many years of work in Parliament, Mr Vajpayee seems to have developed what may be described as a cosmopolitan outlook on political activity which Mr Balraj Madhok, more aggressive and isolationist, does not seem to be able to share. The latter seems prepared to emphasize one part of his party's philosophy, viz., the programme for Hindu revivalism at the cost and to the exclusion of other aspects. Thus, he is resisting a somewhat recent trend in his party's philosophy towards a modern concept of socio-economic goals.

Not surprisingly, these currents and cross-currents in the internal politics of the Jana Sangh have rendered it suspect in the eyes of those who have always dis-

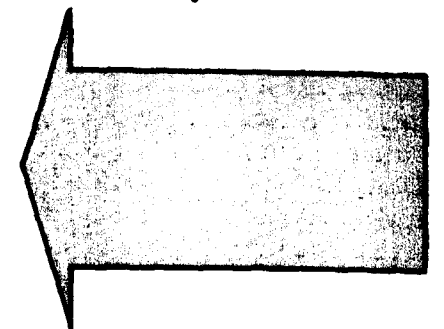
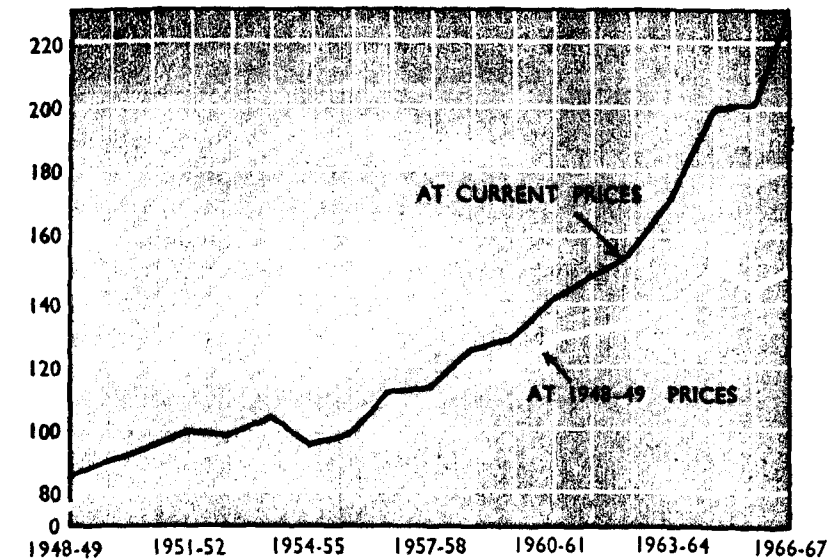
trusted its original communal motivations. The Jana Sangh has incurred some odium, particularly in relation to the pandits' agitation in Jammu and Kashmir state and the violently communal turn taken by a controversy in Bihar over a proposal that Urdu should be declared an official language along with Hindi. Simultaneously, there have been differences in the party over the extent to which it should collaborate with leftist parties which are among its partners in the United Front governments in Bihar and Uttar Pradesh. Here, again, Mr Madhok seems to have some mental reservations about associating with communist groups, while Mr Vajpayee apparently prefers to keep an open mind on the subject. It is perhaps because of these domestic distractions that the Jana Sangh had not been able to take much of an initiative in the agitation against the Official Languages (Amendment) Bill, although its championship of Hindi as against English has always been one of the cornerstones of its political philosophy and programme.

This has left the anti-English agitation field clear and open to the Samyukta Socialist Party, which has promptly placed itself in the vanguard of the campaign. It is unlikely, however, that there is much tactical profit to be made out of this for the SSP. On the contrary, the SSP may find itself isolated from the other leftist non-Congress parties as well as the Swatantra Party

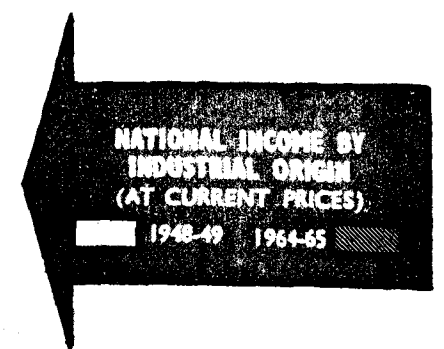
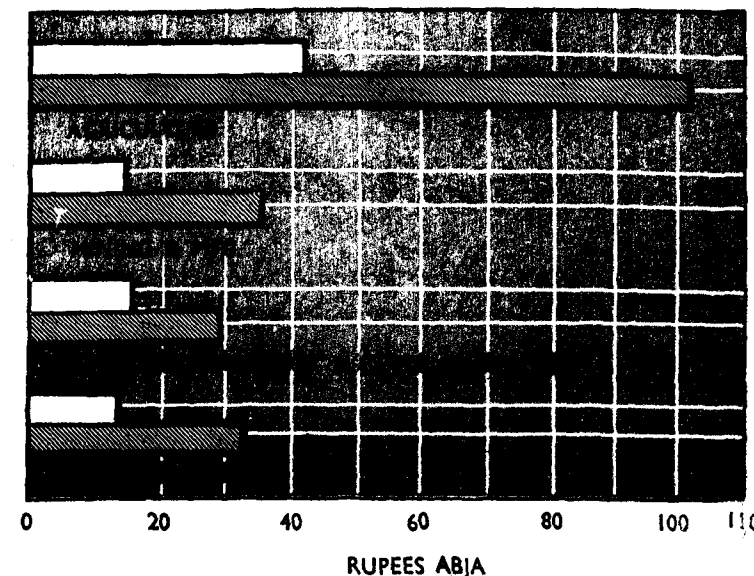
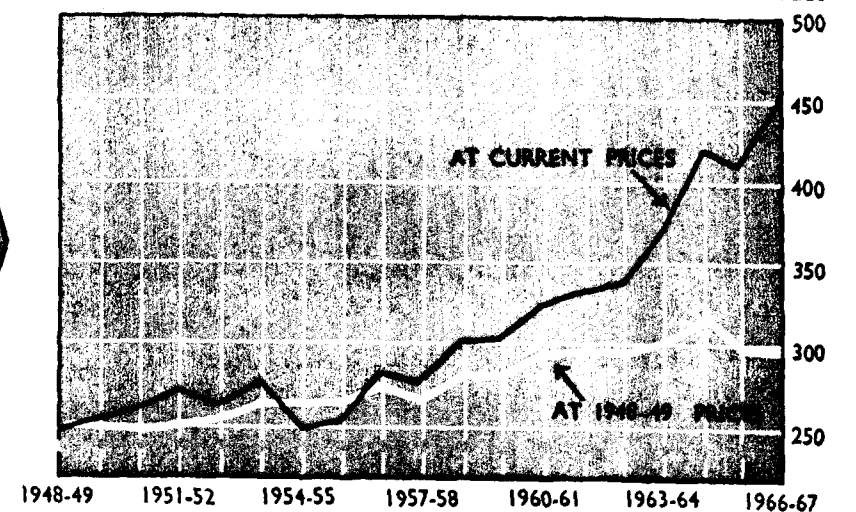


GROWTH IN NATIONAL INCOME: 1948-49—1966-67

RUPEES ABJA



RUPEES

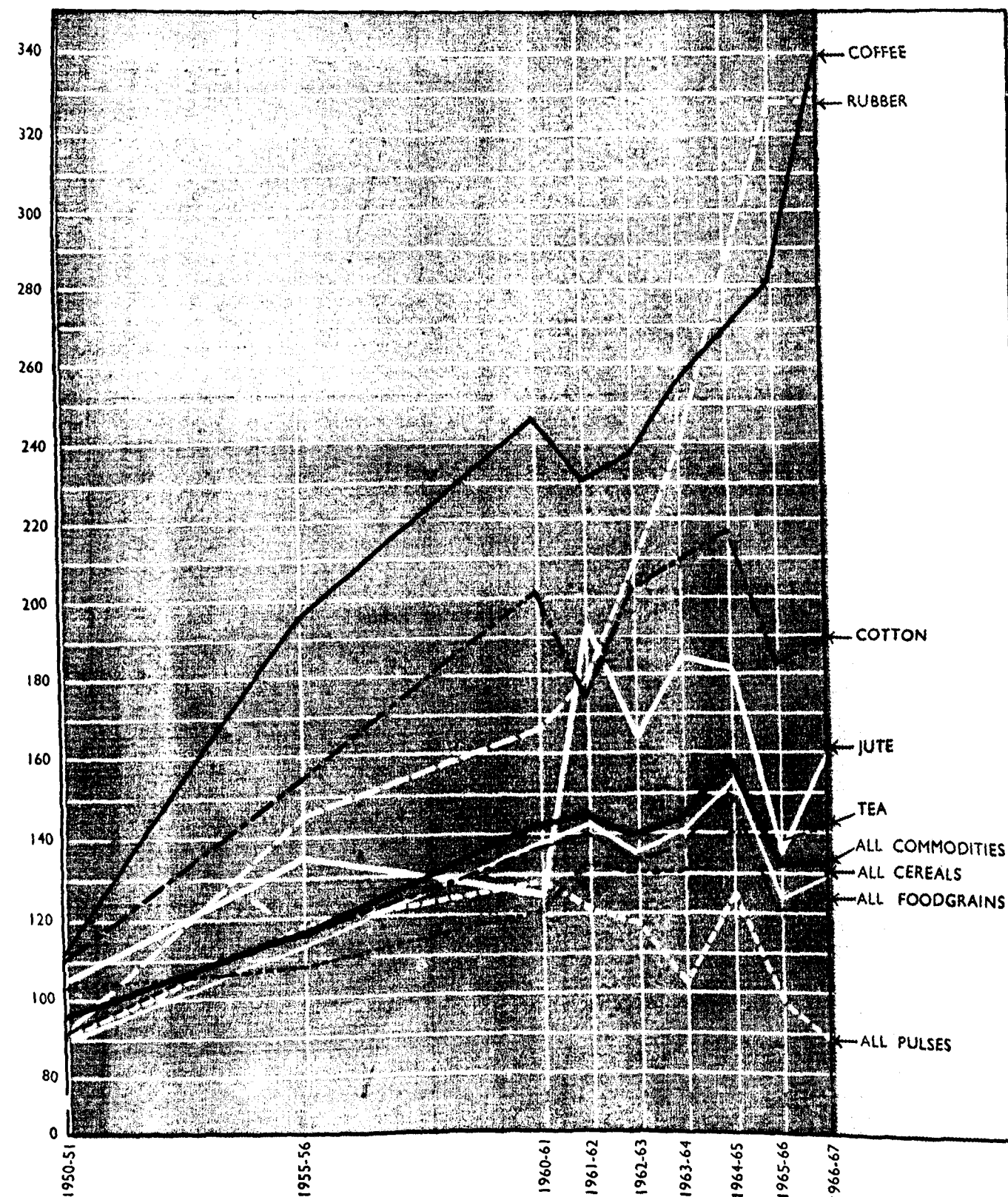


ABJA = 100 CRORES = 1000 MILLION

AGRICULTURAL PRODUCTION: 1950-51 — 1966-67

BASE : 1949-50 = 100

INDEX NUMBERS



and the DMK, without being able to come closer to the Jana Sangh. Indeed, the SSP shows every sign of being left to roam in a political wilderness of its own making. The death of Dr Ram Manohar Lohia has removed from the helm of its affairs a leader who, though wayward and whimsical, had a faith and imagination both of which were vivid and vigorous. To the extent that the SSP has a philosophy at all, it is the personal testament of Dr Lohia who aimed to hoist on the back of the backward classes the standard of revolt of all the under-privileged. He argued that, in the Indian context, true socialism had to begin with a casteless society, although it might aim to end in a classless society.

Despair of the Prophet

Dr Lohia's misfortune was that few among his colleagues or lieutenants sincerely shared this view. Dr Lohia failed in persuading the members of his party to keep away from joining the coalition ministry of non-Congress parties in Bihar. He failed also when he attempted to have a member of a backward class instead of an upper-caste Hindu chosen as an SSP representative in the non-Congress coalition ministry in Uttar Pradesh. Thus, the SSP, which had been the despair of political observers, had come to be also the despair of its own prophet and professor some time before Dr Lohia died. Whether the party will survive him to play a positive and constructive role on our political stage is too early to say. But in the absence of his maverick personality, his unbranded cattle may well stray aimlessly into alien fields. With the Praja Socialist Party continuing in its twilight existence, this would mean that the future of non-Congress leftism is tied up in the main with the fortunes of the communist movement.

The extent to which the communists in our country will be able to take advantage of this situation will depend to a very considerable extent on the willingness and ability of the leaders of the left and the right to compose their differences and work together. It is obvious, for instance, that if these factions continue to be at each other's throat in West Bengal, the prospects of the communist movement as a whole being able to bring pressure to bear on the central government or the Progressive Democratic Front ministry headed by Dr P. C. Ghosh to dissolve the assembly and order a mid-term poll would be lessened. Again, in the event of a mid-term poll being ultimately ordered, the communists will not be able to exploit it in a bid to recapture power in the state government unless they are able to come to some understanding for the avoidance of contests between the candidates of the left and the right. Right now, the Communist Party of India seems to be in a more conciliatory frame of mind towards the Communist Party of India (Marxist) than *vice versa*. Thus, although the CPI has its differences with the conduct of the administration in Kerala, which is headed by the CPI(M) leader, Mr E.M.S. Namboodiripad, it has announced that it will continue to work with that ministry.

In case the left and right communists succeed in

coming together, they would certainly be able to present an extremely strong front to non-communist forces in both West Bengal and Kerala. Another state where a united communist front could pose a formidable challenge to non-Congress parties is Andhra. In Punjab too, an increase in communist influence could be expected provided the two wings of the party are able to settle their domestic differences. Finally, there is Madras. Here the communists have gained some strength through their pre-election collaboration with the anti-Congress election front led by the DMK. Although the Chief Minister and the leader of the DMK, Mr C. N. Annadurai, is trying hard to prevent the communists from capitalising on this relationship, he is at a certain disadvantage since his party does not have an adequate cadre of field workers among organised labour. This has meant that the DMK as a party has been helpless to prevent the communist trade unions from making headway at the expense of the Congress-affiliated trade unions which have been affected, to some extent, by the demoralisation of the Congress party following its crushing defeat in the last general election. For the same reason, the DMK has been tempted to rely, at least occasionally, on the Red-led unions to counter the influence of the Congress party among organised labour. The communists have not been slow to press home this advantage and they have, in fact, tried to generate and maintain industrial unrest in Madras state. Fortunately, the Chief Minister of Madras has so far been able to prevent the grosser excesses by communist extremists by declaring his party's desire and determination to preserve a favourable climate in the state for the functioning and expansion of industries.

Turning Point

Broadly speaking, the communist movement in our country now seems to be at a turning point in its destiny. The adventurism of its left wing in West Bengal, particularly, and east India generally, has rendered most non-Congress parties sensitive to the threat of sedition and subversion inherent in the communist movement. As a result, not only was the Congress party's leadership in the central government able to act firmly in West Bengal to end the misuse of the machinery of the state government for the furtherance of communist objectives, but most non-Congress parties were prompted to overlook their conflict of interests *vis-a-vis* the Congress party and lend support, in varying degrees, to the central government's action in dismissing the left communist-dominated United Front ministry in West Bengal.

Simultaneously, in the states such as Uttar Pradesh, the communist groups are falling into disfavour with other political parties, such as the Jana Sangh or the SSP, with whom they have formed coalition ministries. This very trend towards the alienation of the communist movement from the rest of political India, however, has its response and reaction in the form of tentative moves among the various communist factions for sinking their

domestic differences and building up a facade of fraternal solidarity as against non-communist parties. The outlook, therefore, is that there are difficult times ahead for the communist movement in this country, calling for a strong instinct of survival and great political skills on the part of communist group leaderships.

The Confrontation

The next phase in our political history will thus be dominated by this confrontation among the communist movement on the one hand and the political parties which are opposed to it on the other. There may, however, be a few distractions. One of these is the attempt of groups of ex-Congressmen in some states to constitute a national organisation of those who have seceded from the parent body but are still faithful to what they regard as its original principles and objectives. Their party, which is called the Bharatiya Kranti Dal, however, has its sources only in a few states so far. Rather early in its career it received a crippling blow when one of its leaders, Mr Ajoy Mukherjee (who seceded from the official Congress in West Bengal and later became

chief minister of the United Front ministry in that state) allowed his administration to be dominated by the left communists, resulting in the dismissal of his ministry.

Its trials, moreover, seem only to have begun. The president of the Dal is Mr Mahamaya Prasad Sinha, another ex-Congressman, who heads the coalition ministry in Bihar state. This coalition too is currently in the throes of disintegration and Mr Sinha's ministry, consequently, seems to have a very unstable tenure. Attempts are being made by the leaders of the Dal to fish in the troubled waters of the Congress organisations of Madhya Pradesh and Rajasthan, where the Dal has already found some strength among dissident or disgruntled Congressmen. It is, nevertheless, rather unlikely that the Dal will become a major force in national affairs in the foreseeable future. The tide, in fact, seems to be turning in favour of the official Congress organisation and in the months ahead the processes of the recuperation and recovery of the Congress party may be as much a major development as the struggle of the communist movement to survive, stay and seek strength and influence.

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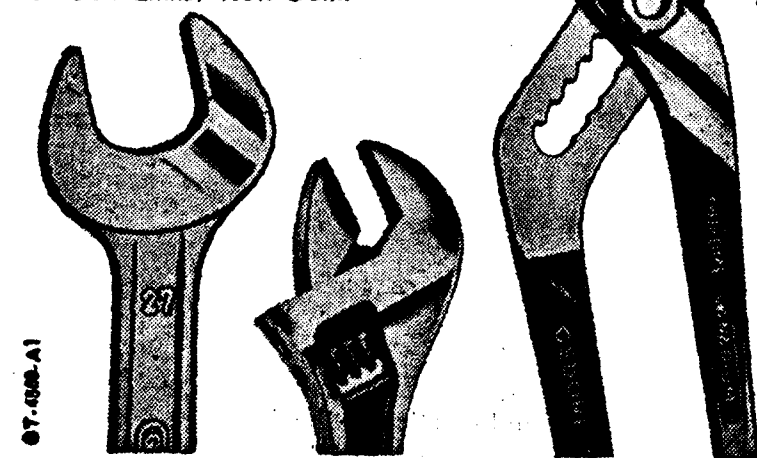
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THE AILING ECONOMY

Development Breaks Down

FOR THE first time since our country became independent there has been a sharp and sustained break in the processes of our economic development. True, there were vicissitudes in the past, but they were over-printed on a basic pattern of continuing expansion. For the last four years, however, our economy has been labouring without an assurance of that continuity. This breakdown is generally attributed in part to the economic burdens and military costs of our territorial conflicts with China and Pakistan which, on two occasions, burst out into short-lived but rather intensive warfare, and for the rest, to a decline in the production of wealth in the community as a result of two successive years of drought which greatly depressed agricultural production. This accounting of our economic misfortunes is, no doubt, justified to some extent, but its validity cannot be pressed beyond a point.

Take, for instance, the defence burden. It is true that it began to rise abruptly after 1961-62, when the total defence expenditure was of the order of Rs 312 crores. But then those who were charged with the responsibility for our national security and public finances were clearly giving hostages to fortune. Even if it is to be pleaded on their behalf that, taking "panch sheel" seriously, they never expected that a time would come when our country would have to arm itself in self-defence against China, they were at least aware of the need for military security in terms of Pakistan's aggressive ambitions in Kashmir and its resort to large-scale military assistance from the United States. Yet, through all the years up to 1961-62 our financial allocations for defence were irresponsibly low. It cannot be said that this parsimony in providing for national security was really dictated by our concern for development.

Defence Unpreparedness

In the early years of planning the mobilisation of resources was still in a rudimentary stage and provided the government had been sufficiently sincere and efficient in avoiding misuse or waste of public funds and enforcing a reasonable order of priorities in both development and non-development expenditures it could easily have got the additional money that might still have been needed for necessary defence purposes without unduly straining the economy or the people's capacity to pay taxes. The real reason why defence was neglected in those days was not the government's enthusiasm for saving for development. It was a clear case of a state of defence unpreparedness prompted and maintained by the government's grave errors of judgment in the military, diplomatic and political fields. If there had not been this shortsightedness and cussedness in the management of national security during the 'fifties, the nation would have been able to build up over the years,

and without undue economic strain, an adequate defence base which would have obviated the need for the abrupt boost in defence expenditure from 1963 onwards rendered imperative by the fact of the government having been caught on the wrong military foot. This is an aspect of the defence issue which is conveniently overlooked by those who would plead the substantial increase in our government's financial commitments for defence in the years following the Chinese attack on NEFA as an excuse for the deterioration in our economic situation.

Neglected Opportunities

Indeed, it is even possible to argue that, had there been a planned establishment or expansion of our defence industries or industries with a defence potential through the 'fifties, the pace and contents alike of our industrialisation would have greatly benefited. To put it differently, the military emergencies of 1962 and 1965 were not in themselves to be blamed for the loss of tempo our development has suffered. What was really at fault was the government's failure to plan and prepare for national security over a period of years. Under favourable conditions, it should have been possible for our economy to have developed enough resources to provide for both defence and development in the 'sixties. Unfortunately, the needs and opportunities of the 'fifties were neglected and there was, therefore, a carry-over of unfulfilled responsibilities and an accumulation of liabilities for the subsequent period.

The argument that the two successive droughts had caused a break-down in our economic development programme should also be examined critically. It is true that the failure of crops in 1965-66 and to a less extent in 1966-67 spelt a considerable diminution in national wealth in those years. How exactly the shortfall in agricultural production affected the momentum of our

DEFENCE EXPENDITURE

(Rs crores)

Year	On Revenue Account	On Capital Account	Total
1960-61	247.55	33.39	280.94
1961-62	289.51	22.95	312.49
1962-63	425.30	48.61	473.91
1963-64	704.15	111.97	816.12
1964-65	692.85	112.95	805.80
1965-66	762.18	122.58	884.76
1966-67 (R. E.)	827.29	114.96	942.25
1967-68 (B. E.)	842.49	120.88	963.37



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economy would, however, need to be carefully judged. The losses in agricultural production, no doubt, restricted directly our export earnings from primary commodities, semi-manufactures and manufactures with a substantial content of agricultural raw materials. They also pushed up, to some extent, our import bill partly on account of heavier food imports (most of which, however, came under PL 480) and partly on account of the importation of raw materials to make up for shortfalls in domestic crop production. There was also some increase in government spending for non-development purposes to pay for rationing arrangements or other measures for dealing with shortages of essential commodities. It may also be conceded that public revenues had been depressed to some extent as a consequence of reduced incomes in the countryside. But to contend that these adverse factors, even when aided and abetted by the increase in the defence burden, were responsible for economic stagnation or the interruption in the development processes—as the Prime Minister or other government leaders have been asserting, for instance, at the last meeting of the National Development Council—does not seem to be warranted by a totality of all the relevant facts.

Industry's Role

For one thing, the agricultural sector has not really come to play that kind of strategic role in our development so far. If we look through the period of the 'fifties, we would find that the leaven of development had mostly worked on the industrial layers of the economy. Development derived its tempo essentially from increasing investment and production in both established and new industries. An allied factor was the development of the transport and power sectors. It cannot really be claimed that they were dictated in any significant manner by the fortunes of the agricultural sector. By the same token, the economic stagnation of the last four years cannot also be attributed, in any significant measure, to a lowering of the levels of agricultural

production in 1965-66 and 1966-67. While it is true that the agricultural sector accounts for the bulk of the gross national product, it is just not the case that it has the same significance for the tempo of economic growth. This is not to deny either the relevance or the importance of agricultural development where the growth of an economy is concerned, but it is a simple fact of our recent economic history that the momentum of our development was largely independent of the agricultural sector.

This momentum came, in the main, from increased investments in industry. Here both the public sector and the private sector have played their part. The largest concentration of investment was in the new steel plants, owned and set up by the central government. Simultaneously, there was a considerable investment of private capital in the establishment of many new industries as well as the expansion of existing ones. Here foreign capital and foreign enterprise worked side by side or collaborated with domestic capital and domestic enterprise. It was this spell of industrial growth



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1961	...	3,495	129.56
1962	...	3,640	141.09
1963	...	4,556	183.06
1964	...	6,266	266.25
1965*	...	7,462	290.32
1966*	...	10,358	523.31

* Includes only the freight of 152.4 thousand tonnes of Australian wheat received as gift on f.o.b. basis.

* Provisional.



during the latter 'fifties and early 'sixties which constituted the relatively high level of economic development witnessed in that period. It follows that, if we are to look for an adequate explanation for the economy's loss of tempo in the last four years, we should address ourselves squarely to the question what had happened to the forces and processes of that industrial effort. In other words, why was it that this movement of industrial expansion weakened towards the close of 1962, became thoroughly enfeebled in the course of 1963 and has been unable to recover since?

Paying for Inefficiency

An answer, as may be expected, has to be sought in a multiplicity of circumstances. The investments in industry were both on short-term schemes and projects maturing over relatively long periods. As the schemes in the former category came to fruition, they pushed up the rate of economic growth, generated resources for further investment and generally helped to leaven up things in the 'fifties and early 'sixties. Around the year 1963 and onwards, the contribution which the long-term projects could or should have made came to be of substantial significance. Unfortunately, investments in these relatively long-term projects, many of which were in the public sector, were slow in yielding profits, mainly because of the lack of good planning or management. Naturally, the economy had to pay for this in-

efficiency. Had the performance of this sector been reasonably good, the resources available for further development would have been ampler from 1963 onwards than they, in fact, were.

Again, in the course of the 'fifties large investments had been made in the development of transport, particularly the railways, and the generation of power. Most of the potential of these sectors for high returns in a short period had by then been realised, at any rate at the prevailing level of general economic development and the new contribution which these could make to the tempo of development was reduced, at least temporarily in the years after 1963. To elucidate this point further, there was a great deal of economic development to be secured in the early 'fifties simply through a widening of the transport and power bottlenecks. This kind of situation did not exist in 1963 and no other strategic sector took over the role of the transport or the power sector.

The credit mechanism of the country, moreover, was more adequate for the needs of industrial expansion in the 'fifties and the early 'sixties than it was subsequently. It is true that industry and trade always used to complain of dear money or scarce credit or both, but, broadly speaking, the resources of the banking system were not lagging seriously behind the legitimate needs

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of industrial expansion up to the end of 1962. Partly because there was a movement towards branch banking, particularly on the part of the State Bank of India and the leading commercial banks, the banking system could very largely fulfil its obligations towards growing industry. From 1963 onwards, however, bank credit became a bottleneck for industrial and commercial activity, to some extent because of the increasing monetisation of the rural sector. The position was not improved by the progressive increase in direct and indirect taxation which strained the liquidity of the corporate sector and the business world generally.

Deterrent Taxation

By the end of 1963, the tax burden and the fiscal policies of the central and state governments had reached a stage where they were not only a disincentive but a deterrent in many ways. It was generally true of the 'fifties that although taxation policies were not positively encouraging from the point of view of industrial growth, their current impact was not actually intolerable in view of the increasing industrial production or improving corporate earnings. The central and state governments were no doubt claiming more and more of the cake, but the cake also was becoming bigger and bigger. The Chinese attack of 1962 and the consequent need of the government, in its state of defence unpreparedness, to step up its defence budget to a sharply higher level almost overnight seemed to stampede the Finance Ministry into the adoption of panicky fiscal policies, especially in the central budget of February 1963. Not only were the rates of existing taxes increased but new and very objectionable schemes of taxation, particularly on corporate earnings, were initiated. In our view, the fiscal attitudes of the central government formulated in the wake of the Chinese attack and emphasized further following the war with Pakistan, rather than the military conflicts themselves, were to be blamed for the break-down in our development effort.

In other words, although a tremendous strain was certainly imposed on the resources of the economy by the military pressures of those years, wiser management of our public finances could have mitigated the worst effects of that impact. Unfortunately, the wrong fiscal policies of the central government only acted to aggravate further the adverse economic repercussions of the military clashes with China and Pakistan. The government's decision to superimpose a greatly increased defence burden on high levels of non-Plan or wasteful or low-priority Plan expenditures and finance these requirements through crippling measures of additional taxation on the productive or growth sectors of the economy was the central act of folly which accounted for much of the economic stagnation that was to develop later into a recession. The then Prime Minister, Jawaharlal Nehru, used to declare that it was the aim of the government to organise both defence and development so that each aided the other. Those were brave words, but they proved to be words and no more, thanks

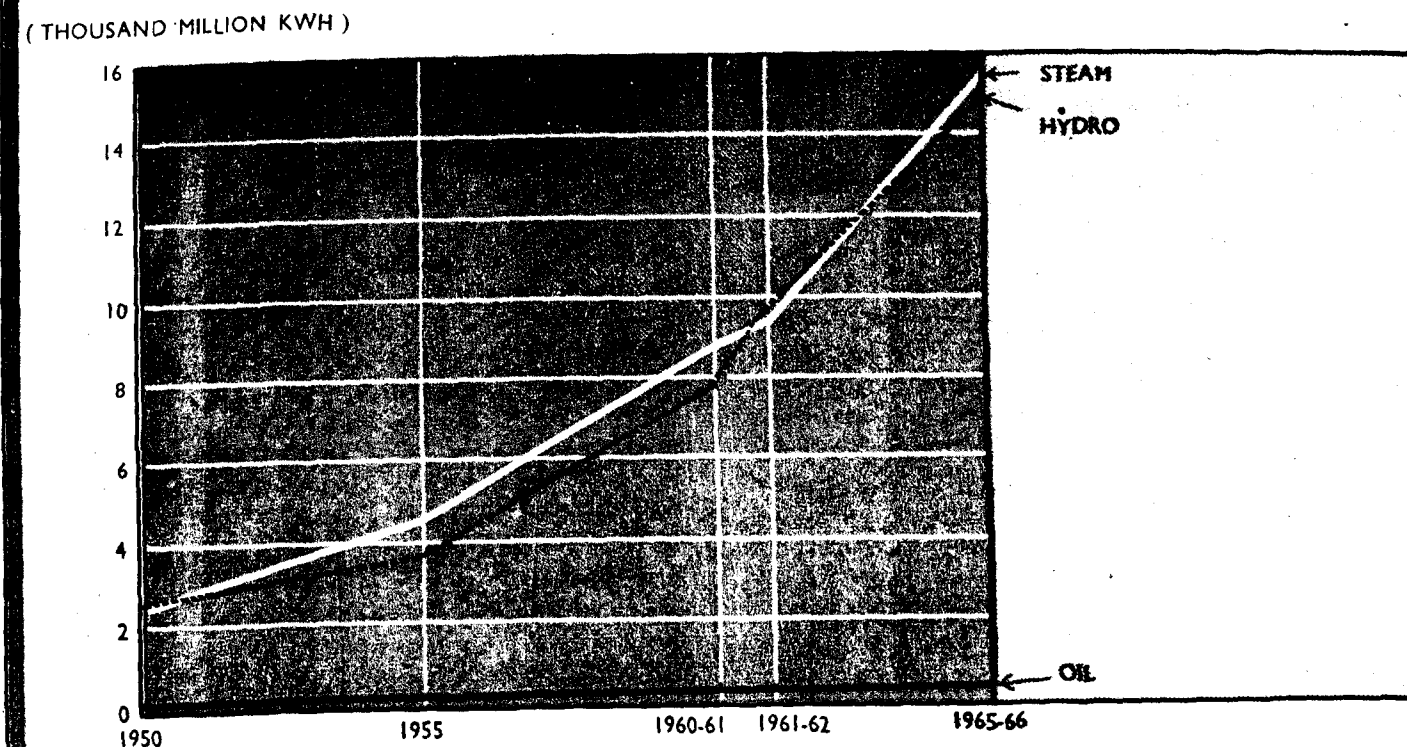
to the centre's fiscal policies which virtually killed the growth of the industrial sector in the name of finding additional resources for military expenditure.

Nor was this all. Simultaneously with the government assuming a direct as well as the decisive responsibility for organising the economic development of the nation through the five-year plans, an apparatus was being built up to enable the government to fulfil this role. This machinery was to some extent promotional but it was largely regulatory. As this edifice of government controls and restrictions kept growing through the 'fifties, it was rapidly losing its moderation and flexibility. During most of this period, however, the government professed to be guided by the needs of fostering a mixed economy in the nation so that both private enterprise and the public sector might develop in a complementary manner. Towards the close of the 'fifties, however, the machinery of government regulation was becoming rigid and self-aggrandizing. By the early 'sixties, this process had reached an advanced stage resulting in the very considerable bureaucratisation of the government's planning processes as well as its economic policy-making and its administration of economic regulations and controls. As a result it became more and more difficult for the government to take decisions promptly or otherwise act quickly. Since industrial expansion was governed by numerous "do's" and "don'ts" prescribed by the government, this deterioration in the government's functioning necessarily led to a slowing down of industrial expansion and even of normal industrial activity. There were frustrating delays in the government dealing with

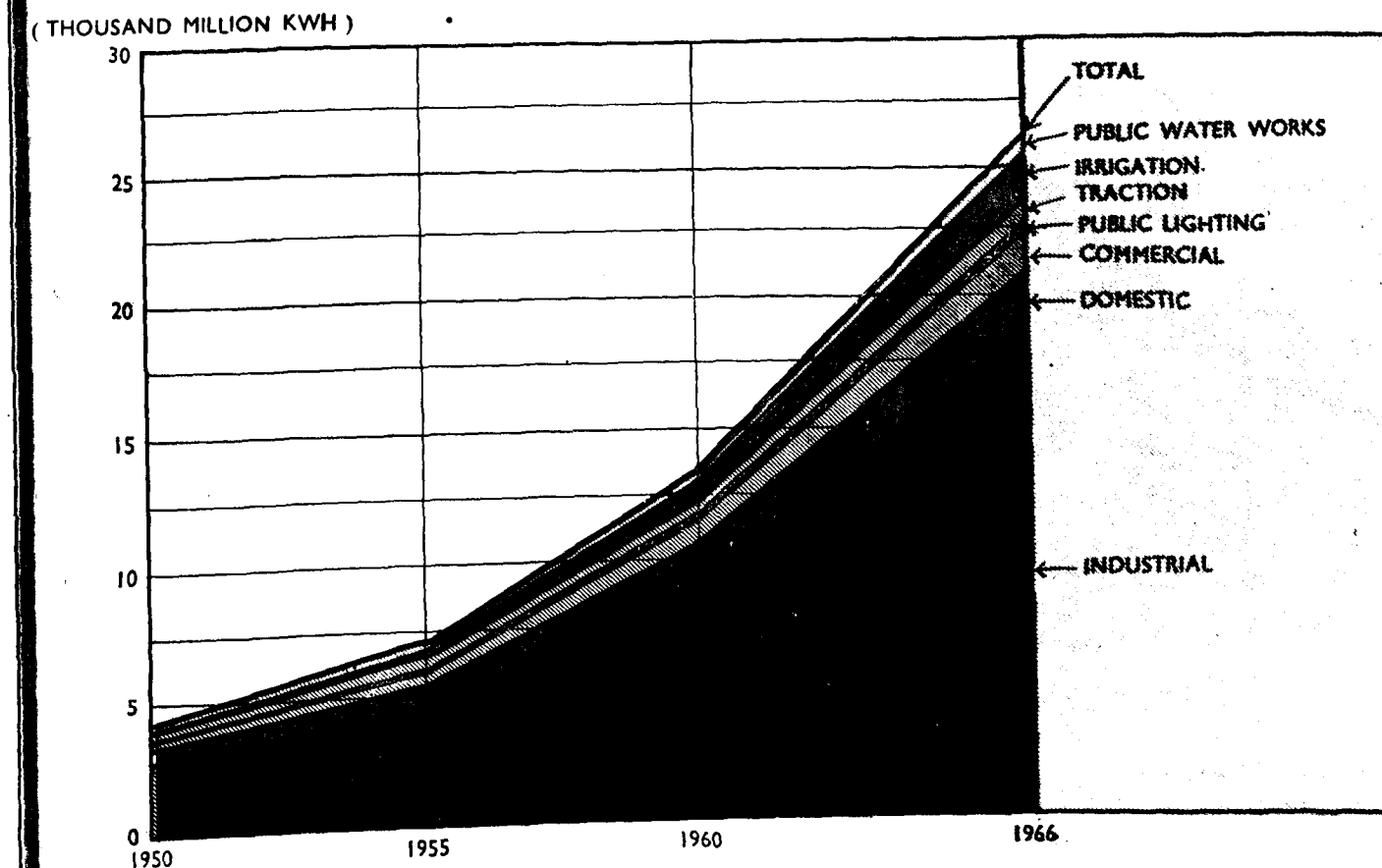


EDUCATION AND CULTURE—1967

ELECTRICITY GENERATED IN PUBLIC UTILITIES: 1950—1966



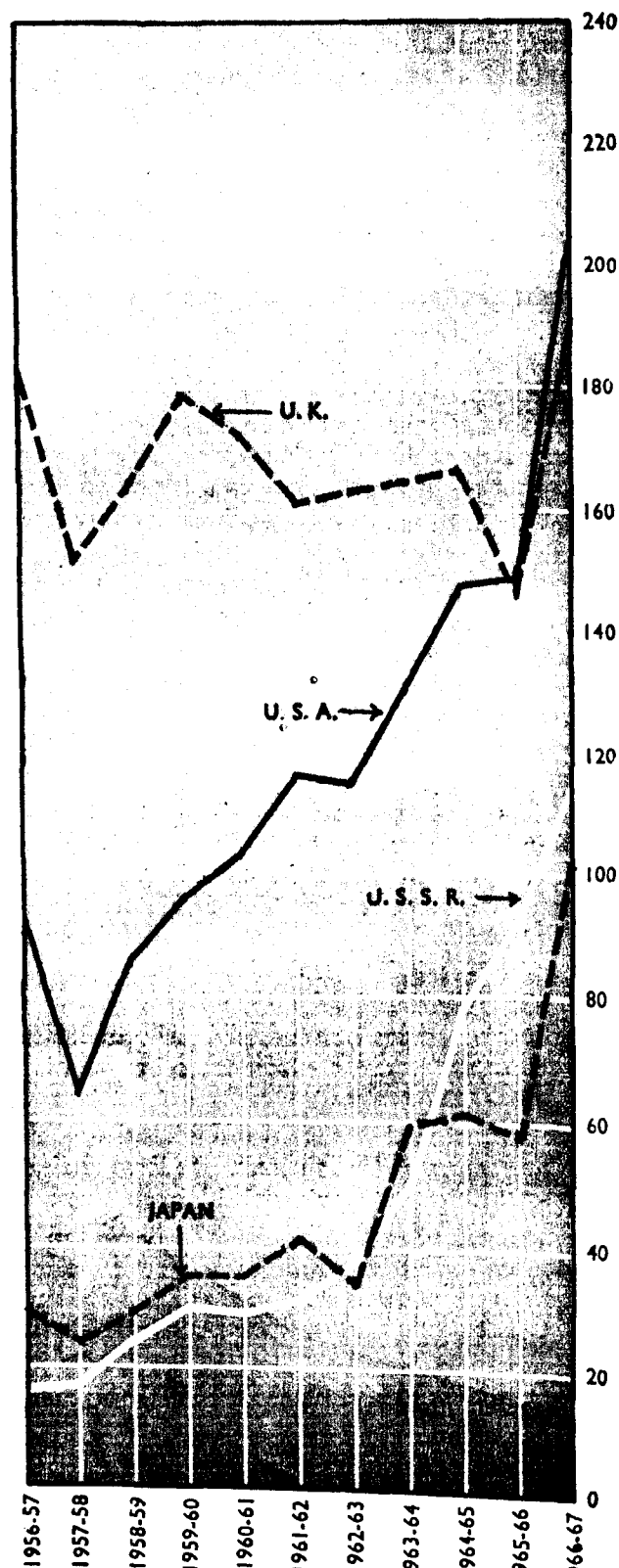
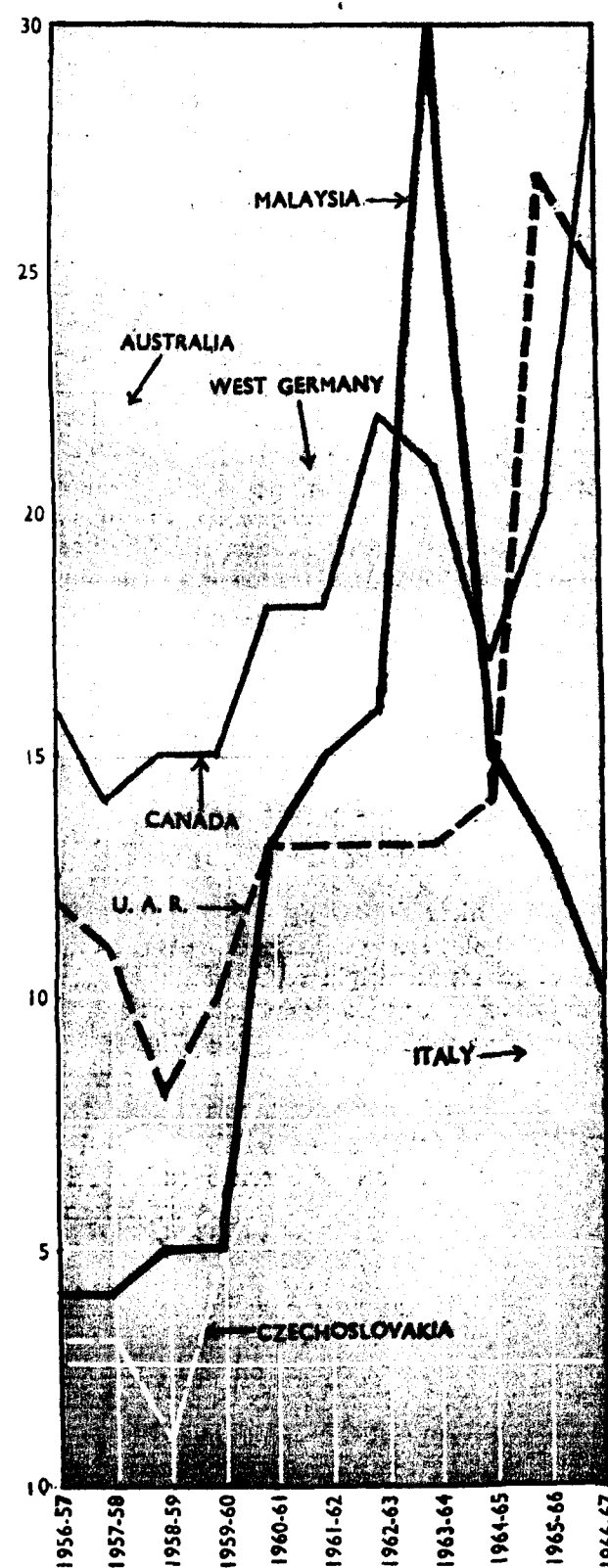
SALE OF ELECTRICITY BY CLASS OF UTILISATION: 1950—1966



MAIN MARKETS FOR INDIA'S EXPORTS: 1956-57 — 1966-67

RUPEES CRORES

RUPEES CRORES



new industrial schemes, particularly those involving foreign collaboration. The situation became all the more serious since, thanks to the government's monetary and fiscal policies, industrial activity was becoming excessively dependent on government or government-sponsored finances.

The break-down in our development effort then cannot be attributed to the malice of Pakistan or China or the whims and vagaries of Nature. It is true that the Chinese and Pakistani attacks on our territories added to our difficulties. It is true, again, that crop failures in 1965-66 and 1966-67 contributed to the set-back on the economic front. But what is not true is that, between themselves, they accounted for our failure on the economic front. On the contrary, the loss of tempo in our development effort in the years since 1962 was basically due to the fact that by that year the climate had become unfavourable for the continuity of vigorous economic expansion and that it tended to become more and more unfavourable in the subsequent years. The economy suffered because the industrial effort was stalled and the industrial effort was stalled by wrong government policies which began to show their adverse effects from 1963 and were, unfortunately, reinforced by policies even more wrong in the years that followed.

The national economy was losing ground from 1963 onwards, but there was still time for wise economic policies to retrieve the situation. Unfortunately, wisdom was absent from the councils of the government. By re-ordering the priorities of the third Plan, rationalising the development programmes, making a sincere and intelligent effort to improve efficiency in

the public sector enterprises, reforming fiscal policies so as to provide incentives for savings, investment, production and exports, abolishing obstructive and irksome controls and generally reversing the policy of bureaucratisation of the economic administration of the country and cutting down government expenditure on administration as well as the less urgent social outlays, it should have been possible for the government in the years between 1962 and 1966 to have retrieved the stability of the economy.

Living Beyond Means

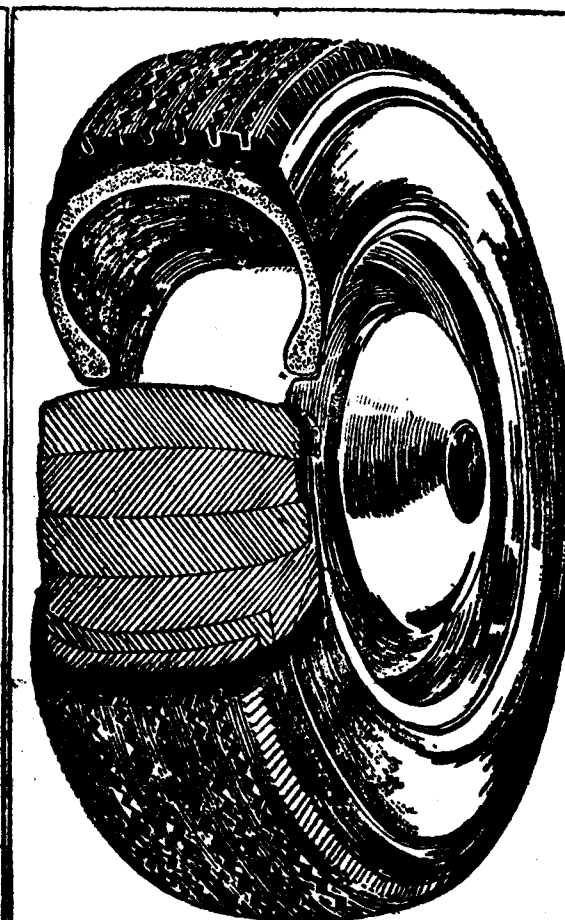
These corrective measures, however, were not taken. The result was that both the government and the country found themselves living beyond their means. Inevitably, the development effort suffered and although the government was incurring financial expenditure on the third Plan according to schedule, the physical results were not forthcoming. The country, in other words, was paying for development without getting it. This meant that its resources were being exhausted and not replenished or augmented. This had several predictable results. Internally, the government had to resort to more and more deficit financing which could not be sustained by increased production. Prices rose and, as a consequence, there was social distress and political unrest. Costs went up, but productivity went down and exports suffered. For a country which had become heavily dependent on foreign aid for keeping its plans going or bridging its trade deficits, all these adverse developments could only spell vulnerability to external pressures.

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THE AILING ECONOMY

The Price of Folly

THE EARLY months of 1966 saw the government reaching the end of the third Plan while being unable to visualise the beginning of a fourth. An assurance that foreign assistance would be available for another five-year plan was just not forthcoming. More serious still, the nation's exports were not enough to pay for its essential imports. Without these imports being available in full, industry was faced with the prospect of having to cut down production. The Government of India therefore had to negotiate for foreign assistance from a position of great weakness. This was the background to the devaluation of the rupee on June 6, 1966, when the existing par value of the rupee was reduced by 36.5 per cent, the new parity being Rs 7.50 to one US dollar as against the previous exchange rate of Rs 4.76 to one US dollar.

The Government of India agreed to this devaluation primarily because the devaluation virtually became a condition for the World Bank organising consortium assistance to the extent of \$900 million for financing our country's essential estimated imports during 1966-67. The World Bank's prescription, however, included much else besides the devaluation of the rupee. The Bank obviously intended that the devaluation would be accompanied by a whole series of measures for liberalising the economy, promoting investment, production and exports and saving on imports through realistic increases in the domestic cost of imported goods. The Government of India has so far not taken the country into confidence regarding its commitments in these respects, but it may be assumed that certain indications were given, if not promises made, to the World Bank.

Spoilt Chances

In the event, not enough was done in 1966 or subsequently to revive the economy or even to make devaluation itself work. In a highly industrialized economy, with its manpower and other resources employed more or less fully, a devaluation of the currency helps to shift resources to investment and exports. In our economic conditions, this particular function of devaluation is not very important. What could be expected of devaluation in the Indian context was that it would give a keener competitive edge to exports vis-a-vis the rival exports of other countries. Such chances as there were of this happening were spoilt, at least partly, by certain wrong-headed government measures accompanying devaluation. Certain export duties, for instance, were imposed or raised on the ground that the government was entitled to trap for the benefit of the public revenues some part of the increased rupee profits that might be accruing to the exporters. There was also the abolition or revision of various schemes of export incentives that were in operation at the time of devaluation. As a result, our export trade probably lost more through these adjustments than it was able to gain through devaluation.

There were also two large movements in our economy which denied it possible benefits from devaluation. The first was the continuing inflationary pressure. We had noted that from 1963 onwards industrial growth was slowing down. There were also the adverse agricultural seasons of 1965-66 and 1966-67. The government was both unwilling and unable to adjust the levels of its spending to these adverse developments. On the contrary, its Plan and non-plan outlays and its expenditure on administration kept going up along with its defence budget. The government was thus living beyond its means as well as the means of the country both before and after devaluation. There was thus an aggravation of inflationary pressures; wages and dearness allowances were going up in industry and government employment partly in response to and partly in exploitation of the psychology of rising prices. Inevitably, in spite of the progressive increase in taxation and the additional money this brought to the public exchequer, the government's reliance on deficit financing was growing. Its helplessness in this matter, in the course of the year of the devaluation of the rupee, reached a point where it was losing altogether its grip on its solvency.

When Mr Morarji Desai took up the Finance portfolio, after joining Mrs Gandhi's second administration as Deputy Prime Minister, one of the first major undertakings he gave to the nation was that he would endeavour to do without deficit financing in the budget year 1967-68. He also pleaded this resolve of his as a justification not only for not giving tax reliefs even where sorely needed but for imposing additional taxation despite the fact that the annual plan for 1967-68 involved no increased commitment on development. Unfortunately, Mr Desai's resources of policy-making or administration have proved unequal to his good intentions. He has, in fact, failed or perhaps not even attempted seriously to translate his pious resolutions into deeds. There has been no significant endeavour to organise adequate savings in the government's administrative or non-development expenditures. Again, the Finance Minister has had to pay for the folly of disregarding counsels of economic wisdom in the framing of his fiscal policies for this financial year.

POST-DEVALUATION EXPORTS

(Million dollars)

Period	1965-66 (June-May)	1966-67 (June-May)	Percentage fall in 1966-67 over 1965-66
First Quarter: June-Aug.	415.0	345.5	-16.8
Second Quarter: Sept.-Nov.	455.5	398.8	-12.6
Third Quarter: Dec.-Feb.	419.0	396.6	-5.4
Fourth Quarter: Mar.-May	429.4	384.5	-10.5
Total: June-May	1718.9	1525.4	-11.3



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Mr Desai was warned that, in the depressed state of the economy, additional taxation would not only not secure any net increase in revenue but might even lead to a decline in government receipts by discouraging business activity further. It is now being officially admitted by Mr Desai himself that the central government's receipts are falling short of expectations while its administrative and other expenditures are exceeding budget estimates. There is little doubt that this continuing fiscal irresponsibility on the part of the government in the post-devaluation period has considerably devalued the possible merits of devaluation itself.

A Major Development

The other major development in the economy which thwarted the purpose of devaluation was the recession in several sectors of our manufacturing industries. From our discussion of the break-down in the development effort in the years since 1962, it would be seen that the recession of which we are speaking now was essentially an aspect of this more basic retreat of the development forces. In other words, the industrial recession, which became marked from the later part of 1965 onwards, was a creature of the adverse economic circumstances developing continuously since 1962. It should be pointed out here that the advent of the recession was generally recognised only some time after the event. This was partly because the true state of affairs in the industrial sector, resulting from a slackening of demand for various manufactures, was disguised for a time by the fact that some industries were also being forced to curtail production because of the inadequate availability of foreign exchange for the import of essential components or raw materials.

Indeed, in the early months of 1966, the dominant view was that industrial production was suffering mainly because of the insufficiency of essential maintenance imports. This assumption was one of the major compulsions acting on the government when it decided to devalue the rupee in a bid for external assistance for liberalising essential imports. Thus one of the beliefs prompting the devaluation of the rupee was that, with more external assistance becoming available for maintenance imports after the devaluation, the government would be able to license the import of raw materials and components more freely and thereby help industry to recover lost levels of production. This belief turned false because it did not take into account the fact that the main reason for the slowing down of industrial production was the break-down in the development effort and the emerging recession. As a result, although foreign exchange has been secured for maintenance imports, industry has been in a position to take advantage of this only to a limited extent. Thus the expected recovery in industrial activity has not come about, which has meant, among other things, that production for exports has not been stimulated and the economy has therefore not been able to take advantage of the devaluation of the rupee. Thus Mr Desai was making the prize under-statement of the year when he

stated in Parliament recently that the expected gains from devaluation had not been forthcoming. In retrospect, there is irony in the fact that a good part of the external assistance granted for maintenance assistance, following the devaluation of the rupee, has remained largely unutilised, partly because of bureaucratic delays on the part of the government and partly because the requirement of industry has declined due to the recession.

The situation then is that, since 1962, the tempo of the development process has been steadily declining and that in the last two years this decline has been progressively accelerated essentially because wrong economic policies had been pursued and persisted in over a period of years. One of the more spectacular casualties of the process was the par value of the rupee which had to be reduced in June 1966. An equally serious casualty was the capabilities of the economy for maintaining long-term development planning. Thus, at the end of the third Plan period, when the time came for the government to launch a fourth five-year plan, it was not in a position to look beyond the next 12 months. Nevertheless it chose to maintain the pretence that there would be no break in the series of five-year plans. This posture was dictated largely by political considerations into which the imminence then of the fourth general election entered to a high degree. It was being claimed that the annual plan for 1966-67 would be an integral first instalment of a fourth five-year plan and when this plan ended and was succeeded by another annual plan in April this year, the game of make-believe still continued. Indeed, as late as in August last year, the Planning Commission had the effrontery to present what it called a draft fourth plan covering the years 1966-67 to 1970-71. It was only when the Planning Commission was reconstituted in September this year with a new set of members, that the government was prepared to face the facts

ADDITIONAL TAXATION BY CENTRE

(Rs crores)

	Total yield during third Plan	1966-67	1967-68*
Income tax (incl. corporation tax)	303.2	56.2	—
Wealth tax	11.8	—	—
Gift tax	3.4	-1.7	—
Expenditure tax	-1.2	-0.6	—
Estate duty	4.4	0.7	—
Customs duties	693.4	0.2	-4.2
Union excise duties	1026.1	50.7	92.0
Others	10.3	0.5	—
Total	2051.4	106.0	87.8
Increase in railway fares and freight	209.6	18.0	35.0
Increase in postal rates	14.5	—	3.0
Total yield	2275.5	124.0	125.8

* Additional taxation proposed in 1967-68 budget after allowing for concessions announced later on.

and permit the new Deputy Chairman of the Planning Commission to confirm, what was by then obvious, that the series of five-year plans had broken down and that the Planning Commission would not be able to come forward with another five-year plan for a period earlier than the one commencing from April 1969.

Deceiving the Nation

It should not, however, be inferred from this that the government has given up trying to deceive the nation, if not itself. The game of make-believe, in other words, continues, but with convenient modifications. For instance, it is being argued that there is really no gap between the third Plan and a fourth plan since there would be annual plans for the three intervening years, that there has only been a change in strategy and tactics which will facilitate what is being hopefully presented as a process of consolidating the gains of the previous plans, giving some respite to the economy from inflationary pressures, promoting the realisation of the unfulfilled targets of the third Plan and generally strengthening the potential of the economy and the resources of the community so that by April 1969 the country will really be ready for another large five-year planning effort. The only virtue of these contentions is their plausibility which, however, far exceeds their credibility.

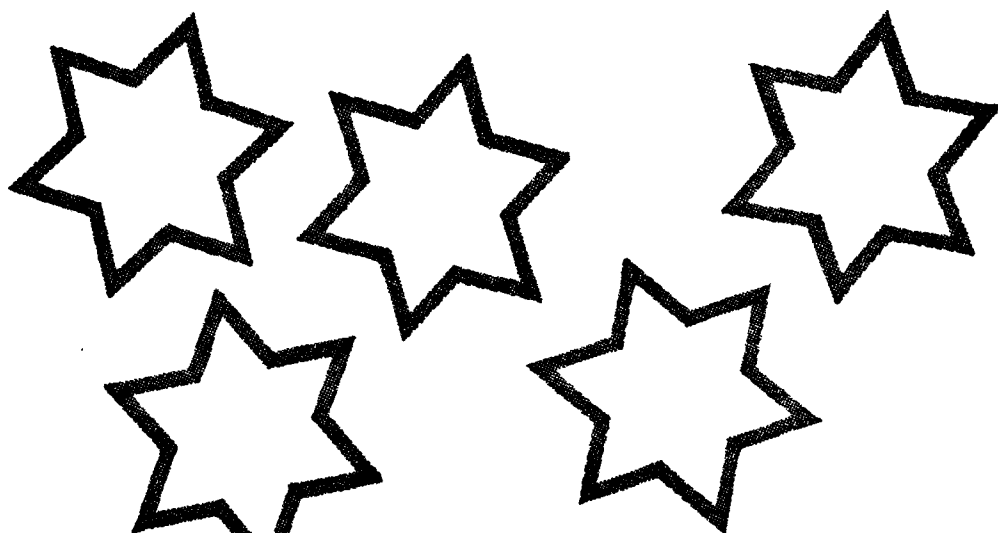
To start with, more than one half of this period of consolidation has already gone without there having been any consolidation in evidence. Why should the country be expected to believe that the next 15 months are going to be so very different from the last 21 months? As a matter of fact, where the resources devoted to development, whether in the public sector or the private sector, are concerned, the year 1967-68 will admittedly present a poorer record than the year 1966-67. As for the year 1968-69, it is already being indicated that the Finance Minister and the Deputy Chairman of the Planning Commission are in the process of reconciling themselves to a smaller development outlay of the order of about Rs 2,000 crores. It has to be noted in this connection that, while a decrease in development outlay is being mentioned as unavoidable, there is no indication that the powers that be are also thinking in terms of any corresponding readjustment of the total level of government spending. It is even more significant that there is no talk whatever of tax reliefs or even of the avoidance of further taxation. In other words, the pressure of the government's demand on the resources of the economy may not ease but may even increase although the outlay on development is to be reduced.

In these circumstances, the conclusion is hard to resist that, if the prevailing or proclaimed policies of the government are to continue, the tempo of development will be further decelerated over the three-year period from 1966-67 to 1968-69. The popular impression in government circles that the improvement indicated in agricultural production in the year 1967-68 should enable the economy to turn the corner seems to have been too hastily formed. As we had argued ear-

lier, the main explanation for the stagnation and recession lies in the break-down in industrial growth. Poor harvests might have aggravated our difficulties and to that extent better harvests might redress the balance in favour of resumed economic expansion, but this expansion itself will have to come primarily through greater endeavours in the industrial field. In other words, a much more favourable climate for industrial expansion than has been obtaining for some years now should be deliberately created by the government through policies designed to that end. This is an obligation which must be honestly accepted and neither the Planning Commission nor the central cabinet should try to evade its responsibilities in this regard with the aid of the false argument that the economic progress of previous years is now being consolidated through the annual plans and that nothing, therefore, need to be done until we are ready for a fourth plan to revivify and reinvigorate the industrial sector. Every delay in restoring and raising the tempo of industrial expansion will cost the nation dear in terms of essential development. With a large and growing population looking for employment and consumer goods, the economy just cannot afford to let the industrial sector idle.

Learning from Mistakes

What the nation needs, therefore, is a new economic policy, particularly for the industrial sector, which would have learnt from the mistakes of the past and would take on the task of promoting industrial expansion in a positive and practical manner. The fact that there is to be a gap of three years between the third five-year Plan and a fourth one will not justify any failure on the part of the government to formulate such a policy here and now. Dr P. S. Lokanathan, writing in *Yojana* recently, wondered why those who had been criticizing the government's previous five-year plans were also finding fault with the postponement of a fourth plan. We are unable to share his mystification. The five-year plans have been criticized by different people from different points of view and such of those critics as had based their objections on the argument that the plans were failing because wrong economic policies were being followed, especially in the industrial sector, surely have no reason to feel satisfied now when, in the name of consolidating the economy, the government is merely evading the responsibility for framing new policies which would avoid the mistakes of the old. The point really at issue is what precisely the government is trying to consolidate now. Dr Lokanathan seems to think that the government is consolidating such progress as has been achieved. Some of us might believe that the government is simply consolidating the break-down in the economy which occurred in the period since 1962. Those who do not want this break-down to be perpetuated or even prolonged have every reason to be dissatisfied and to demand that the government should not shirk its responsibility for giving a new and purposive direction to the processes of development.



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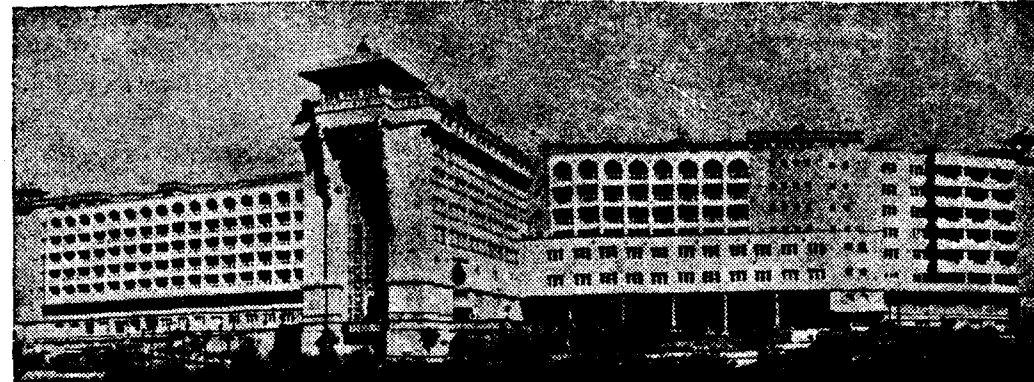
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THE AILING ECONOMY

Requirements of Recovery

THE NATION, as we have seen, needs a new economic policy. To be successful, this economic policy should be enabled to work in a political atmosphere which encourages constructive activity and very positively discourages agitational diversions and distractions. The primary need here is for the central government to assume direct and decisive responsibility for maintaining law and order in each and every part of our land irrespective of the party allegiances or affinities of individual state ministries. A bitter lesson has been learnt in West Bengal, where law and order and economic stability and progress were very considerably damaged through the machinations of an adventurist political group which had been allowed to exploit the authority and machinery of the state government. Fortunately, the central government acted at least at the eleventh hour to save West Bengal from chaos.

Two other states, where there are weak governments, seem destined to go through a frustrating phase. These are Bihar and Uttar Pradesh. In both the states, the coalition ministries, which are now in power, are proved failures. Each one of these ministries is a house divided against itself. As a result, it is not in a position to think in terms of policies or programmes. These two states have always been poor in administration and they have now become poorer still. It is possible that these ministries may not survive for any length of time, but this thought cannot be sufficient consolation because the prospects for alternative government which would be strong and stable are not too bright either in Bihar or in Uttar Pradesh. This, however, is no reason why the central government should lose all interest in the affairs of these states. At least in the vital fields of law and order and a minimum of administration needed for a degree of economic stability and progress, the central government should tactfully, but nevertheless firmly, use its influence and good offices to improve matters.

Commendable Enthusiasm

Some state governments have been showing commendable enthusiasm and capacity for promoting industrial activity in their respective areas. Among them are Gujarat, Orissa, Madras, Mysore and, surprisingly enough, Kerala. We strongly urge on the central government to extend its full co-operation to the governments of these states. Everything possible should be done to help them in their constructive endeavours so that not only these states benefit from greater industrial activity but other states are also stimulated by their example. We believe that Andhra, Maharashtra, Rajasthan, Madhya Pradesh, Haryana, Punjab and Jammu and Kashmir are all in a position to gain in this manner.

We have spoken of the importance of the firm ad-

ministration of law and order and the maintenance of political stability. Several developments over the past three or four years have been rather disquieting in this context. In the years following Independence, the leadership of the Congress party and the central government had succeeded remarkably well in creating confidence, both at home and abroad, in the prospects for growing national unity and stability. But in the last few years fissiparous and centripetal tendencies have been active to an unwholesome degree. The political immaturity and frustration of parties, such as the Jana Sangh, the Samyukta Socialist Party, the DMK, and to a less extent, the Swatantra, have combined with the power-hunger, authoritarianism and general decadence of the Congress party to create an unhealthy ferment in the politics of the nation which the conspiratorial forces of the communist movement have not been slow to exploit. In these conditions of emotional instability in the nation, a premium has been placed on divisive or negative political exhibitionism and, as a result, chauvinistic, opportunistic and aggressively parochial tendencies have come to the surface. This has been reflected on a national scale in the case of the language controversy and on a regional scale in movements such as the Shiv Sena in Maharashtra.

Transitional Difficulties

It may not be strictly necessary to take too tragic a view of current distempers such as these and it may not be too unrealistic to regard them as the incidence of a transitional phase. At the same time, in a country where poverty and illiteracy are widespread, where barriers of language or caste lie in the way of a fully integrated citizenship and where many popular political parties have still to acquire sufficient political responsibility, there is a constant need for the forces of national unity and political stability to be vigilant and assertive. The passing of the Official Languages (Amendment) Bill by Parliament is welcome evidence that, provided strong and self-confident leadership is forthcoming from the central government, fair and reasonable compromises, which are generally acceptable to the nation, could be worked out even where highly explosive controversies are concerned. We believe that the central government should acquire a new strength of purpose from this experience and push ahead to restore and strengthen the influences that make for national unity and political stability without which there cannot be any real hope of economic recovery or further industrial expansion.

Just as confidence at home and abroad in the economic future of our country has to be built up partly by national policies which strengthen the unity of our people and the stability of our democratic order, this confidence has also to be promoted by a viable foreign policy which can be sustained by our national resources and which can serve our national interests. Right

now our foreign policy is both spiritless and shapeless. It has attempted to do too much and ended by doing too little. Take, for instance, our foreign policy adventures in Africa. The government has not cared to economise its resources by cultivating only those African governments which have a high sense of responsibility towards their own people and which are therefore worth cultivating by another country. If our government had not let itself be swayed by the naive sentiment that all Africans are brothers of all Asians and had instead been selective and discriminating, this country should by now have some genuine and effective friendships on the African continent.

Political Strangers

In south-east Asia our foreign policy seems to have been committing a different kind of blunder. Apart from its courting of Soekarno, even after he had ceased to be a force for progress in his country or peace in Asia, our foreign policy never made any serious attempt to understand the affairs or the aspirations of our neighbouring countries in the Pacific area. The result is that, although these countries are geographically close to us, they are as distant strangers politically. There is very little mutual understanding between Burma and our country, while our relations with Ceylon can certainly be more close and co-operative than they are. Thailand, the Philippines, Taiwan and South Korea are other cases in point of our neglected opportunities in the Pacific area. It is indeed amazing that our diplomacy should be doing so little to establish bonds of common interest between our country and such other countries of south or south-east Asia which must share our apprehensions and anxieties regarding communist China's long-term intentions or plans for ideological subversion or military aggrandizement in this part of the world. Not less surprising perhaps is our failure also to cultivate any meaningful relations with Laos, Cambodia or North Korea. We should certainly have made more effective use than we have done of our advantageous position as a member of the International Control Commission to bring the people of Cambodia and Laos closer to our people in significant economic and cultural relationships. As it is, our connections with these south-east Asian countries are largely confined to ceremonial exchanges of greetings or occasional state visits.

Our most significant diplomatic failure in the Pacific area, however, is in our concept of relations with Japan. Long after it had become obvious that Japan was fast developing into a major economic power of the contemporary world, our diplomacy was slow in sizing up the political or other implications of this development. Our foreign policy attitudes towards Japan have essentially been to treat it as a country which, being within the sphere of influence of the United States, is not to be expected to take major policy initiatives on its own. By and large, our government has been content to look upon Japan as a source of foreign aid under the leadership, if not at the com-

mand, of the United States. Our government is now being forced to discover that it has been acting on wrong calculations. Japan is very definitely a country with a mind and a policy of its own in Asian and Pacific area affairs. While it is taking great interest in developing political and economic ties with South Korea, Thailand, the Philippines, Malaysia and Indonesia, its attitude towards our country is influenced by certain inhibitions relating partly to our bigness in terms of area and population but largely to the rather unrealistic position our foreign policy is apt to take where the security of the non-communist countries in this part of the world is concerned. It is a pity that our diplomacy has never been very concerned about promoting a true understanding of the mutuality of interests which exists between Japan and our country in many ways.

Of the futility of our foreign policy with regard to China, there is no need to write at length because the facts speak for themselves. All through those fanciful years when it was dangerous to bank on the good-neighbourliness of communist China, our foreign policy insisted on doing exactly that. When this conduct on our government's part placed, as it was bound to do, our country in a helpless position in defending our frontiers when Peking chose to attack us and occupy our territory, our diplomacy found itself forced into a dead alley from which it is yet to work out an egress. It is now apparent that China has taken, and is in firm possession of, such of our border areas as it was seeking to do through its political and military manoeuvres.



MODERN LIVING—1967



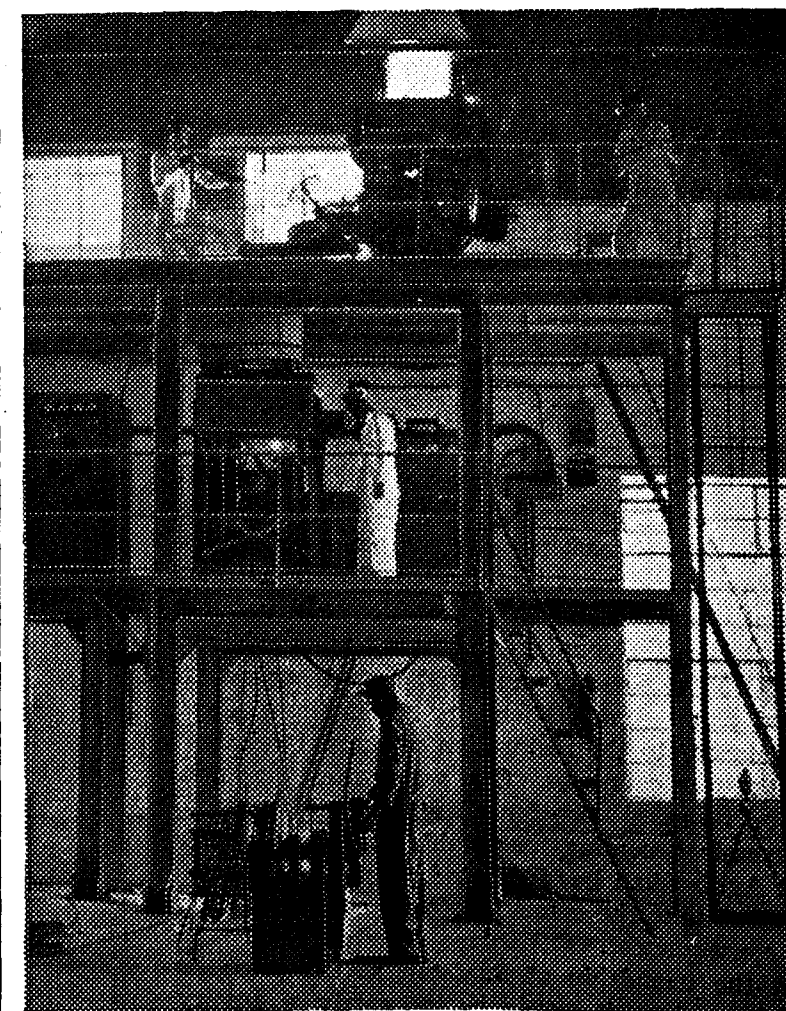
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of the late 'fifties and early 'sixties. China has therefore nothing further to gain now in this respect through any diplomatic initiative on its part. Our position, however, is different. Even if it has to be conceded that we have no means in sight of recovering the territory forcibly occupied by China, it need not be assumed also that we have nothing to gain from diplomatic initiatives directed towards Peking. As a matter of fact, it is the merest common sense that we should at least try to make the best of a bad bargain. As it is, not only does China sit tight on the spoils of her aggression, but its leaders are also exploiting the state of hostility with us to promote conditions of insecurity and instability all along our eastern and north-eastern frontiers. It is clearly in our interest to seek some relief from this dangerous situation. If diplomatic negotiations with China at this stage could ease that country's inimical pressure on our restless border regions, it is a possibility which our government owes it to our country to explore. Any diplomatic initiative on our part which may have the result of bringing off a cooling of Chinese enthusiasm for Pakistan's claims on our territory or for the secessionist demands in tribal areas in our frontier states will surely be a gain worth the candle. It is, therefore, a pity that our government just seems to have resigned to doing nothing towards the discharge of its responsibilities in this area of our foreign policy.

Inconsistent Policy

As for our relations with Pakistan, our government does not have any consistent policy at all. The Prime Minister and some of her advisers in the Ministry of External Affairs are apparently itching to break the ice. We have no quarrel with this mood. We believe that the Deputy Prime Minister, Mr Morarji Desai, is also inclined to enter into a dialogue with President Ayub Khan. This, again, is a position which we could appreciate. But we insist on the government being clear in its own mind on what it wants to talk about. It could be claimed for the President of Pakistan that he has at least not tried to make things difficult for our government in this respect. He has said very recently and very clearly that the only issue in debate between his country and ours is Pakistan's claims relating to Kashmir and that once these claims are settled through mediation or arbitration there would be no bar to the restoration of normal relations between the two countries. Our government has now to make up its mind once for all whether it agrees to allow Kashmir becoming negotiable in the manner President Ayub Khan has indicated. If it is willing to do so, it must take the country into its confidence and face the consequences. Otherwise, it must boldly declare that the friendship of Pakistan at the price its President has set on it would be too costly a luxury for us and that we are therefore resolved to do without it until such time as Pakistan or those who speak on its behalf are willing to make a revised offer.

It is one of the most serious weaknesses of our

foreign policy at present that there is so much muddle-headedness in the government about its thinking on Kashmir. If our government believes that it would be right and proper for our country to settle its differences with Pakistan over Kashmir by courting the possibility of a change in the status of Kashmir as an integral part of our national sovereignty and our national territory, it should have the courage to say so and go through all such acts as would thereafter have become logical and necessary. If, on the contrary, our government is not prepared for a compromise on the status of Kashmir, it should announce as precisely its own terms for a peace settlement as President Ayub Khan has declared his. In either case, our relations with Pakistan will gain in clarity and, therefore, effectiveness. As it is, we are having the worst of both worlds. Our government has no intelligent counter to Pakistan's diplomatic offensive, while its credibility suffers all along the line—with the third countries of the world and with the people of our own country, particularly the people of Jammu and Kashmir.

Our foreign policy in terms of our membership of the Commonwealth has been equally vague or vagarious. For some time, we availed ourselves of our Commonwealth kinship to support the cause of freedom of Britain's colonial territories on the African continent. Up to a point this was a legitimate role and even a glorious chapter in our history as a country which had

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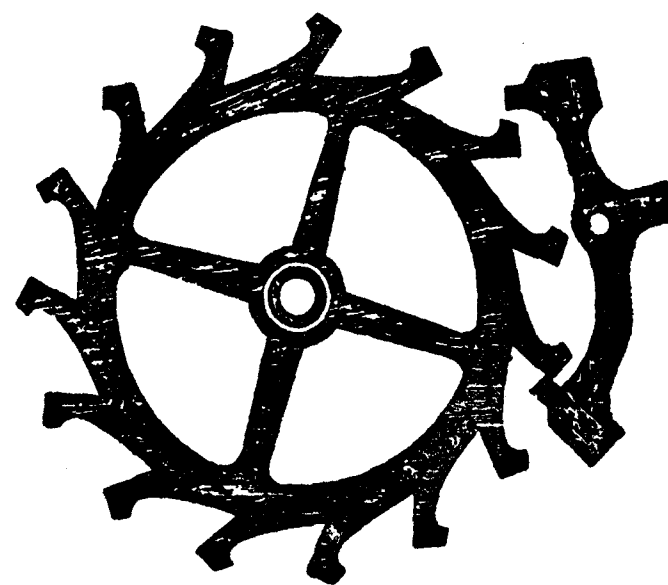
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gained its own independence from British rule after a memorable struggle, but, unfortunately, our enthusiasm has often tended to overstep the bounds of good sense and has often assumed the airs of the bully or the blackmailer. Our government, indeed, has tended to cast itself in the role of a gad-fly whose pleasure and privilege it is to force the British government to keep to the straight and narrow path. In the process, it has been losing some valuable opportunities of turning its membership of the Commonwealth or the institution of the Commonwealth itself to good account by emphasizing the principle of constructive co-operation among all its members. We believe that, as a member of the Commonwealth, our country should have been enabled by our government to establish a greater degree of understanding with other members, such as Canada, Australia and New Zealand. Fortunately, a high level of co-operation does exist between Canada and ourselves or between Australia and ourselves, but in either case this seems to be owed to statesmanship on the other side rather than on ours. The Canadian government and industry are no doubt making solid contributions to our economic development, but they could and might do even more had there been a greater effort on our part. As for Australia and New Zealand, there are some very obvious reasons why a high degree of political understanding and economic co-operation should be established between those countries and ourselves. In fact, it is even necessary for a certain amount of military understanding among the three for the sake of the peace and progress in this part of the world. We are definitely of the view that much more needs to be done by us in this respect than we have cared to attempt so far.

Prisoner of Emotions

In dealing with the affairs of West Asia (which is the term our government favours as a description of the region which is more generally known internationally as the "Middle East"), our foreign policy has been exhibiting its virtue more than its wisdom. It is still the prisoner of its emotional involvement with the anti-colonial crusade of Arab nationalism, although that crusade itself now belongs firmly to past history. One of the grave errors of judgment which our foreign policy is still persisting in is its insistence on putting all its West Asian eggs in President Nasser's basket. It is now clear that neither President Nasser's personal ascendancy nor the viability of his political system is to be taken for granted. Recently, in the course of a perceptive and, on the whole, sympathetic assessment of the current state of affairs in the UAR in the context of West Asian politics, *The New York Times* suggested that President Nasser himself had been driven to conclude that the only justification for his remaining in the position of the head of state of the United Arab Republic was that he could not very well retreat, through the relatively simple act of abdication, from his personal responsibility of rescuing the UAR from the mess into which his policies had landed it. It follows that while there may be some justification for our

government sympathizing with President Nasser in his present predicament, it will not be wise for it to commit its foreign policy, in so far as it relates to this vital area of world power-relationships, to the personal destiny of the present President of the UAR. This, however, is exactly what the Prime Minister and her foreign policy advisers seem bent on doing. We are in full agreement with the view that our country should develop ties of the utmost friendliness with the Arab world, but we cannot agree that the only way of our doing this would be for our diplomacy to underwrite either President Nasser's presidency or his politics. We are even less convinced that the friendship of Arab countries is available to us only on the condition that our government continues in its attitude of hostility towards Israel. On the contrary, its refusal to agree to the establishment of normal diplomatic relations between Israel and our country has little to recommend itself in logic or equity.

In fact, for a government which has been preaching Panch Sheel and the *dharma* of peaceful co-existence among nations, the Government of India, it seems to us, has let itself be without diplomatic relations with far too many foreign countries. There is, in any case, no justification at all for our government not having normal diplomatic relations with the governments of Israel, East Germany and Taiwan. These are all fully functioning political entities with a sovereign

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status in their respective territories. As Britain's Prime Minister said recently while speaking of his government's attitude towards the military government in Greece, "recognition is not based on approval of a regime but on whether it has control of the country". Even in the case of Portugal and South Africa, against whom our country may have specific grievances, it seems to us to be desirable for our government to seek the restoration of normal diplomatic relations, while leaving it to the processes of the United Nations to wean Portugal away from its colonialism or South Africa from its racialism. We believe that our foreign policy will gain greatly in the esteem of the world if it could be demonstrated by our government through sensible actions that it is prepared to let reason and realism guide its relations with other countries.

Our dealings with the United Kingdom have a touch of love-hate complex about them. For this both sides are responsible. Britain is a part of Indian history and India is a part of British history. Men's memories will have to be very short indeed for this to be forgotten; nor is there any real need for forgetting. The Indo-British association could be a constructive force in the contemporary world provided an attempt is made on both sides to wipe out the cobwebs of misunderstanding. Here Britain's responsibility is perhaps the greater if only because not very long ago the present Prime Minister of that country went out of his way to take a view of our country's accountability for the border war with Pakistan in 1965 which merely served to give substance to our ancient grievance that Britain had been championing Pakistan's claims and causes in a partisan spirit to the disadvantage of our people. We are, however, glad that the Deputy Prime Minister, Mr Morarji Desai, recently chose to make a special gesture of friendship and goodwill towards Britain which should make it easier for the statesmen of that country to move towards a closer understanding with ours.

Importance of Commonwealth

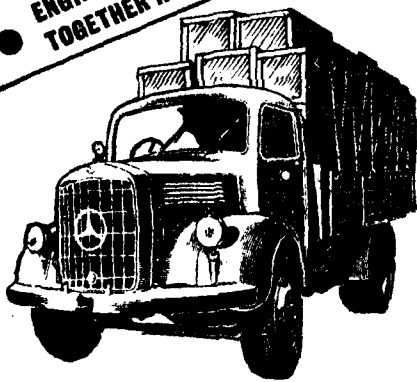
Departing from the prepared text of a formal speech on the occasion of his signing an agreement with Mr Reg Prentice, the British Minister for Overseas Development, for an interest-free development loan of £12 million (Rs 21.6 crores) from Britain to India, Mr Desai was reported to have spoken with great warmth of the importance of the Commonwealth and the association of Britain and our country within the framework of that system. The generous phrases which the Deputy Prime Minister employed, we learn, not only came as a pleasant surprise to but also made a profound impact on his British audience. We should like to believe that Mr Desai's observations will be the beginning of a new era, to use his words, of "mutual understanding, mutual accommodation and mutual respect" between Britain and our country. If Indo-British relations develop in this manner, they will not only function as a fertilizing force within the Commonwealth but also exert a healthy influence on relations with the countries of western Europe, since sooner or later Britain is bound to participate effectively in

the co-operative patterns of co-existence on the European continent. Even as it is, we have been developing active bonds of friendship and co-operation with the various European countries, notably West Germany, France and Italy. Perhaps an area of Europe which we could cultivate more intensively than we are doing now is Scandinavia. We have rightly been giving much thought and effort to get to know Yugoslavia better. In the same way, we should show a high degree of interest in Sweden and some other European countries with whom there could be closer understanding. Such efforts could be fruitful in many fields, notably economic and social.

There remains the central area of interest for our foreign policy, which is, clearly, our relations with the United States, on the one hand, and the Soviet Union, on the other. Here we have what is in many ways a triangular pattern, the essence of which has been lucidly captured by the US Ambassador in India, Mr Chester Bowles. Writing recently in his column in the *American Reporter*, Mr Chester Bowles chose the form of an open letter to the "Editor, Radio Peace and Progress" to express some remarkable objective and helpful views on the commonality of interest that the United States and the Soviet Union could discover in constructively befriending our country. We reproduce extracts from his appeal:

"For many years I have been convinced that the peace and progress of our world depends in large measure on the

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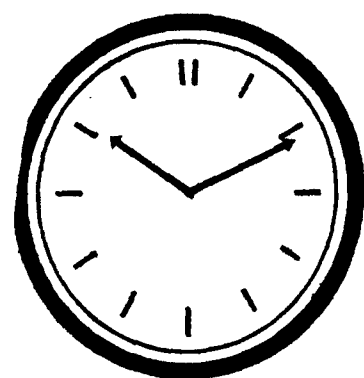
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ability of your country and mine to work together in a constructive manner.

"Obviously we cannot expect agreement on all of the complex questions of our present-day world. Our political and economic philosophies are different and, inevitably, we see some issues from a different perspective.

"In regard to India, however, there is every reason why our legitimate national interests should closely coincide, i.e., to support India's own massive drive to achieve political stability and economic progress, with an increasing measure of social justice....

"However, our ability to work together in helping to speed Indian economic development is being undermined by the series of hostile broadcasts now being beamed into India over 'Radio Peace and Progress' which contain slanders against my government and my people.....

"I am writing to ask you to consider whether such broadcasts are serving the best interests of your own country and of the people of India.....

"Why not forgo these bitter attacks and join in a common effort to establish closer understanding among the peoples of India, Russia, and the United States, who together constitute nearly one-third of mankind?

"Working together, the USSR and the United States can play a crucially important role in helping India to achieve a greatly improved standard of living and broader opportunities for all its people."

May we suggest that, for our part, it should be the purpose of our foreign policy, in its relation to the United States and to the USSR, to help establish this triangular pattern of participation in the economic development of this country which Mr Chester Bowles has so eloquently advocated as being in the best interests of the United States, the USSR and ourselves? It

is true that over the years our foreign policy has been generally successful in developing friendly relations and a high degree of understanding with the United States, on the one hand, and the Soviet Union, on the other. This has not been an easy task but it has certainly been a rewarding one. But good as our performance has been, it could be even bettered in the future. An important condition of this improvement would be for our own government to make it clear through its words and deeds that our country and its politics are not to be considered ever as being among the spoils of any cold war among the great powers. Once we succeed in implanting this truth firmly in the minds of the foreign statesmen concerned, the tendencies which the US Ambassador in India deprecates in an agency of the Soviet government will be decisively discouraged from whatever quarter they are to be feared. It is here that our diplomacy needs to be disciplined by thoughtfulness and mature political judgment. It needs to be said that these qualities have not always been to the fore in the functioning of our foreign policy, our government's pronouncements from time to time on Vietnam being only one example of the failure of its diplomacy to conform to the exacting standards of national interest. In the difficult and dangerous world we all live, the friendship of the United States, as well as of the Soviet Union, is of the greatest importance to us whether we are thinking in terms of our continuing political stability or an earlier recovery from the break-down in our development effort.

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THE AILING ECONOMY

Wanted: A New Deal

PROVIDED A firm domestic policy for maintaining law and order and national security and an enlightened foreign policy which will earn the co-operation of friendly nations could be counted upon, our country may hope to attempt the task of economic recovery in a favourable context. This policy must start with a new deal for both domestic and foreign capital. This would mean primarily that politics should be eschewed from the government's handling of the nation's economic affairs. Our economy has suffered a great deal from political meddling and political pressures. The sensible and energetic plans of a former Minister for Food and Agriculture, Mr C. Subramaniam, for instance, were frequently in danger of being wrecked by politically-motivated opposition to the proposal for encouraging the expansion of the fertilizer industry in our country with the participation of both foreign and domestic capital and management. It was only after some valuable time had been lost and a certain distrust generated about the government's intentions that even a reasonably liberal deal could be secured for promoters in this essential field. The government, however, is yet to sort out the tangled web of its policy for the petroleum industry. The expansion of refining capacity in the private sector is being objected to in a manner which helps neither the healthy development of the oil industry nor the larger economic interests of the country, particularly with reference to the flow of foreign capital into our economy.

Campaign of Slander

It is, however, the domestic entrepreneur who is bearing the brunt of political pressures and manoeuvres. For some months now—and especially since the last general election—a campaign of slander, vilification and character assassination has been deliberately organised and is being carried on from every position of political vantage against business houses and business leaders. The pretext for this campaign is that there is a growing concentration of wealth and economic power in the country as a result of big business becoming bigger and bigger through the manipulation of its political influence to secure patronage and favours from ministers and officials. The merchants of disaffection have conveniently forgotten that, if there is a certain involvement of business with government or government with business, it is precisely because of the state of affairs which Rajaji has been denouncing as a "permit-licence raj". They refuse to see that their advocacy of more extensive and stringent controls on industry and trade, if accepted, would only further strengthen and vitiate this permit-licence raj. It is now clear that this crusade against big business is not what its ministers and their minions would like to make it appear to be. It is, in fact, a back-door political action by certain leftist or otherwise disaffected

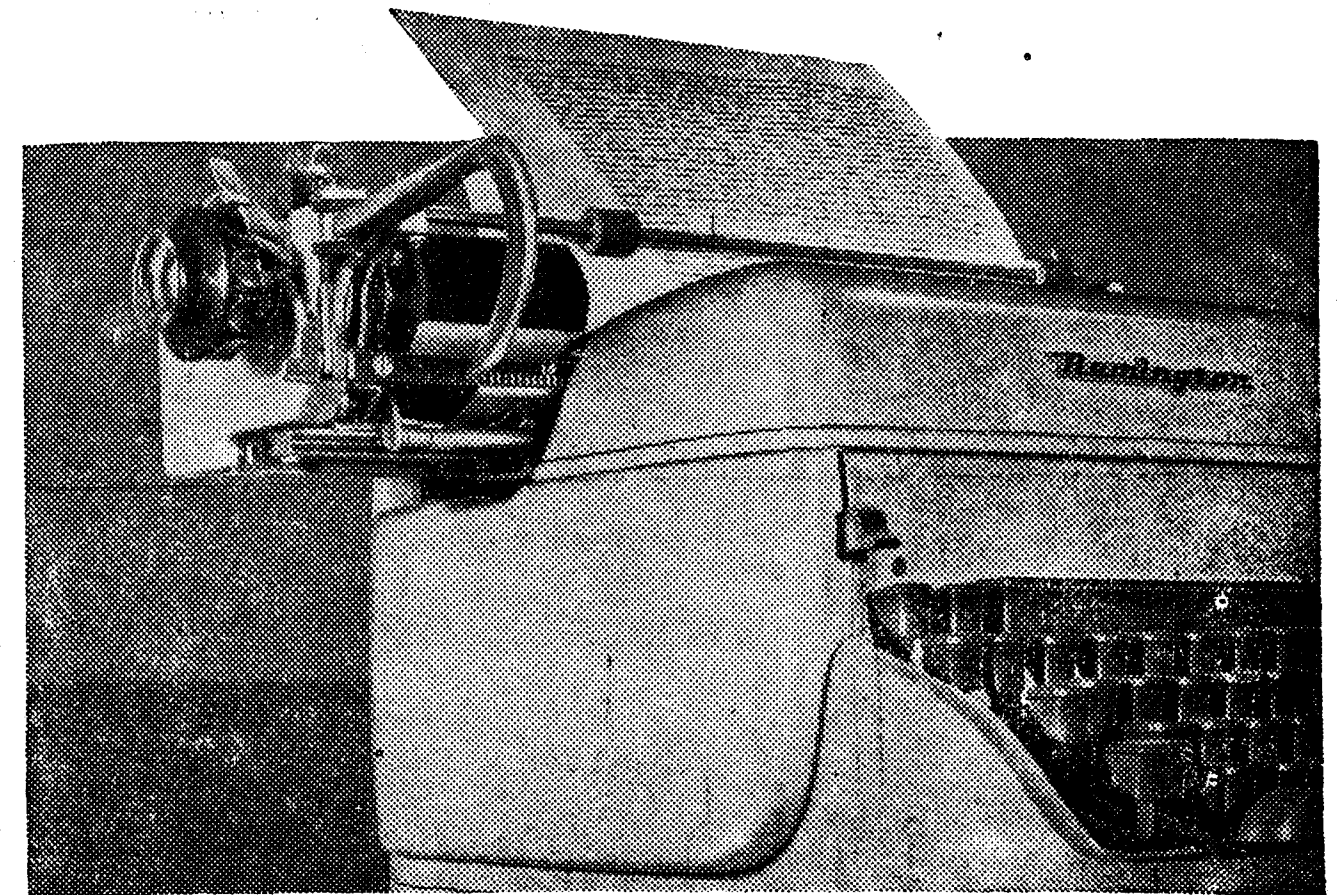
elements in our country which have seen their economic arguments for a larger dose of dogmatic socialism fail to carry conviction with the public. It is because it has become difficult to maintain that the efficiency, productivity and growth of the economy could be improved by an extended resort to socialist policies that these politicians and political factions have changed their tactics and are now hoping to play on the ignorance, gullibility or discontent of sections of the community and thereby whip up an atmosphere of resentment and hostility towards the entrepreneurial class.

Bureaucratic Grip

This campaign has now reached a point where enterprise or efficiency shown in expanding production or establishing new industries is being represented as a crime against the community. It is unfortunate that responsible political parties and their leaders have failed to exert themselves to stem this rot. It is even more unfortunate that the central government, in its higher leadership, should be hesitating to act cohesively in countering this organised attempt to discredit and demoralise the dynamic elements in the business community. To make matters worse, the central government seems to be softening under these destructive pressures. For instance, the demand for the nationalisation of the banking system has been conceded at least up to the point where the Finance Ministry and the Reserve Bank have been forced to sponsor a scheme of greater government regulation of the banking system under the label of "social control". The government's bureaucratic grip on general insurance is to be further tightened. It has also been indicated that the central government has decided to abolish the managing agency system by 1963. Finally, a definitive statement of government policy on the permissibility of foreign capital has been threatened. The merits of these measures apart, the circumstances under which they are being initiated or thought of represent a victory for political blackmail which bodes ill for the climate for industrial expansion. It is undeniable that the cumulative effect of these developments will be to demoralise domestic capital and enterprise and deter their foreign counterparts. It follows that, if the government and political leaderships in our country do not call a halt to this dangerous drift, it will become so much more difficult for our economy to pick up, business activity to recover or industrial expansion to be resumed. Business confidence has been gravely damaged by the political postures now popular among certain politicians or political parties and it is not too soon now for responsible leaders in government or elsewhere to start setting things right.

Next in importance is the need to lift the dead hand of bureaucracy off the economy. The economic

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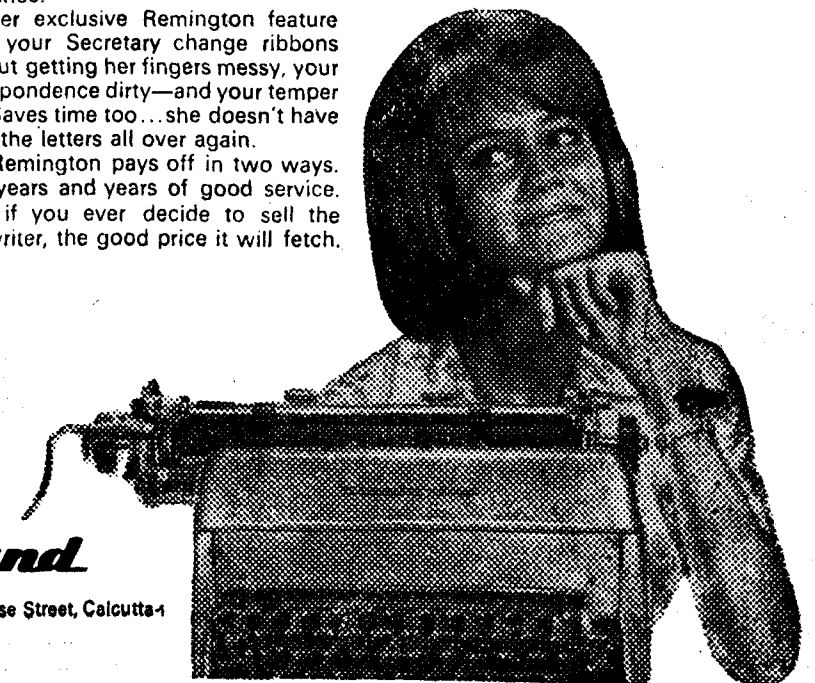
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and regulatory ministries of the government have been progressively loaded with so many duties and responsibilities that an administrative break-down has, in some ways, preceded and to a certain extent prompted the break-down in the economy. There have been proposals and even plans for simplifying or improving administrative procedures. Well-intentioned though they may have been, their results have not been impressive. This is because there is a basic contradiction in the government wanting to do away with bureaucratisation while persevering with the elaborate machinery of controls and regulations. It is highly desirable that this issue should be faced squarely. The bureaucratisation of the economy can be eliminated only if there is an extensive dismantling of the structure of economic controls and regulations. A few useful steps have been taken both before and after devaluation but an expectation entertained in some quarters that post-devaluation policies will attempt to carry this process several steps further has not been fulfilled. The steel industry has been granted a considerable measure of decontrol and so also the coal industry. There has been partial decontrol of the distribution and prices of cement and sugar, but production and price controls continue to operate to an extent on the cotton textile industry, while government regulation of prices still applies to the paper industry. The government's reluctance to do away with most of these or other remaining commodity controls is not by any means easy to appreciate.

and certain other agricultural produce will have to be treated on a separate footing so far as physical controls are concerned. We disagree. On the contrary, to the extent that agriculture is plagued even normally by so many rigid elements which paralyse its responsiveness to market forces, it is least fitted to be loaded with government regulations and restrictions on production, prices or marketing. Unfortunately, even in periods of marginal shortages, there are tremendous social and political pressures coming into play compelling the government to apply controls. But the policy should always be to give the benefit of the doubt to a programme of decontrol as soon as adverse weather conditions disappear. It follows that, given the prospects of larger harvests in 1967-68, we are opposed to the continuance of stringent controls on foodgrains. We believe that the zonal system restricting movements of foodgrains across state borders is both unnecessary and undesirable in the present circumstances. The question is not whether government-fixed prices are fair to the grower, the middle man or the consumer. So long as there is no free market, every one of these interests is liable to entertain a sense of grievance and act in an artificial manner which is inimical to the restoration of a healthy balance in the foodgrain economy.

The grower will always feel that he is being prevented from getting more attractive prices which freer trading would give. As a result, he will be discouraged to produce more while being encouraged to hold on to what he has produced already. The middle man, for

Shortsighted Approach

At the same time, it must be said in fairness to the government that far too often the industrial interests concerned have been disposed to be shortsighted and to plead against decontrol mainly because the status quo may give them some temporary advantages. This has happened, for instance, in the sugar and paper industries. We would, therefore, plead both with the government and the industries concerned not to allow their particular vested interests to prevail against the long-term benefits that might accrue to our industrialisation through the withdrawal of commodity controls which only serve to distort the investment, production and consumption patterns resulting in a net loss of growth in the economy.

It may be argued in some quarters that foodgrains

EXPORTS DURING JUNE-SEPT. 1966 and 1967

Period	(Million dollars)		
	1966 (1)	1967 (2)	Rise or fall of (2) over (1) (3)
June	99.9	128.7	+28.8
July	102.3	136.1	+33.8
August	142.6	118.9	-23.7
September	129.9	148.9	+19.0
Total: June-Sept.	474.7	532.6	+57.9

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his part, will not be satisfied with government-fixed margins and will be under a constant temptation to make more money by contravening or at least getting around government restrictions. As for the consumer, given the fact that government rationing is just not able to provide him with supplies satisfactory in quality and sufficient in quantity, he too is liable to hunger for more normal conditions of food supply. Moreover, it has to be recognised that government-controlled distribution has never been able to meet even the basic requirements of all the people. In fact, even when there are food controls, people who have to fend for themselves in markets of varying degrees of grey-ness vastly outnumber those who are served by ration shops or even by fair price shops. It is, therefore, really no favour to the consumer to continue government controlled distribution except when there is a real and acute shortage of foodgrains.

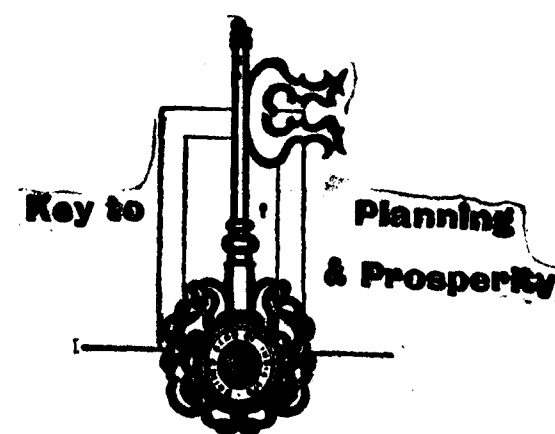
Decontrol as a Boost

There is also the fact to be considered that although the government seems determined not to reconsider the zonal system or other food controls it is, nevertheless, planning to import six million tonnes of foodgrains. Therefore, even the justification that the country should be enabled to do without imports is not available for the continuance of controls this year. The plea that a buffer stock has to be built up with the aid of food controls is not worth much. It has been our experience, not in one year but in many years, that the plan for a food buffer stock has never got off government files. In any case, if it is seriously intended to set up and maintain buffer stocks, the government could easily do it with three million tonnes of imports, while leaving the country in this good agricultural year to meet its domestic consumption out of domestic production. We are convinced that the decontrol of foodgrains at this stage would be a powerful boost both to the psychology and economics of the new agricultural strategy of stimulating the immediate as well as the long-term growth of the farm sector. As a matter of fact, decontrol would do more in this respect than the whole lot of promotion schemes for fertilizers, better seed and the rest.

While the withdrawal of commodity controls will go a long way towards reducing the bureaucratisation of the national economy, it is also necessary to complete the process by abolishing various other administrative and licensing procedures, particularly those applying to industrial expansion schemes or new industrial ventures. Despite the efforts made by the government in this area during the administration of the late Lal Bahadur Shastri and subsequently, it is still a fact that time-consuming procedures and, worse still, a multiplicity of government agencies and government officials of varying degrees of importance (who are involved in the making of decisions even on points of detail) are obstructing essential industrial activity almost at every point. This difficulty is felt to a greater extent by foreign collaborators than by domestic entrepreneurs

and we have heard it said by those who are affected that this ubiquitous presence of the bureaucracy, which forces investors and entrepreneurs to pay court to numerous divinities in the central government and even in state governments and to wait on their pleasure, is even more of a deterrent than our fiscal system or political attitudes. In this context, we would urge that industrial licensing, capital goods licensing and capital issues control could, in fact, be abolished without any harm to any identifiable national interest. The argument that these regulations are needed to prevent an excess of foreign exchange commitments, if it had any force at all at any time, is no longer valid in the current context of economic recession and industrial stagnation. There is, moreover, the possibility that to the extent that the withdrawal of these regulations would stimulate the flow of foreign capital, the balance of payments stands to gain, a possibility which, even as a short-term consideration, should be an attractive prospect in our economic difficulties.

With regard to foreign private investments particularly, it should be the aim of our government to move towards an open-door policy. There is little to be gained by continuing the current "don'ts," while much may be lost if new "don'ts" are to be added to them. It cannot be too strongly emphasized that there is nothing like a flood of foreign capital waiting to swamp our eco-



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mony. There are after all very few countries in the world with large capital surpluses to export. As a matter of fact, the United States is the only country which is in a position to contemplate a net outflow of business capital on any considerable scale and even the vast economy of the US is currently under pressure because of a deficit in the balance of payments brought about mainly by military and aid expenditures abroad. Britain, which is a traditional exporter of venture capital, is also being forced to retreat steadily from this historic role. West Germany and Japan, however keen their desire may be to expand their industrial and trade activities abroad, are restricted in their initiatives by the non-availability of capital surpluses for export.

Foreign Capital

In the circumstances, it would be a folly on our government's part to persist in going through the motions of defending our economy against the threat of inundation by foreign capital. On the contrary, what is required is to enhance such attractiveness as our country may possess for foreign capital through every means open to us. Fortunately, we do have some advantages in this respect such as our political stability which, despite our current distempers, compares favourably with conditions in most other developing countries. There is also the reassuring value of our democratic system of government which counts for much in the western scheme of values. On the economic plane, there is a vast potential market in our country of over 500 million for the goods and services of modern industry. The scope for the economies of mass production and marketing is immense and modern industry, it need hardly be emphasized, has its growth firmly tied to rising standards of consumption in populous communities. Many foreign investors and entrepreneurs are also favourably impressed by the variety of raw materials in our country and the abundance of manpower, unskilled, semi-skilled or skilled. Indeed, the fact that our schools, colleges and technical institutes are turning out thousands and thousands of young men from whom industry could easily draw its manpower requirements of various descriptions is, in stock exchange terms, one of the big bull points in favour of our economy in the eyes of the foreign investor or entrepreneur.

If, in spite of all this, our country is receiving less than its share of foreign investments from sources such as the United States, the conclusion must be that our political attitudes and government policies are less than helpful. We believe that it is utterly wrong for our government to prescribe time-limits for foreign collaboration, as they had done in the case of the fertilizer industry. We believe that it will be an even greater folly if our government chooses to commit itself through a rigid policy statement, to restrict or keep out foreign capital or entrepreneurial participation in our industries. It is sometimes argued that we have got to be on our guard against foreign penetration in what are described as vital industries. We rather feel that the argument should be the other way about. To the extent that these industries are usually highly demanding of

capital, advanced technology and sophisticated managerial skills and to the extent that their rapid and efficient growth is needed for our economic progress very few restrictions, if any, should be placed on foreign investments seeking to be associated with their development. Had our government, acting under political pressures, not played a dog-in-the-manger role in the late 'fifties and the early 'sixties, the fertilizer industry, for instance, would certainly have grown much more rapidly with the aid of private capital and enterprise, both domestic and foreign. The Ministry of Industrial Development has been threatening, for some time, to come forward with a definitive statement on the government's policy towards foreign collaboration. It is difficult for us to be enthusiastic about this declaration of intent. We are afraid that, with the government so much the creature of political pressures, this statement is more likely to be a negative one than a positive and expansive gesture which it is in our country's interest that the government should make towards foreign private investments.

A realistic policy for foreign capital becomes all the more necessary when this issue is considered in the context of a declining trend in foreign government aid juxtaposed to a rising curve of our foreign exchange requirements. For two years now development assistance through the World Bank Consortium has been restricted to non-project or maintenance imports and no resources are therefore forthcoming from this source for new economic development or industrial expansion. There is no indication that project aid will be resumed next year or indeed in the year after. On the contrary, it is more than possible that even the aid for maintenance imports will not continue at the current level indefinitely. We are aware that there is a movement for persuading the developed countries to devote

OUTSTANDING FOREIGN INVESTMENTS IN INDIA (Rs crores)

		At the end of March		
		1963	1964	1965
Country-wise				
UK	...	488.0	502.0	529.3
USA	...	113.4	154.6	193.2
Germany, West	...	23.0	21.8	24.5
France	...	10.4	16.8	19.7
Switzerland	...	15.3	16.6	18.1
Italy	...	9.4	10.4	14.2
Japan	...	9.9	12.2	13.6
Canada	...	7.7	8.8	10.5
Sweden	...	7.5	8.0	8.1
Other countries	...	102.2	105.0	104.6
Total	...	786.9	856.2	935.8
Industry-wise				
Plantations	...	111.3	115.6	121.1
Mining	...	15.9	13.8	12.1
Petroleum	...	165.7	162.4	177.8
Manufacturing	...	354.6	408.9	458.6
Services	...	139.4	155.5	166.2
Total	...	786.9	856.2	935.8

Source: Reserve Bank of India.

one per cent of their gross national product to development aid. It is not unlikely that some advance will be made in this direction at the annual session of the UN Conference on Trade and Development which is to be held in New Delhi in February. It should not, however, be forgotten that the queue of aid-seeking nations is also growing while each member in the queue is building up his own case for more aid. Therefore, our dependence on economic aid from foreign governments or from international institutions, which obtain a large part of their resources from governments, will have to be deliberately reduced and our capacity for doing this will be partly determined by our success in attracting into our industrial development a greater flow of foreign private capital.

There is now a break in the series of five-year plans. The government hopes to launch a fourth plan in April 1969. Meanwhile, there would still be need for some kind of programming of development—at least the development of the high-priority industries. It is surely not possible to decree that they should not expect to look beyond the next 12 months. Industries, such as fertilizers, pesticides, special purpose steel, aluminium and non-ferrous metals generally, petrochemicals and cement to mention some, surely need to draw their schedules of expansion at least within a three-year framework of reference. We, therefore, urge on the Planning Commission and the central ministries concerned to get to work immediately on a series of three-year develop-

ment or expansion programmes for a limited number of essential industries so that adequate resources could be organised and applied in a systematic way towards the realisation of the targets of capacity or production which may be sought for them. The disruption of our five-year planning should not be allowed to come in the way, either, of the urgently needed modernisation programmes in industries, such as cotton textiles and raw jute. In their case, a system of long-term government financing has to be devised for supplementing the resources available within the industries concerned for the rehabilitation or replacement of their equipment.

Reorganising the Public Sector

A good deal needs to be done quickly too towards avoiding losses and increasing the earnings in the public sector of industry. It has been generally admitted that, even after all the relevant circumstances have been allowed for, government-owned and/or government-managed industrial undertakings are failing to earn a reasonable return on the capital invested in them. In fact, the failure of the public sector of industry to contribute to capital formation has been one of the significant contributory factors to the stringency of resources available in the economy for further development. It will be broadly true to say that government industries are doing badly because of poor management. Currently, a creditable effort is being made by the Minister for Steel, Mines and Metals to improve the organisation, particularly managerial, of the steel plants in the pub-



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lic sector. The progress of Dr Chenna Reddy's efforts will be watched with interest. He should also give similar attention to the affairs of the National Coal Development Corporation. It seems to us that the time has come for drastic decisions to be taken for closing down the uneconomic or wasteful operations of this corporation and turning over some of its mining rights, mining areas and mining equipment to the private sector for more profitable exploitation. There has clearly been much over-capitalisation in this case and unless this is remedied, the prospects of the National Coal Development Corporation becoming reasonably profitable are remote indeed.

Surgery Needed

The Fertilizer Corporation of India, which masterminds the fertilizer plants in the public sector, is another body which needs surgery of the kind which is being attempted in the case of Hindustan Steel which presides over the government steel plants. Unfortunately, Mr Asoka Mehta, in whose ministerial jurisdiction the fertilizer industry falls, is no Chenna Reddy and it is therefore, not realistic to expect much from him by way of a practical endeavour to improve leadership or management in the Fertilizer Corporation. Much of this would also apply to the public sector in petroleum (which, again, happens to be a property in Mr Asoka Mehta's portfolio) and the government's heavy electricals plant in Bhopal and heavy engineering project in Ranchi.

In the area of exports, again, the absence of a five-year plan should not be pleaded as a justification for there being no organised or forward-looking effort. We may concede that exports may begin to look up in the coming months, but there is certainly no room for complacency. It cannot be taken for granted that our export trade will gather sufficient momentum just because the rupee was devalued in June 1966 or crop prospects have brightened up this year. There seems to be no end in sight to the lean days through which our export trade in cotton textiles is passing. In the case of jute goods, the heavy export duties levied by our government seem to be reinforcing the adverse impact of government-subsidized competition from Pakistan's jute industry. In tea, the problem of low unit prices remains serious. There are few signs that the government sees its way clearly to co-operating constructively with these industries to improve matters. On the other hand, a defeatist attitude seems to be prevailing and it is apparently being assumed that the traditional export trades should give up ambitions of growth.

Even with regard to the newer export industries, it seems as if a great deal is being left to chance. It is true that there have been encouraging performances by a number of industries, such as engineering, both heavy and light, tyres and tubes, automobile components, cables and, to some extent, machine tools. For this credit is due to enterprise on an individual scale. Never-

theless, if the export sector, both traditional and non-traditional, is considered as a whole, there is surely great inadequacy of organisation in salesmanship and marketing. It has been far too often argued that, provided domestic consumption is restricted and enough export surplus is created, our sales to foreign countries will thrust forward. Currently, due to the recession in the economy, home demand has fallen off for many goods, resulting in capacity or production being released for export. We see no evidence that this development has made any big difference to our export effort.

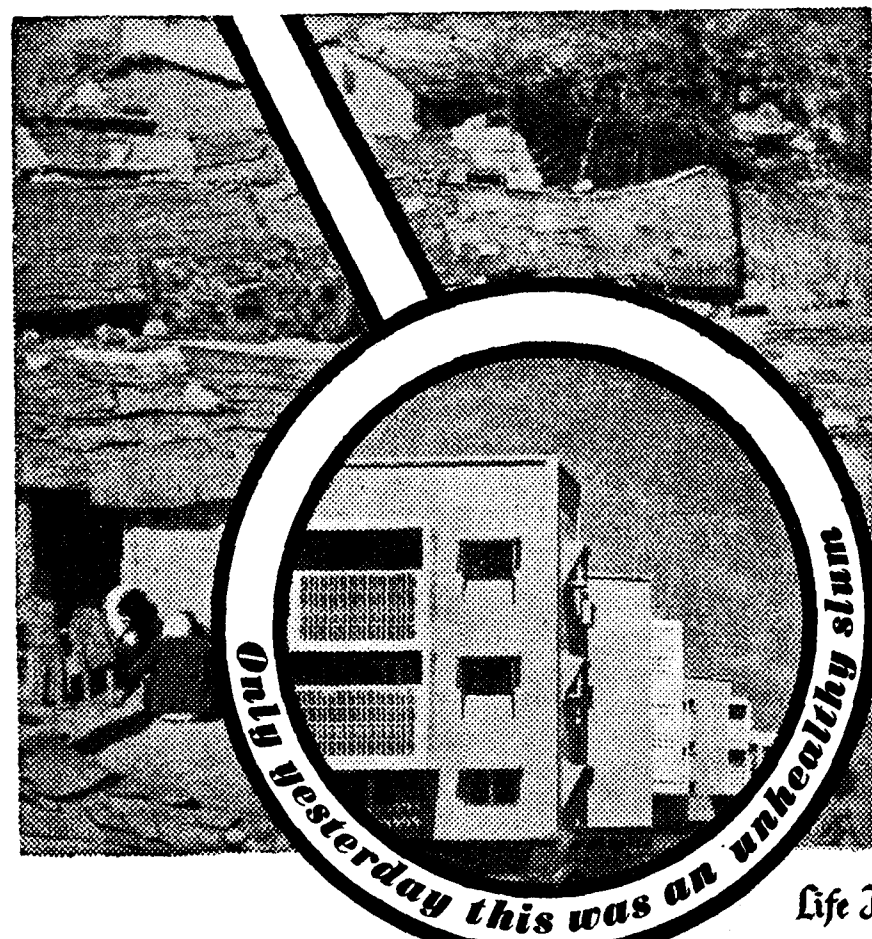
Discovering the Markets

Take, for instance, the case of machine tools. There is surely capacity in Hindustan Machine Tools or elsewhere for production for export; only the markets and customers remain to be discovered, although our manufactures may be competitive in terms of quality and price. We believe that the importance of competent export marketing has not been sufficiently recognised in our country. Unless this is done, production or prices will go only a small way towards helping our export effort. Our government as well as the governments of other developing countries are expecting a great deal from the New Delhi session of the UNCTAD. It is possible that their hopes may be realised to some extent since the current opinion among the developed countries seems to be running in favour of preferential treatment of manufactured goods exported by developing countries. But the winning of an argument will mean little if we are not able to organise our export trade in a way which is effective in terms of modern, sophisticated, competitive selling in international trade. Here, again, is an area of the economy where neither the government nor the export industries can afford to let the weeds grow simply because the country has been asked to wait for a fourth five-year plan.

Again, just because the government is financially not in a position to carry on with the business of development for some time to come, it does not necessarily follow that the country should accept a freeze on growth in the private sector. On the contrary, the government's failure in mobilising and using resources for development makes it all the more essential that the private sector should be given more scope to realise its potential. This means, above all, that the government's fiscal policy should give up acting like the old man of the sea. It cannot be too strongly emphasized that, although the government has decided that it cannot step up its investment on industrial expansion, the tax burden which has been progressively increased from year to year in the name of planning is still very much there. Even the excuse that the additional fiscal resources are needed for defence is now wearing thin since the government has now resolved to step down its proposed spending on a five-year defence plan. In other words, under the new dispensation, the economy is to get less defence and less development but is, at the same time,

being called upon to continue to bear all the extra taxation which has been specifically imposed in the name of more development and more defence. This is altogether a deplorable state of affairs and the responsibility for this rests squarely on the government since all this is because the government has lost control of its administrative and other non-development expenditures. Worse still, this loss of control is leading to budgetary deficits which the government evidently will be forced to meet through a combination of increased taxation and deficit financing. In the circumstances, the centre's protestations that state governments should live within their means and not have recourse to continuous or cumulative overdrafts from the Reserve Bank, cannot be expected to carry any weight. Even as it is, Mr Morarji Desai's much-advertised programme of disciplining spending by state governments has been largely still-born.

The danger in this situation is that, being unable to control its spending, the government may make more and more inroads into the productive savings of the community both through fiscal measures and continued deficit financing. If this happens, industrial expansion



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These were some LIC investments as at 31st March, 1967:	
Loans to State Govts. for Housing Schemes	Rs. 83,33.74 lakhs
Loans to Co-operative Housing & Finance Societies	Rs. 29,41.50 lakhs
Cement	Rs. 9,92.47 lakhs
Electricity	Rs. 12,76.37 lakhs
Iron & Steel	Rs. 17,07.53 lakhs

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in the private sector will be particularly affected at a time when the need for it has become all the greater, thanks to the government freezing or reducing its commitments relating to investment outlays on the economy. This is a contingency which must be countered by vigilant and informed public opinion. In other words, the importance of a liberal fiscal policy, which would stimulate savings and investments in the private sector, is greater than ever before. Only if activity in the private sector is stimulated by a favourable fiscal climate, there can be any hope of at least a certain degree of economic growth being secured during these lean years when the government is in no position to think of another five-year plan.

Diminishing Returns

Even from the revenue point of view, the government's taxation measures, as has been frequently pointed out, are now deep in the region of diminishing returns. Instead of seeking to secure more revenue out of an increasing gross national product, the government has shortsightedly settled for squeezing a slackening or stagnant economy. This has proved to be a self-defeating policy. It has been often argued by the Finance Minister that, in view of the vast financial requirements of the government, it is in no position to forgo any source of revenue. This argument begs the question since the government, in any event, is unable to improve its revenue in the context of an economic recession for which its fiscal policies are partly responsible. As a result, there is and there will continue to be deficit

financing and the government cannot therefore plead financial orthodoxy or financial rectitude on its part as an explanation for its greedy fiscal policies. On the contrary, since the government's fiscal policies are meeting with diminishing returns, this is precisely the time for it to liberalise taxation so that any immediate loss in revenue could be quickly made up by increased receipts from a recovered and resurgent economy. In our view, a recasting of tax policies for promoting savings, both personal and corporate, and encouraging investment in industrial expansion, will be the most important part of the kind of new deal which our current economic circumstances demand.

In conclusion it may be stated that it will be futile to expect that the recession will end or that economic recovery is just around the corner mainly because crop prospects have improved. The seasonal fortunes of agriculture are not by any means the determining factor of economic dynamism or growth. It is only rapid and vigorous industrial growth over an uninterrupted period of years which will really help our economy to take off. This heightened industrial activity can be brought about only through a change of government policies, particularly in the areas of state regulation of business activity and the taxation of personal and corporate earnings. The essence of the analysis and arguments of the preceding pages, therefore, is that, if these changes are not made now, the responsibility for the continuance of mass poverty or mass unemployment in our country will rest squarely on the government.

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THE AILING ECONOMY

A Statistical Appendix

ADDITIONAL TAXATION BY STATES

(Rs crores)

State	Third Plan Target (1)	Total yield during third Plan (2)	% of 1966-67 (2) to (1) (3)	1966-67 (4)	1967-68 (5)
Andhra Pradesh	53.0	47.4	89	6.0	2.7
Assam	16.0	13.9	87	0.3	1.7
Bihar	50.0	24.0	48	2.3	2.4
Gujarat	29.0	44.1	152	0.1	0.6
Haryana	—	—	—	—	2.8
Jammu & Kashmir	8.0	6.1	77	0.3	0.4
Kerala	23.0	26.2	113	—	4.5
Madhya Pradesh	48.0	32.3	67	2.8	4.9
Madras	45.0	56.8	126	—	5.2
Maharashtra	52.0	79.2	152	0.5	2.4
Mysore	42.0	38.3	91	0.5	3.5
Orissa	23.0	32.7	142	1.8	1.3
Punjab	40.0	52.5	131	0.8	3.3
Rajasthan	32.0	31.2	98	0.4	3.5
Uttar Pradesh	109.0	89.7	82	0.4	—
West Bengal	49.0	41.4	104	3.9	—
Total	610.0	615.7*	101	19.9	39.2

* Including yield from revision of inter-state sales tax.

DEVELOPMENT AND NON-DEVELOPMENT EXPENDITURE OF CENTRE AND STATES (On Revenue Account)

(Rs crores)

Year	Development expenditure	Non-development expenditure
1960-61	703.21	927.48
1961-62	802.11	1042.06
1962-63	896.45	1273.83
1963-64	960.19	1616.54
1964-65	1121.26	1685.50
1965-66	1328.60	1991.15
1966-67 (R.E.)	1503.14	2388.04
1967-68 (B.E.)	1734.14	2502.28
Percentage change of 1967-68 over 1960-61	+146.6	+169.8

DEVELOPMENT AND NON-DEVELOPMENT EXPENDITURE OF CENTRE AND STATES (On Capital Account)

(Rs crores)

Year	Development expenditure	Non-development expenditure
1960-61	531.51	119.01
1961-62	612.08	79.03
1962-63	773.13	101.33
1963-64	912.64	191.90
1964-65	988.68	184.95
1965-66	972.77	239.94
1966-67 (R.E.)	959.00	515.76
1967-68 (B.E.)	961.56	331.25
Percentage change of 1967-68 over 1960-61	+80.9	+178.3

UNITS OF MEASUREMENT

One metric ton	: 0.9842 long ton
One kilogramme	: 2.2046 avdp. pounds
One metre	: 1.0936 yards
One kilometre	: 0.62137 mile
One hectare	: 2.471 acres
One lakh	: 100,000 (one hundred thousand)
One crore	: 10,000,000 (ten million)
one billion	: 1,000,000,000 (thousand million)

VOLUME OF DEFICIT FINANCING

(Rs crores)

Period	Amount
First Plan	260
Second Plan	1177
THIRD PLAN:	
1961-62	181
1962-63	180
1963-64	212
1964-65	162
1965-66	398
Total	1133
1966-67	223

POST DEVALUATION IMPORTS

(Million dollars)

Period	1965-66 (June-May)	1966-67 (June-May)	Percentage fall in 1966-67 over 1965-66
First Quarter: June-Aug.	786.4	564.5	-29.1
Second Quarter: Sept.-Nov.	743.0	652.0	-12.2
Third Quarter: Dec.-Feb.	640.4	614.5	-4.0
Fourth Quarter: March-May	838.8	793.7	-5.4
Total: June-May	3018.6	2624.7	-13.0

ITEMS* SHOWING FALL IN EXPORT EARNINGS (Value in million dollars)

	June-March	
	1966-67	1965-66
Jute manufactures	277.8	330.2
Tea	197.0	227.7
Cotton piecegoods (Mill-made)	60.9	83.9
Cotton piecegoods (handloom)	7.7	14.0
Tobacco unmanufactured	17.7	28.3
Pepper	13.5	19.6
Art silk fabrics	2.4	8.7
Coffee	16.1	21.7
Vegetable oils	2.7	6.6
Mica	16.0	19.9
Raw wool	7.5	11.5
Engineering goods	25.7	29.8
Chemicals and allied products	11.8	15.2
Mineral fuels and lubricants	13.7	17.0
Sugar refined	12.2	15.8
Manganese ore	14.8	19.0
Cotton yarn	9.9	11.9
Lac	6.8	8.0

* Major items only.



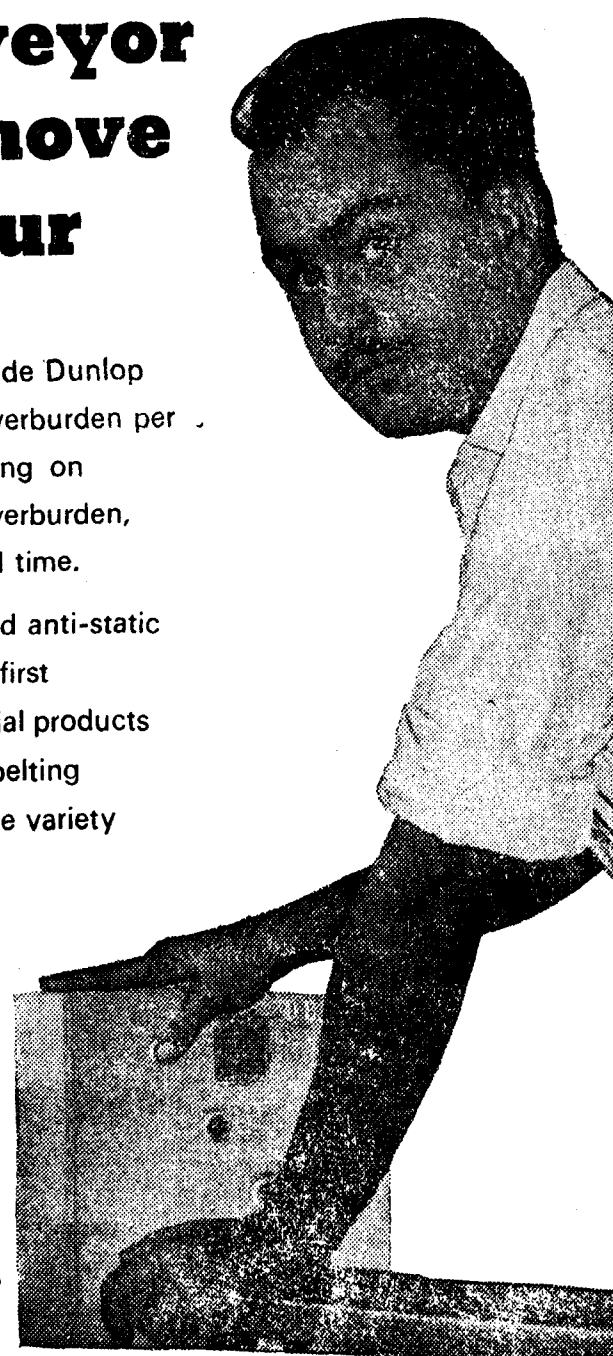
race against time : India's widest conveyor belts, by Dunlop, move 4700 tonnes per hour

At the Neyveli Lignite Project, a complex of 1500 mm wide Dunlop conveyor belts will carry an enormous 4,700 tonnes of overburden per hour at a belt speed of 240 metre per minute. Operating on shiftable conveyors and handling lumpy and abrasive overburden, these belts—widest in India—cut both transport cost and time.

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Wherever India's engineers and workers are racing against time, Dunlop products help in some way or other, giving the power and speed to fulfil target on schedule.

DUNLOP INDIA
—keeping pace with India's Industries



TERMS OF TRADE
 (Base: 1958=100)

Year	Exports		Imports		Terms of Trade (5=2) (4)
	Volume index	Unit value index	Volume index	Unit value index	
1960-61	(1)	(2)	(3)	(4)	(5)
1960-61	100	110	128	96	115
1961-62	105	109	121	98	111
1962-63	112	106	131	94	113
1963-64	126	105	135	97	108
1964-65	132	107	146	99	108
1965-66	124	113	154	104	109
1966-67*	119	169	149	150	113

* These indices are based on the average for ten months (June 1966 to March 1967). Consequent to devaluation of Indian rupee on June 6, 1966, the figures for April and May 1966 have not been taken into account as they are not comparable with the post-devaluation figures.

INDEX NUMBERS OF INDUSTRIAL PRODUCTION
 (Base: 1956=100)

	General Index (unadjusted)	Percentage change over preceding year
1961	141.0	—
1962	152.6	+8.2
1963	165.8	+8.7
1964	177.0	+6.8
1965	186.9	+5.6
1966	191.6	+2.5
1967*	193.6	+1.1

* Estimated on the basis of eight months.

GROWTH OF CENTRAL GOVT. UNDERTAKINGS
 (Rs crores)

	No. of Units	Total Investments
At the beginning of:		
First Plan	5	29
Second Plan	21	81
Third Plan	48	953
1966-67	74	2415

Source: Bureau of Public Enterprises.

PROFITABILITY RATIOS OF PUBLIC AND PRIVATE SECTOR UNDERTAKINGS

Industrial Group	Gross profits/Total Capital employed				Gross profits/Sales				Net Profits/Net Worth			
	1958-59		1964-65		1958-59		1964-65		1958-59		1964-65	
	Govt.	Private	Govt.	Private	Govt.	Private	Govt.	Private	Govt.	Pvt.	Govt.	Pvt.
Iron & steel	—	7.38	2.50	14.81	—	14.59	9.82	16.53	—	11.94	0.49	10.63
Engineering	4.34	13.64	11.24	18.82	9.50	9.21	21.71	11.89	3.63	9.32	10.55	13.26
Chemicals	10.73	9.06	3.09	17.41	35.31	9.03	11.10	15.93	6.77	6.28	3.67	12.23
Shipping	—	5.18	6.17	4.96	—	10.60	14.38	9.54	—	6.16	6.01	5.46
Mineral oils	—	17.87	4.22	13.19	—	20.90	4.51	17.96	—	11.70	3.18	6.97
Coal mining	1.77	13.36	0.79	8.82	5.20	9.09	-4.74	6.30	2.15	6.76	-3.19	4.75
Paper	11.71	15.27	11.16	8.58	24.97	14.42	20.03	10.24	10.63	10.68	6.39	6.00
Trade	43.64	12.43	26.78	15.32	7.77	3.64	4.68	5.43	35.04	7.14	12.83	9.24
Total	8.43	10.59	3.61	15.42	10.44	10.37	8.63	11.72	6.45	9.77	2.11	10.67

(5.73)

(8.48)

(5.31)

Figures in brackets are exclusive of Hindustan Steel Ltd.

Source: Economic & Scientific Research Foundation.

INVESTMENTS IN CENTRAL GOVT. UNDERTAKINGS
 (At the end of 1965-66)

CATEGORY-WISE		Amount
Undertakings under construction		331.7
Running concerns—Hindustan Steel Ltd.		960.1
Running concerns—Other than Hindustan Steel Ltd.		899.2*
Promotional and Developmental Undertakings		217.1†
Financial institutions		6.9
Total		2415.0
INDUSTRY-WISE		Amount
Steel		981
Engineering		490
Chemicals		220
Petroleum		295
Mining & minerals		181
Aviation & shipping		120
Building & repairing ships		11
Miscellaneous		110
Financial institutions		7
Total		2415

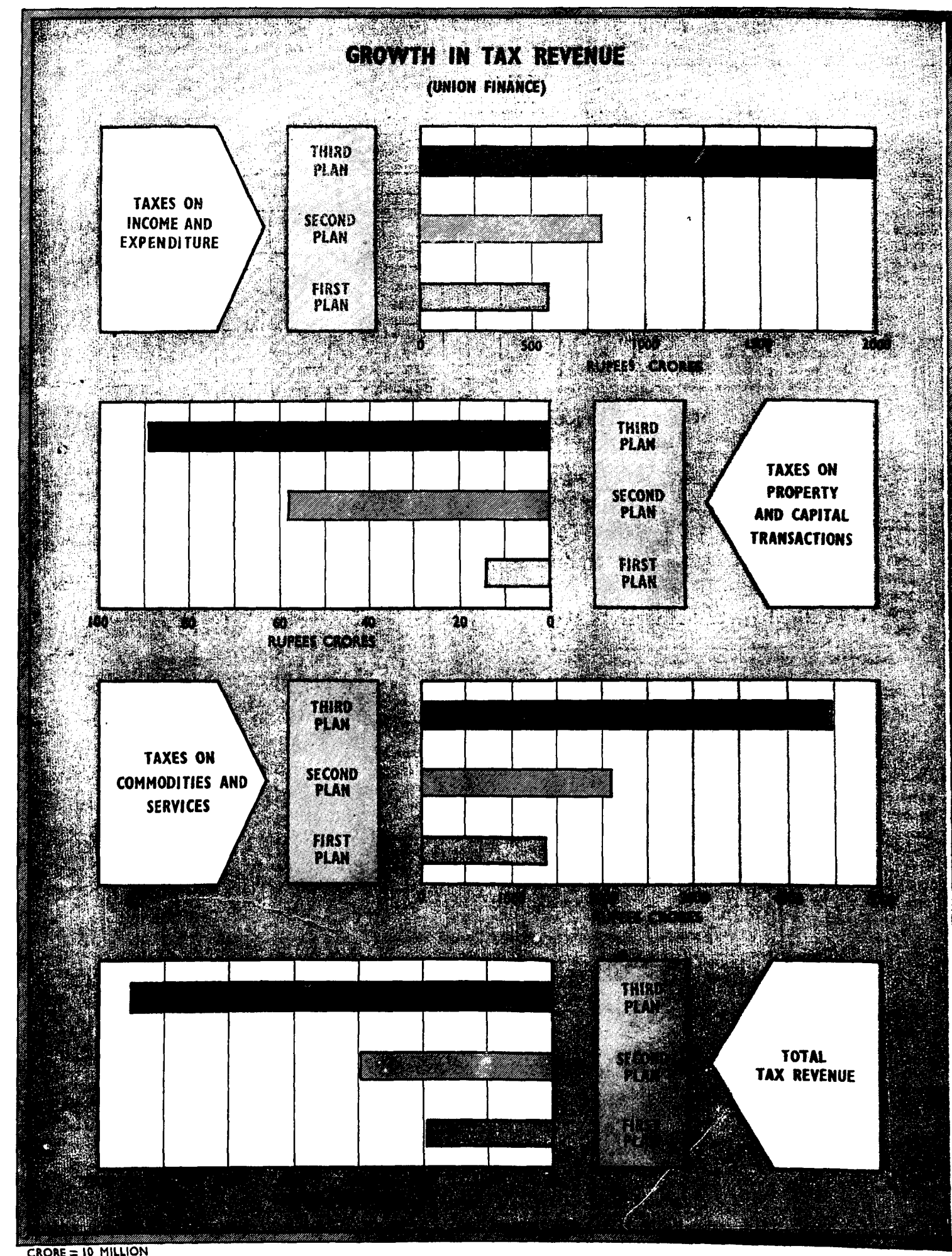
* This excludes Rs 1.00 crores invested in a subsidiary company.

† Excludes Rs 0.96 crore invested in a subsidiary company.
Source: Bureau of Public Enterprises.

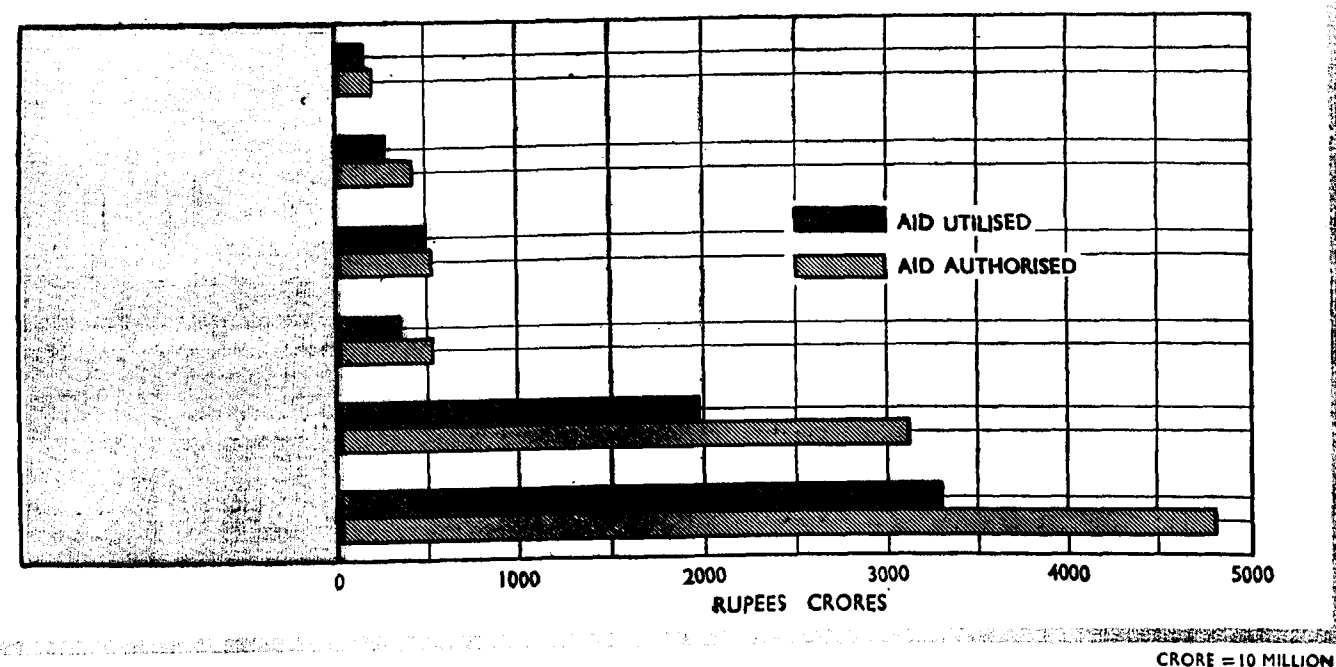
NET OUTPUT PER UNIT OF CAPITAL EMPLOYED
 (In Public & Private Sector Undertakings)

	1958-59		1964-65	
	Govt.	Private	Govt.	Private
Iron and steel	—	.1727	.0589	.3029
Engineering	.1920	.3380	.2767	.4209
Chemicals	.1210	.2432	.0755	.3152
Shipping	—	.1171	.1052	.1357
Mineral oils	—	.2205	.0691	.1633
Coal mining	.2226	.9652	.0665	.8673
Paper	.1519	.3169	.1709	.1960
Trade	.5054	.3249	.3270	.3592
Total	.1335	.2659	.1016	.3462

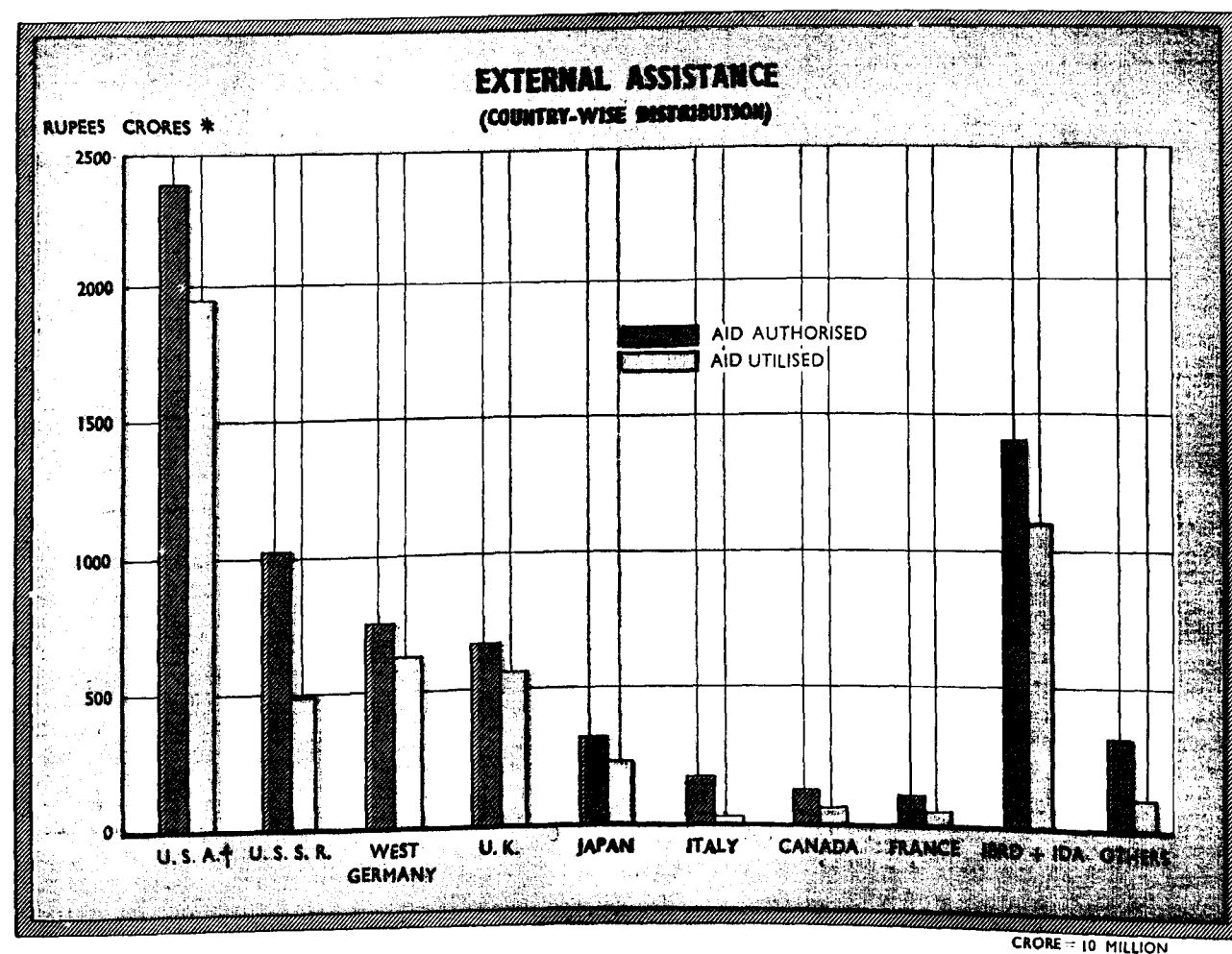
Figures in bracket is inclusive of Hindustan Steel Ltd.
Source: Economic & Scientific Research Foundation.



EXTERNAL ASSISTANCE (PURPOSE-WISE DISTRIBUTION) (UP TO MARCH 31, 1967)



Note: Distribution at pre-devaluation rates of exchange.



* At post-devaluation rates of exchange
† Other than P.L. 480
Note: Figures up to June 33, 1967.

A PROFILE OF INDUSTRIES

Fertilizer Plans Take Off

THE REVISED programme, initiated some four years ago, when the mid-term appraisal of the third Plan brought home the considerable lag in the implementation of the fertilizer manufacturing schemes, has, at long last, started yielding results. As many as five projects—Gujarat, Visakhapatnam and the Ennore plant expansion in the private sector and Gorakhpur and Namrup in the public sector—have been commissioned this year, raising the capacity for nitrogenous fertilizers to 895,300 tonnes in terms of nitrogen (N). The capacity for phosphatic fertilizers (P₂O₅) is expected to be augmented by March 31, 1968, to the extent of 120,988 tonnes with the completion of eight schemes—those of West India Chemicals, the Metal Corporation of India, Alembic Chemical Works, J.K. Cotton of Kanpur, Bharat Fertilizer Industries, the Phosphate Company of Calcutta, Dharamsi Morarji and Coromandel Fertilizers (Visakhapatnam). Some of these schemes have already been commissioned. Another 11,140 tonnes of P₂O₅ may be available as by-product di-calcium phosphate. The total phosphate capacity may thus reach 418,958 tonnes by the end of the current financial year.

No further capacity for nitrogenous or phosphate fertilizers may be added during the next financial year, but the capacity for nitrogenous fertilizers is expected to go up in 1969-70 by as much as 576,000 tonnes (N) with the commissioning of the Durgapur, Cochin and FACT (fourth expansion) projects in the public sector and Gujarat expansion and Delhi Cloth Mills' Kota plant in the private sector. The setting up of the DCM's Kota plant and the fourth stage expansion of FACT together with the completion of the scheme of Maharashtra Agro-Industries Corporation will raise the P₂O₅ capacity by 45,880 tonnes.

Additional Projects

In the subsequent year, 1970-71, four more projects—Madras, Namrup II and Barauni in the public sector and ICI's Kanpur unit in the private sector—will go into production. They will augment the capacity for nitrogenous fertilizers by 694,000 tonnes (N). As only the Madras scheme envisages production of phosphatic fertilizers also, the capacity for this product is expected to go up by 85,000 tonnes.

Thus, by the end of 1970-71, we should have capacity to produce 2,165 million tonnes of nitrogen and 549,838 tonnes of phosphorous pentoxide. This, however, does not include the projected first phase expansion of the Visakhapatnam project which is intended to raise this plant's capacity by 20 per cent through the process of removing bottlenecks. A letter of intent has been issued for this expansion programme and the company has to take out an industrial licence by March 31. If this expansion scheme materialises in about two years, as expected, we may have, by 1970-71, a capacity of the order of 2.18 million tonnes (N) and phosphate fertilizers capacity of the order of 564,838 tonnes.

So far as potassic fertilizers (K₂O) are concerned, some 2,000 tonnes of low-grade muriate of potash is currently being produced in the country. A small project for the manufacture of potash muriate from salt bitterns is under implementation at Tuticorin. But when it will go into production is not yet clear. Almost all the potash requirements of our agrarian economy at present are being met through imports. By 1970-71, the Visakhapatnam project is expected to undertake manufacture of potassic fertilizers from imported potash, as it is felt that, after two or three years of application of large dosages of nitrogen and phosphorous pentoxide, there arises a need to supplement potash in the soil. No other scheme for the pro-

duction of potassic fertilizers, however, has been licensed as yet.

The above facts should suggest that the availability of nitrogenous and phosphatic fertilizers from indigenous sources will improve considerably during the next three years. But it will be presumptuous to assume that we will become self-sufficient by 1970-71. Notwithstanding the fact that the consumption this year is not up to expectations, their use has grown appreciably. In 1965-66, the application of nitrogen had to be restricted to about 600,000 tonnes due primarily to lack of adequate supplies. Last year liberal imports, made possible by the massive assistance from the United States, would have increased consumption to nearly 960,000 tonnes, but some consignments from abroad reached late. Even then the consumption was of the order of 830,171 tonnes. This year's requirements of nitrogen were placed around 1.35 million tonnes. Actual consumption, however, may be about 1.1 million tonnes. The consumption targets for 1968-69, 1969-70 and 1970-71 have been fixed at 1.7, 2.0 and 2.4 million tonnes, respectively. Provided promotional work is adequate, it may reasonably be expected that the nation's effective requirements of nitrogenous fertilizer will be of the order of two million tonnes of nitrogen by 1970-71.

Estimates Over-Pitched

The requirements of P₂O₅ and K₂O are expected to go up next year to 650,000 and 450,000 tonnes, respectively, from the estimated consumption of about 400,000 and 250,000 tonnes this year. In 1966-67, we consumed about 283,220 tonnes of P₂O₅ and 115,000 tonnes of K₂O. In 1965-66, consumption amounted to 134,075 tonnes of P₂O₅ and 89,631 tonnes of K₂O. The consumption in 1965-66 and 1966-67 was depressed because of paucity of supplies. The 1970-71 demand for these two products has been estimated by the union Ministry for Agriculture around one million tonnes and 700,000 tonnes, respectively. These estimates too, like the 1970-71 estimate for nitrogen, may prove over-pitched. But the consumption of P₂O₅ and K₂O in 1970-71 may not be less than 750,000 and 500,000 tonnes, respectively.

As against the above estimates of demand, indigenous production in 1970-71 may not exceed 1.6 million tonnes of nitrogen, 400,000 tonnes of P₂O₅ and about 20,000 tonnes of K₂O. We will, thus, have to import substantial quantities of all the three plant nutrients even in 1970-71.

In view of this gap between demand and supply, four other projects—Goa, Trombay (expansion), Mangalore and Haldia, have been licensed. The latter three will produce not only nitrogenous fertilizers but also phosphatic manures. Letters of intent have been issued for another four schemes: the Modi venture at Ghaziabad, the Birla project at Mirzapur, a co-operative unit at Kandla and Visakhapatnam second phase expansion. The Kandla project will turn out nitrogenous as well as phosphatic manures. The Visakhapatnam expansion envisages the setting up of additional facilities to produce all the three plant nutrients. The plants of Modi and Birla will undertake the production of nitrogenous fertilizers only. Officially, all these projects are expected to go on stream in 1970-71 or shortly thereafter. But they might be delayed as work on them has yet to be started. By 1972-73, they all however should be on stream, raising the nitrogen capacity to 3.55 million tonnes. The P₂O₅ capacity by then will be nearly 1.34 million tonnes. Besides P₂O₅ being produced at the complex fertilizer manufacturing plants, Sindri is expected to produce

TABLE I
NITROGEN PROGRAMME

1. Existing capacity		3. Firm projects due for completion in 1970-71	
Public sector :		Public sector :	
Sindri	117,000	Madras	190,000
Nangal	80,000	Namrup II	152,000
Trombay	90,000	Barauni	152,000
Rourkela	120,000		494,000
FACT, Alwaye	70,000		
Neyveli	70,000	Private sector :	
Gorakhpur	80,000	Kanpur	200,000
Namrup	45,000		200,000
Belagula	1,300		
By-product from Coke			
Oven plants	20,000		
	693,300	Total :	694,000
		4 Projects approved but work yet to start—likely to be completed by 1970-71 and 1971-72.	
		Public sector :	
		Trombay expansion	229,000
			229,000
		Private sector :	
Private sector :		Goa	160,000
Ennore	8,000	Mangalore	240,000
Varanasi	10,000	Haldia	142,000
Visakhapatnam	80,000		
Ennore Expansion	8,000		
Gujarat	96,000		
	202,000		542,000
Total :	895,300	Total :	771,000
2 Projects due for completion in 1969-70		5. New projects—expected to be completed in 1970-71 and 1971-72.	
Public sector :		Public sector :	
Durgapur	152,000	Kandla (Co-operative)	215,000
Cochin	152,000	Private sector :	
FACT—4th stage	22,000	Modi (Ghaziabad)	160,000
	326,000		160,000
		Total :	375,000
Private sector :		SUMMARY	
D.C.M.	130,000	1. Existing	895,300 Tonnes
Gujarat Expansion	120,000	2. 1969-70 Additional	576,000 "
		3. 1970-71 Additional	694,000 "
		4. 1970-71 and 1971-72 Additional	771,000 "
		5. 1970-71 and 1971-72 Additional	375,000 "
	250,000		
Total :	576,000	Total :	3,311,300 Tonnes

Note : If Mirzapur project and the Visakhapatnam both first and second phase expansions also go on stream by 1972-73, the total capacity for producing nitrogenous fertilizers will go up to about 3.55 million tonnes.

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TABLE II
PHOSPHATE PROGRAMME

	P2O5 (Figures in tonnes)
1. Capacity as on September 1, 1967	286,830
2. Projects due for completion in 1967-68	
(a) West India Chemicals	6,600
(b) Metal Corporation of India	12,700
(c) Alembic Chemical Works	1,680
(d) J. K. Cotton, Kanpur	6,770
(e) Bharat Fertilizer Industries Ltd.	3,750
(f) Phosphate Co. Ltd, Calcutta	3,488
(g) Dharamsi Morarji	13,000
(h) Visakhapatnam	73,000
(i) By-product Di-Calcium Phosphate	11,140
	132,128
3. Projects due for completion in 1969-70	
(a) FACT IV Stage	9,200
(b) Kota (DCM)	30,000
(c) Maharashtra Agro-Industries Corp., Bombay	6,680
	45,880
4. Projects sanctioned and due for completion in 1970-71	
(a) Madras	85,000
(b) Trombay	124,000
(c) Haldia	79,000
(d) Mangalore	90,000
	378,000
5. Projects likely to be taken up and due for completion in 1970-71/1971-72.	
(a) Sindri (TSP)	156,000
(b) Kandla (Co-op.)	127,000
	283,000
6. Khetri Project 100,000 tonnes will be on stream in 1971-72	
7. Direct Application of powdered rockphosphate 100,000 tonnes P2O5 by 1970-71.	
SUMMARY	
1. Capacity on September 1, 1967	286,830
2. 1967-68 Additional	132,128
3. 1969-70 Additional	45,880
4. 1970-71 Additional	378,000
5. 1970-71—1971-72 Additional	283,000
6. 1970-71 Direct application	100,000
7. 1971-72 Additional	100,000
	1,326,000*

*Does not include expansion of Visakhapatnam project. Under the first phase expansion of this plant, nearly 15,000 tonnes capacity will be added through the process of removing bottlenecks.

156,000 tonnes and the Khetri project 100,000 tonnes. There is also envisaged direct application of rock phosphate to the extent of 100,000 tonnes of P2O5. (See Tables I and II). The addition to K2O capacity may not be much.

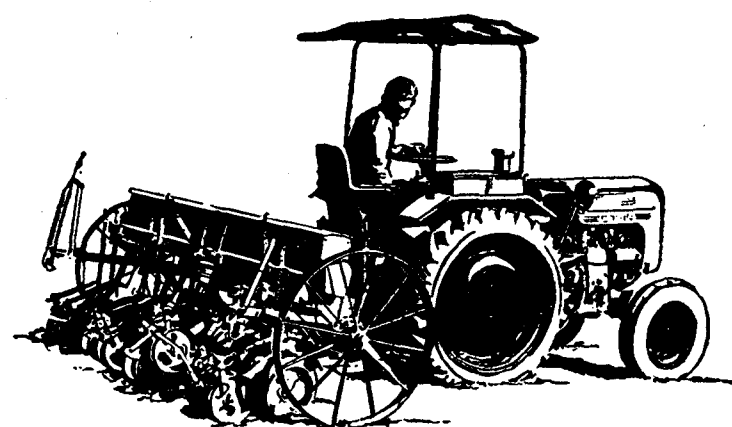
By 1972-73, therefore, if the indigenous capacity is utilized, if not to the optimum level, but even to a fairly reasonable percentage, we may have enough indigenously produced nitrogenous and phosphatic fertilizers to go round, provided of course, demand continues to grow only at the rate projected at present. The recent upsurge in the demand for new high-yielding varieties of seeds in north India (thanks to the prices of farm products scaling new peaks), the need to boost the output of commercial crops such as sugarcane, tea, jute, cotton, tobacco and oilseeds (to meet not only the growing domestic demand but also for throwing up larger surpluses for exports) and the active promotional work proposed to be taken up by the fertilizer manufacturers, may, however, necessitate upward revisions of the mid-1970s demand estimates for all the three plant nutrients. Even on the basis of the current projections, which reveal that in 1975-76 we will require four million tonnes N, two million tonnes P2O5 and a million tonne K2O, further licensing of capacity is necessary. Being aware of this, the government is considering four schemes—Tata's complex at Mithapur, Dharamsi Morarji project at Bombay, Burmah-Shell's venture also at Bombay, and Atlantic Richfield's scheme (location of the project not yet known). An American concern, the Occidental Oil Company, has also shown interest in setting up two plants—one at Visakhapatnam and the other at Paradeep—but detailed proposals for these two projects are expected only early next month.

Giant Ventures

All these projects are to be giant ventures for producing mostly complex fertilizers. The Burmah-Shell proposal, for instance, envisages the setting up of a 1,000 tonnes-a-day ammonia stream. The Dharamsi Morarji scheme envisages the production of 500,000 tonnes of nitrogen per annum. The Tata complex will produce 2.3 million tonnes of plant nutrients. The proposed ventures of Atlantic Richfield and Occidental are equally ambitious. While the Burmah-Shell, Atlantic Richfield, Dharamsi Morarji and Tata plants are to be in the private sector, the Occidental proposal envisages majority participation by the government.

It is doubtful that all these schemes can be cleared before the deadline for the 1965 concessions expires at the end of 1967. Under these concessions, foreign collaborators in the private sector fertilizer plants are allowed majority participation. The raw material supplies would be ensured to all the plants enjoying these concessions. These plants will also be provided adequate supplies of fertilizers for their "seeding programmes". But the most important concession is that all those ventures for the setting up of which letters of intent, if not industrial licences, are taken out before December 31, 1967, will be allowed the freedom to market their products through their own distributive channels, without price control, for a period of seven years from the start of commercial production, subject to the government exercising an option to take over 30 per cent of the production at negotiated prices, for distribution in areas not adequately served otherwise.

But does the expiry of the deadline really matter? A close look at the industrial policy of the government would dispel any misgiving that the expiry of this deadline will make any difference in so far as the freedom to market fertilizers without price and distribution controls, grant of priority for raw materials and support for the seeding programmes of manufacturers are concerned. The government obviously cannot discriminate in regard to marketing between one unit and another in the same industry. Then, fertilizers being of vital importance for raising agricultural production, the raw mate-

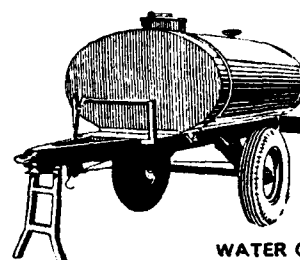


RAISE BUMPER CROPS

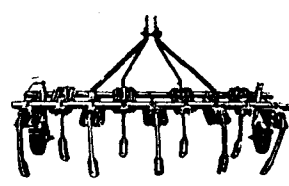
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IMPLEMENTS

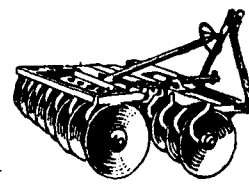
FOR ALL MAKES AND MODELS OF TRACTORS



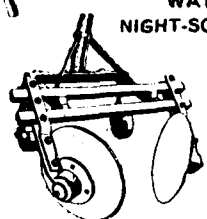
WATER OR
NIGHT-SOIL TANKER



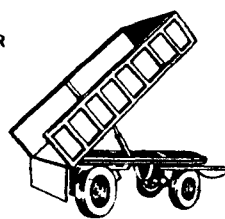
CULTIVATORS (TILLER)



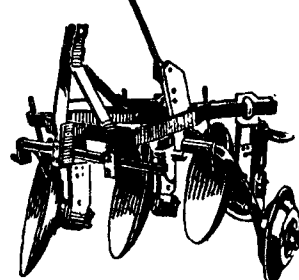
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rial requirements of all the units in this industry will continue to receive priority. The support for seeding programmes also cannot be withdrawn as they have now come to be treated as necessary in the interest of spread of fertilizer use and for enabling the manufacturers to put in position their marketing arrangements before the start of production. The only difference the expiry of the deadline may make is that foreign collaborators may not be allowed to have majority participation in the future private sector ventures. But this surely is a point to be determined on the merits of each case subject to the government's general policy relating to foreign collaboration.

The expiry of the deadline, thus, should not make any difference for the promoters of fertilizer plants which are currently under the consideration of the government. The major difficulty that is to be encountered in the case of five of these units is whether they can be allowed to import ammonia or not. Dharamsi Morarji and Atlantic Richfield want to base their projects entirely on imported ammonia. Tata's would require ammonia from abroad for the first few years while they gradually switch over to the indigenous resources of both land and sea. The Occidental Oil Company would like to import ammonia for the first two years during which it will put up ammonia manufacturing facilities at its proposed ventures. These two plants are to be ultimately based on naphtha. The advantage of such a procedure, it is pointed out, is that fertilizer manufacture can start about two years earlier than in the case of projects where ammonia manufacturing facilities have to be put up along with the other units. The Burmah-Shell proposal, of course, is said to be entirely naphtha based; no import of ammonia is envisaged.

Ammonia Imports

The government has been averse to the import of ammonia for two reasons. First, it involves commitment for use of free foreign exchange on an appreciable scale. Secondly, the present world prices of ammonia compare unfavourably with the cost of producing ammonia indigenously from naphtha. Naphtha is currently in surplus not only within the country but also in the world market owing to the rapid expansion of the oil refining capacity in several countries in the last few years. This has led to exports of this petroleum product at distress prices. Even though the original Dharamsi Morarji proposal had some attractive features, the most important of them being that it committed the promoters to bring in annually 200,000 tonnes of sulphur (the supply of which is growing stringent in the world market) for ten years at competitive prices, it was rejected by the union cabinet some two months ago on the plea that commitment on account of import of ammonia would be heavy. The new representation by the promoters, currently under the consideration of the government, tries to meet the objection to the cost of ammonia imports (originally to be effected at \$ 40 per tonne for first 10 years) by suggesting that the ammonia price may be revised after five years and even if after seven years the government thinks that ammonia should be produced locally from naphtha, the promoters will set up ammonia manufacturing facilities. The ammonia controversy thus has to be resolved before any decision is taken on at least five of the six proposals now being considered.

Ammonia can be manufactured from coal, naphtha and natural gas. The technological breakthrough during the past 10 years has made the traditional raw material—coal—an uneconomic source. At the present prices of coal and naphtha, coal-based ammonia is said to cost nearly 100 per cent more than the naphtha-based ammonia. As compared to the cost of producing ammonia from natural gas, the cost of production of coal-based ammonia is said to be only about 60 per cent higher. This is because of two reasons. First, natural gas as feedstock for the manufacture of ammonia has gained importance only recently as a result of improvements in world transport and storage facilities. So economies of scale have

not yet been secured fully. Secondly, naphtha being surplus in the world at present, it is being disposed of in the international market at distress prices.

As a sequel to the above developments, even in the advanced countries of Europe, not excluding West Germany and Britain, which have vast resources of coal like us, naphtha has replaced coal in the production of ammonia. Natural gas, however, has yet to make sizable headway as feedstock for ammonia manufacture. In line with this trend, all our recently set up or licensed fertilizer projects have been based on naphtha. But the latest official estimates of naphtha supplies indicate that if all the fertilizer plants which have been already licensed go on stream as scheduled, we will face a significant shortage of naphtha from the indigenous sources.

According to non-official estimates, naphtha supplies from indigenous sources may fall short of our requirements even in 1971-72. In that year, as Table III shows, we will have 21.3 million tonnes oil refining capacity which will yield nearly 3.5 million tonnes of motor spirit and naphtha. This level of production of motor spirit and naphtha takes

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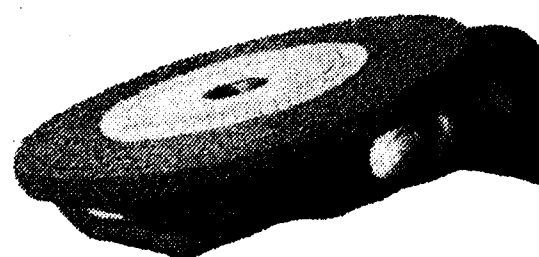
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into account the possible increases in the outputs of JP-4, liquid petroleum gas and solvents in response to demand.

TABLE III
ESTIMATED MOTOR SPIRIT AND NAPHTHA SUPPLIES
BY INDIGENOUS SOURCES IN 1967

Refinery	Total refining capacity (million tonnes)	Motor spirit and naphtha production ('000 tonnes)
Digboi	0.5	90
Burmah-Shell	3.75	590
Esso	2.70	297
Caltex	1.05	169
Gauhati	0.8	146
Barauni	3.0	622
Koyali	3.5	614
Cochin	2.5	411
Madras	2.5	403
Haldia	1.0	148
	21.3	3,490

* The Haldia refinery has been licensed for 2.5 million tonnes, but it may be running only to one million tonnes capacity in 1971-72. Full production is expected only after March 31, 1972.

The demand for motor spirit in 1971-72 is expected to be around 1.5 million tonnes. So naphtha supplies may be of the order of two million tonnes. The demand for naphtha in that year is estimated as follows:

(i) Fertilizers manufactured at all the plants already licensed	2,200,000 tonnes
(ii) Petro-chemical projects at Koyali, Bombay and Goa	650,000 tonnes
(iii) PVC manufacture at Tuticorin	15,000 tonnes
(iv) Indian Oil Corporation's export commitments (from Cochin)	115,000 tonnes
Total:	2,980,000 tonnes

On the above calculation, we will be faced with a shortage of naphtha from indigenous refineries to the order of 980,000 tonnes in 1971-72 itself. This shortage, however, may be made up to some extent if the Haldia refinery attains a throughput of 3.5 million tonnes earlier than expected at present. In that case we may be nearly self-sufficient in naphtha supplies, but another problem will arise—that of regional imbalances in the supply of petroleum products. Not only will this run counter to the government's policy of having a regional balance, but it will also entail large intra-regional movements.

With no surplus of naphtha to be feared therefore and coal expected to remain an uneconomic source as feedstock for ammonia production, the three alternatives before us then will be: (i) further expansion of our oil refining capacity; (ii) import of naphtha; and (iii) import of ammonia. Presently, we have no large resources of natural gas which are going waste. The Cambay resources have been harnessed for providing fuel for industries in Baroda area and for producing electricity at Dhruvaran and the small quantities of gas in Assam are being judiciously utilized. Ammonia manufacture from natural gas, it may be pointed out, is profitable only if there are huge resources available as in West Asia.

The further expansion of our oil refining capacity is desirable not only for meeting the growing requirements of

naphtha but also for becoming self-sufficient in various other petroleum products such as kerosene. But there are limitations to this. Our presently proved or indicated crude oil reserves being not more than 150 million tonnes, any large-scale expansion in the refining capacity will necessitate import of crude oil. Then the problem of export of some surplus products, such as motor spirit, will have to be tackled. But even if the refining capacity is expanded, will it be judicious to commit all the additional supplies of naphtha for fertilizer manufacture. The development of petrochemical industries apparently has to be encouraged at a fast rate; its naphtha requirements may have to be given priority over the requirements of the fertilizer industry at a not very distant date.

Economical Feedstock

The above analysis suggests that the import of naphtha or ammonia for fertilizer manufacture need not be ruled out. As stated earlier, the distress sales of naphtha, which have been taking place in the world market till now, has made it a more economical feedstock for ammonia manufacture than natural gas at present. But owing to the large-scale global expansion of the fertilizer industry with naphtha as base, this feedstock may in the near future become a scarce commodity—Japan, for instance, has already initiated measures for guarding its interests in such an eventuality. On the other hand, expansion in the production of ammonia from natural gas should bring into play the economies of scale. Natural gas may thus become a more economical feedstock for the production of ammonia than naphtha in the long run.

There are two other considerations that need to be appreciated in this connection even in the short run. First, basing of a fertilizer unit on imported ammonia apparently should reduce the capital outlay of the project as the cost of setting

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up ammonia facilities is obviated. Secondly, the execution of such a project will be expeditious; fertilizers will flow out more quickly.

There is, however, a political factor also to contend with. This is that it may not be judicious on our part to base large-scale fertilizer capacity on ammonia imports from West Asia. The support which some of these countries extended to Pakistan in the 1965 conflict cannot be easily forgotten. But this aspect need not be emphasized unduly as there will always be efforts on the part of our country to foster good relations with the countries of West Asia. Further, crude oil imports for any large-scale expansion of our oil-refining capacity will also have to come from West Asia.

The basing of some of our new fertilizer projects on imported ammonia, therefore, may not be too risky. The fears that we will commit ourselves indefinitely to imports of ammonia (to be paid for in foreign exchange) would easily be exaggerated. Our dependence on imported ammonia may conceivably decline in the future. The ambitious oil exploration programme currently being carried on in the country may well throw up some new sources of natural gas which can be utilized for producing ammonia indigenously.

Main Difficulty

If even four of the six schemes now under the consideration of the government materialise, we should have by 1975-76 enough capacity to meet the requirements of nitrogenous and phosphatic fertilizers. In the case of potassic fertilizers, however, indigenous production will still appreciably fall short of demand. The main difficulty in the way of producing potassic fertilizers at present is that there are no economical sources of potash currently available in the country. Much depends on how far the Geological Survey of India, which has recently undertaken exploration of this chemical, succeeds in finding deposits. The acquisition of the services of an American expert under the aid programme of the US Agency for International Development is also a welcome step in the exploration of potash deposits in our country. The Tata experiments to recover potash from the sea will also be watched with interest.

It may be mentioned here that self-reliance in the manufacture of nitrogenous and phosphatic fertilizers is being fostered through undertaking research in fertilizer technology and purchase of foreign know-how. The research and technology department of the FACT has successfully developed and improved a process for the manufacture of ammonium sulphate from by-product gypsum. In addition, the production of sodium fluoride for the first time in the country has been developed at FACT. A process has also been developed for the utilization of waste sulphuric acid from the Travancore Titanium Products Ltd. This process provides a means for the production of ammonium sulphate and rouge (a pigment) as co-products in the recovery of waste acid. The engineering and design organisation of the FACT has entered into an agreement with the Power Gas Corporation of the UK for the designing and engineering of synthesis gas plants based on the ICI steam reforming process. The Fertilizer Corporation of India has entered into an agreement with Montecatini of Italy for the licence to use the Italian firm's processes for ammonia synthesis and production of urea.

The capacity for the manufacture of nitrogenous and phosphatic fertilizers having been taken care of (the question of setting up sufficient capacity for the manufacture of potassic fertilizers depends on the discovery of economical sources of potash), the two main problems that we are now confronted with are the judicious utilization of capacity and the organization of adequate credit facilities for the marketing of end-products.

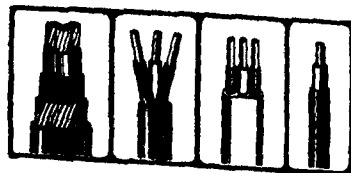
The main problems in regard to the efficient utilization of the nitrogenous fertilizer capacity are to be met in the public sector. The private sector plants should take care of themselves if adequate supplies of raw materials are made available in the light of the commitment of the government and no unnecessary spokes are put in the way of imports of spares and components. The performance of the public sector plants, however, has been poor and disappointing. There have been inordinate delays not only in the erection of these plants but also in running them to optimum capacity. Last year the public sector fertilizer projects had a capacity to produce nearly 550,000 tonnes of nitrogen, but their actual output was not even 300,000 tonnes. By the end of 1970-71 the total capacity of the fertilizer plants in the public sector will be more than 1.5 million tonnes. It may go up to about 2.5 million tonnes by 1975-76. So attention has to be paid to the evolution of a suitable organisational set-up to run this capacity. At present there are two public sector enterprises—the Fertilizer Corporation of India and the Fertilizers and Chemicals Travancore Ltd—wholly doing fertilizer business. The plants at Rourkela and Neyveli are owned and operated by Hindustan Steel and the Neyveli Lignite Corporation. The co-ordination of the activities of all these organisations is no easy task. But since the overall supply position is not difficult, their deficiencies have not become glaring.

A study team, consisting of six Indian experts and four experts from the Tennessee Valley Authority, has recently reported on the question of streamlining the organisational set-up of the public sector enterprises in the fertilizer industry. Comment on the recommendations of this study team must await the release of their report. But it can be stressed that the merging of all the public sector fertilizer projects under one body will not be a right step. The projects having similar manufacturing programmes may be grouped together. In the interest of healthy competition, there should, however, be three or four autonomous corporations manufacturing ferti-

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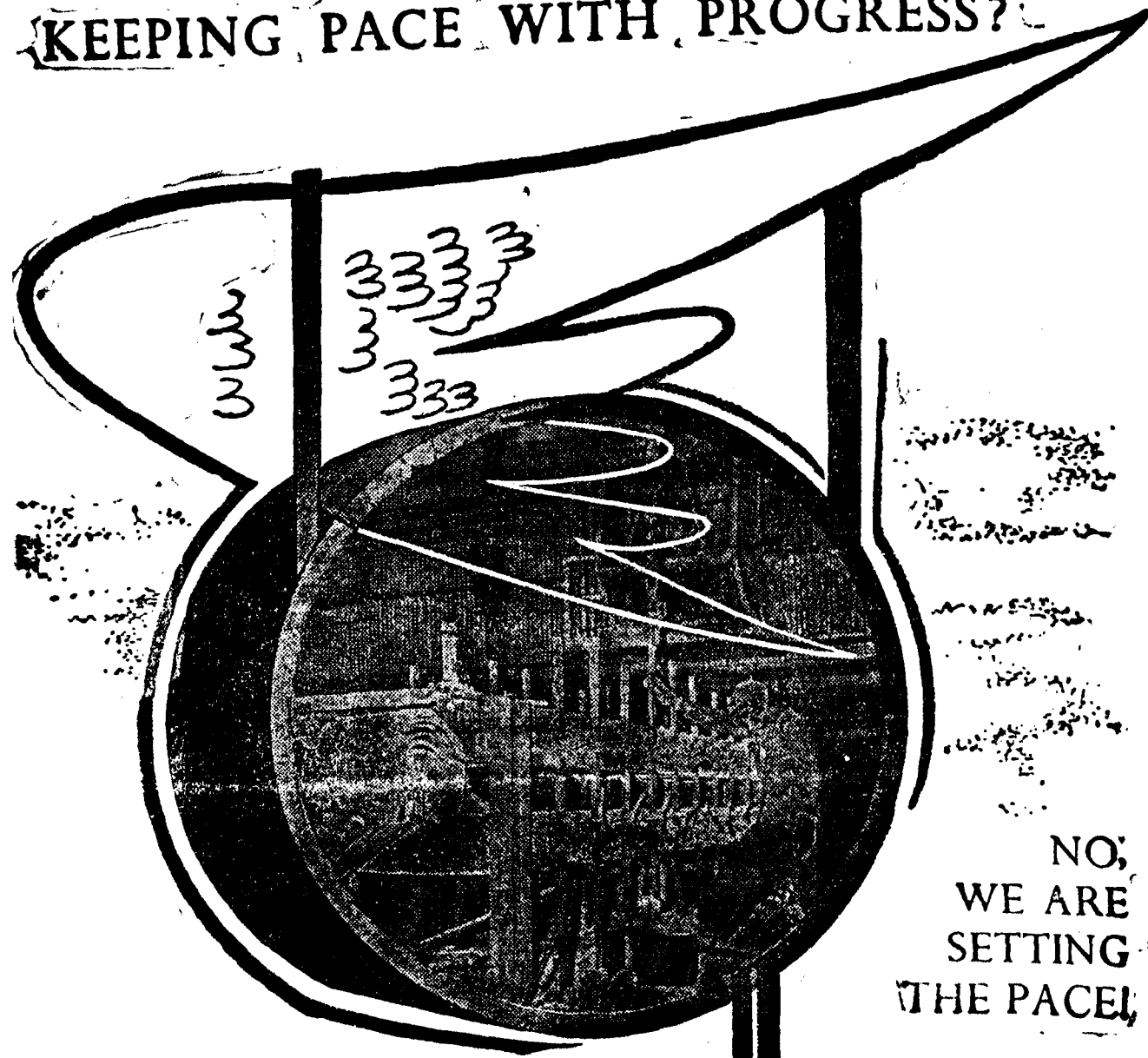
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zers in the public sector and marketing them. There will, however, have to be effective co-ordination between them.

As regards the efficient utilization of the capacity for phosphatic fertilizers, whether in the public sector or the private, the main difficulty lies in ensuring adequate supplies of sulphur. With the major sulphur producers of the world going in for the production of sulphuric acid by setting up captive plants, there is every likelihood of global supplies of elemental sulphur growing more and more stringent with the passage of time. This is notwithstanding the fact that some countries have started utilizing pyrites for the manufacture of sulphuric acid for use by their fertilizer industries. Our own efforts to produce sulphur from the Bihar pyrites have not been successful as yet. Although this project was given the green signal over seven years ago, it has yet to make headway. The main difficulty this scheme has encountered is the lack of a definite pattern in the pyrite deposits. Unduly large aberrations have been discovered in our pyrite deposits. Efforts are being intensified to further assess the pyrite deposits as also for overcoming the difficulties arising out of the aberrations. But whether large-scale utilization of these pyrites will be possible in the next few years remains to be seen. Pilot-scale production of sulphuric acid from the Bihar pyrites, however, is expected by September next. This should suggest that some long-term arrangements for sulphur imports will have to be made. The optimism of the Commerce Ministry that sulphur will be easily available abroad in the years to come appears to be unwarranted.

The other important raw material required in large quantities for the production of phosphatic fertilizers—rock phosphate—may, of course, not pose any problem. Large deposits of this material have been discovered in the Doon Valley and Rajasthan. Only, the exploitation of these deposits has to be expedited. Imports too may not be difficult as some of the north African countries have discovered extensive deposits. The only question to be resolved is whether the import of rock phosphate direct or the import of elemental phosphorus will be more economical. The government is at present considering this issue.

Credit Structure

The proposed expansion in the use of fertilizers in the next seven or eight years can take place only if the credit structure is strengthened appreciably. The Sivaraman Committee had estimated that the fertilizer credit requirements would grow to Rs 365 crores even by 1970-71. Due to the devaluation of the rupee in June last, there has been a substantial increase in the cost of imported fertilizers and of the raw materials required by the industry. Manufacturing costs too have gone up due to various reasons, including the general inflationary tendencies in the economy. The Fertilizer Association of India (FAI), at a seminar held earlier this month, has expressed the view that even though the agriculturists, as a result of the attractive prices secured by them for their products, may be able to finance part of their fertilizer requirements on their own, a minimum of Rs 500 crores of credit per annum will have to be arranged from 1970-71 onwards for taking fertilizers to the agriculturists.

Credit on such a scale obviously cannot be made available by the existing sources. The co-operative societies, as has been assessed by the FAI, may be able to provide credit to the tune of Rs 250 crores, while dealers or other marketing agencies may also bear a part of the financing responsibilities. There would however be still need to supplement the flow of credit with the aid of other institutional lenders, including commercial banks. The commercial banks, it is understood, have drawn up a tentative plan to supply credit for agriculture to the tune of about Rs 60 crores a year. This would be a good beginning.

This month's seminar of the FAI has recommended that the farming credit must be available at the final point of

supply to the farmer in his own right, i.e., regardless of the fact whether the farmer is a member of a co-operative society or not. The system of credit dispensation, it has further stressed, should be direct, simple and free of administrative encumbrances. Eligibility for credit should be based on the productive capacity of the farm and the farmer. Linking of the marketing of farm produce with the administration of credit, the FAI feels, will be helpful.

There is also need for the provision of credit to the whole saler and the retailer in the fertilizer trade on account of the fact that the sale of fertilizers is seasonal. The manufacturer can provide part of this credit. But if fertilizer is to reach the farmer in time and in adequate quantities, stocks must be held at strategic centres. This is all the more important taking into consideration the difficult transport situation in several parts of the country.

To enable commercial banks and other institutional lender to play a larger role than hitherto in the provision of credit to agriculture, strengthening of the refinance facilities and guaranteeing of repayment of credit, as suggested by the FAI, are essential. It is encouraging to note that the Reserve Bank of India is seized of the former issue and will soon draw up a scheme for not only strengthening the refinance facilities but also for augmenting the credit facilities for agriculture in general. This scheme envisages the use of PL 480 counterpart funds. The guaranteeing of the repayment of credit will have to be done by the state governments with assistance from the centre. Some state governments, for instance Gujarat, have already taken steps in this direction. Others ought to follow even though their financial position is not so sound at present.

Along with the strengthening of the credit structure, the extension service for educating farmers in the use of fertilizer

FERTILIZER CORPORATION OF INDIA

KEY ROLE IN INDIA'S GROWING ECONOMY

The Fertilizer Corporation of India is the biggest producer of chemical fertilizers in the country. Its existing operating factories at Sindri (Bihar), Nangal (Punjab) and Trombay (Maharashtra) have a total capacity of 287,000 tonnes of nitrogen and 45,000 tonnes of phosphate per year.

With the completion of its new factories at Namrup (Assam), Gorakhpur (U.P.), Durgapur (West Bengal), Barauni (Bihar) and Namrup Expansion (Assam), the first two in 1967, the third one in 1969 and the last two by 1970-71, the overall nitrogen capacity will be raised to 9,60,600 tonnes.

Over 68 lakh tonnes of fertilizers, valued at about Rs. 210 crores, have already been produced in the Corporation's operating factories, making a substantial contribution towards the goal of self-sufficiency in food.

As the Corporation's new factories go into production, more and more fertilizers will be available to make a much bigger contribution towards achieving self-sufficiency in food.

The Corporation has built up adequate technical know-how. In fact, it is now equipped to design, engineer and build complete fertilizer plants.

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will also have to be strengthened and streamlined. The promotion of fertilizers has two aspects: first, a general educational process directed to educating farmers in the underlying principles of fertilizer use, economic and other benefits and efficient methods of using recommended plant foods and practices; and secondly, sales promotion of particular brands of products. Sales promotion, brand-wise, is in the interest of the manufacturers and can be left to them entirely. But educational or basic promotion of fertilizer use cannot be left entirely to manufacturers. There is need for a cadre of trained extension

TABLE IV
RISE IN PRICES OF VARIOUS TYPES OF FERTILIZERS

	Prices prior to April 1, 1967	Current prices
	(Rupees)	(Rupees)
I. Pool fertilizers:		
Ammonium Sulphate 50 kg. bags	416.00	503.00
Ammonium Sulphate Nitrate	515.00	577.00
Calcium Ammonium Nitrate (20.5%)	365.00	385.00
Ammonium Phosphate (20-20-0)	660.00	738.00
Urea	680.00	840.00
Calcium Ammonium Nitrate (26%)	405.00	455.00
Di-Ammonium Phosphate (18-46-0)	830.00	1,000.00
Ammonium Chloride	445.00	450.00
II. Non-Pool fertilizers:		
A. Superphosphate		
For port factories in eastern region (Calcutta port)	256.48	308.33
For port factories in other regions	249.39	300.95
For non-port factories:		
Adarsh Chemicals & Fertilizers, Udhna (Gujarat)	259.34	311.11
Alembic Chem. Co. Ltd, Baroda	265.59	317.35
Ralli Chemicals Ltd, Magarwara (Maharashtra)	383.01	335.04
DCM Chemical Works, Delhi	285.08	337.82
West Indian Chemicals, Poona, Mundhwa	259.34	317.44
Dharamsi Morarji Chemical Co. Ltd, Kumhari (MP)	265.99	319.00
Andhra Fertilizers, Tadepalle	265.13	317.82
Associated Industries (Assam) Ltd, Chandrapur	307.22	348.19
Bihar State Superphosphate Factory, Sindri	270.98	323.06
Mysore Chemicals & Fertilizers, Belagula	275.49	327.40
B. Potashic Fertilizers		
Export prices for muriate of potash (60% 'K')	305.00	383.00
Export prices for muriate of potash (50% 'K')	250.00	315.00
Ex-godown prices for muriate of potash (60% 'K')	314.00	392.00
Ex-godown prices for muriate of potash (50% 'K')	259.00	324.00

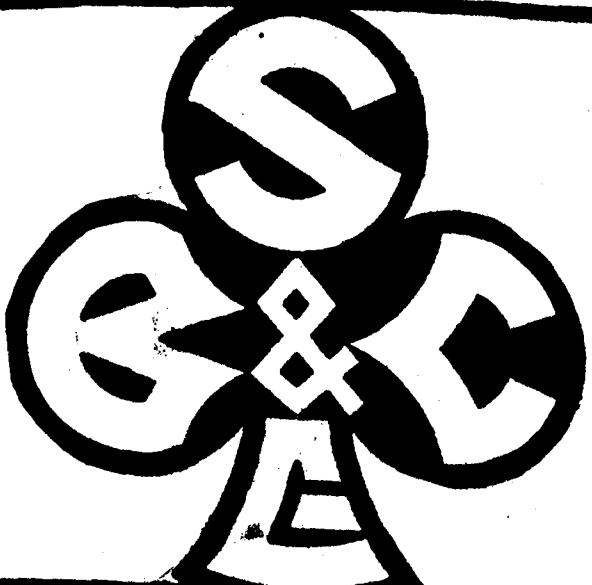
workers functioning under the agriculture or community development departments of state governments.

The rise in the prices of fertilizers, as a sequel to the devaluation of the rupee, the increase in the cost of importing sulphur even otherwise and the withdrawal of the subsidy on fertilizers early this year are primarily responsible for the fertilizer consumption this year not coming up to original expectations. The extent of the rise in prices of the various types of fertilizers is shown in Table IV.

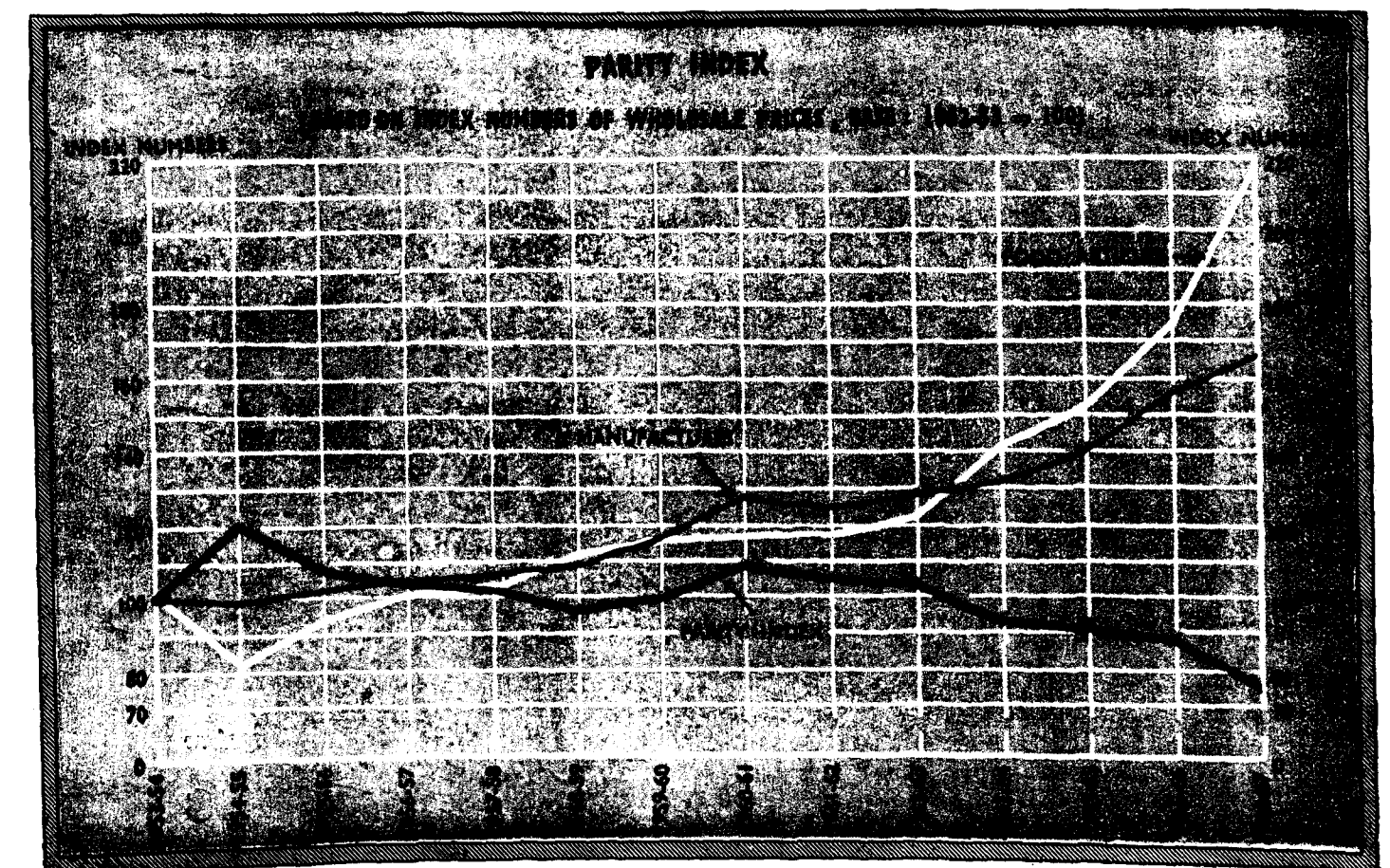
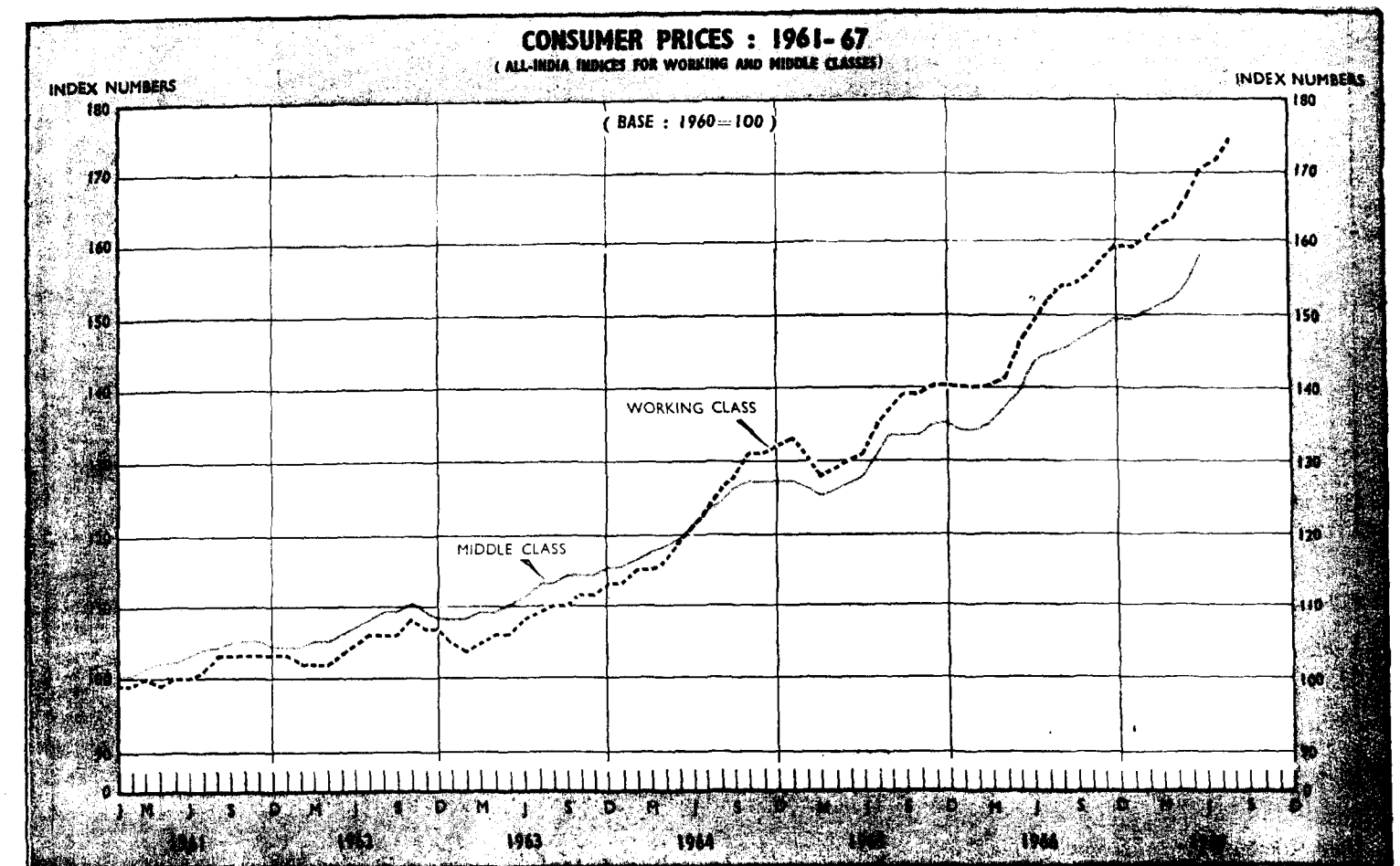
If the growth in the use of fertilizers is not to be retarded in the interest of rapidly increasing our farm output, it is essential that an ambitious promotional work is undertaken both by the government and the fertilizer manufacturers and dealers.

Finally, it is important that the central government's efforts to raise the consumption of fertilizers are not thwarted by state governments. Even though under the 1965 concessions, the manufacturers of fertilizers have been allowed the freedom of marketing their products without price and distribution controls, many state governments still insist on distribution of fertilizers through co-operatives alone. Not all the co-operatives are competent enough to undertake this job. The services of the efficient co-operatives will surely be utilized by the fertilizer manufacturers as is being done by FACT and Coromandel Fertilizers. But the action of some state governments in restricting the marketing of fertilizers to co-operative channels goes against the letter and the spirit of the concessions of 1965.

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Progress in Pesticides

IT WAS during the period following the Second World War that organic chemicals were developed and utilised on a large scale all over the world to eradicate insects and other pests responsible for spreading disease among human beings and causing damage to crops. Prior to that, pest control was practised on a limited scale, mostly through the use of inorganic chemicals such as arsenic compounds, sulphur, copper sulphate and barium carbonate, which were not always sufficiently effective. The introduction of organic hydrocarbons such as dichlor-diphenyl-trichlorethane (DDT) and benzene hexachloride (BHC) revolutionised the process of pest control by their remarkable efficiency. These chemicals had a broad spectrum of action and were effective in low doses. Some quantities of DDT were imported into our country for the malaria eradication campaign but its use in agriculture made a beginning when various states were encouraged to set up plant protection service organisations in 1946.

The use of pesticides on a significant scale, however, is only a recent development following a change in the strategy of agricultural development. During the first decade of planning, the programme for increased agricultural production relied largely on the extension of the area under cultivation and the provision of irrigation facilities through large river dams. It was only during the third Plan that the programme for intensive cultivation was adopted as a part of the policy for agricultural development. As a natural consequence, the input of fertilizers and pesticides increased rapidly. While fertilizers and high-yielding varieties of seeds were used for raising the productivity of crops, pesticides were considered necessary to insure the fruits of costly inputs against attack of pests. An idea of the progressive use of pesticides in agriculture in our country may be had from the fact that the area covered under plant protection measures reached 43 million acres by the end of 1965-66 from 16 million acres in 1960-61, showing an increase of 170 per cent during the period. In 1965-66 nearly 25,800 tonnes of technical grade materials were used as against nearly 14,600 tonnes used in 1961.

Manufacturing Programme

The manufacture of pesticides was taken up in our country for the first time in 1952 when an entrepreneur in the private sector established a unit at Rishra near Calcutta for the manufacture of BHC with an annual installed capacity of 500 tonnes. Soon after, the government proposed the manufacture of DDT and established an insecticides manufacturing unit in 1955 in Delhi. Later on additional capacity of DDT was created through the expansion of the DDT factory at Delhi and the establishment of a new unit at Alwaye in Kerala, both of which were completed in 1958. Thereafter the overall annual capacity for DDT increased to 2,800 tonnes. The expansion of capacity of BHC was mostly in the private sector and it increased from 2,500 tonnes in 1956 to 3,900 tonnes in 1960. Towards the beginning of the third Plan the Development Council for Organic Chemicals in collaboration with the Directorate of Plant Protection, Quarantine and Storage assessed the demand for pesticidal chemicals for 1965-66 as under:

Item	Requirement by 1965-66 (tons)
BHC	15,000
DDT	6,000
Other chlorinated insecticides like endrin, aldrin, chlordane etc.	875
Organic phosphatics like parathion & malathion	1,000
EDCT	10,000 (3:1 mixture)
Copper oxychloride	2,000
Organic mercurials	100
2,4-D & related weedicides	1,500
Other pesticidal materials	2,000

During the period of the third Plan a large number of schemes for the manufacture of pesticides were implemented. It may be observed from Table I that capacity sanctioned and under negotiation has further increased particularly in the case of BHC, parathion and other organo phosphatics, carbamates, thiram and weedicides. It may be added that with the development of new pesticides throughout the world, new units were established for their production in our country too. An important advance in the field of insecticides has been the development of organo phosphatic products which are mostly systemic in nature. Important constituents of this group are malathion, parathion, dimethoate, phosphamidon, bidrin, and azodrin. The significance of these pesticides is that they are absorbed by the plant itself and thereby make it toxic to insect pests that feed on it. After doing its job as a pesticide the chemical gets broken down into harmless by-products. Considerable progress has also been made in the production of other pesticides such as herbicides, weed killers, fungicides and rodenticides, so that in all there are nearly 100 chemicals produced for various pest control operations.

The capacity for the production of these pesticides at present has reached 38,000 tonnes. Nearly 22 units are engaged in the manufacture of technical grade material which has to be formulated into proper concentrations and forms before it can be used. A substantial formulation capacity has, therefore, been developed by 27 units in the organised sector and about 70 units in the small-scale sector. All these units put together produced nearly 100,000 tonnes of ready-to-use pesti-

TABLE I
PRODUCTION OF PESTICIDES

	Capacity sanctioned	Current production	Capacity under negotiation
Chlorinated Hydrocarbons			
BHC, including lindane	10,700(3)*	10,000	38,100(13)
DDT	4,200(2)	2,630	3,000(1)
Toxaphene	250(1)	5	—
Endrin	—	—	1,000(1)
Organo Phosphatics			
Parathion	700(2)	5	2,500(2)
Malathion	1,000(2)	750	1,100(2)
Dimethioate	220(1)	5	780(1)
Others	—	—	5,362(5)
Carbamates			
Carbaryl	—	—	7,000(2)
Thiocarbamates			
Zineb ziram	2,500(2)	1,600	2,624(4)
Sulphur (dust, wettable)	6,500	6,000	—
Organo mercurial salts	111	15	—
Organic seed dressers (Thiram)	300(1)	80	1,254(4)
Copper salts			
Copper oxychloride	2,284(4)	1,500	—
Copper sulphate	5,250(9)	5,200	—
Rodenticides			
Zinc phosphide	300(3)	300	150(1)
Coumarin compounds	50(2)	20	—
Fumigants			
EDB, methyl bromide	—	—	—
ED/CT mixture	—	—	—
Aluminium ohosphide	5,000(5)	50	300(1)
Weedicides			
2,4-D, 2,4,5-T etc.	100(1)	60	4,200(5)

*Figures in paranthesis indicate the number of plants/schemes.

cides for direct application. It is important to add that the formulation of pesticides from technical grade material also requires certain raw materials such as soap stone, china clay, solvent mineral oils and wetting agents.

The vital importance of pesticides in the context of our economy may be realised from the fact that the damage to agricultural production every year by way of pest attack on the standing crop as well as on the stored produce has been estimated at nearly 15 to 20 per cent of the total production, which is roughly valued at Rs 1,000 crores. A recent survey undertaken by the National Council of Applied Economic Research (NCAER) covering various crops revealed that damage to the extent of 14.9 per cent of the total crop could be prevented at the stage of standing crop through the judicious use of pesticides. An attempt was made by the NCAER to establish cost benefit ratios after the use of pesticides. A number of similar plots were taken and one out of these was left without treatment while others were treated with different chemicals. The percentage increase in yield as a result of the use of pesticides turned out to be as high as 40 in cotton and as low as three in wheat. For the other crops studied, the benefit ranged from nine to 15 per cent thereby bringing the overall average to 14.9 per cent. The cost output ratio—the ratio of additional output in relation to the cost of insecticides—worked out to 9.5 for potatoes and 4.6 for paddy. It was observed that in general the cost output ratio worked out to be in the neighbourhood of three. In other words, for every expenditure of Rs 100 by way of pesticides, there was an additional output of Rs 300. In the case of seed treatment the cost output ratio is considerably high because a small quantity of pesticide is sufficient for a large quantity of seeds. The treatment of standing crops, however, is necessary for maximum benefit.

The farmers in this country, by and large, are aware of the losses to crops caused by major pests such as cutworm, stemborers, caterpillars, grasshoppers, termites and rust and many of them resort to plant protection measures. In fact in the context of the use of pesticides, the cultivators may be grouped into three broad categories. The most advanced cultivators are found among the planters of tea, rubber and coffee and the horticulturists of mangoes, citrus and grapes, who have sufficient knowledge of pests and pesticides. They

have resources for the use of proper pesticides and could follow technical literature to keep themselves informed of the latest developments. Then there are the cultivators of cash crops, such as tobacco, cotton, sugarcane and vegetables, who generally have a reasonable level of awareness regarding pesticides but do not always make use of them. The last category is made up of the bulk of farmers engaged in the cultivation of foodgrains, many among whom are not equipped with precise knowledge about pesticides. The non-users of pesticides are mostly found among these farmers and the reasons for their apathy are both ignorance and lack of financial resources. The survey conducted by the NCAER revealed that of the non-users, as many as 30 to 60 per cent, varying from one state to another, did not have adequate financial resources and as many as 40 to 70 per cent were not aware of the efficacy of pesticides. The proportion of those non-users who were not aware of the pest attacks was small in all states. A significant factor that inhibited the progressive use of pesticides was the smallness of the agricultural holdings. Moreover, the per acre yield of various crops in this country was generally low and this acted as a disincentive to cultivators who could adopt plant protection measures.

Growth Potential

In spite of the serious hindrance in the increased use of pesticides, the demand for pesticides is bound to grow rapidly in the next few years, especially as the government is playing an active role in initiating the farmers in the use of pesticides. The coverage under plant protection measures is to be raised from the level of 41 million acres in 1965-66 to 210 million acres in 1968-69. The target for 1967-68 is placed at nearly 126 million acres, the details of which are given in Table II. For this programme the requirement of pesticides is likely to increase from 30,000 tonnes of technical grade material in 1965-66 to nearly 84,000 tonnes in 1968-69. The NCAER has projected the demand for the next 15 years on the basis of full requirements for 282 million hectares and has placed the quantity of technical grade material at around 344,000 tonnes. This estimate should be helpful to the manufacturers in formulating their long-range programmes of investment or production. The NCAER has also estimated that to meet the full requirements of farmers, the licensed capacity of the industry may have to be increased seven-fold from the present

TABLE II
PROGRAMME OF PLANT PROTECTION — 1967-68

Directorate's estimates (Area in lakh acres)							(Lakh acres)	
S. No.	Name of state/union territory	Total area to be treated	Seed treatment	Rat control	Polyphagous intensive and weed control		State proposals for physical targets of 1967-68	Area under H.V.P.
					Ground	Air		
1.	Andhra Pradesh	140.00	33.00	14.00	92.00	1.00	—	17.91
2.	Assam	18.00	4.20	1.80	11.70	0.30	9.88	0.95
3.	Bihar	70.00	16.50	7.00	46.00	0.50	—	17.20
4.	Gujarat	30.00	7.00	3.00	19.85	0.15	—	9.38
5.	Jammu & Kashmir	6.00	1.40	0.60	3.90	0.10	—	1.80
6.	Kerala	24.00	5.60	2.40	15.60	0.40	12.00	7.53
7.	Madhya Pradesh	110.00	26.00	11.00	72.15	0.85	34.00	3.92
8.	Madras	100.00	23.50	10.00	65.85	0.65	—	11.09
9.	Maharashtra	160.00	37.50	16.00	105.55	0.95	—	31.00
10.	Mysore	44.00	10.35	4.40	29.02	0.23	20.00	7.665
11.	Orissa	40.00	9.50	4.00	26.30	0.20	42.44	3.881
12.	Haryana	84.00	19.60	8.40	55.40	0.60	—	2.63
13.	Punjab	100.00	23.50	10.00	65.85	0.65	—	12.50
14.	Rajasthan	88.00	20.70	8.80	58.05	0.45	54.00	2.62
15.	Uttar Pradesh	160.00	37.50	16.00	105.55	0.95	60.00	26.75
16.	West Bengal	70.00	16.50	7.00	46.00	0.50	11.10	4.30
*Total :		1,261.04	296.46	126.03	830.07	8.43	—	162.33

* Includes centrally administered areas.

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level. The details of demand projected by the NCAER along with the official projections are given in Table III.

At a recent conference of the state agriculture ministers it was indicated that the success of the targets for various plant protection measures, such as seed treatment and rat, insect and weed control, would depend largely on the distribution arrangements in the field, because bottlenecks on that score could easily account for dislocation in supply. The state governments were asked to maintain stocks and streamline their distribution system. This would involve the planning of purchases and arrangements of storage as well as a sound system of collection and transmission of information about pest attacks. At present the pesticides are distributed to the farmers by the department of agriculture and community development, co-operatives, marketing societies, panchayats and several private firms. All these institutions put together have nearly 10,000 organised sale points in different parts of the country. This number is extremely inadequate, taking into account the vastness of the area involved. It has been proposed that the number of sale points should be increased substantially by keeping stocks of pesticides with stockists of fertilizers. Moreover, in order to be able to rush assistance where it is needed, the state governments have been asked to maintain buffer stocks of all important pesticides, particularly those which may not be readily available when needed.

The pesticides have to be handled with care because they often contain poisonous material. Almost all accidents report-

TABLE III
OVERALL ANNUAL NEEDS OF PESTICIDES

(Tonnes)

Pesticides	NCAER Estimate	Government's estimate*	
	Gross coverage: 282 million hectares	Gross coverage: 172 million hectares	Gross coverage: 85 million hectares
BHC	86,527	40,000	27,200
DDT	9,908	10,000	2,400
Endrin	7,333	3,800	2,530
Aldrin	7,195	600	N.A.
Dieldrin	1,039	N.A.	N.A.
Lindane	24,222	1,600	1,600
Malathion	4,748	2,000	3,600
Parathion	8,709	2,400	2,330
HETP	218	N.A.	N.A.
Carbaryl	25,212	N.A.	5,930
Thiocarbamate	12,606	2,800	5,300
Copper oxychloride	27,525	6,000	3,900
Sulphur	1,40,295	10,800	5,870
Mercury	722	120	50
Antibiotics	1,759	N.A.	3,410
Zinc phosphide	720	2,480	273
Methyl bromide	450	300	300
Ethylene dibromide	150	250	100
EDCT (3:1)	900	9,500	600
2, 4-D, 2, 4, 5-T, MCPA, etc.	4,500	14,500	3,180

N.A. = Not available.

* Report of the Working Group for the Formulation of the Fourth Five-Year Plan Proposals on Plant Protection, Ministry of Food and Agriculture, Department of Agriculture, Government of India, New Delhi, 1965, pp. 52 and 74.

ed due to pesticides have been due to negligence in observing necessary precautions. An extensive educational programme has to be undertaken along with the popularisation of pesticides making the cultivator familiar with the proper use of pesticides. Statutory powers for regulating the manufacture, transport, sale and use of pesticides are to be acquired through the proposed Insecticides Bill. In fact the industry realises this responsibility so that while synthesising, screening and testing in the laboratory and in the field toxicology tests are undertaken. Detailed studies are needed for establishing the effectiveness of the chemical dosage which is necessary under particular conditions. Most of the companies, therefore, have maintained well-trained complements of biologists for carrying out field trials and this work is carried out in close collaboration with government research institutions.

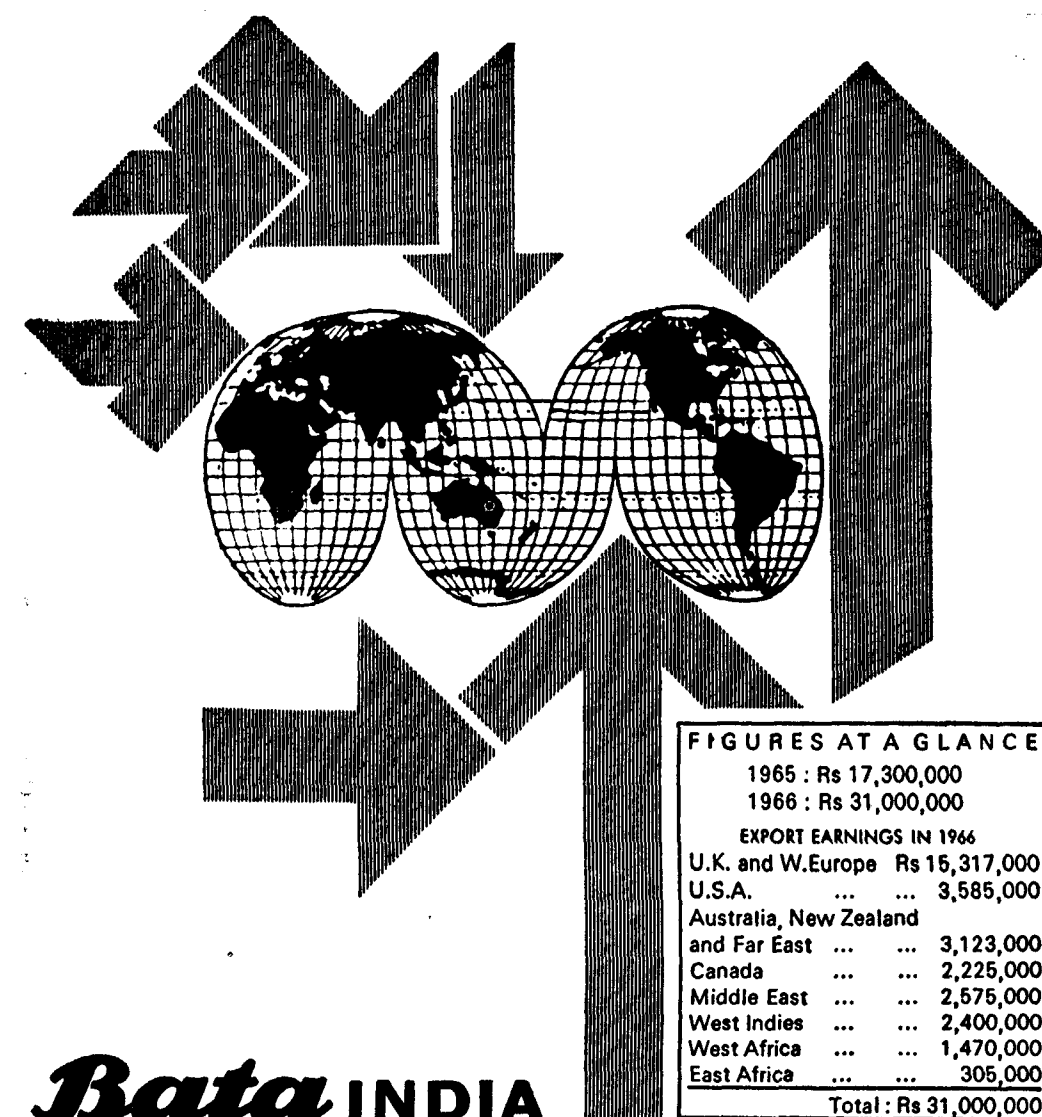
The distribution of plant protection equipment such as knapsack sprayers need to be planned properly. Although the purchase of these sprayers is subsidised by the government, very few cultivators can afford them. It has been proposed that cultivators with relatively large holdings should be encouraged to acquire these sprayers so that they could hire these out to others. It has also been considered necessary to maintain plant protection equipment in adequate numbers with gram panchayats and co-operatives. Along with the supply of equipment, facilities for their repair have also to be organised. Lack of training on the subject has led to a large quantity of equipment going out of use. Periodic checks by mechanics maintained by pesticidal firms or panchayats would be useful. The aim should be to provide repairs at the field and eliminate, as far as possible, idleness of equipment.

Technique of Application

A word needs to be added about the techniques relating to the application of pesticides. Conventionally, pesticides are applied as foliar sprays, but a major drawback in this method is the rain which washes them away. The sprays also do not reach the stem where the stem-borer lays eggs. More recently, insecticides have also been applied to the water surface in the fields from where they permeate into the stem of the plant. Aerial sprays have been tried for treating large patches of land but by international comparison the total area covered is not enough. In the USA and the USSR aerial sprays cover nearly 66 million acres each as against 350,000 acres in this country (Table IV). To achieve a certain extent of economy, ultra low volume sprays have been tried where the pilots fly nearly 15 to 30 feet above the crop level as against the conventional altitude of three to five feet. The higher altitude also has the advantage of safety for the pilot and his aircraft.

TABLE IV
AGRICULTURAL AVIATION — 1965

Region	Aero- planes	Helicop- ters	Total units	Area covered	Unit work output
USSR	5000	200	5200	66,250,000	12,740
USA	5210	120	5330	64,500,000	12,101
Oceania	470	10	480	13,250,000	27,604
Africa	80	15	95	6,375,000	66,100
South America	740	15	755	5,750,000	7,615
Far East	15	120	135	5,000,000	37,037
Middle East	45	10	55	1,250,000	22,745
India	10	9	19	351,000	18,473



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Exports Hit New High in 1966

Rs 31 Million Earned in Foreign Exchange

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A remarkable performance indeed : achieved at a time of general decline in exports from India, and in the face of keen competition from such major exporters as Japan, Hong Kong and others.

What is more, many developing countries, becoming self-sufficient in footwear production, are not only restricting imports, but are making a bid to enter the export field themselves.

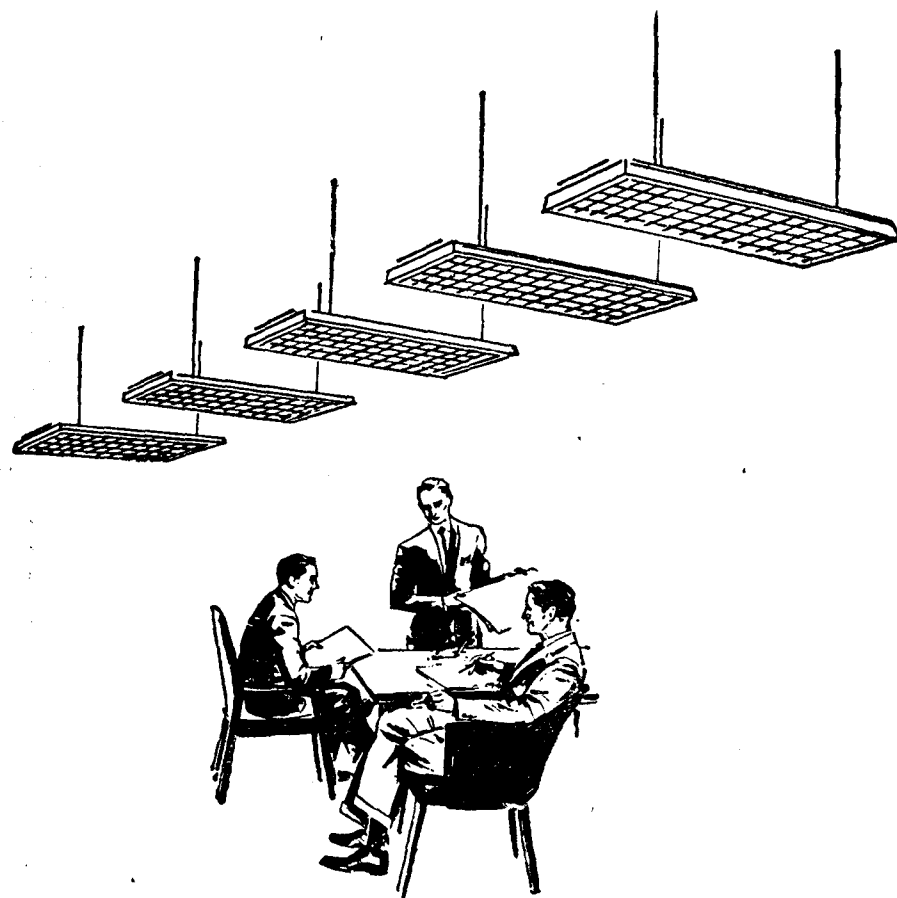
Bata-India, consequently, has to build new markets and to increase exports to

such highly developed countries as the U. K., the U. S. A., Canada, and others, where quality products have to be offered at a price that must meet both international and local competitions.

Bata-India has rendered service to the country by earning valuable foreign exchange. And it has earned entitlements to import its vital raw materials which are yet scarce in the country and which it is progressively and successfully substituting with indigenous ones.

The Company makes full use of its Market Research and Product Development methods, which enable it to keep pace with progress in the developed countries and cater to their demands.

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A PROFILE OF INDUSTRIES

Steel in the Melting Pot

WITH THE Planning Commission and the National Development Council having decided to wait for April 1969 for launching a fourth plan, the steel expansion programme has gone into the melting pot. There is not the same urgency now for raising of steel-making capacity by 1970-71 to the annual levels of 14.8 million tonnes of mild steel ingots, 500,000 tonnes of alloy and tool steels, 150,000 tonnes of electrical sheets, 100,000 tonnes of low alloy high strength steel and three million tonnes of pig iron—the tentative targets fixed under the draft outline of the fourth plan. Another assessment of the future demand for steel has been undertaken by the National Council of Applied Economic Research (NCAER) at the instance of the union Ministry of Steel. The results of this study will be known in the near future. Meanwhile opinion is veering round to the estimate that even if the current recession is over by next year, our requirements of mild steel in 1970-71 may be only about one million tonnes and those of alloy and tool steels around 100,000 tonnes. Pig iron requirements may not exceed two million tonnes and those of electrical sheets and low alloy high strength steel together may not be more than 200,000 tonnes.

For raising the production of mild steel ingots to 14.8 million tonnes by 1970-71, it was planned that (i) the existing steelworks at Bhilai, Durgapur, Rourkela and that of Indian Iron and Steel Co. (IISCO) should be expanded to 3.2, 3.4, 2.5 and 2.0 million tonnes and (ii) two new integrated steelworks—one at Bokaro (1.7 million tonnes ingot capacity plus 0.88 million tonnes of pig iron capacity) and the other either at Visakhapatnam or in the Bellary-Hospet area (one million tonnes ingot capacity) should be set up. There was also talk of the central government establishing about half a million tonnes of steel-making capacity based on Neyveli lignite and Salem iron ore.

Schemes Shelved

In view of the sharp decline in the estimated demand and the difficulties of securing foreign financial assistance, the expansions of Durgapur and Rourkela and the setting up of new steelworks in the Visakhapatnam/Bellary-Hospet area and the Neyveli-Salem region have been shelved for the time being. What remains of the draft fourth plan steel programme is the expansion of Bhilai and the establishment of Bokaro steelworks, as Russian assistance is available for both these schemes. The expansion of IISCO is to be limited for the present to 1.3 million tonnes for which aid from the World Bank has been secured. Some marginal increase in the capacity of the Tata Iron and Steel Co. (TISCO) might also take place through the addition of balancing facilities such as mine development and ore beneficiation, facilities for self-fluxing sinter, etc. A loan has been requested for this purpose from the World Bank.

Presently, we have a capacity of nine million tonnes for mild steel. This is spread over the various plants as follows:—

Producer	Capacity (Million tonnes)
TISCO	2.0
IISCO	1.0
Bhilai	2.5
Rourkela	1.8
Durgapur	1.6
Electric Furnaces in the Private Sector	0.1
Total :	9.0

Some capacity is also presently available at the Bhadravati works of Mysore Iron and Steel Ltd., but it will disappear in 1970-71, for this plant is being converted into an alloy and special steels unit.

Bokaro is expected to go into production in 1971-72. The expansions of Bhilai and IISCO should materialise by 1970-71. Thus in 1970-71 we will have a capacity of nearly 10 million tonnes. In the subsequent year, the capacity will go up to 11.7 million tonnes.

In 1970-71, if all the plants then working produce up to their rated capacities, we should have enough mild steel ingots to meet our requirements. But as the rolling facilities will be inadequate for some categories, particularly flat products, we may experience difficulties in meeting fully the demand for them. In the case of such products as structurals, bars and rods, rails etc, we may have surpluses which will have to be exported. By 1971-72, when Bokaro goes into production, the supply position of flat products should also ease; this plant will primarily turn out such products. Imports of mild steel then may have to be restricted only to such finer sections the rolling of which may not be economical because of small demand.

Notwithstanding the poor performance, till lately, in the field of alloy and special steels, the supply of these steels from indigenous sources is also expected to improve considerably by 1970-71. Currently, we have eight units producing alloy, electrical and spring steels. Their capacity and the likely output this year is as follows:—

	Licensed capacity* (tonnes)	1967 output city* implement- ed or under implementation (tonnes)
1. Durgapur Alloy Steel Plant	60,000	18,000
2. Mysore Iron and Steel Ltd (conversion from mild to alloy and special steels)	77,000	20,000
3. Tata Iron and Steel Co. (electrical steel)	80,000	30,000
4. Guest, Keen, Williams (spring steel)	45,000	25,000
5. Mahindra Ugin	36,000	12,000
6. Globe Steels (spring steel)	6,000	4,000
7. Canara Alloy Steels (spring steel)	9,600	5,000
8. Man Industrial Corporation (spring steel)	24,000	10,000
Total :	337,600	124,000

* In most cases only part of this licensed capacity has been commissioned so far.

By the end of next year, the Durgapur alloy steel plant would have rolling facilities to convert the entire 100,000 tonnes ingots it will be producing into 14,500 tonnes of high speed tool and die steels, 27,500 tonnes of alloy constructional steels and 18,000 tonnes of stainless steel. The conversion of the Bhadravati works of Mysore Iron and Steel Ltd into an alloy and special steels unit is also expected to be completed next year. The Bhadravati works will, therefore, have in 1968 capacity to produce 8,850 tonnes of high speed tool and die steels, 3,000 tonnes of stainless steel, 30,000 tonnes of free cut-

ting and spring steels and 35,150 tonnes of constructional steels. Besides these two schemes, another project—manufacture of 50,000 tonnes of electrical steel at Rourkela—will be completed in the public sector in the near future.

By 1970-71, all the above public sector units and at least three of the six private sector plants which are already in partial production, are expected to be running to their rated capacity. Although licences to augment the alloy and special steels capacity to nearly 840,000 tonnes—330,000 tonnes in the public sector and rest 510,000 tonnes in the private sector—have been issued, no further addition to installed capacity is expected by the government by 1970-71. In that year, therefore, we will have on current official estimates 387,000 tonnes capacity from which actual output may be of the order of 320,000 tonnes. Of this, alloy steels (high speed tool and die steels, stainless steel and free cutting and constructional steels) may account for about 170,000 tonnes; spring steel nearly 58,000 tonnes and electrical steel approximately 92,000 tonnes.

Demand Pattern

The demand pattern for the various types of alloy and special steels, as stated earlier, is being re-assessed by the NCAER. But a detailed market survey conducted last month by one of the licensees which has yet to go into production—Bihar Alloy Steels Ltd—using the end-use method, normally adopted for such studies, reveals that on a conservative basis, our requirements in 1970 and 1975 will be as follows:—

	1970	1975
	(Tonnes)	(Tonnes)
1. Alloy constructional, low alloy high strength and spring steels	310,008	594,861
2. Miscellaneous unidentified alloy constructional steels	34,175	62,137
3. Stainless and heat resistant steels	17,826	36,568
4. Tool and die steels	30,167	55,250
5. Electrical steel	47,805	92,400
Total:	439,981	841,216

The above pattern of demand and supply of alloy and special steels suggests we may be able to meet in 1970-71 the requirements of spring and electrical steels almost fully from indigenous sources, but that will not be the position in regard to the other categories of alloy steels, notwithstanding the considerably improved position compared to the current year when we are meeting only a very small portion of the demand from indigenous sources.

The above analysis reveals that we have not to worry much about the installation of new capacity for producing mild steel to cater to the requirements of 1970-71. The supply of pig iron should also be comfortable. This, however, cannot be said about alloy steels.

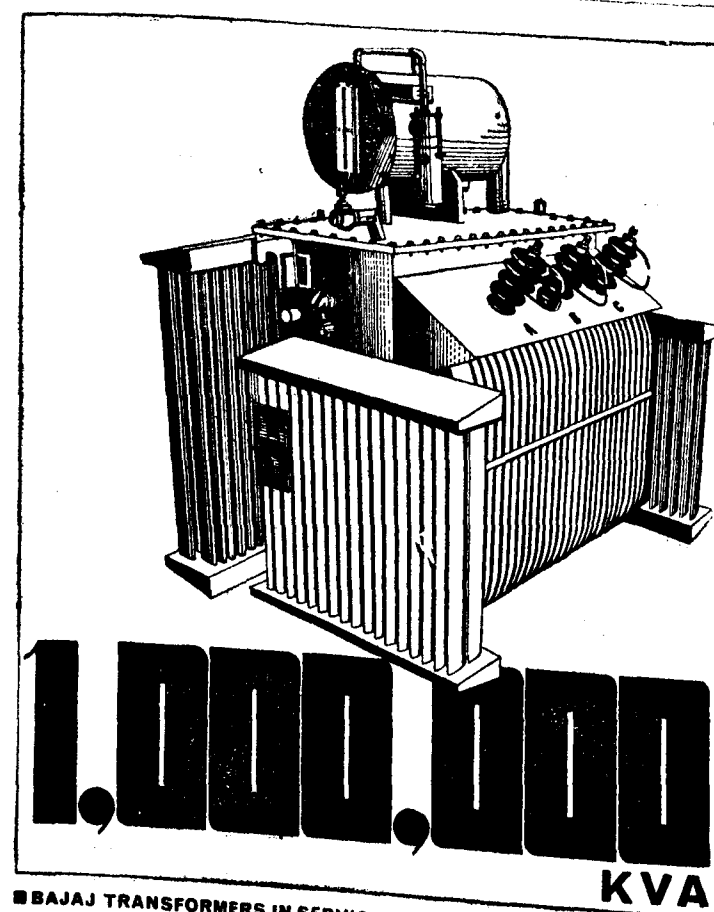
The supply of alloy and special steels (excluding spring and electrical steels, from indigenous sources in 1970-71 may fall short of the demand by at least 150,000 tonnes. This implies that in so far as the augmenting of steel making capacity is concerned, we should concentrate for the time being on increasing the capacity for alloy steels. The production of some categories of these steels may not be economical because of the small demand for them. But there is still sufficient scope for raising the total alloy steels capacity.

Of the present unimplemented licensed capacity, 143,000 tonnes is in the public sector, comprising the expansion of the Durgapur alloy steel plant from 60,000 tonnes to 180,000 tonnes and the expansion of Bhadravati works from 77,000 tonnes to

100,000 tonnes. A project report for the Durgapur plant has been commissioned recently, but it is expected only by the end of 1968. Construction may start in 1970. The expansion of the Bhadravati works will also be completed only after 1970. The rest of the licensed capacity which is awaiting implementation is in the private sector.

The lag in the installation of capacity in the private sector till now has been ascribed to various reasons. But the most important of these appears to be the injudicious licensing of capacity. All the units in the private sector (see Table I) except a few—those of the Tatas, Bihar Alloy Steels (one of the two alloy steel projects of Birlas), Mahindra Ugine, Guest, Keen, Williams and Alloy Steel Corporation of Salem, which have been licensed for over 35,000 tonnes capacity—were licensed to small capacities. This made the securing of foreign collaboration difficult. Many of the private entrepreneurs now have been able to find foreign collaborators. But the dampening of development prospects and stringent capital market conditions have scared some of these licensees. Even then, however, there are a couple of licensees who would like to implement their schemes immediately. But their efforts are being thwarted by bureaucratic delays, for instance, in revalidating licences, for import of equipment.

It is high time that the urgency of the problem is appreciated. Alloy steel imports are a heavy drain on our foreign exchange resources. This drain has to be reduced expeditiously. If energetic action is not taken immediately to install



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additional capacity for the manufacture of alloy and special steels, the drain on foreign exchange resources will grow in the early 1970s. The demand for such steels in 1975-76 is estimated at not less than 840,000 tonnes.

The decision on augmenting mild steel capacity for catering to the demand of the 1970s, may, however, await the findings of the NCAER study. It has to be stressed, however, that for augmenting further the mild steel making capacity, a judicious balance will have to be struck between the expansions of TISCO, IISCO, Rourkela, Durgapur and Bokaro and the setting

up of new plants. No doubt the expansion of the existing plants would involve smaller outlays than the setting up of new projects and products from expansion programmes will start flowing into the market earlier than in the case of new plants, but an undue postponement of new plants may create difficulties in the latter half of 1970s as the gestation period of steelworks is appreciably long.

The immediate problem that we face in the manufacture of mild steel, of course, is to secure optimum production from the present, or the currently being, installed capacity. Although

TABLE I
ALLOY AND SPECIAL STEELS: LICENSED SCHEMES

Name of Entrepreneurs & Collaborators:	Categories of alloy steels in thousand tonnes							Total
	Spring	Free cutting	High speed tool & die	Alloy constructional	Low alloy constructional	Stainless	Electrical	
1. Alloy Steel Project, Durgapur (Japanese and Canadian Consortium)	—	—	14.5	27.5	—	18.0	—	60.0*
2. Mysore Iron & Steel, Bhadravati financial collaboration—West German technical collaboration—Bohlers, Austria)	—	30.0	8.85	35.15	—	3.0	—	77.0**
3. Hindustan Steel, Rourkela	—	—	—	—	—	—	50.0	50.0
4. Mahindra Ugine, Khopoli (Ugine, France)†	—	—	—	18.0	—	—	—	36.0
5. Textile Machinery Corporations Venture, High Quality Steels, Calcutta (Samuel Osborne, UK)	—	—	7.0	12.0	—	—	—	19.0
6. Bihar Alloy Steels Ltd, Ranchi (SFAC, France)	—	—	4.0	30.0	—	6.0	—	40.0
7. Tata Iron & Steels, Jamshedpur (Kobe Steels & Nissho of Japan)	4.5	—	12.0	5.0	28.5	—	80.0	130.0
8. Globe Motors, Ballabgarh	6.0	—	—	—	—	—	—	6.0
9. Krishna Steel Ind. Bombay	1.8	—	—	—	—	—	—	1.8
10. Canara Works, Mangalore (Sumitomo)	9.6	—	—	—	—	—	—	9.6
11. Singh Engg. Works, Kanpur	2.4	—	—	—	—	—	—	2.4
12. Guest, Keen, Williams, Calcutta (Guest, Keen, Williams, UK)	45.0	—	—	—	26.0	—	—	71.0
13. Firth Sterling Ltd, Bombay (Firth Sterling, Pittsburgh, USA)	—	—	0.3	0.3	—	—	—	0.6
14. Madras Alloy & Stainless Steels (English Steel Corp. Firth Vicker, UK)	—	1.0	6.0	—	—	7.0	—	14.0
15. V. H. Shah (Mitsubishi Shoji Kaisha, etc.)	—	—	—	—	—	10.0	—	10.0
16. K.T. Rolling Mills, Ambernath (Firth Brown, UK)	—	—	3.4	5.0	—	—	—	8.4
17. Gangadhar Baijnath Kanpur (CAFL, Paris, France)	19.8	—	—	—	—	—	—	19.8
18. Man Industrial Corp., Jaipur (Bell Gettons, & Morton, UK)	24.0	—	—	—	—	—	—	24.0
19. Alloy Steel Ind. Corp., Salem (Latrobe Steel Corp., USA)	—	—	7.0	12.5	17.6	—	—	37.1
20. Steel Makers Ltd., Ambernath	—	—	—	12.0	—	—	—	12.0
21. Netra Krishna Saighals, Punjab	—	—	—	3.0	—	—	—	3.0
22. Jamna Auto Industries, Yamunanagar	—	—	—	10.0	—	—	—	10.0††
23. Mir Vizarat Alikhan, Hyderabad	—	—	2.0	21.0	—	—	1.0	24.0
24. Upper India Steel Manufacturing & Eng. Co. Ltd, Ludhiana	—	—	—	7.2	—	—	—	7.2††
25. S. S. Miranda (P) Ltd, Bombay	—	—	1.2	—	—	—	—	1.2††
26. Others	—	—	—	—	—	—	—	22.9‡

* Licensed further to 180,000 tonnes. Product-wise details of expansion not available.

** Licensed further to 100,000 tonnes. Product-wise details of expansion not available. Free-cutting steel production includes some production of spring steel also.

† Product-wise details not available.

†† Letter of Intent.

‡ Details not known.

there is some under-utilization of the capacity presently because of slackened domestic demand—to counter which exports are being pushed up—the performance of our steelworks leaves much to be desired.

So far as the plants of TISCO and IISCO are concerned, their working this year has been seriously hampered by labour indiscipline and the hostility of some sections of the Bihar government and the recently dismissed West Bengal government. The IISCO Chairman, Mr Biren Mookerjee, dwelt on the growing labour indiscipline and the role of "outsiders" in encouraging it at the annual general meeting of the shareholders in September last in the following words:

"The general law and order situation in your works is deteriorating rapidly and complete indiscipline reigns supreme. The number of major gheraos since March now exceed fifty and threats of new and ingenious devices, whereby your works could be brought to a standstill, are being formulated by workmen at the behest of their union leaders. The latest is a move to disrupt the water supply of the entire works and township. There are certain ominous and significant overtones to this incident as it involves outsiders, i.e. not the company's own employees. About 200 outsiders, armed with spears, bombs and lathis sealed the wall of the company's works, blocked the entrance gate by felling trees across the roadway and assaulted several workmen at their work. When the police were contacted, they took no action as they had no instructions from Calcutta. But the strange phenomena that confronts us today in West Bengal is that where the order book is sectionally adequate, the workmen select that particular section for its go-slow tactics. Similarly, workmen appear to be concentrating on the loading and transport sections."

The dismissal of the United Front government in West Bengal should improve the situation, but to discipline labour again and to remove the influence of "outsiders" is not going to be an easy task.

Poor Performance

As regard the public sector units—Durgapur, Bhilai and Rourkela—the performance of all the three has been below expectations during the last 18 months. The worst has been that of Durgapur. As the Pande Committee, which reported on the working of this plant earlier this year, has pointed out, the performance of every section at Durgapur showed marked deterioration in 1966. The coke ovens were seriously damaged; their production went down to about 64 per cent of the rated capacity. The working of all the by-product units, except the tar plant, was "very unsatisfactory." Although the performance of the blast furnaces was not altogether unsatisfactory, considering the quality of the raw materials or coke, there was "excessive" loss due to the bleeding of blast furnace gas into the atmosphere. In the steel melting shop, off-grade production was high. The number of soaking pits was inadequate. The working of the blooming and the billet mills left much to be desired. The down-time here and in the various rolling mills was excessive. The production in the wheel and axle plant had not yet reached the rated capacity. The rejections of the products of the sleepers plant had gone up. The production in the CEM shop, although above target, the committee thought, could be stepped up further. The output of the ingots mould foundry had gone down and at the same time the rate of rejections had gone up. The serious setback to the working of the plant last year had increased its loss to an alarming extent—from Rs 26 lakhs a month on an average in 1965-66 to over a crore of rupees per month during the last financial year.

Although the performance of Rourkela and Bhilai had been much better, compared to that of Durgapur, these two units also could not repeat last year the results of the earlier

year. Rourkela turned out in 1966 only 924,466 tonnes steel ingots as against 1,077,582 tonnes in 1965. Bhilai's production at 1.76 million tonnes also was at the rate of utilisation less than 100 per cent, as against 109 to 113 per cent two years earlier. Accumulation of stocks due to slackened demand (at Bhilai pig iron stocks on March 1, 1967, amounted to 83,000 tonnes as against 45,000 tonnes a year ago and those of rolled steel aggregated 171,000 tonnes as against 55,000 tonnes; at Rourkela the accumulation was somewhat less—pig iron 59,000 tonnes as against 37,000 tonnes and rolled steel 57,000 tonnes as against 49,000 tonnes) might have hampered production to some extent. But there were other factors also responsible for this. At Rourkela, for instance, the decline in production was mainly due to the reduction in Hirakud power supply for about six months and the shutting down of one of the blast furnaces for more than three months for relining purposes. Both Bhilai and Rourkela had their share of labour trouble also.

While slackening of demand for some categories of steel may create upsets in production occasionally, efforts have to be made to keep up output to the maximum by readjusting the rolling programmes as has been done by TISCO and IISCO. The latter has recently taken up the production of galvanised sheets with a view to utilising capacity rendered spare by fall in the demand for structurals, etc.; the former has increased the production of this product with the same end in view. But this requires considerable elbow room for the management to plan production.

With a view to facilitating this sort of adjustment and avoiding such difficulties in the public sector steelworks as the Durgapur plant has been experiencing (the main factor

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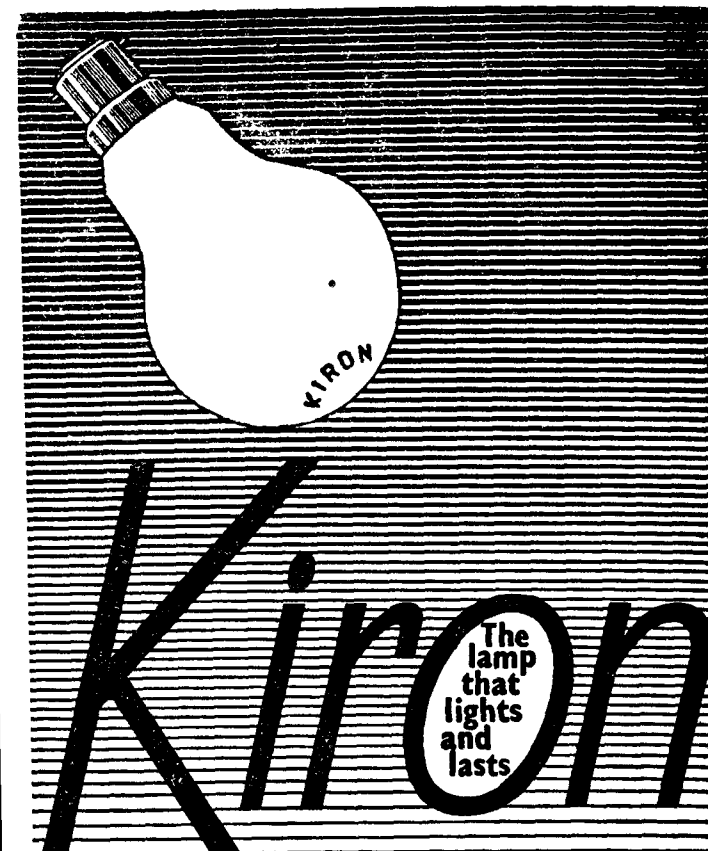
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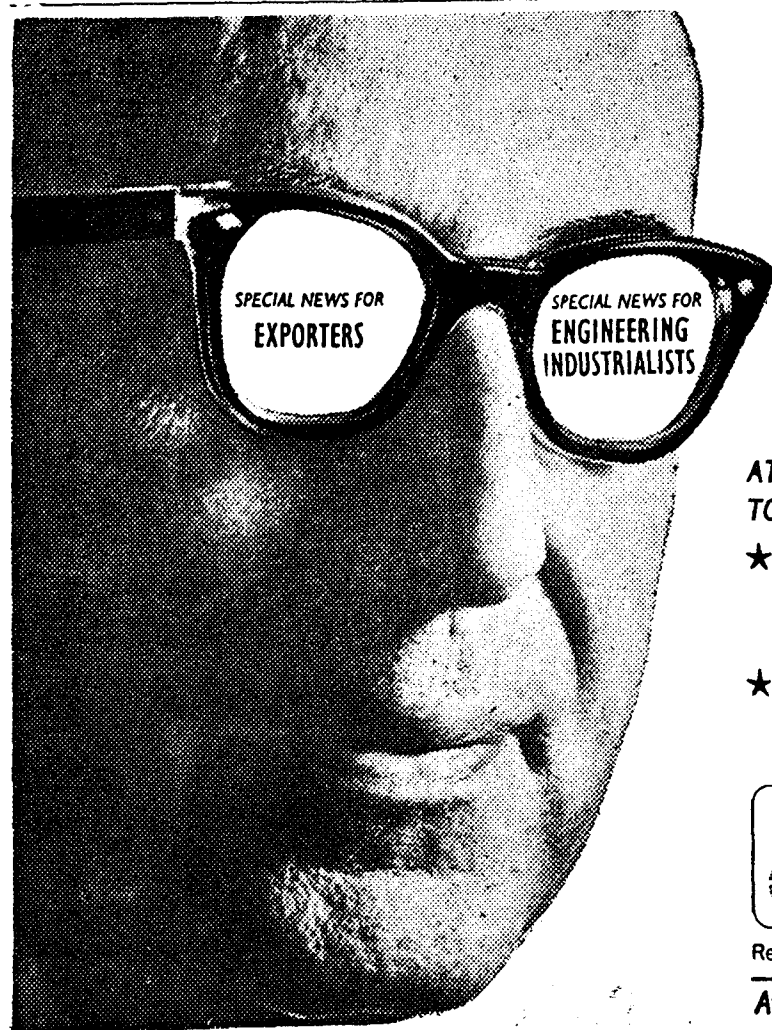
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responsible for the poor performance of Durgapur during 1966, the Pande Committee observed, was the failure of the management in respect of many of its essential responsibilities "like proper maintenance, lack of rigid control on quality of products, checking staff indiscipline and building up of staff competence". The union Minister for Steel, Dr M. Chenna Reddy, is thinking of reorganising the set-ups of Hindustan Steel Ltd (HSL) and the Joint Plant Committee (JPC). The latter plans the production of both the public and the private sector plants.

Withdrawal of Control

The reorganisation of the JPC, of course, has been necessitated otherwise too as a sequel to withdrawal of all direct government controls on prices and distribution of steel. The Standing Committee of the Iron and Steel Advisory Council at its meeting last month recommended that in future, the JPC should plan production and distribution of only the scarce categories of steel such as sheets, for which ceiling sale prices, instead of fixed prices as hitherto, would be laid down. For the other categories, steel producers, both in the public and the private sectors, would be free to fix prices depending on the market situation and plan their production. However, whatever prices are fixed would apply uniformly for delivery anywhere in the country so that engineering industries and other consumers situated in places away from the producing areas would not suffer. For this purpose, it has suggested that the freight equalization arrangements should continue and this work would be looked after by the JPC as at present. The requirements of the government departments, public sector projects and other priority consumers would have to be provided adequately by the steel plants in their production programmes.

The Standing Committee further suggested that the JPC

should be strengthened to enable it to function effectively. It should ensure proper marketing surveys and effective co-ordination among the steel plants for increased production of categories now scarce. It was further recommended that the Secretary of the Steel Ministry himself should take over the chairmanship of the JPC from the present incumbent—the Steel Controller. The new set-up of the JPC, it was proposed, should become effective from January.

Flexibility in the production programmes of steel plants is expected by the reorganisation of the JPC on the above lines. Restricting JPC's directions in production planning to only the scarce categories of steel should enable it to devote greater attention to the important function of arranging market survey to assess demand in advance. Fixing of only ceiling prices for the scarce categories should spur the steelworks to improve their efficiency. The transfer of the chairmanship of the JPC from the Steel Controller to the Secretary of the union Steel Ministry is similarly a step in the right direction. The Secretary with his better knowledge of the prospective changes in the economy, gained at the capital through inter-ministerial consultations, can bring greater realism to the JPC's planning than is possible under the present set-up.

The reorganisation of HSL has been proposed by Dr Reddy on the lines of the British Steel Corporation (BSC)—which was formed recently to look after the nationalised sector of the steel industry in the UK—but with one difference. The difference is that instead of having a three-tier set-up as in the UK—a central organisation, a group level set-up (the nationalised British steel plants have been divided into four groups of approximately equal size) and individual plant level management—we should have only a two-tier set-up—a central organisation and a plant level management. The plant level management in our case, it is thought, should correspond to

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the group level set-up in the UK as the size of our plants after their optimum expansions in the next few years will be approximately equal to the size of the groups in the UK.

The central organisation, Dr Reddy feels, should not only look after the Bhilai, Rourkela and Durgapur plants but also the Bokaro steelworks and the Mysore Iron and Steel Ltd. The Administrative Reforms Commission, however, would like this central organisation to look after the Hindustan Steel Construction Ltd. as well. This is another public sector company in the steel industry.

This central organisation will be nothing else but the present HSL management strengthened both in authority and personnel. The Board of Management of HSL is proposed to be strengthened by the addition of two or three deputy chairmen and a few functional directors, all on whole-time basis (at present, the HSL board has only one whole-time member—the chairman who is also the chief executive). The deputy chairmen and functional directors will be experts in different fields such as administration, industrial relations and technical matters. It is also proposed that the plant general managers should be brought back to the central board (they were members of the board before 1963 when it was thought that they should no longer remain so). This, it is felt, will result in more realistic decisions and will facilitate their implementation. Further, the organisation underpinning the board at the head office is proposed to be substantially reinforced, particularly in technical and industrial relations personnel. The responsibility for distributing the functions among the whole-time members of the board, Dr Reddy thinks, should be left to the chairman who should be consulted, on the British pattern, on the appointment of all the members of the board. The financial advisers of the public sector steel plants, Dr Reddy further feels, should also be appointed by the constituent units themselves instead of being appointed by the government as at present. The public enterprises, he opines, should develop their own cadre of financial advisers so that they do not have to rely on deputationists for providing this important service longer than necessary. To allow the chairman to have an effective say in the appointment of the members of the board should enable the board to function with cohesion and purpose.

Advisory Boards

At the plant level also, Dr Reddy feels, there should be advisory boards. These boards should assist the central board in some of the conventional top management functions such as scrutiny of annual plans, capital expenditure proposals, appraisal of performance, watch over cost trends and the general managers of plants in resolving problems of local or regional character. The general managers of the plants, Dr Reddy thinks, should be appointed by the central board in consultation with the government.

Some of these proposals have already been acted upon. For instance, Mr A. N. Bannerjee, a former general manager of Rourkela, has been appointed as the Deputy Chairman of HSL. One of HSL's own employees has been recently appointed as the financial adviser in the Bhilai steelworks.

With a view to imparting flexibility to the management of the public sector steel plants, the statute defining the relationship between Parliament, government and the steelworks, sufficient room, Dr Reddy has suggested, should be left for facilitating organisational changes when necessary.

This two-tier set-up for our public sector steel plants, indeed would be advantageous, compared to having separate autonomous bodies for each of the plant as contemplated earlier. It will help in reducing over-head costs and shall enable the constituent units to follow common policies and procedures, to share common services, to distribute scarce technical and managerial skills evenly and to rationalise pro-

duction. It should also avert fragmentation of industrial effort. But will it not make the central board, especially when Bokaro is also brought under its charge, a too much centralised organisation?

Under the proposed set-up, it will become very difficult to have any differentiation in policy which might be warranted on regional, productivity or other such considerations. A healthy competition between the various units may also become difficult, notwithstanding Dr Reddy's proposal to have consultations with the HSL authorities to find out ways and means to give a concrete shape to the British practice of inculcating inter-plant or inter-group rivalry, not in prices of course, but in the matter of reduction in cost of production and better service to domestic consumers (export sales of the nationalised steel plants in the UK are to be centralised in the hands of the BSC). In the proposed set-up, the chances of friction arising between the central organisation and the plant level set-up are also greater. Fixation of responsibility for failures in individual units would as well become difficult.

Some of the advantages of the two-tier system can certainly be had through co-ordination between different units. Straightaway copying the British pattern of management may not in the long run prove judicious. The UK has a well-trained, disciplined working force for its steel industry. Here we have yet to train not only our workers but also the managerial personnel.

Dr Reddy has also proposed that inter-plant transfers of the personnel of our public sector steelworks should be resumed. On the face of it, the proposal is sound. But if the transfers are too frequent and quick, they might in several cases mean wastage of experience acquired by an employee in par-

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ticular environments which over a period of time he would have effectively used for the benefit of that plant. In allowing large-scale transfers, there will be risk of undue favouritism. Some limited transfers, of course, should be beneficial as a sequel to Dr Reddy's programme of initiating arrangements for planned career development schemes whereby the potential of the technical personnel in the public sector steel plants can be realised to the full. If we have separate autonomous organisations for the public sector steelworks, transfers can be well regulated automatically.

Dr Reddy's three other proposals, of course, are quite judicious. The first of these is that we should move away from the framework of the standard salary scales which were prescribed in 1965 for the top posts in our public sector enterprises and should secure the services of competent managers on terms comparable to those in the private sector, if necessary. Competent management can make a substantial difference to the efficiency of our public sector enterprises and the compensation that will have to be paid to secure the services of such men would be insignificant when compared to the financial results that would accrue. Negotiations with a top private sector executive are understood to have been already initiated by Dr Reddy for securing his services for the public sector steel industry.

Incentive Scheme

The second idea is to develop an incentive bonus scheme which would provide, on the positive side, incentives at all levels, and, on the negative side, deterrents against performance below a specific level. The scheme, in essence, will provide variable pay packets at all levels depending on performance from month to month. Once such a scheme is developed, it would be extended to cover executives also whose role in the optimum utilisation of a modern, sophisticated plant is indeed crucial.

To check labour indiscipline, Dr Reddy wants to secure a national agreement to which the government, the public sector steel industry and the central trade unions would be parties. By this national agreement a proper machinery for the speedy settlement of industrial disputes is proposed to be brought into being. Agreements at the local level in each plant between the trade union representatives and plant authorities are envisaged.

Dr Reddy also feels that the prescription of financial obligations for nationalised industries in the UK is worth emulation by us here. A clear definition of such obligations will serve to demarcate the limits of the autonomy of an undertaking and the extent of its accountability to Parliament.

The reorganisations of the JPC and HSL, however, will not by themselves improve the situation. As the West German Reconstruction and Loan Corporation, which studied the working of our steel industry recently, has pointed out, the real source of trouble in our public sector steel plants is the poor leadership at all levels and inexperience of operators. The lack of sufficiently attractive terms for the higher level managerial and technical personnel has led to the public sector steelworks being manned by not really talented and experienced persons. As regards workmen, there has not been enough in-plant training. The bureaucratic hold on our public sector steel industry has also been tight—the top managerial positions have been filled mostly by bureaucrats. Even the general managers have been from the administrative services rather than with experience of pig iron and steel manufacture as is the case in most of the western countries. In western countries even a rolling mill man has a little chance of becoming the general manager of a steelwork. Dr Reddy's proposal to attract competent personnel for the key jobs by offering terms comparable to those in the private sector should yield good results so far as the higher categories of the steel plants'

staff are concerned. But there is no substitute for intensive in-plant training for the workmen whose number is large.

Then there have been parochial considerations and favouritism in recruiting staff for our public sector enterprises. Unless we shed the parochial approach, avoid favouritism and recruit the personnel for our steelworks strictly on merit, there is not much hope of improvement in the situation.

The other main problem of our steel industry is its high cost of production. As Table II shows, the average retention prices of our steel products went up by 61 per cent between 1952 and 1964, while the prices in Japan and the UK actually went down. The increases in prices in West Germany and Belgium were only moderate. Even in the United States, the increase was not to the extent we have had in our country.

TABLE II
INDICES OF STEEL PRICES (1952=100)

	1955	1960	1964
India	137	152	161
USA	118	147	150
Belgium	114	127	123
West Germany	102	114	120
UK	86	88	91
Japan	99	87	79

Source: Development and Objects of the Indian Iron and Steel Industry (West German Reconstruction and Loan Corporation).

With the removal of the statutory price control on all the categories of steel in May last, further increases in prices of our steel products have been allowed by the JPC (under infor-

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Normal	1488698	—	Prior to introduction of Perennial Plucking.
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1967 (up to Nov.)	2562024	84.97	

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mal control) between four per cent and 32 per cent. But even this increase in prices has compensated our steel plants to about 50 per cent of the increase in the cost of production since the previous revision about two years earlier. The increase in the cost of production of our steel, therefore, has been substantial over the last 15 years.

Table III throws light on the various factors responsible for the high cost of steel in our country.

TABLE III
COMPARATIVE COSTS OF STEEL PRODUCTION IN
INDIA, U.S.A., JAPAN AND WEST GERMANY

	Sales	Mate- rial costs	Person- nel expenses	Deprecia- tion	Inte- rest
India—Public Sector					
Rourkela	100	65.7	12.6	20.9	11.4
Bhilai	100	62.8	10.8	15.0	8.6
Durgapur	100	65.7	9.8	16.0	8.8
ISL (Total)	100	64.6	11.1	17.3	9.6
Private Sector					
Tata Iron & Steel	100	48.6	17.9	6.9	1.6
Indian Iron	100	54.2	16.9	5.7	1.8
Foreign					
US Steel (USA)	100	33.3	44.3	8.5	0.9
Yawata (Japan)	100	61.3	14.8	9.9	7.3
Thyssen (W. Germany)	100	64.3	19.3	6.6	1.7

Source: Development and Objects of the Indian Iron and Steel Industry (W. German Reconstruction and Loan Corporation).

This table shows that the production costs of TISCO and IISCO compare favourably not only with those of our public sector steel plants but also with those of Yawata, Thyssen and US Steel. With our public sector steelworks, the story is, how-

ever, different. With the exception of labour costs, their all other costs are higher than those of TISCO, IISCO, Yawata, US Steel and Thyssen (Bhilai's material costs, of course, are somewhat lower than those of Thyssen).

The advantage of lower wages in our public sector steel plants, however, is being frittered away to a great extent by overmanning of these units. The inflationary tendencies in our economy and the persistent increase in the cost of living may, further, reduce this edge in the near future. The advantages which our private sector steelworks enjoy in regard to depreciation may not be there when the impact of the last year's devaluation of the rupee is reflected in their balance sheets. The devaluation has increased the burden of the loans with which the public sector steel plants have been set up, making them even more over-capitalised.

Main Factors

The three main factors which have to be contended with if the cost of production in our public sector steelworks is to be brought down thus are: (i) over-capitalisation; (ii) high material costs; and (iii) excess working force.

The problem of over-capitalisation could be solved to some extent at least if all the three plants at Bhilai, Rourkela and Durgapur had been expanded to their optimum capacity. But as stated earlier, the expansion of Rourkela to 2.5 million tonnes and of Durgapur to 3.4 million tonnes is yet to be undertaken. The main causes of the over-capitalisation of our public sector steel plants have been high import duties, frequent changes in the project reports (even when construction had been taken up) and the condition imposed by foreign financiers that the equipment should be procured from a designated source. A good deal of over-capitalisation, thus, could have been avoided if we had a clear idea of what we wanted to produce even before project reports were commissioned.

Not enough attention has been paid till lately to the improvement of raw materials. The Rourkela steelworks, for instance, has been suffering on account of variations in the

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quality of iron ore. Our coal having high ash content, the coke consumption has been excessive. It is, however, encouraging to note that some steps have been initiated recently for reducing material costs of our public sector plants.

The four major innovations introduced with a view to bringing down material costs, after the Japanese example, are: (i) reducing of coke consumption through oil injections; (ii) providing of "high top pressure"; (iii) adoption of the oxygen enrichment method in the blast furnaces; and (iv) resort to sintering and ore bedding. Ore bedding is being done at Rourkela where variations in the quantity of iron ore have been frequently experienced. Sintering plants are already at work at Bhilai and Rourkela. In Durgapur, sintering is proposed to be resorted to in the near future. Provision for oxygen enrichment is being made as the blast furnaces are taken up for repairs and relining. High top pressure is being provided in all the new furnaces. In the case of the old ones, there are some financial difficulties arising out of the necessity to change valves and pipes. Attempts at introducing oil injection have been made, but under the present high excise and custom levies, not much headway has been made in this regard. The cost is said to be prohibitive.

At TISCO and IISCO too, attempts are being made to cut production costs. Tatas are going in for the establishment of a plant at their Noamundi mine to pelletise the blue dust and fines produced there. This plant is expected to go into production in a couple of years. They have also taken up modernisation of their coal mines on a long-term basis. The IISCO management is balancing its various production units under the 1.3 million tonnes expansion programme.

The designing by Tatas in collaboration with the Associated Cement Company of a wholly indigenous pelletisation plant is a healthy development in our steel industry. Switching on to the use of pellets by all our steelworks, in line with the global trends, in not distant future should make possible appreciable economies in production cost.

With a view to reducing over-staffing in the public sector steel plants, Dr Reddy has proposed that these plants should be allowed to diversify their activities in their neighbourhood in collaboration with local entrepreneurs, if necessary, as is being done by the National Coal Board in the UK. The suggestion is wholesome, but how far such a step will succeed will depend on the attitude of labour. It is indeed depressing to note that the attempt to bring down the workmen-output ratio at Durgapur after the expansion of this plant from one million tonnes to 1.6 million tonnes, by manning the expanded capacity largely with the present staff and recruiting only the essential new hands, has been thwarted by the insistence of labour on having entirely new staff for the expanded capacity. The result is that the 0.6 million tonnes expansion, although it was completed several months ago, is yet to be commissioned. Such hindrances by labour, notwithstanding the need to increase the employment opportunities in the country, can hardly be justified.

In a nutshell, what is required is that our public sector steelworks should be run on a strictly commercial basis.

Their profitability at present, as shown in Table IV, compares very unfavourably with both of TISCO and IISCO. If production costs are not reduced appreciably at these plants, we will find it very difficult to push up exports of steel and engineering goods. The quality of our steel also has to be improved considerably. This too depends primarily on harnessing modern techniques and innovations for improving the quality of raw materials.

If maximum utilization of our steel-making capacity throws up surpluses of some products, attempts ought to be made for exporting these surpluses instead of under-utilizing the capacity. The experts of the West German Reconstruction and Loan Corporation, in fact, have urged that export potential of our iron and steel industry should be explored more intensively than is being done at present. What concerted efforts can yield in this regard has been demonstrated this year. Our steel and pig iron exports during the first five months of the current financial year (Rs 23 crores) exceeded the exports in the whole of last year (Rs 20 crores). The public sector steelworks exported during the five months to August nearly 300,000 tonnes of iron and steel and earned Rs 14 crores in foreign exchange. Exports of TISCO and IISCO amount to four crores of rupees and those of re-rollers about crores of rupees.

Export Efforts

The public sector steel plants have stepped up their export activity following the visits of their delegations to several countries recently. The exports of iron and steel this year may exceed Rs 50 crores, as against Rs 3.3 crores in 1962-63, Rs 6.7 crores in 1963-64, Rs 8.2 crores in 1964-65, Rs 15.5 crores in 1965-66 and Rs 20 crores last year.

The direction of our iron and steel exports this year should suggest that we can continue to export sizable quantities to our present customers in future also. Most of them belong to Africa, west and east Asia and eastern Europe. Most of the pig iron exports have gone to Japan. Among the largest buyers of our rounds and flats have been Iran, Kuwait, the United Arab Republic, Thailand, Malaysia and Yugoslavia. Rails have been exported to Sudan, Ghana and Malaysia. Large consignment of structurals have gone to the Soviet Union and Iran.

Apart from the rising trend in our cost of production, the three other hurdles in the way of larger exports by our steel industry are: (i) lack of adequate stacking place at our ports; (ii) the chronic labour trouble at the most convenient port for steel exports—Visakhapatnam; and (iii) the highly discriminatory freight rates by the western shipping countries. When Scindias start their regular shipping service to West Asia in the near future, the markets in this region can be served economically. A similar service to east Asia will be a step in the right direction. But what this really implies is the strengthening of our merchant shipping. Improvements in port facilities are also urgently needed not only in the interest of larger iron and steel exports but also for facilitating our entire foreign trade.

TABLE IV
PROFITABILITY RATIOS OF INDIAN STEEL PLANTS

		Gross profit as % of sales		Net profit as % of sales		Net profit as % of net assets		Net profit as % of net worth	
		1965	1964	1965	1964	1965	1964	1965	1964
Hindustan Steel	...	1.0	—	1.0	—	0.3	—	0.5	—
Indian Iron & Steel	...	13.9	15.1	8.2	10.1	7.5	9.1	10.5	13.6
Tata Iron & Steel	...	11.9	14.6	6.9	10.4	6.4	8.8	10.1	14.5

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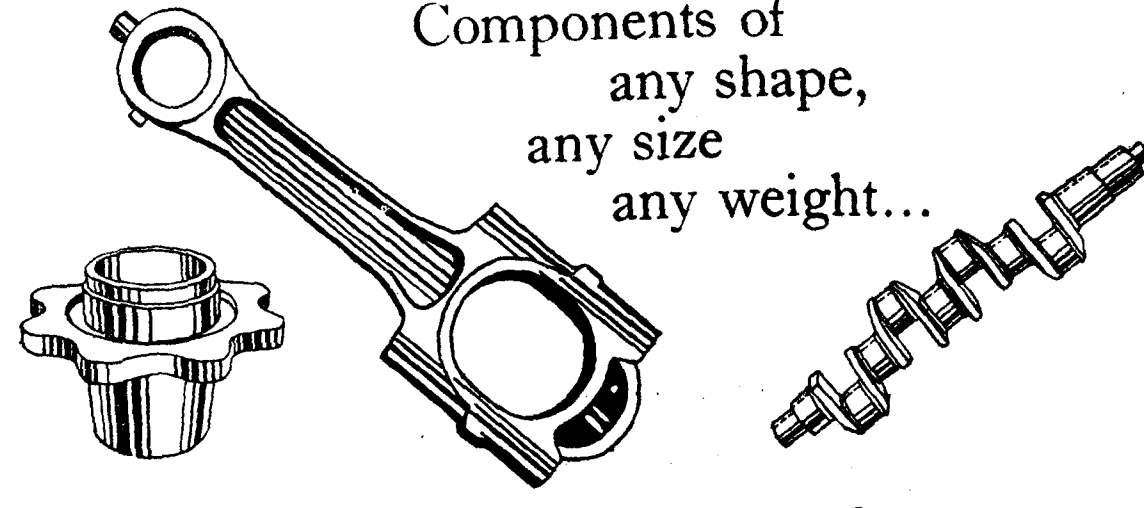
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A PROFILE OF INDUSTRIES

Engineering: Hit Hard by Recession

THE ENGINEERING industry was the worst victim of the recession which gripped our economy in 1967. Even in 1966, leading industrialists had warned the government that unless the economy was revived by appropriate changes in economic policy, the engineering industry in particular would suffer severely. For instance, Mr S. K. Datta, chairman of the Indian Engineering Association, said in a conference in Calcutta in December 1966:

"The current importance of the engineering industry in eastern India, to my mind, is entirely negative in that it lies neither in its growth nor in its management but in how to survive the consequences that will follow the closure of several units in structural fabrication, railway wagon building, railway wagon components, steel casting, cable and sterner manufacturing industries and even in the steel king industry. These are all industries which satisfy a crowded demand induced by other areas of economy and if (Rs) industries continue to suffer because of insufficient demand, there are bound to be repercussions on other sections of the engineering industry as well. This is, of course, part and parcel of the overall question of the revival of the economy but I am particularly apprehensive that if pockets of depression are allowed to remain, the revival of the economy may to a large extent be unbalanced and, at best temporary, to the detriment of certain sectors of activity—particularly those sections of the engineering industry dependent on a derived demand. What worries me is that, as yet, it does not appear that this aspect of the general problem of the revival of the economy is adequately appreciated in official circles".

The Government of India however did not take timely steps to revive the economy. Unfortunately, the assumption of office by the United Front government in West Bengal in March 1967 further aggravated the difficulties of the engineering industry. The ministry not only did not take any positive steps to improve the climate for industrial expansion but considerably hurt production and employment by encouraging gross indiscipline in factories. As a result, even factories with full orders could not work properly. According to unofficial but reliable estimates, the deterioration in the labour situation in West Bengal has caused a loss of three million man-hours, production of over Rs 20 crores and government revenue exceeding Rs 5 crores in the period since March, 1963. If account is taken of the go-slow tactics, the loss would be more.

An idea of the extent of the recession can be had from the existence of large-scale idle capacity in many engineering industries. The figures for 1965 and 1966 are given in Table I.

TABLE I
IDLE CAPACITY AS % OF TOTAL INSTALLED CAPACITY

Industry	1965	1966
Boilers	28	66
Agricultural machinery	10	76
Tea machinery	38	46
Machine tools	25	28
Steel castings	25	53
Steel forgings	6	36
Electric fans	5	14
Welding electrodes	28	33
Railway wagons	14	49
Heavy structurals	14	35

Data for 1967 are not yet available. But it is clear that the general situation did not improve much. The causes for the recession are the failure of the monsoon, cut in government orders, lack of demand, high taxation, the indiscriminate

licensing of industries, unfair competition between the public and the private sectors, and decline in exports. All these factors are closely connected with one another. But there is no doubt that the widespread recession in the last two years is a strong indictment of the type of planning that is being attempted in the country.

So far as the engineering industries are concerned, the sharp reduction in the demand for railway wagons affected adversely not merely the wagon-building industry but a number of ancillary industries. The railways have always been a big buyer of engineering goods. In the pre-planning period, the annual purchases of the railways were of the order of only Rs 82 crores. But at present it is about Rs 300 crores, of which imports represent 14 per cent. Because of the failure of agriculture, the freight target of the railways was cut from 308 million tonnes to 260 million tonnes, compelling the railways to reduce their offtake of wagons. The requirements of the railways for wagons for 1967-68 are about 21,000; and for 1968-69 the railways have decided to place orders for 16,000 wagons. The Railway Ministry however has stated that out of the orders for 21,000 wagons placed for 1967-68, only 7,000 have been supplied till November and that another 4,000 might be delivered by March 1968. The ministry has also indicated that the total value of all orders for railway materials including wagons and ancillaries for 1968-69 will come to about Rs 123 crores.

Lack of Raw Materials

The wagon industry, however, seems greatly dissatisfied with the promises and performance of the Railway Ministry. The industry says that its inability to deliver the wagons in time was due to the irregular and insufficient supply of raw materials and components, "extraordinarily stringent" quality control imposed by the inspection wing of the Railway Board, go-slow tactics of workers and, above all, the uneconomic price offered by the railways. The Engineering Association of India pointed out in November that the Railway Board was offering the "lowest-ever" prices for wagons though costs on all sides had sharply increased and the productivity of labour had deteriorated. The association also said that because of the intense competition in foreign markets, the industry did not get any reasonable margin of profit on export. Therefore, the Railway Board's insistence on low prices for wagons would seriously affect the finances of the industry.

Besides the wagon industry, many other industries also suffered from lack of demand. 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), are welding electrodes, razor blades, trucks, trailers, mopeds and others. The details are shown in Table II (pages 1213 & 1214).

Apart from the lack of demand, the issue of industrial licences without adequate care also contributed to the industry's difficulties. For example, the production of steel castings declined from 60,000 tonnes in 1965-66 to 55,000 tonnes in 1966-67. The demand for all types of castings by 1970-71 is expected to reach only 200,000 tonnes per year but the industry even now has a capacity of 255,000 tonnes.

Competition from the public sector has also been a source of great anxiety to the engineering industry. It is stated, for instance, that though the production of cast iron spun pipes declined from 258,000 tonnes in 1965-66 to 223,000 tonnes in 1966-67 and the industry has a capacity of 360,000 tonnes, the government is still contemplating to set up a fresh capacity of nearly 140,000 tonnes. Similarly, while the electric cable

industry has been hard hit by lack of demand and there is a considerable amount of idle capacity, the government has decided to set up a telecommunication cables factory at Hyderabad at a cost of around Rs 22 crores. The Engineering Association of India recently expressed concern at the proposal of the government to develop in the public sector industries like pumps and compressors, fabrication shops for fertilizers and chemicals, heavy plate vessels, foundry forge, central foundry forge for heavy electricals at Hardwar, and a new foundry forge project at Warda. The association said in these private sector was capable of expanding production in these fields and that it was not necessary to duplicate the capacity.

The liberalisation of import policy has been helpful to the engineering industry but because of the shortage of finance and the lack of demand for its products, it could not fully avail itself of the benefits of the new policy. On the other hand, the industry has complained that liberalised imports have impeded the industry's programme of import substitution. For example, 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.

FICCI Proposals

The problems relating to recession in the engineering industry were examined by the Federation of Indian Chambers of Commerce and Industry (FICCI) during the year and several suggestions were made to tackle them. The FICCI's proposals included restoration of the cut in wagon production, postponement or cancellation of the government steel foundries at Hardwar, Varanasi, Bokaro and Rourkela, selective reduction of excise duties on raw materials like pig iron and steel and finished products like fans and sewing machines; extension of hire-purchase facilities for producer goods like machinery and machine tools and replacement of import licensing by a rational system of import tariffs. The FICCI suggested that industry also should take appropriate steps to fight the recession by giving proper attention to diversification and rationalisation, by mergers of weaker units and by efficient inventory management. But most of these suggestions could not be carried out. The government was not willing to lose revenue by reducing taxation while industry did not have adequate incentives to improve efficiency and cut down costs. As a result, the engineering industry generally continued to suffer from the effects of recession.

Though the engineering industry has been hit hard by the recession, its export performance was relatively satisfactory in 1966-67 when the value of fabricated engineering products exported was about Rs 30 crores (or Rs 20 crores at pre-devaluation rates). This was an improvement of 17 per cent over 1964-65. But if we examine the export trend of engineering goods in April-August, 1967, the performance was hardly encouraging, as will be clear from Table III.

However, there have been some notable developments in the sphere of engineering exports in 1967. For example, an Indian firm secured an order for the supply of railway rolling stock to South Korea for \$11 million. This is significant because India got the order in the face of powerful competition from the USA, Japan, France, Britain, West Germany and Belgium. Another Indian firm succeeded in securing orders from New Zealand for the supply of cranes. Here, too, India had to face tough competition. Another significant achievement in the field of export has been the formation of a consortium by several firms for quoting against global tenders. For example, in October 1967 seven power cable manufacturers formed an export consortium in order to project the cable industry's image in the world market and step up exports; and this consortium succeeded in winning a contract of £1.1 million in Kuwait, competing against manufacturers of many advanced countries.

The entry of Indian engineering goods in such advanced countries as the UK and the USA is undoubtedly encouraging, though, so far, the exports have been only on a relatively small scale. In the UK, for instance, some of the new engineering

products introduced by India include grey iron castings for machine tools, machine tool accessories, car batteries, auto accessories and tools, expanded metal manhole covers, and so on. The United States imported from India in 1966 engineering goods (such as iron and steel articles, manufactures of metals, machinery and transport equipment) valued at \$7 million compared to \$14 million in 1965.

During 1967, the Government of India took several measures for improving 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. While these steps have been helpful, the industry feels that they will not be sufficient, considering the acute competition that its products have to face in foreign markets. For example, the shipping freight on many engineering goods continues to be excessive. Here are a few instances. The freight on steel rails from the United Kingdom to New Zealand is Sh. 212 per tonne while from Calcutta to New Zealand it is Sh 250 per tonne. On steel wire ropes, the freight from Tokyo to Rangoon in Yugoslavia is Sh 199 per 1000 kg while it is Sh 297/6 in Calcutta to the same destination. Apart from high rate of absence of regular shipping services between India and certain regions, such as central and south America, west north Africa, Australia and New Zealand has also been a handicap to export promotion.

The target for the export of engineering goods has been fixed at Rs 100 crores by 1970-71. This target cannot be realised merely by providing some incentives although these are important. It is necessary that engineering industry should be able to make better utilisation of its capacity. This will depend not merely on the supply of adequate raw materials of the right quality but also on ensuring a steadily increasing demand for its products. In other words, the outlook for the industry is closely bound up with the country's economic progress. The good crops of the current year will, to some extent, revive the demand for engineering products. But it is only when the economy as a whole shows signs of vigorous growth that the engineering industry can hope to achieve steady progress. For this purpose, it is necessary to pursue practical policies especially in regard to taxation and industrial development so that both production and consumption are stimulated.

TABLE III
EXPORT TREND OF ENGINEERING GOODS

Sections	April-August (Value in lakh rupees)		Percent- variation over 1966 (post- dev.)		Percent- contribution to the total export of Rs. 10.07 crores in 1967
	1966	1967			
Manufactures of non-ferrous metals	73.65	44.85	-39	4	
Manufactures of iron and steel	378.69	332.42	-12	33	
Manufactures of all metals	35.71	26.10	-27	3	
Misc. manufactured articles	64.41	63.26	-2	6	
Machinery—non-electrical	216.62	216.24	-0.13	21	
Machinery—electrical	212.63	176.44	-17	18	
Transport equipment	240.62	147.71	-39	15	
Total :	1222.33	1007.02	-18	100	

TABLE II
STOCKS AND SALES POSITION OF ENGINEERING INDUSTRIES

S.			Stocks in December				Annual sales			
No.	Industry	Unit	1964	1965	1966	1967 (January)	1964	1965	1966	1967 (January)
Capital Goods :										
1.	Looms (calico, semi-automatic and automatic)	Nos.	694	750	788	702	4,071	3,112	2,686	298
2.	Complete ring spinning frames	"	468	575	360	266	1,977	2,185	1,619	163
3.	Carding engines (revolving flat cards)	"	290	324	172	301	1,896	1,778	1,344	107
4.	Road rollers	"	50	56	114	90	1,051	1,122	1,034	109
Producer Goods :										
1.	Refractories	'000 M.T.	138.8	135.0	124.0	123.5	612.4	691.4	733.4	62.0
2.	Insulators—H.T.	M.T.	985	1,400.0	1,650.0	1,880.0	5,320.8	9,655.4	10,144.4	670.0
3.	" L.T.	"	472	550.0	540.0	585.5	4,725.0	4,094.4	3,289.6	200.0
4.	Coated abrasives	'000 Reams	37.2	29.7	25.1	26.0	161.7	185.1	178.6	15.8
5.	Screws—machine screws	Million Nos.	85.5	79.0	120.0	121.7	536.3	475.7	557.8	48.0
6.	Expanded metals	M.T.	270	—	62	58	1506	1866	550	53
7.	Ball & roller bearings	'000 Nos.	1268.2	1789.0	2028.8	1394.4	5626.1	7729.2	8929.4	1419.4
8.	Hacksaw blades	Hundred Nos.	41860	59669	33086	32182	285139	287439	205131	16839
9.	Reamers	Nos.	26119	29319	39309	43134	121322	143278	178086	15170
10.	Threading tools (taps dies & chasers)	"	171125	345300	364187	362506	1896642	2079389	1877893	3415638
11.	Milling cutters	"	67659	63599	96863	195713	234017	243444	270972	22935
12.	Tungsten carbide (sintered)	Kgs.	4711	10214	11858	13354	26519	35393	42156	2478
13.	Lathe tools (tool bits)	'000 Nos.	78	179	240	254	531	799	833	69
14.	Diamond drill bits	Nos.	111	95	656	949	22353	33988	30781	3049
15.	Steel castings	M.T.	13753	10628	10921	10309	63520	60880	52135	5278
16.	Wire ropes	"	2741	4645	4780	4921	9226	11066	13233	1047
17.	Electrical steel sheets	"	—	—	—	—	22500	26736	28236	2159
18.	Electrolytic copper wire rods	"	1765	1147	—	—	21483	12870	15667	1852
19.	Diesel engines : 1—Vehicular type	Nos.	147	153	18	11	8271	8670	7167	428
20.	2—Stationary type	"	2087	1875	3698	3208	70263	88088	105193	11405
21.	Power driven pumps	'000 Nos.	6.8	9.1	15.0	12.8	169.2	211.3	264.1	27.1
22.	Twist drills	"	774.2	1985.6	3033.3	3271.5	6398.6	6844.4	6581.9	442.5
23.	Grinding wheels	'000 Kgs.	434.4	550.3	619.4	643.4	3318.5	3909.3	4405.7	333.8
24.	Arc welding electrodes	Lakh R. Meters	144.4	193.2	138.3	191.6	2262.8	2093.2	2080.5	126.7
25.	Steel files	'000 Nos.	1638	1523	1834	1932	5484	7687	8610	813
26.	Air compressors	Nos.	81	318	450	319	2682	2523	3264	391
27.	Electrical motors	'000 H.P.	83.6	93.0	90.5	32.9	1318.8	1692.2	1987.3	247.9
28.	Power transformers	'000 KVA	296.4	383.7	454.0	550.4	3245.6	4221.9	4723.7	455.7
29.	Cables & wires :									
30.	i) Conductors—									
31.	(a) Bare copper	M.T.	143	64	45	32	5845	3847	2179	108
32.	(b) Aluminium	"	5289	3984	4779	4985	42687	43275	47707	4927
33.	ii) Winding wires	"	724	626	780	934	8951	9634	9482	1132
34.	iii) Rubber & plastic insulated cables & flexibles	Lakh Meters	446.0	582.1	539.5	330.0	2937.1	3835.8	3832.2	539.5
35.	iv) Paper insulated power cables	Kilometers	211.0	836.0	465.0	386.0	2648.8	3893.0	4881.8	363.0
36.	28 Motor starters	'000 Nos.	9.4	8.0	16.4	16.1	214.2	294.2	370.8	39.4
37.	29. Railway wagons	Nos.	6	308	158	128	24234	24766	16852	1367
38.	30. Measuring instruments	"	4839	7138	11,455	10650	83098	107465	139983	13938
39.	31. Water meters	"	7778	29593	4247	3039	115150	95113	126902	7893

STOCKS AND SALES POSITION OF ENGINEERING INDUSTRIES (Contd.)

S.			Stocks in December				Annual sales			
No.	Industry	Unit	1964	1965	1966	1967 (January)	1964	1965	1966	1967 (January)
Consumer Goods :										
1.	Sanitary wares	M.T.	1401	1500	1685	1790	9435	13173	12595	1167
2.	Thermosflasks	'000 Pcs.	235.0	91.0	300.0	295.0	1963.2	2178.0	2428.6	210.0
3.	Screws—wood screws	Million Nos.	107.4	100.0	91.0	119.8	1588.0	1796.6	1709.4	103.6
4.	Razor blades	Lakhs	312.9	417.8	1157.1	1195.1	8806.3	9208.3	8321.9	704.2
5.	Hurricane lanterns	'000 Nos.	416.0	250.0	568.0	592.0	5265.0	5817.4	4821.6	368.0
6.	Oil pressure lamps	"	4.4	4.4	8.5	10.6	131.1	116.4	59.5	4.9
7.	Enamel Wares	'000 Pcs.	981.0	946.0	850.0	850.0	35125.2	35978.0	33868.8	2790.0
8.	Duplicators	Nos.	411	229	168	99	5221	5582	3301	284
9.	Crown cork	Million Nos.	57.6	29.1	22.6	16.5	890.3	1034.5	1148.9	101.0
10.	Typewriters	Nos.	8750	7318	4287	4383	42146	42189	34226	4210
11.	Stoves									
	1. Pressure type	Nos.)	1199	488	1779	366)	193429)	152475	50693	6815
	2. Non-pressure type	Nos.)		2648	2101	1707)			284863	36162
12.	Sewing machines	Nos.	17676	38229	28507	28049	242194	401127	420422	32589
13.	Sewing machine needles	'000 Nos.	—	354.0	256.1	231.0	2580.0	155.0	459.1	472.1
14.	Conduit pipes	'000 R. Meters	124.2	486.6	535.0	476.3	4082.0	3231.2	7589.6	726.6
15.	Dry cells	Lakhs	62.1	39.6	124.8	146.7	2849.0	3029.7	3200.4	318.0
16.	Storage batteries	'000 Nos.	32.0	28.6	30.8	29.0	762.6	748.4	717.8	65.5
17.	Electric lamps :									
	1. Incandescent filament lamps	'000 Nos.	1902.3	2505.5	3288.6	3934.5	58591.6	66474.4	73397.3	5084.6
	2. Fluorescent lamps	"	29.9	267.9	325.2	318.1	3442.4	3940.4	4002.3	448.1
	3. Miniature lamps	"	2690.0	2293.9	1979.9	2198.7	31616.3	28913.4	29806.4	2250.8
18.	Electric fans	"	175.1	207.5	132.0	167.5	1122.0	1416.0	1367.9	75.8
19.	Radio receivers	Nos.	20313	10972	35125	39689	469238	593051	688419	59924
20.	House service meters	"	184081	103267	67044	42034	1105460	1182306	1082047	109055
21.	Domestic refrigerators	"	3384	6497	7706	8821	30703	25799	36915	2346
22.	Portable room airconditioners	"	750	803	1567	1661	12113	11323	17164	1114
23.	Electrical wiring accessories :									
	1. Plastic accessories	'000 Nos.	1520.8	1679.6	1555.8	1480.7	16889.0	187893.0	20055.8	1635.2
	2. Brass lamp holders	"	441.9	53.9	149.3	264.0	4470.6	5615.5	3096.6	131.1
24.	Automobiles :									
	1. Cars	Nos.	699	642	357	434	23433	24849	27885	3147
	2. Jeeps & land rovers	"	513	401	328	221	10225	10600	9877	933
	3. Station wagons, utilities, mobiles, health vans	"	—	—	—	—	—	—	—	—
25.	Commercial vehicles,									
	(a) Trucks—									
	1. Petrols	"	605	404	270	332	7352	7190	5702	509
	2. Diesel	"	635	1223	1174	1484	25824	22584	22189	1685
	(b) Passenger buses—									
	1. Petrol	Nos.	—	—	13	12	—	—	47	1
	2. Diesel	"	169	330	234	343	5332	6763	7320	646
26.	Bicycles :									
	i) Complete cycles	"	39313	35286	82070	81050	1484605	1551589	1624252	151340
	ii) Spare parts & accessories	"	—	—	—	—	85863.6	98244.0	96403.2	9400.0
27.	Motor cycles	"	716	958	935	800	13724	21118	24647	1745
28.	Scooters & scooteress	"	460	899	1103	921	20480	19805	20448	2589
29.	Three wheelers	"	79	3	115	87	2517	1960	1076	166
30.	Trailers	"	86	838	658	750	7070	8980	4620	238
31.	Mopeds	"	—	362	48	22	900	4856	4396	625
32.	Clocks	"	4736	853	1866	2004	62897	70627	66571	5710
33.	Water coolers	"	—	—	—	—	2268	356	4002	485
34.	Clinical thermometers	"	797935	502598	894560	395451	798856	1784257	1679481	537840
35.	Zip fasteners	'000 Meters	621.8	462.9	322.5	194.6	3231.6	3374.9	3802.8	518.2

Source: Based on the Monthly Statistics of the production of selected industries of India published by the Central Statistical Organisation (Industrial Statistics Wing), Government of India, Calcutta.

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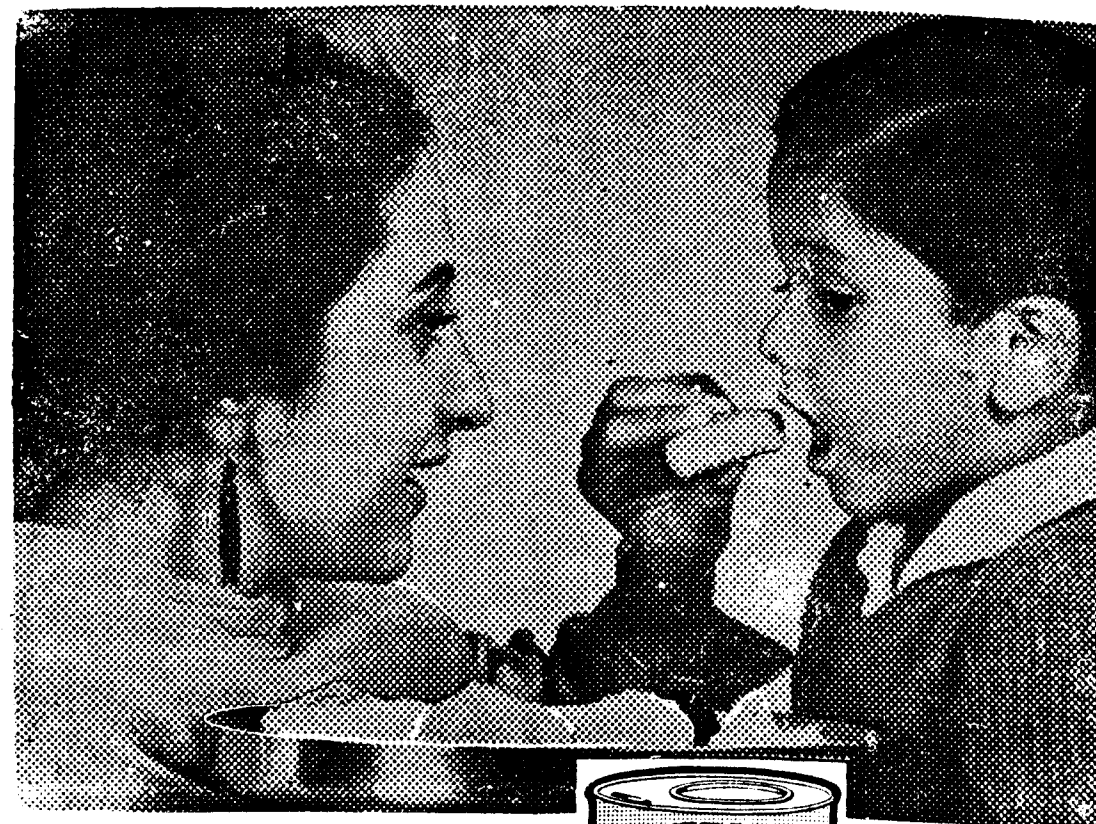
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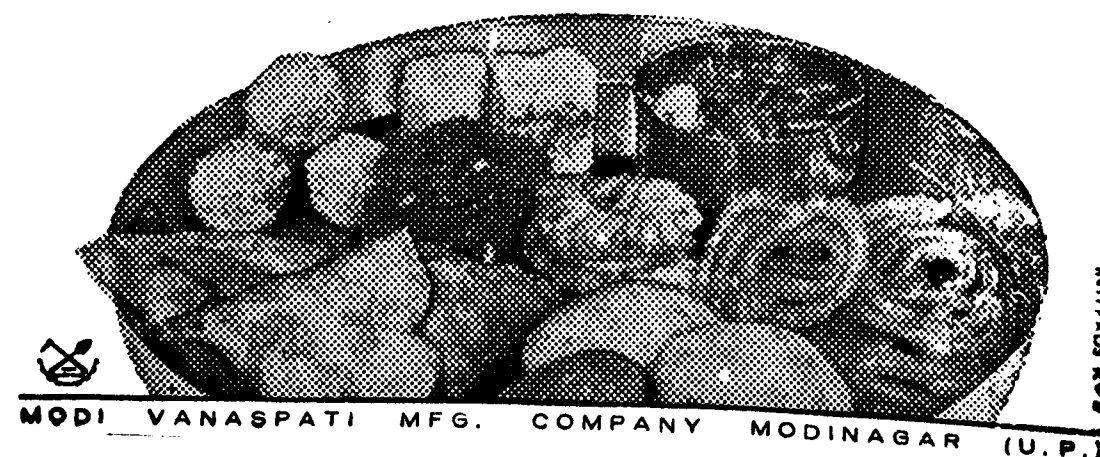
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A PROFILE OF INDUSTRIES

Industrial Machinery: Recession and Readjustment

HOWEVER PIOUS were the intentions of our planners in establishing a large capacity for the manufacture of heavy industrial machinery in the public sector, their judgment will be considered of value only when the products of these units face the market. As yet these units are being defined as 'undertakings under construction' and their performance cannot be assessed on the basis of their production, sales and profits. Doubts are often expressed regarding the economic viability of these projects because in several cases experts from this country did not prepare their feasibility reports. Reliance was placed solely on the reports of the foreign collaborators who could have gone wrong in their assessment of costs, etc. Even the union cabinet approved some of the projects without having a precise idea about their costs of production and profitability.

Of the three industrial machinery making units in the public sector—heavy machine building project at Ranchi, high pressure boiler plant at Tiruchirapalli and coal mining machinery project at Durgapur—the first one is being equipped to make machinery for iron and steel, mineral oil, coal mining, chemicals, fertilizers and cement industries, along with several other items for general industrial use such as cranes, excavators, oil drilling rigs, crushing and grinding equipment. The total outlay on the project, which has the benefit of Soviet collaboration, has been estimated at nearly Rs 46 crores and the annual value of end-products, when full capacity is reached by 1972-73, will be around Rs 56 crores. In actual practice, the output in the coming years will depend upon the orders received by the unit. The overall production during 1966-67 was estimated at around Rs 7.5 crores.

A Unit of Significance

The second unit of significance in the public sector is the Mining and Allied Machinery Corporation, which was incorporated as a new company in April 1965 to take over the coal-mining machinery project at Durgapur from the Heavy Engineering Corporation. This project is expected to manufacture 45,000 tonnes of diverse types of coal-mining machinery every year. It also proposes to undertake the manufacture of allied machinery, such as coal washeries, material handling equipment, ore beneficiating and mineral dressing plants and other miscellaneous engineering items. The additional work in this connection is in progress and full production is proposed to be attained by 1971-72. The erection of equipment, which is being done in consultation with Soviet experts, is expected to be completed shortly. The total cost of the project has been estimated at around Rs 30 crores and that of the township around Rs 9 crores. The production during 1965-66 was around 5,178 tonnes and during 1966-67 around 7,724 tonnes as against a rated capacity of 10,000 tonnes. The unutilized capacity of the plant apparently revealed the paucity of orders following a decline in demand for coal mining equipment, but it also failed to meet certain orders because of some reorganisation of its production programme.

The heavy pressure boiler plant being set up at Tiruchirapalli in Madras state in collaboration with Czechoslovakia, is an integral part of the plan to manufacture heavy electrical equipment in the country. It has been designed to manufacture every year 12 high pressure boilers of the capacity of 125 to 450 tonnes of steam per hour, with a total power capacity of 750 MW. The programme of manufacture includes the annual production of 1,800 tonnes per year of boiler fittings for sale to other enterprises. When in full production by 1970-71, the unit is likely to have a sale realisation of around Rs 22 crores. Civil engineering works in the main buildings has been com-

pleted and the manufacture of two boilers for Ennore Thermal Power Station has been taken up.

The manufacturers of industrial machinery in the private sector have been hit hard by the recession. The enthusiasm with which they were operating against heavy odds of non-availability of raw materials and know-how as well as high costs, has been dampened to a considerable extent. The order books of these manufacturers are not as full as they used to be because demand for most of the items of machinery has dropped propitiously. Today they are fighting a battle for existence, and in this their faculty for diversification is coming to their aid. They are utilising their capacity for making machinery for new industries where demand is still growing. Important manufacturers such as Texmaco and Larsen and Toubro, who already have many lines of manufacture, are preparing to add more. Texmaco today manufactures textile machinery, sugar mill machinery, machine tools, railway wagons, steel castings, water tube boilers, stationary boilers, barrage gates, etc. Similarly the activities of Larsen and Toubro include the manufacture of chemical and fertilizer plants, cement plants, paper and pulp plants, dairy equipment, power equipment, oil drilling equipment, earth moving equipment, cranes etc. Such diversification, while providing stability for the manufacturers, brings about increasing import substitution in the field of industrial machinery. The scope for import substitution can be imagined from the fact that non-electrical machinery worth Rs 267 crores was imported in 1966-67, a large part of which was industrial machinery.

Many units engaged in the manufacture of machinery have learnt the value of international market analysis for their products and have succeeded in exporting complete units as well as components of machinery to some developing countries. Textile machinery, sugar machinery, paper machinery, cement machinery and chemical machinery are proposed to be exported to countries such as Nigeria, UAR, Ghana, Kenya, Ceylon, and many other Asian and African countries. There have been some efforts to form consortia of various manufacturers of machinery for the supply of complete industrial plants on turn-key basis. It is believed that exports of industrial plants in this manner can be expanded considerably so as to achieve an annual export of engineering goods of the order of Rs 200 crores as against an export of Rs 34 crores at present.

Although the machinery industry does not present a rosy picture today, its importance cannot be minimised in the context of our present stage of economic growth. All hopes of industrial prosperity are pinned on this sector of industry which is going to engineer the ultimate abundance of textiles, sugar, cement, chemicals and a host of other goods that reach the common man. The period of recession, therefore, is 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. The details of their activities may, however, be assessed by a study of individual lines of manufacture.

Textile Machinery

The working group of textile machinery industry assessed the demand of machinery by the textile mills during 1965-66 to 1970-71 at nearly Rs 232 crores taking into account the increased requirements of the textile industry and the necessity for rehabilitation and modernisation of obsolete and outdated equipment. The present annual installed capacity for the manufacture of textile machinery is of the order of Rs 35 to 40 crores. Taking into account the fact that the licensed capacity

of the industry is around Rs 70 crores, it may be stated that the industry is well set to meet the demand assessed by the working group. If we look at the figures of output of textile machinery during the last few years (Table I), it is obvious that the peak was already reached in 1965, after which the industry has shown signs of stagnation.

TABLE I
OUTPUT OF TEXTILE MACHINERY
(Rs crores)

Year	Value of output
1961	12.94
1962	15.40
1963	20.08
1964	20.69
1965	28.38
1966	22.15
1967 (Jan.-June)	8.12

It may be observed from Table II that a considerable part of capacity was unutilised during 1966 and 1967. In the face of this decline in production, no new capacity is likely to be licensed till the situation changes after an improvement in demand. At present the principal items of textile machinery

TABLE II
CAPACITY AND PRODUCTION IN TEXTILE MACHINERY

Item of textile machinery	Annual licensed capacity (Nos.)	Annual installed capacity (Nos.)	Production in 1966 (Nos.)	Production during 1st half of 1967 (Nos.)
Blow Room Lines	78	18	16	6
Carding Engines	3130	1074	1089	276
Draw Frames	505	120	26	46
Speed Frames	703	84	68	39
Ring Frames	5066	1680	1507	625
Combined Bobbiners	8	5	2	—
Woolen Ring	—	—	—	—
Spinning Frames	40	10	5	—
Woolen Preparatory	16	35	4	—
Gill Boxes	—	—	—	—
Worsted Ring	16	5	—	—
Twisting Frames	4488	1560	423	68
Reeling Machines	216	84	69	5
Bundling Press	120	72	57	—
H. S. Winding Machines	60	30	5	—
H. S. Warping Machines	104	48	33	5
Sizing Machines	720	600	71	36
Pirn Winding Machines	7210	4824	1838	547
Looms Plain (Cotton)	6600	3504	1294	632
Looms Auto (Cotton)	—	—	—	—
Looms Plain (Silk & Art silk)	1805	305	13	1
Baling Press	36	124	17	5

that are being manufactured in this country are carding engines, ring frames, reeling machines and looms and these have been well established.

Although the textile machinery industry has recorded impressive progress during the last decade, certain items have still to be imported as are either not manufactured in the country or whose production is inadequate (Table III). Progress in respect of certain items such as speed frames, draw frames and pirn winders has, however, not been quite satisfactory. It has been estimated that indigenous production of the existing units will not be able to meet the entire demand of these items. The production of full range of textile machinery has been hampered by a number of drawbacks such as the non-availabi-

lity of sufficient foreign exchange for the import of components and raw materials as well as the non-supply of proper quality of pig iron and coke. In an attempt to develop the manufacture of latest types of machinery in the face of advancing technology, producers in this country are being encouraged to enter into collaboration agreements with foreign producers of repute.

There are nearly 29 main producers of textile machinery the names of which along with the important products they manufacture have been listed in Table IV. Texmaco which was established in 1939 was followed by Cooper Engineering in 1940 and T. Maneklal in 1941. Central India Machinery Manufacturing Co. (CIMMCO) entered the field in 1943. At present there are 29 manufacturers.

TABLE III
IMPORT OF TEXTILE MACHINERY
(Figures include parts and components)

Year	Value imported (Rs crores)
1957	50
1960	20
1961	20
1962	21.89
1963	22.37
1964	24.21
1965	25.10
1966	28.92
1967 (Jan.-March)	6.23

Besides these large units, there are over 450 small-scale units manufacturing spare parts of textile machines, generally for replacement. These units manufacture spinning frames, winding and preparatory equipment parts, loom parts including accessories such as dobby and parts of printing, finishing and



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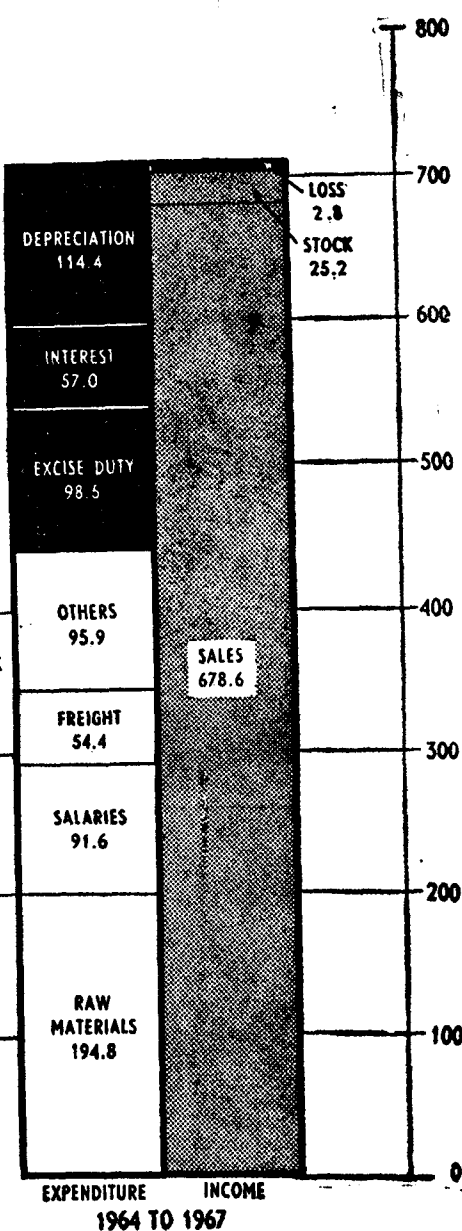
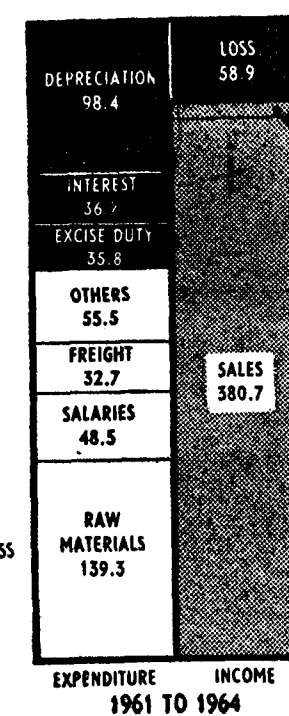
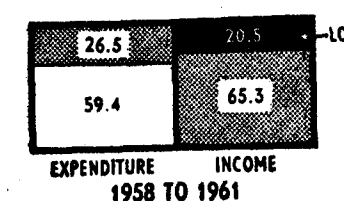
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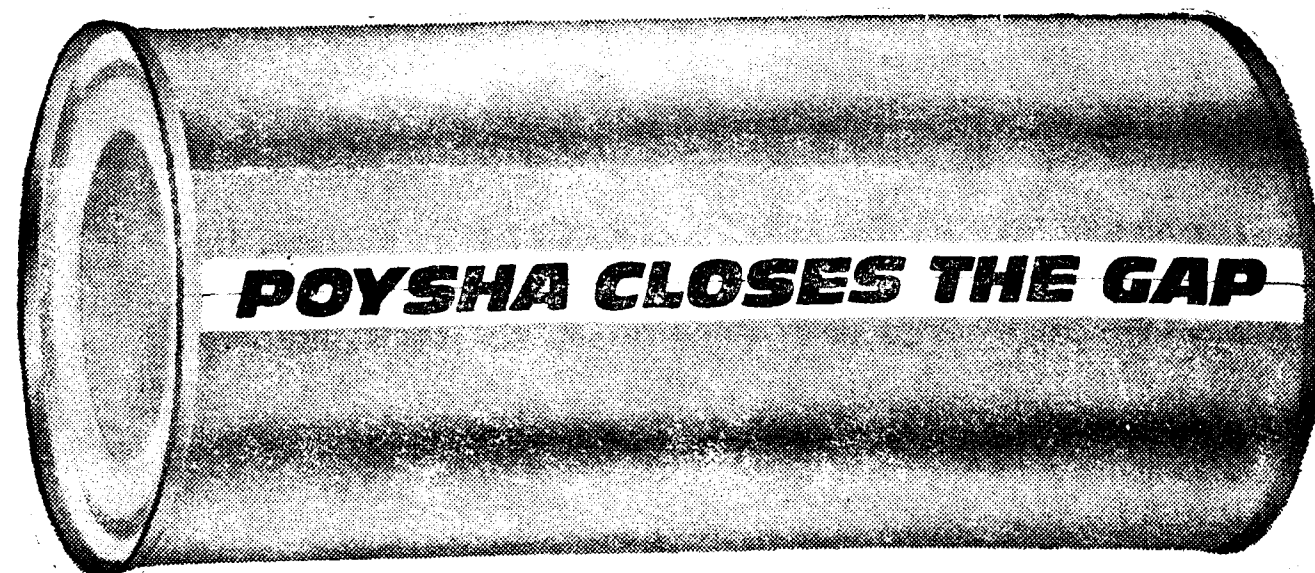


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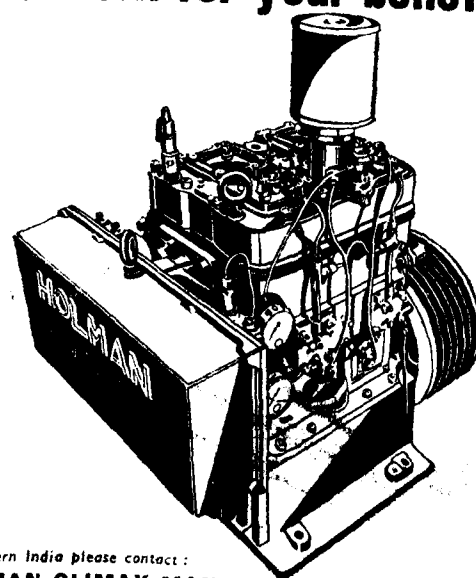
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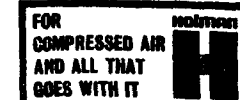


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processing machinery. These units are concentrated mostly in Gujarat, Maharashtra and Mysore. The Small Industries Service Institute estimated their output at around Rs 3 crores in 1956, which increased to around Rs 24 crores by 1965.

Textile machinery manufacturers have gradually built up an export market for their products and in this direction the Textile Machinery Manufacturers' Association has tried to explore prospects abroad. Study teams to east European countries as well as Middle East and African countries are proposed to be sent. The association also proposes to invite trade delegations from developing countries so that the idea of establishing textile mills with our textile machinery can be sold to them. Some manufacturers have jointly submitted a tender through the State Trading Corporation for two complete cotton textile spinning and weaving plants invited by the Burmese government and a number of enquiries from other countries such as Ceylon and UAR are also likely to prove meaningful.

Sugar Mill Machinery

The production of sugar mill machinery at around Rs 8.70 crores in 1966 was nearly 60 per cent of the installed capacity (Rs 12 crores) and less than half of the licensed capacity (Rs 18 crores). The seven important manufacturers who have an annual capacity to produce two sugar mill plants each, have achieved more freedom in terms of import content which has come down to nearly Rs 15 lakhs for a sugar mill with a capacity of 1,000 to 1,250 tonnes per day. All these manufacturers have collaboration agreements with well-known foreign manufacturers. The quality of their production is considered fairly good and the industry is in a position to cater to the entire domestic demand of sugar indus-

try. These manufacturers are also well-equipped to meet the possible additional demand during the next five years (Table V). Consequently, the ministry does not propose to license any additional unit for the manufacture of sugar mill machinery. Additional capacity, however, is allowed only for the selective items of sugar mill machinery such as milling plants and centrifugals the production of which has either not been established or is not adequate in relation to domestic requirements. At present, most of the manufacturers have standardised the size of their plants at around 1,250 tonnes per day, although they are in a position to fabricate bigger plants of a capacity of 2,000 tonnes per day, should there be demand for such plants.

In addition to these manufacturers of complete sugar mills, there are nearly 11 other producers who manufacture individual items of sugar mill machinery against specific orders. Moreover, during the year 1966-67, licences were granted to two more manufacturers of the diffusion plant and they are expected to go into production shortly.

The industry has gone through a period of slackness because there was no notable establishment of new sugar mills and even the existing mills did not expand their capacity to a significant extent. The quantity of sugar manufactured in fact declined due to low sugarcane availability, which in turn affected adversely the capacity of the existing units to spend even on replacements of machinery. The decline in domestic demand for sugar mill machinery was made up to some extent by exports, where the manufacturers met with fair success. A number of sugar mills have been established in Uganda with our sugar mill machinery and technical know-how. Similarly our sugar mill machinery is finding favour in many other developing countries. These exports are likely to provide

TABLE IV
MAIN MANUFACTURERS OF TEXTILE MACHINERY

Sl. No.	Name of unit	Products
1.	Textile Machinery Corporation (Texmaco), Calcutta	Carding engines, draw frames, speed frames, ring frames.
2.	Textool Co. Ltd, Coimbatore	Carding engines, draw frames, speed frames, ring frames, winding machines.
3.	Central India Machinery Manufacturing Co. (CIMMCO)	Wind machines, warping machines, plain loom, auto-looms.
4.	Machinery Manufacturers Ltd, Bombay	Carding engines.
5.	National Machinery Manufacturers, Thana, Bombay	Carding engines, drawing frames, speed frames, ring and doubling frames, auto-looms.
6.	Lakshmiratan Engineering Works Ltd, Bombay and Kanpur	Draw frames, speed frames, ring frames, auto-looms.
7.	Cooper Engineering Ltd, Satara	Plain looms, auto-looms.
8.	Ramakrishna Industries Pvt. Ltd, Coimbatore	Blow room lines, draw frames, speed frames, ring frames.
9.	Star Textile Engineering Co. Ltd, Bombay	High drafting equipment, ring frames, speed frames.
10.	Hindustan Textile Engineers, Bombay	Spinning machinery and accessories.
11.	Zenith Textile Engineers, Bombay	-do-
12.	Parmar Mechanic Works, Surendranagar, Gujarat	-do-
13.	Sewing Machine Parts Making Works, Surendranagar, Gujarat	-do-
14.	Indo-Belga Engineering Co., Ahmedabad	Fluted rollers, spinning rings, high draft draw box units.
15.	T. Maneklal Manufacturing Co. Ltd, Bombay	All types of textile machines and processing machines.
16.	Mysore Machinery Manufacturers, Bangalore	Plain looms, weaving and preparatory machinery.
17.	Lakshmi Machine Works Ltd., Coimbatore (Regd.)	Blow room lines, silver and ribbon lap machines, combers, etc.
18.	Machino Textile Ltd., Dehra Dun	Ring frames and spares
19.	M. K. Brothers, Ahmedabad	Spares and accessories for spinning machinery.
20.	Mistri Mohallal Veldas & Co., Ahmedabad	-do-
21.	Indequip Engineering Ltd, Ahmedabad	Textile machinery and accessories.
22.	Suessen Textile Ball Bearings & Products Ltd.	Spares and ancillary items for spinning machinery.
23.	Indian Caseblancas High Draft Co. Pvt. Ltd, Bombay	Fluted rollers and other spinning accessories.
24.	Machinery Manufacturers Corporation, Calcutta	Carding engines, speed frames
25.	New Standard Engineering, Bombay	Blow room lines.
26.	M/s. India M/c. Calcutta	Plain looms.
27.	M/s. Shri Banshi Industries, Patna	-do-
28.	M/s. Indentors Industries Corporation	-do-
29.	M/s. Ravi Industries, Thana	-do-

considerable cushion to the producers of sugar mill machinery against the possible repercussions of the present recession. Moreover, in the face of under-utilisation of capacity, the manufacturers of sugar mill machinery have diversified their activities, treating their units as overall engineering units.

TABLE V
ANNUAL MANUFACTURING CAPACITY OF SUGAR MILL MACHINERY

Firm	Annual capacity Complete plants of crushing capacity of 1000-1250 tonnes a day Nos.
Walchandnagar Industries Ltd, Walchandnagar (Maharashtra)	2
Indian Sugar & General Engineering Corporation, Yamunanagar (Punjab)	2
Textile Machinery Corporation Ltd, Balgharia (West Bengal)	2
Binny Engineering Works Ltd, Madras	2
K. C. P. Limited, Madras	2
Buckau Wolf New India Engineering Works Limited, Pimpri (Maharashtra)	2
Triveni Engineering Works Ltd, Naini	2
Total:	14

They are also trying to reduce the import content, which at present is around 14 to 15 per cent of the total cost of an average plant of nearly Rs 1 crore, by mobilising indigenous engineering capacity.

Cement Plant Machinery

The production of cement machinery was taken up in the country only during the later years of the second Plan so that there was no unit in the country to manufacture a complete cement mill up to the beginning of the third plan. There were four establishments attached to cement works that turned out selected items of plant equipment of relatively minor importance. The requirements for expansion in the capacity of cement industry, therefore, were almost entirely met through imports till 1961. Gradually the domestic capacity has increased so that the present installed capacity for the manufacture of cement making machinery is 17 plants a year, distributed among eight main producers (Table VI). Four of these producers can manufacture two units in a year while two others can manufacture one unit in a year. These units have accepted orders for the supply of complete cement plants of a capacity of nearly 600 tonnes per day. All these units have entered into collaboration agreements with well-known foreign producers.

TABLE VI
INSTALLED CAPACITY OF CEMENT MAKING MACHINERY

A.C.C. Ltd, Shahabad	7 Nos. a year
A.V.B. Ltd, Durgapur	2 Nos. "
K.C.P. Ltd, Madras	2 Nos. "
Indian Sugar & General Engg. Corpn., Yamunanagar	2 Nos. "
Walchandnagar Industries Ltd, Walchandnagar	1 No. "
Utkal Machinery Ltd, Kansbahal (Orissa)	1 No. "
McNally Bird Engg. Co. Ltd, Kumardhubi (Bihar)	2 Nos. "
Larsen & Toubro Ltd, Bombay	2 Nos. "

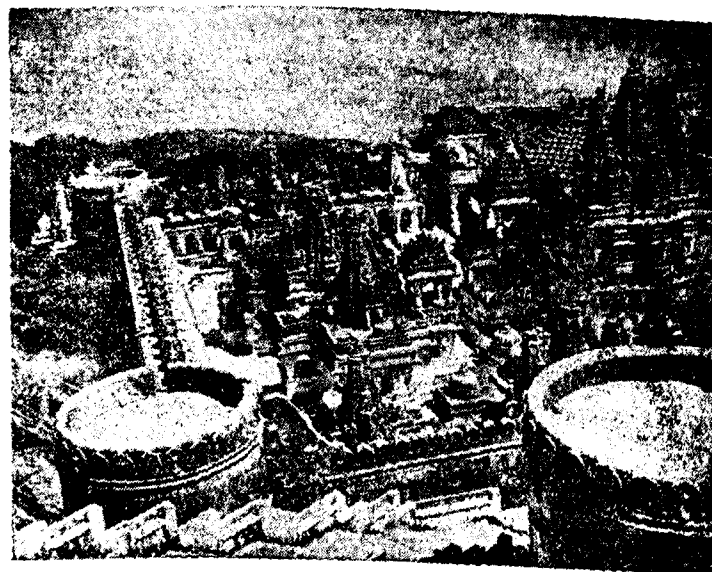
The capacity already set up and that licensed is considered adequate to take care of the requirements of the cement industry during the next few years. Consequently the import

of cement machinery has been banned. The industry has recorded some advances during the last few years in eliminating a considerable part of the imported content. As against Rs 71 lakhs for a standard cement plant of 600 tonnes a day capacity in the initial stages, import content has been reduced to nearly Rs 40 lakhs for each unit under fabrication. After further discussions with the manufacturers, the value of import content has been proposed to be further reduced in the next lot to Rs 12.6 lakhs for a wet process plant and nearly Rs 19 lakhs for a dry process plant in post-devaluation prices. Foreign exchange has been released for processing 17 plants to the manufacturers. One hurdle in the progress of indigenous capacity of cement machinery industry has been the lack of suitable steel castings, forgings and electrical equipment such as heavy motors which have to be imported.

The Cement Corporation of India proposes to give an export orientation to cement machinery and market surveys followed by joint ventures with developing countries have already been taken in hand. Preliminary negotiations with Kuwait are already in progress.

Paper Mill Machinery

The manufacture of paper making machinery was taken up in the country later as compared to many other lines of machinery manufacture. A beginning was made in 1960 after which the progress has been fairly encouraging. The production of paper machinery during 1964 was around Rs 1.72 crores and it increased to Rs 2.06 crores in 1966. At present there are 20 units which have been licensed a capacity



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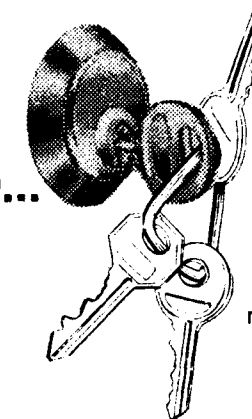


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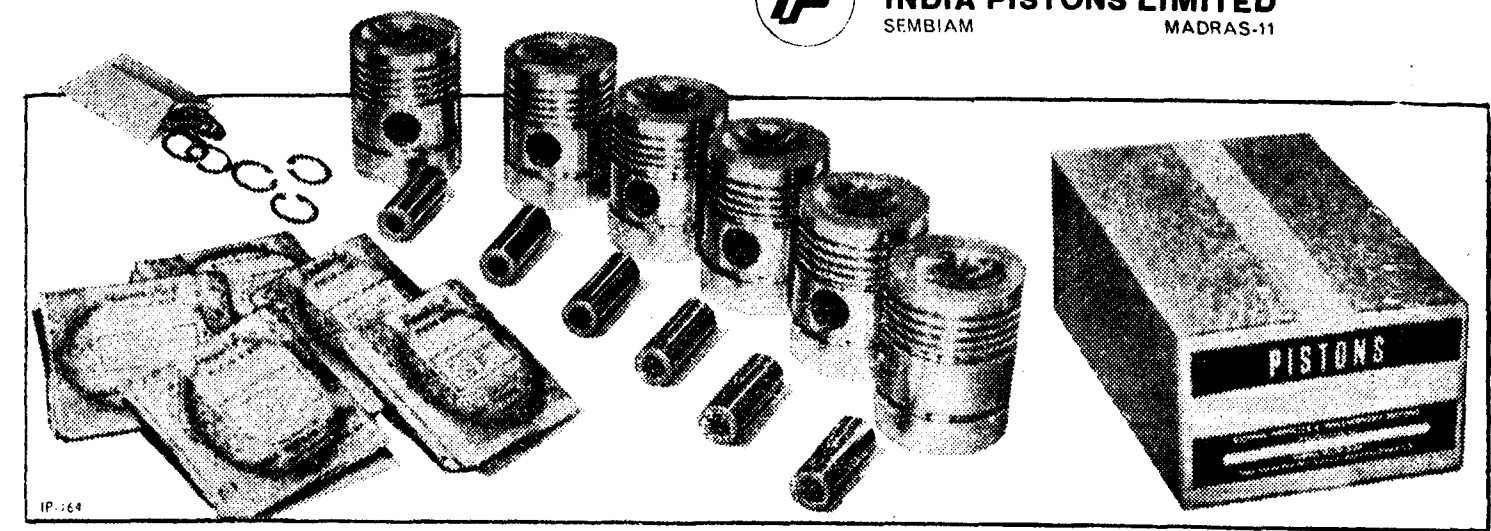
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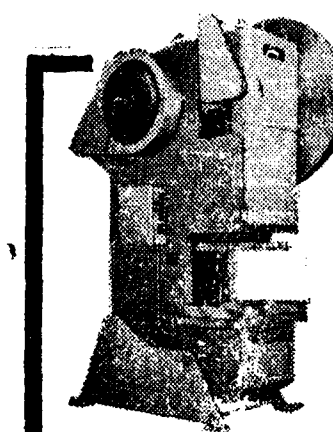
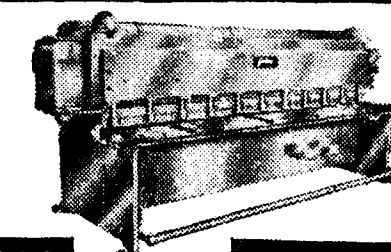
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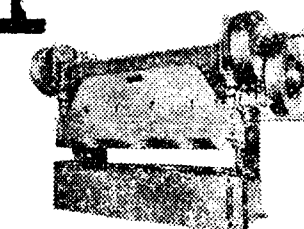
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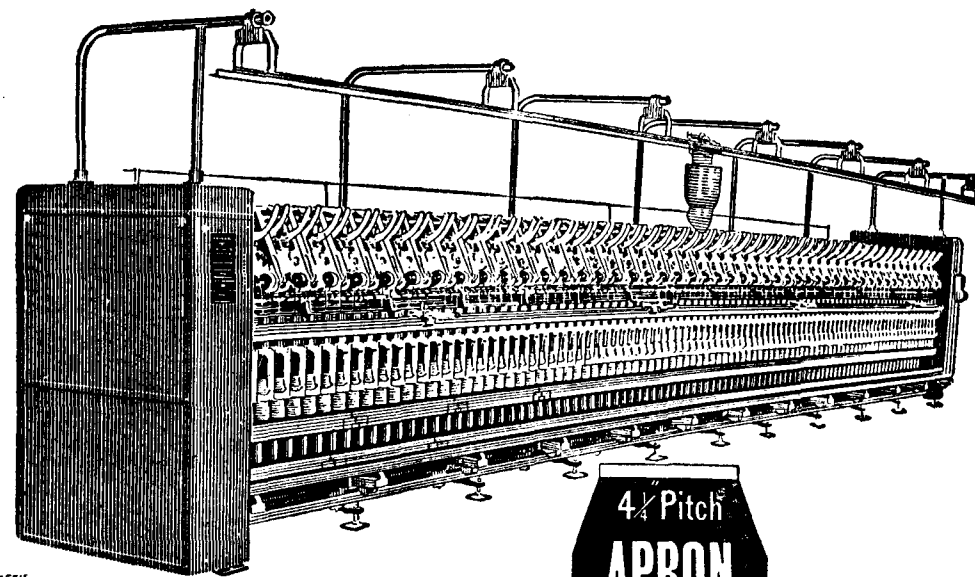
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of machinery worth over Rs 16 crores, out of which 15 units are already in production with a capacity of Rs 6.05 crores. The indigenous producers are now in a position to supply large, medium and small pulp and paper making plants and board mill plants, but they do not manufacture the full range of equipment. Many of them depend upon sub-contractors and are not able to provide adequate after-sale service and consultancy. Moreover their deliveries are delayed. Consequently the government has allowed the import of paper machinery from abroad. It has been suggested that paper machinery manufacturers should specialise in the production of a few individual standardised items of equipment so that they can improve the quality of their products

Chemical Plant Machinery

The establishment of various chemical and fertilizer plants in the country has mostly been achieved through the import of foreign equipment. During the last few years, however, the manufacture of complete plants for producing sulphuric acid, superphosphates, caustic soda, solvent extraction, fatty acid and alcohol have been taken up in the country. Moreover items such as pressure vessels, distillation stills, crystallizers, evaporators, heat exchangers and agitators required by the chemical industry are also being supplied by the indigenous manufacturers in increased quantities. There are 51 units producing chemical machinery and the number of units licensed is around 75. The total licensed capacity is for the manufacture of machinery worth Rs 25.60 crores out of which the capacity installed at present is around Rs 7.30 crores. The industry has made considerable progress in terms of sophistication and techniques, although in terms of value it has made minor progress since 1963 when the output was around Rs 6 crores.

The capacity for the manufacture of fertilizer plants is to be achieved rapidly as demand for such plants is considerable. At present the country has the know-how for designing and manufacturing both nitrogenous as well as phosphatic fertilizer plants. The planning and development division of the Fertilizer Corporation of India has evolved capacity for constructing fertilizer factories at Durgapur and Cochin where indigenous materials and services are likely to contribute 46 per cent in terms of cost of two plants. Medium and low pressure equipment and heat exchangers have been included from indigenous sources and high pressure equipment and raw materials have been imported. This division of the Fertilizer Corporation of India has made recommendations to the government for mobilising and supplementing the existing facilities both in the public and the private sectors to reduce import of plant, machinery and raw materials. Mr Raghuramiah, Minister of State for Petroleum and Chemicals, revealed recently that the government proposed to set up, with Russian collaboration, public sector units in the country to utilise entire indigenous capacity, talent and know-how for setting up plants for the various chemical and fertilizer industries. Similarly, the Chemical Plant Manufacturers' Association proposed to form a consortium so that several manufacturers in collaboration with one another take up the supply of complete plants on turn-key basis.

The non-availability of specific kinds of alloys and steel required for the construction of chemical plant is posing a problem. The Chairman of Chemical Plant Manufacturers' Association pointed out recently that heavy import duty on stainless steel plates, which was increased in 1965, was reduced recently from 110 per cent to 15 per cent after considerable canvassing. But the duty on stainless steel sheets still remains around 100 per cent. Iron and its alloys, specially stainless steel, occupy a unique position in the industry. Many processes would become very costly without stainless steel, which combines the advantage of corrosion resistance, temperature resistance, strength and cleanability. The government should adopt a helpful attitude by making available alloys and steel to the industry at reasonable rates.

Dairy Machinery

The production of dairy machinery has also developed

recently and major part of requirement of government departments, who were the main consumers of dairy machinery, was reported against gifts and credits. The three units in the line have been established in collaboration with well-known manufacturers from Denmark, Sweden, and the UK. Although their installed capacity is around Rs 2.60 crores, actual output in 1966 touched a figure of Rs 86 lakhs. These units are in a position to manufacture almost the entire range of domestic demand for dairy plant. During 1966 two new items—automatic milk bottle washing and bottle filling machine and milk spray drying plant—were produced in the country. The technique for the manufacture of spray drying plant for making powder out of liquid food, other than milk, has also been developed.

Jute Mill Machinery

The actual production of jute mill machinery in the country was around Rs 2.50 crores, including the spares and accessories worth Rs 90 lakhs. This level is much below the level achieved by the industry in 1963 when it produced machinery worth Rs 5 crores, including accessories. The present installed capacity is considerably more than the demand though several items that need sophisticated techniques of manufacture have not been taken up in the country. Two units were granted permission to manufacture grooved insert mill eyes, which requires high technical skill. In a period of two years the indigenous producers hope to manufacture the full range of jute mill machinery and also propose to fulfil some export obligations to neighbouring countries.

Tea Processing Machinery

The manufacturers of tea processing machinery have gradually achieved a complete range of production and in terms of quality too their machines compare favourably with the foreign manufactures. The value of output of such machinery during 1966 was around Rs 1.2 crores—a little below the level achieved in 1965. The output in 1963 was, however, still higher at Rs 1.6 crores. The domestic demand is not expected to increase beyond the present capacity, but the manufacturers have exported their products on a modest scale.



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A PROFILE OF INDUSTRIES

Coal Fights for Fair Prices

THE DECONTROL of coal prices in July 1967 was a happy event in the recent history of the coal industry. The price of coal had to be revised upwards no less than 28 times between July 1957 and April 1967 for different reasons such as the impact of enhanced wages, increase in royalty payments, incentives to workers for achieving specific targets of production, increase in the employers' contribution to the provident fund, etc. Normally the industry should have been more than satisfied with the doing away of the price control but the dispute between the producers and the chief consumers which followed immediately after the announcement of price decontrol took all the charm away.

The Tariff Commission had been asked in August 1966 by the Ministry of Steel, Mines and Metals to undertake a comprehensive enquiry into the cost of production of coal and coke in the country and make suitable recommendations in regard to their price structure having regard to the future needs of this industry as well as of the major consumers of coal. The report of the Tariff Commission was signed on July 25, 1967, but the government decided to decontrol the price of coal and soft coke a day earlier i.e. with effect from July 24, 1967. The recommendations of the Tariff Commission, therefore, could be useful in guiding the industry regarding the fixation of the price of coal after decontrol if the industry had access to the report; it would perhaps have avoided the dispute between the bulk consumers such as the railways and the steel mills on the one hand and the producers on the other.

The Wage Board

It is necessary to state here that, in the wake of the rising cost of living in the past few years, the Government of India set up a number of wage boards for different industries. The wage board for the coal industry was set up on August 10, 1962, under the chairmanship of Mr Salim M. Merchant; it consisted of, besides the chairman, two independent members, two members representing the employers and two representatives of the workers. The terms of reference of the wage board included the determination of categories of employees to be brought within the scope of proposed wage fixation and working out of wage structure based on principles of fair wages as set forth in the report of the Committee on Fair Wages. The wage board had also been asked to measure the impact of the wage structure evolved by it on the cost of production of coal and ultimately the effect of this on various industries consuming coals. The report of the wage board was completed and submitted to the Government of India on February 11, 1967. The representatives of the employers did not agree with the conclusions and recommendations of the wage board and submitted their minutes of dissent as the wage board had recommended a new wage structure whose incidence on the cost of mining coal was very heavy. The board failed to measure the impact of its recommendations on the cost structure of the industries as "it was found difficult to come to any quantitative assessment which would be based on adequate data and which would be generally acceptable as a basis for determining appropriate adjustments in prices."

The employers estimated that if all the recommendations of the wage board were put into practice and the directives of the Director General of Mines Safety were fully implemented, the incidence would be Rs 9.24 per tonne. They had however put forward the suggestion that they should be allowed an increase of Rs 7.08 per tonne; this reduced figure did not provide for future development. The industry asked the consumers to pay the enhanced price from September 1, 1967,

to which the consumers did not agree. At one stage, the railways—the largest consumer of coal—had cancelled some of its train services on the less important lines in order to browbeat the producers. After protracted negotiations a compromise solution was evolved according to which the consumers agreed to an increase of five rupees a tonne except for the collieries in Madhya Pradesh for which the lower figure of four rupees was agreed to.

It is worth recording here that, after the report of the wage board had been submitted to the government in February 1967, a study group was asked to make a quick review of the prices of coal and coke. This group was asked to recast the recommendations of the Coal Prices Revision Committee, 1958, in the light of the new conditions by comparing the cost data and norms worked out earlier by the committee, the main objective being estimation of the increase in cost during the intervening period. The group was asked also to examine how far the rise in cost had been neutralised by the increases in prices which had been allowed from time to time; it selected 27 collieries from the Bengal/Bihar coal mines in the private sector and three in the public sector. The production of coal of the selected 27 units varied in such a way that almost all the grades of coal were included. The group adopted the same method of estimation as that of the Price Revision Committee and came to the conclusion that the cost of mining coal had risen under almost all heads (Table I). According to the formula laid down by the Coal Price Revision Committee (CPRC) 1958, the revised selling price including a fair profit was of the order

TABLE I
COST STRUCTURE OF BENGAL-BIHAR COALFIELDS

	(Rs per tonne)	
	As per PRC's recommenda- tion*	Recommen- dation of of the study group
1. Wages, salaries, administration, labour amenities and coal mines regulations	12.15	15.68
2. Stores	1.72	3.40
3. Power, royalty, cess, colliery consumption and other misc. items	1.82	3.71
4. Depreciation	1.67	2.06
5. Brokerage & commission	0.25	0.25
	17.61	25.10
Less subsidy for difficult mining conditions	—	00.61
	17.61	24.69
Less adjustment for lesser No. of working days in costing period at one per cent	—	0.23
	17.61	24.26
Add fair profit	1.72	2.20
Fair selling price	19.33	26.46

* All costs have been shown here with ref. to tonnes as against ton after conversion, and, hence, the difference in figures from those actually mentioned by the CPRC in its report.

Source: Study Group on Coal prices (1967).



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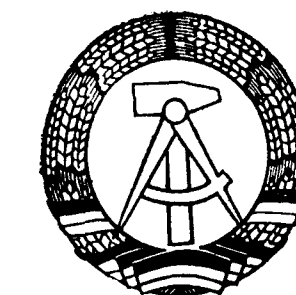
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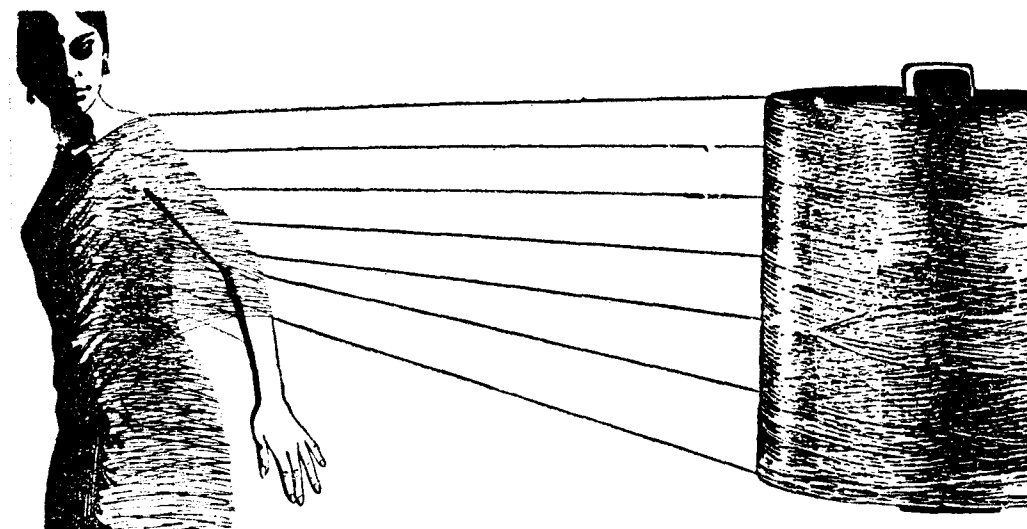
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of Rs 19.33 per tonne; the study group concluded that cost had risen to Rs 26.46 per tonne—a rise of Rs 7.13 per tonne.

Taking the weighted average of raisings of various grades of coal, the gross sales realisation was estimated by the study group at Rs 26.24 per tonne, indicating a shortage of 22 paise over the fair price worked out by it. Its recommendation was that an upward revision of 20 paise per tonne should be allowed to coking coals above and including grade H and to non-coking coals of Grade I and above. This suggestion was accepted by the government. However, another suggestion by the group to sanction a cess of a rupee a tonne for expansion was put off, awaiting the findings of the Tariff Commission.

The following figures show that the Tariff Commission's estimate was higher than that of the study group; this is said to be the real reason for the haste with which the decision to decontrol the industry was taken:

	(Rs per tonne)	
i) Estimate of fair cost for the region in the year 1965-66 excluding depreciation	22.32	
ii) Provision to bring the stores cost up-to-date	0.38	
iii) Total	22.70	
iv) Provision for contingencies at 2½%	0.57	
v) Total	23.27	
vi) (a) Depreciation	1.04	
(b) Provision for replacement of higher cost	0.90	1.94
vii) (a) Return : On working capital at 3.75% on (v)	0.87	
(b) On net fixed assets at 15%	1.95	2.82
viii) Fair pit-head price for average grade of coal excluding cost of stowing	28.03	
ix) Commission & brokerage	0.25	
x) Royalty at 5% of f.o.r. price	1.49	
	29.77	

It may be noted that the estimates of the study group as well as of the Tariff Commission did not include either the incidence of the recommendations of the wage board on salaries and wages or the effect of the increase in railway freight rates announced by the Railway Minister early this year. The dispute between the producers and the consumers concerned as much to the incidence of wage increases as to the basic revised cost.

While the coal pricing policy of the government has been defective, its planning in coal production has been a complete failure; it is evident from the repeated changes which have been made in targets for both the third Plan and the draft of the fourth five-year plan and the wide gap between the actual demand and the targets fixed. The third plan had fixed the target of production for coal in 1965-66 at 97 million tonnes but actual production was no more than 63.49 million tonnes which was able to meet full demand. The targets for the fourth plan have been reviewed almost yearly from 1963 onwards. The Committee on Assessment of Coal Demand has estimated that the total demand for coal in 1970-71 will be around 99.69 million tonnes (see Table I) and is likely to rise to 118.71 million tonnes in 1972-73. The draft outline of the fourth five-year plan had, on the other hand, set down

the target of 106.00 million tonnes and at one time—in 1963—the optimists believed that the demand for coal in 1970-71 would be around 185 million tonnes. The Tariff Commission has now forecast the demand for coal in 1970-71 around 95-100 million tonnes (see Table II), of which roughly 26.5 million tonnes would be coking coal and three million tonnes blendable coal, including about 1-2 million tonnes for exports. Of the 70 million tonnes of non-coking coal, about 8.50 million tonnes would be required in selected grade coals and 30.50 million tonnes in Grade I coal. The demand for 1975-76 has been estimated by the Tariff Commission at 125 million tonnes.

Incentive Price

That the coal mining industry will be able to raise production to around 100 million tonnes in the next three to four years without much difficulty is evident from the fact that it was geared to an output of 100 million tonnes in 1965-66 and for this purpose, more than 200 mines, including some new ones, had procured equipment as well as spares under the World Bank loan. The only proviso is that the industry should be able to get a fair price—including some incentive for raising production. Even after the decontrol in coal prices, the producers have to negotiate a price with the bulk consumers who are putting up a stiff opposition for every increase in prices.

Table III compares the profitability ratios for coal companies and "all companies" for 1960-61 to 1964-65 as computed by the Reserve Bank of India. The figures relate to both public and private companies. In the case of the public companies, the profitability ratios of 45 coal mining companies have been compared with those of 1,333 public companies which account for nearly 80 per cent of the total paid-up capital in this category of companies. In the case of the private companies, the mining and quarrying companies com-

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prise 28 out of a total of 501 companies. The six major indicators of profitability, namely, gross profits as percentage of capital employed, profit after tax as percentage of net worth, ordinary dividends as percentage of ordinary paid-up capital, total dividend as percentage of total paid-up capital and profits retained as percentage of profits after tax show the coal mining industry in this country in a very sad state of affairs. The gross profits as percentage of capital employed in the case of public coal mining companies declined from 8.9 in 1960-61 to 5.7 in 1964-65 whereas the corresponding figures for all public com-

panies ruled above 10 per cent throughout these five years.

In the case of the private companies, this profitability ratio for mining and quarrying companies was, in each of the years under consideration, below the figures for all the private companies taken together. This also applies to the other profitability ratios. In particular, the ratio of dividends to net worth (paid-up capital plus reserves) was pitifully low at 3.6 per cent both for public and private companies. In 1964-

TABLE II
THE ESTIMATED DEMAND FOR COAL DURING THE FOURTH PLAN PERIOD AND FIRST TWO YEARS OF FIFTH PLAN PERIOD

		(In million tonnes)								
Sl. No	Consuming sector	Actuals 1965-66	Estimated Actuals 1966-67	Estimates					1972-73	
				1967-68	1968-69	1969-70	1970-71	1971-72		
A. Coking coal :										
1.	Steel plants	11.89	11.73	17.44	18.39	19.78	22.11	28.66	30.66	
2.	Merchant coke ovens	1.22	1.22	1.94	2.26	2.26	3.95	4.25	4.57	
3.	Sindri Fertilizer Plant	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	
4.	Export	—	—	0.25	0.25	0.25	0.25	0.25	0.25	
	Total :—	13.29	13.13	19.81	21.08	22.47	26.49	33.34	35.66	
B. Blendable coal :										
1.	Steel plants	1.18	0.91	1.44	1.96	2.08	2.37	3.04	3.22	
2.	Merchant coke ovens	—	—	0.08	0.08	0.08	0.12	0.12	0.12	
3.	Sindri Fertilizer Plant	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	
4.	Foundry Forge Plant	—	—	—	—	—	0.45	0.45	0.18	
	Total:—	1.36	1.09	1.70	2.22	2.34	3.12	3.79	3.97	
C. Non-coking coal :										
1.	Export	0.80	0.40	0.40	0.40	0.40	1.90	1.90	1.90	
2.	Bunker	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	
3.	Ordnance factories	0.19	0.18	0.19	0.20	0.21	0.22	0.23	0.25	
4.	Defence services	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	
5.	Railways	17.20	16.80	16.60	16.40	16.20	16.00	16.00	16.00	
6.	Port & dock railways	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	
7.	Inland steamer services	0.17	0.05	0.06	0.07	0.08	0.30	0.30	0.30	
8.	Power houses	8.60	8.79	11.12	12.88	14.48	17.57	21.08	21.11	
9.	Cement	2.94	3.00	3.73	4.28	4.69	5.17	5.52	5.53	
10.	Paper & newsprint	1.30	1.30	1.45	1.53	1.63	1.77	2.01	2.11	
11.	Cotton textiles	1.76	1.75	1.82	1.90	1.97	2.05	2.05	2.05	
12.	Fertilizers	0.43	0.43	0.54	0.66	0.85	0.97	1.01	1.01	
13.	Heavy chemicals	0.36	0.36	0.39	0.44	0.47	0.53	0.53	0.53	
14.	Engineering & Foundries	0.10	0.10	0.12	0.15	0.20	0.30	0.35	0.40	
15.	Refractories	0.32	0.32	0.35	0.40	0.45	0.50	0.55	0.60	
16.	Tea gardens	0.20	0.20	0.22	0.25	0.30	0.35	0.40	0.45	
17.	Jute mills	0.31	0.20	0.25	0.25	0.25	0.40	0.40	0.40	
18.	Re-rolling mills	0.16	0.17	0.18	0.19	0.20	0.21	0.23	0.25	
19.	Sugar mills	0.15	0.10	0.12	0.14	0.16	0.18	0.20	0.23	
20.	Ginning & pressing factories	0.11	0.07	0.09	0.11	0.13	0.15	0.17	0.20	
21.	Vanaspati	0.11	0.09	0.10	0.11	0.13	0.15	0.17	0.20	
22.	Iron ores	0.05	0.03	0.04	0.04	0.05	0.05	0.05	0.05	
23.	Starch factories	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	
24.	GMF (brick)	—	—	—	—	—	—	—	—	
25.	Steel plant boilers	0.83	1.25	1.25	1.25	1.14	1.25	1.25	1.25	
26.	LTC	—	—	—	—	—	0.42	0.83	1.12	
27.	Aluminium	—	0.23	0.89	0.89	0.89	0.99	1.11	1.11	
	Total central priorities :—	36.40	36.14	40.24	42.87	45.22	51.77	56.69	57.41	
State priorities :										
1.	Soft coke	2.73	3.00	3.30	3.64	4.04	4.48	4.93	5.47	
2.	Brick burning	3.65	3.30	3.64	4.04	4.48	4.93	5.47	6.07	
3.	Industries	6.06	6.80	7.26	7.77	8.32	8.90	9.52	10.19	
	Total state priorities :—	12.44	13.10	14.20	15.45	16.84	18.31	19.92	21.73	
	Total non-coking coal :—	48.84	49.24	54.44	58.32	62.06	70.08	76.61	79.14	
	Grand total :—	63.49	63.46	75.95	81.62	86.87	99.69	113.74	118.77	



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65, the corresponding figures for all public and private companies ruled above five per cent and at one time more than nine per cent in the case of all the private companies taken together. It is this low profitability in coal mining which has made it impossible for it to attract equity capital from the capital market. It cannot now expand its production without external assistance, except for the expansion in capacity which has already been secured during the last plan and which has not been fully exploited.

The Energy Survey Committee Report had estimated that for the expansion of existing mines as well as for opening new ones through different modes of mining, investment required per tonne of coal (at 1963-64 prices) ranged between Rs 32 and Rs 92 per tonne. The lower figure of Rs 32 per tonne related to expansion of existing mines where mining is done by the open cast method, while the higher figure of Rs 92 per tonne related to new mines wherein coal has to be dug from deep underground. The committee estimated that a gross investment of Rs 520 crores was needed in the years 1965-66 to 1970-71 and Rs 770 crores in the period 1970-71 to 1975-76.

Nearly 12 years ago, the Balwantrai Mehta Committee had been asked to investigate the possibilities of amalgamation of small coal mines and to recommend the necessary ways and means to achieve this objective. The Government of India had also drafted a bill for compulsory amalgamation of uneconomic units which lapsed and has not been revived so far. On the face of it, the case for amalgamation of the small coal mines is, no doubt, strong. As Table IV shows, out of 826 mines in operation in 1965-66, 257 i.e. 31 per cent produced only one per cent of the total output of coal in this country. Those having monthly output between 1,000 and 5,000 tonnes were 259 in number and constituted 31.3 per cent of the total number of mines and 11 per cent of the total output. Thus, nearly two-thirds of the coal mines in this country produced no more than 12 per cent of the total output of coal.

TABLE IV
DISTRIBUTION OF COAL MINES ACCORDING
TO LEVEL OF PRODUCTION

Monthly output in tonnes	No. of mines	% of mines	% of total output
Below 1000	257	31.0	1.0
1000-5000	259	31.3	11.0
5000-10,000	112	13.6	13.7
10,000-25,000	145	17.6	39.0
Above 25,000	53	6.5	35.3
Total: 826		100.0	100.0

Source: Tariff Commission Report.

The Colliery Voluntary Amalgamation Committee has not made any significant progress in regard to the amalgamation of the small units. It is reported that up to the end of November 1966, the committee had received 308 proposals out of which only 66 were approved and 147 had to be dropped. The number of proposals under consideration at that time was 95. The Tariff Commission which has examined this question in detail, came to the conclusion that the "small units can exist, by and large, only on account of natural advantages or unhealthy practices, and it would appear desirable that the scheme of amalgamation should be proceeded more vigorously than at present." The Tariff Commission has also stated that as a rule, the larger mines had lower cost of operation than the smaller ones. It has recommended that the Government of India should consider the enactment of legislation in order to secure compulsory amalgamation.

The practical difficulties in bringing about amalgamations are many. This is evident from the large number of cases dropped by the Voluntary Amalgamation Committee. Frequently the creditors object to amalgamation because they

would not like the identity of their debtors to be lost. They have hitherto resisted amalgamation of units to which they have loaned funds because they have the right to sell the coal of these mines. Compulsory amalgamation, which will also lead to mechanisation for increasing productivity, will however increase the production of inferior grades of coal. This is not the intention of either the government or the planners because it is imperative that superior quality of coal should receive the highest attention. Besides causing unemployment, com-

TABLE III
PROFITABILITY RATIOS

	1960- 61	1961- 62	1962- 63	1963- 64	1964- 65
1. Gross profits as % of capital employed:					
a) Public Ltd:					
1333 (All Cos.)	10.2	10.1	10.2	10.6	10.3
45 (Coal Mining)	8.9	8.3	9.6	8.3	5.7
b) Private Ltd:					
501 (All Cos.)	10.5	11.3	11.5	12.5	12.0
28 (Mining & Quarrying)	8.2	11.1	11.2	10.0	8.1
2. Profits after tax as % of net worth:					
a) Public Ltd:					
1333 (All Cos.)	10.9	10.0	8.6	9.4	9.2
45 (Coal Mining)	7.8	5.7	8.1	9.0	4.8
b) Private Ltd:					
501 (All Cos.)	12.8	12.6	9.9	9.2	10.5
28 (Mining & Quarrying)	6.2	8.9	7.8	8.3	7.4
3. Dividends as % of net worth:					
a) Public Ltd:					
1333 (All Cos.)	6.6	6.3	5.8	5.8	5.6
45 (Coal Mining)	5.3	5.1	4.3	4.1	3.6
b) Private Ltd:					
501 (All Cos.)	9.4	8.1	7.1	5.4	5.3
28 (Mining & Quarrying)	8.4	9.2	6.9	4.6	3.6
4. Ord. Dividends as % of ord. paid-up capital:					
a) Public Ltd:					
1333 (All Cos.)	12.0	11.8	10.7	11.1	11.1
45 (Coal Mining)	9.9	9.6	8.2	8.1	7.1
b) Private Ltd:					
501 (All Cos.)	15.4	14.1	12.5	9.9	10.4
28 (Mining & Quarrying)	10.2	11.3	8.7	6.1	5.0
5. Total dividends as % of total paid-up capital:					
a) Public Ltd:					
1333 (All Cos.)	11.2	11.0	10.1	10.4	10.5
45 (Coal Mining)	9.3	9.0	7.8	7.7	7.0
b) Private Ltd:					
501 (All Cos.)	14.9	13.6	12.1	9.7	10.2
28 (Mining & Quarrying)	10.2	11.2	8.7	6.1	4.9
6. Profits retained as % of profits after tax:					
a) Public Ltd:					
1333 (All Cos.)	39.6	36.4	33.4	38.5	39.2
45 (Coal Mining)	31.8	10.3	46.6	54.9	23.8
b) Private Ltd:					
501 (All Cos.)	26.5	35.1	28.9	41.8	49.3
28 (Mining & Quarrying)	-34.9	-2.7	12.3	43.8	50.9

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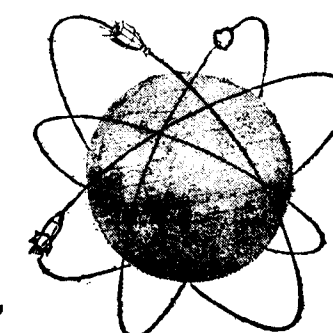
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pulsory amalgamation, though in the larger interest of the country in the long run, is likely to throw up a number of problems—financial, legal and administrative—which would not be easy to solve.

As stated earlier, the railways are the largest consumers of coal in this country. They are being called upon to shoulder a heavy burden due to steady increase in freight traffic which multiplied almost three times between 1950-51 and 1966-67. The passenger traffic also nearly doubled itself in this period. In order to meet these mounting challenges, the railways have taken to diesel traction because it is faster and is helpful in removing congestion on crowded lines. In 1951, the Railway Fuel Economy Enquiry Committee under the chairmanship of Dr D. C. Driver had recommended diesel traction on a number of lines. The expert committee on coal consumption of railways in 1958 had also recommended rapid electrification and progressive dieselisation of main line services in order to improve the line capacity. This trend towards increased dieselisation will no doubt have an unfavourable impact on the demand for coal by the railways. The colliery owners have hitherto opposed dieselisation of railways on the ground that it causes a strain on our balance of payments because of increased imports of crude oil; they have recommended re-examination of the merits of diesel traction and reconsideration of programme for dieselisation.

Realistic Decision

It is recognised that the increase in traffic offerings as a result of speedy economic growth is bound to cause congestion on many traffic routes and the only way to eliminate it is either through increased speed of trains or by having double lines on all the strategic routes. Even in the case of double lines, the pressure is likely to be very heavy and our country cannot do without dieselisation. The railways have taken a realistic decision in encouraging dieselisation; a number of expert committees—references have already been made to two such committees—have suggested this course in the interest of the economy. Therefore, it seems that the collieries are fighting a losing battle if they think that, at this late stage, the decision in this regard can be reserved. It is not only in this country but all over the world that the steam engine is giving place to the diesel or electric locomotive, the basic reason being the increased speed as well as the longer halts for loads of these locomotives which the steam locomotive will never be able to cope with. The example is usually given of a train run by diesel which can move on without a halt for service from Cochin to Pathankot, whereas the steam engine in order to cover the same distance would need at least nine service halts on the way. Moreover, a tonne of diesel as fuel is equivalent to nine tonnes of coal. Also, nearly one-third of the steam engines of the railways are over-age and should be retired as they tend to increase the cost of operation. The railways have done the right thing in shifting to dieselisation, wherever possible. However, the colliery owners can certainly press for greater electrification of the railway lines than has been the case hitherto. It will not only meet the objective of the Railway Ministry to speed up the trains but would also sustain the demand for coal.

It is paradoxical that, on the one hand, the demand for coal has been slackening while on the other, we have failed to divert soft coal for use as domestic fuel. It was stated in Parliament almost a decade ago that the use of cow dung in the rural areas was undesirable because it caused extensive waste of natural manurial resources. The quantity of cattle dung used for fuel every year was estimated at 1,200 million tonnes which was equivalent to 2.4 million tonnes of nitrogen, 1.8 million tonnes of potassium and 1.2 million tonnes of phosphate. In order to avoid such a large waste of our resources, it is essential that long-term measures should be taken to meet the needs of domestic fuel in a more rational way. Moreover, the use of timber for purposes of fuel should be

discouraged. The Energy Survey Committee which went into this question in detail urged that the use of fire-wood as a fuel, particularly in the towns, should be reduced. If steps are taken to scale down the use of cow dung as well as fire-wood as fuel, it will definitely stimulate the demand for soft coal as a domestic fuel, and will make for a more reasonable use of available fuel facilities.

The public sector in the coal mining industry has now come to occupy an important position, though in the first Plan period its share was not large. The total output of the public sector coal mines at the beginning of the second Plan (1965-67) was less than five million tonnes, the two important contributors being the National Coal Development Corporation (NCDC) and the Singareni Collieries Company. The NCDC steadily increased its area of operation so as to reach an output of 10 million tonnes in 1965-66. Singareni also doubled its output during this period. The output of the public sector today is nearly one-fourth of the total output of the industry. Increased production in the public sector has been attained at a heavy cost. As Table V shows, the working results of the NCDC for the four years ending 1965-66 have been extremely disappointing. The losses of 1964-65 apart, the return on

TABLE V
NATIONAL COAL DEVELOPMENT CORPORATION LTD

	1962-63	1963-64	1964-65	1965-66
Percentage of				
(a) Net profit to equity capital	2.8	0.4	Loss	0.8
(b) Gross profit to capital employed	3.3	1.4	Loss	3.8

capital employed has been discouraging, mostly due to inefficient utilisation of resources. At the time of writing, a dispute with labour is under arbitration which has an unhealthy effect on production. Also, the NCDC has invested huge sums of foreign exchange on machinery and equipment which have not been put to use as yet. The NCDC may have given satisfaction to the socialists in the government but from the country's point of view, it has been a grievous failure.

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Chemicals: More Problems than Progress

THE SCARCITY and high prices of raw materials were among the main problems that confronted the chemical industry in 1967. There was an acute shortage of sulphur, sulphuric acid, rock phosphate, alcohol, sodium sulphate and several other items. The industry also faced difficulties arising from the inadequate allotment of foreign exchange for essential imports. At the same time, indiscriminate imports of certain products, already available within the country, caused concern. Foreign demand for chemicals and allied products continued to be rather encouraging. But the industry could not fully avail itself of the export opportunities because of the high cost of production and excessive shipping freight. The industry also had its share of troubles arising from illegal strikes and the implementation of the wage board awards which did not in many cases take into consideration its ability to pay and the workers' productivity.

In order to solve the problem of sulphur shortage, the industry suggested to the Government of India that the latter should allow the private sector to exploit the pyrites and rock phosphate deposits available in the country, permit the import of pyrites from whichever source it was available and provide some financial incentives to encourage the sulphuric acid plants to utilise pyrites in place of sulphur. But, as usual, the government's response to these suggestions was not readily forthcoming.

Another suggestion made by the industry was that the government should persuade the steel industry to substitute sulphuric acid by hydrochloric acid for pickling purposes. The Indian Chemical Manufacturers' Association, in a memorandum to the Government of India, argued that if this proposal was implemented, it would help the country to save substantial sums of foreign exchange. In many developed countries, hydrochloric acid has been effectively substituted for sulphuric acid and here also this has been done in the Chittaranjan Locomotive Works. The association said that in 1964 the steel industry consumed 21,000 tonnes of sulphuric acid (93 per cent concentration), which required about Rs 62 lakhs in foreign exchange for importing the equivalent sulphur; and it estimated that in 1970-71 for pickling about three million tonnes of steel, the cost, in terms of imported sulphur, would be about Rs 1 crore. It was also pointed out that the capital cost for conversion from sulphuric acid to hydrochloric acid would be relatively cheap and that, at a later stage, it would be possible to achieve substantial economies in maintenance costs. Moreover, it was stated that the caustic soda industry was likely to face a surplus stock of chlorine of about 33,000 tonnes by 1970-71. This had to be converted into hydrochloric acid before disposal in order to avoid the problems of toxicity and air pollution involved in chlorine.

Production Curtailed

Meanwhile the high prices of many raw materials forced the industry to curtail production. For instance, many sodium sulphate plants were able to utilise only about 30 per cent of their capacity because of the steep increase in the price of the raw material to around Rs 700 per tonne compared to about Rs 300 per tonne in the previous year. The public sector also played its part in pushing up prices. Thus the price of nitric acid of 100 per cent purity sold by the Fertilizer Corporation of India (FCI), Sindri unit, was increased from Rs 750 to Rs 1,250 per metric ton. When the industry protested against this increase, the government's reply was that, actually, the price should have been increased to Rs 1,430 per metric ton on the basis of the price fixed for the nitric acid produced at the Trombay unit of FCI. The price charged by the Sindri unit was therefore considered to be not excessive. The price of

the ammonium sulphate produced at Sindri had also been raised from Rs 405 to Rs 650 per metric ton.

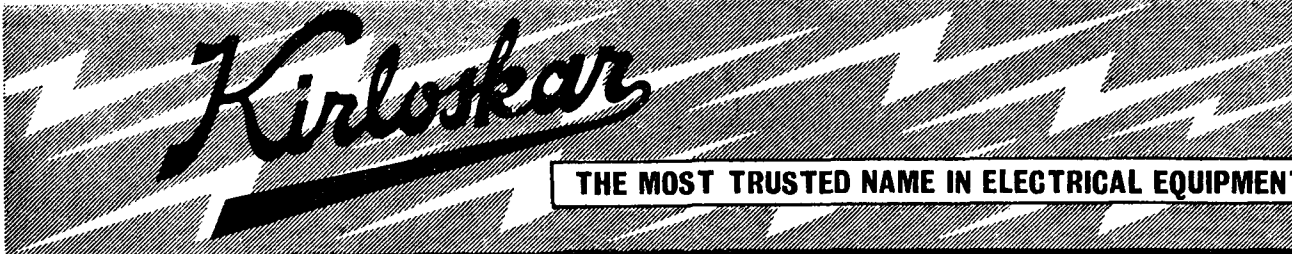
The canalisation of imports through the State Trading Corporation also affected the production costs of the chemical industry. For example, the imported cost of titanium dioxide from the UK and Japan is only about Rs 5,100 per tonne. But the STC imported recently about 1,500 tonnes of this item from Poland at Rs 7,300 per tonne and sold it at Rs 8,300 per tonne. This is considered far too excessive especially as actual users and export promotion scheme licence holders have been able to import this commodity at Rs 5,522 per tonne, and the government-owned titanium dioxide factory is able to sell it at Rs 4,767 per tonne. The other chemicals such as aniline oil, phenol and sodium nitrate imported through the STC also has been unduly high.

Costly STC Imports

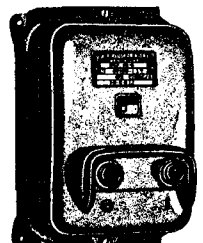
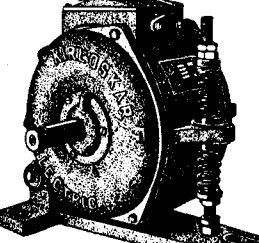
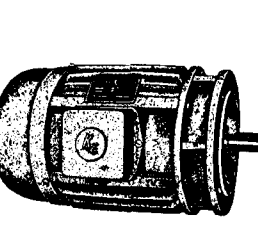
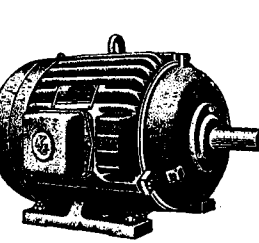
It is not only the private sector that has complained about the heavy cost of canalising imports through the STC. For example, the Fertilizer Association of India, which includes public sector units, has suggested that the industry should be permitted to make its own arrangement for the import of sulphur and rock phosphate since imports through the STC have become costly and dilatory. As the raw materials form about 60 to 70 per cent of the costs of fertilizers, the plea for imports on the most economic terms is, of course, reasonable, especially in the context of the growing requirements of sulphur and rock phosphate, estimated at one million tonnes and 3.5 million tonnes respectively by 1970-71. The association has also reiterated the suggestion to the government to set up a raw materials committee with representatives of the industry and the ministries concerned to assess the raw material requirements and draw up an import programme in a co-ordinated manner.

As regards exports, the value of paints and varnishes, fertilizers and other chemical products exported in 1966-67 was \$276.13 lakhs. The value of fertilizers, mainly crushed bones and bone grist, exported in this year was \$79.96 lakhs, paints, varnishes and allied products \$26.67 lakhs, tyres and rubber products \$78.00 lakhs and glass and glassware \$7.47 lakhs. The chemical industry feels that it could step up exports substantially provided the government gives it adequate incentives and also removes the impediments in the form of high shipping freight. During the year under review the industry represented to the Government of India that the high cost of raw materials such as titanium dioxide (anatase), caustic soda, carbon black, natural rubber, synthetic rubber, natural latex, soda ash and borax considerably affected the competitiveness of our goods. It was therefore suggested that, as in the engineering industry, the chemical industry should also be given raw materials at international prices. The industry also pointed out that the import replenishment scheme did not provide a sufficient incentive for export. Moreover, it was urged that for several products like sheet glass and thermos flasks the cash subsidy of 10 per cent should be substantially enhanced.

Many of our chemical products are not able to find markets beyond Pakistan, Burma and Ceylon because of the high shipping freight which works out to over 100 per cent of the f.o.b. value in some items. In many others the freight incidence varies between 60 to 80 per cent of the f.o.b. value. As an example of high rate, it is mentioned that the freight for sodium bichromate from the UK to Singapore is Sh 140 per ton while from the west coast of India to the same destination it is Sh 154 per 1000 Kgs. The industry has pleaded that the incidence of freight should in no case exceed 10 per cent to 20 per cent of the f.o.b. value.



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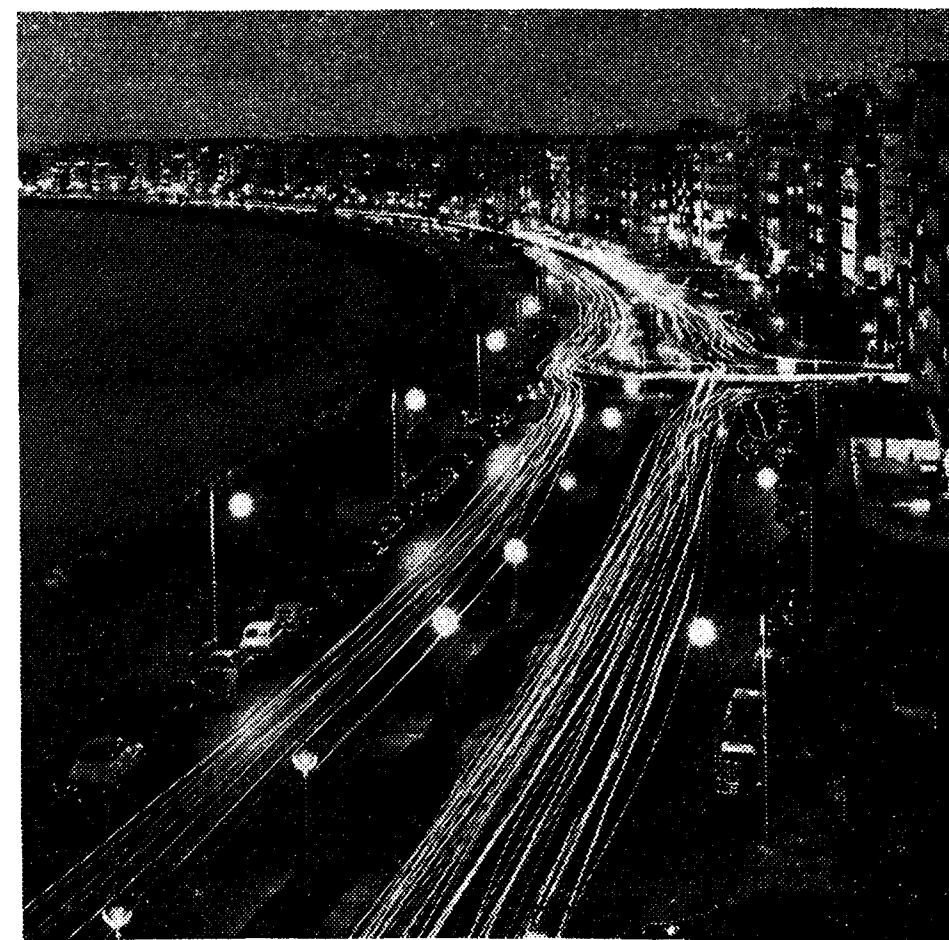
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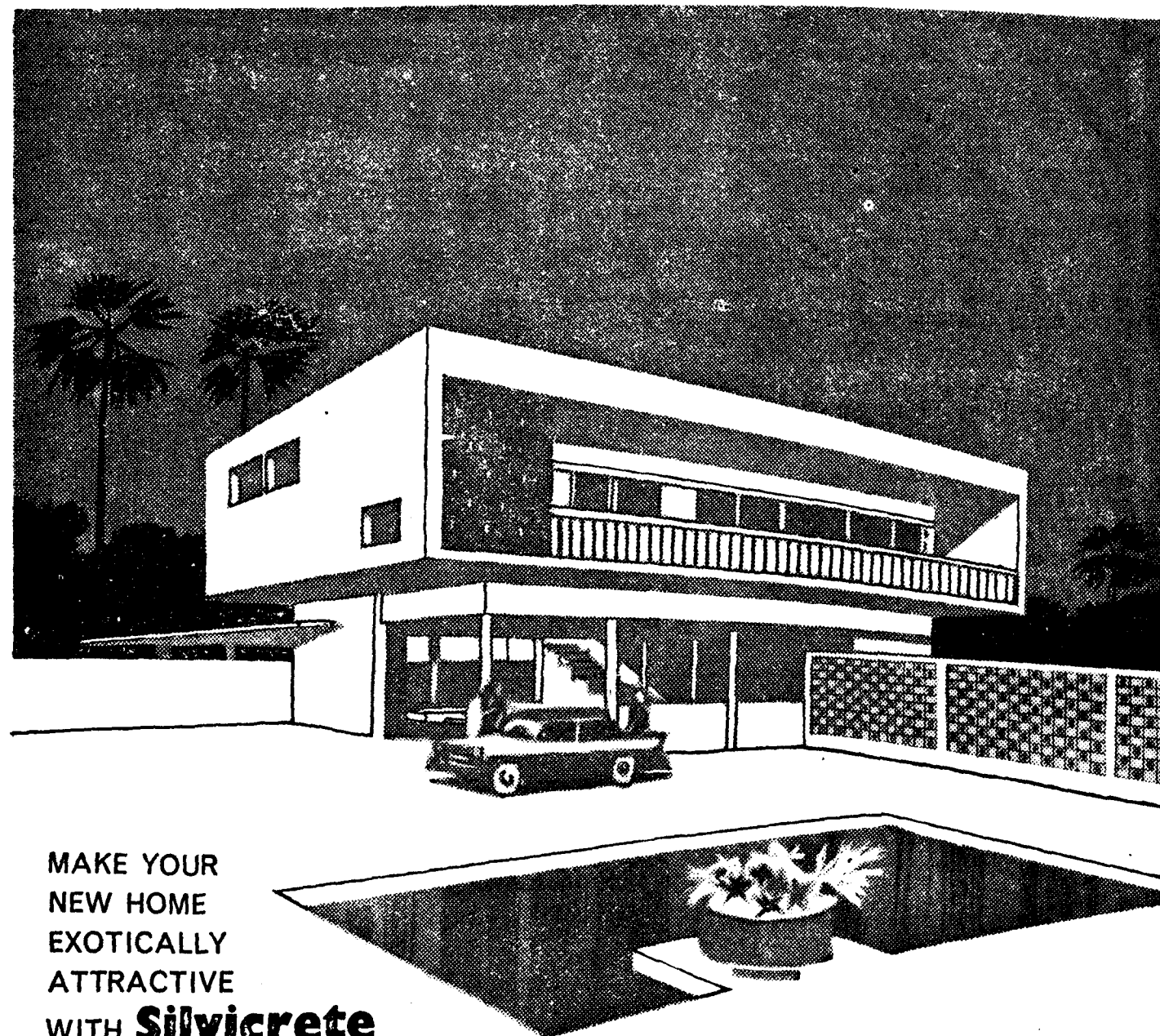
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A PROFILE OF INDUSTRIES

Automobiles Waiting on Demand

THE AUTOMOBILE industry has been passing through a difficult period in the past few years and the existing producers have been experiencing difficulties in marketing current production. The position is grave in respect of some units as they are in the midst of the implementation of expansion schemes on which heavy expenditure has already been incurred. Just when it was expected that there would be a continuing increase in the demand for commercial vehicles, cars, jeeps, three-wheelers and heavy-duty trucks, the recession has brought about an opposite trend and there has been a falling off in sales of all types of commercial vehicles to even below the levels of 1965. It had been fondly hoped that the opportunity for importing the required quantities of raw materials and components, with the availability of non-project aid, would be useful for maximising production and the expansion facilities would start yielding beneficial results. The expectations in this regard have not, however, materialised and it has become necessary for the producers of jeeps and commercial vehicles to cutback production and even lay off workers for short periods. Till recently it was felt that the producers of commercial vehicles were on a good wicket and with the accordance of high priority for the import of raw materials and scarce components, those who had embarked on ambitious expansion schemes were very advantageously placed and would be able to increase turnover and earnings.

Unexpected Developments

But the developments since the middle of 1966 have been entirely unexpected. Against the anticipated improvement in the output of all types of vehicles and an unsatisfied demand for commercial vehicles, there has been a downward trend in production and sales of commercial vehicles while the backlog orders for cars is being speedily worked out. It is apprehended that the waiting list will soon be exhausted and there will be a problem of absorbing a higher rate of output. This basic industry has thus been unfortunate in not being able to take advantage of a sellers' market while it lasted, due to bottlenecks in respect of raw materials and components and there was unutilised capacity even when expansion schemes had not been implemented. It is needless to say that the position has now become extremely complicated because of the expansion of manufacturing facilities.

TABLE I
PERFORMANCE OF AUTOMOBILE INDUSTRY

	Cars	Trucks	Jeeps & Land rovers
1957	11,604	11,880	4,068
1958	7,812	11,028	3,552
1959	11,988	14,964	4,656
1960	19,092	21,420	5,496
1961	21,660	19,512	7,056
1962	23,328	21,156	7,596
1963	15,708	23,400	8,100
1964	23,232	28,044	10,392
1965	24,782	30,168	10,488
1966	27,600	27,708	9,804

The setback in the past one year and more has given rise to fears about the future of the industry. There is no longer talk about a continuing demand for cars, trucks and jeeps and it is felt that the industry will not be in a position to undertake the implementation of new expansion schemes if there is no improvement in profitability. The existing producers are therefore on the horns of a dilemma. Thanks to devaluation and high taxation, imposed both by the central and state governments, there has been a sharp increase in sell-

ing prices and the periodically revised prices are nearly double those that prevailed eight years back. It is contended by the representatives of the industry that the adjustments in selling prices have been due to factors beyond their control and that additional taxes have also played a mischievous role in adding to the consumer prices. Since there has been a sharp increase in capital outlay and interest charges have been rising, it is pointed out that further development of the industry will not be possible unless a reasonable rate of return is secured on the investment that had already taken place.

The consumers, for their part, have been complaining about the poor quality of the industry's products and high costs. The problem of maintenance has assumed serious proportions as the assemblers of cars and trucks and manufacturers of components in the ancillary industries have been making an effort to earn high profits on sales of spare parts in order to offset the adverse effect of small profit margins or losses sustained on sales of cars and trucks and on supplies of components as original equipment. The difficulties involved in financing purchases of commercial vehicles have added to the hardship of fleet-owners with the result that sales of commercial vehicles and cars can be improved only with a reduction in selling prices and easier credit. The industry is in the anomalous position of having to absorb increasing overhead charges on a static or a declining turnover and achieving a reasonable rate of return on a larger capital outlay. It has, therefore, represented to the Tariff Commission that there should be an enquiry into the costs of production and suitable adjustments in selling prices.

Scope for Cost Reduction

It is naturally contended that there is considerable scope for reducing costs through a rationalisation of the methods of production and through an integration of manufacturing facilities for reducing avoidable expenditure and eliminating wasteful use of costly raw materials. This procedure will inevitably have to be adopted in the near future. But the working of the ancillary industries also has to be examined as it is the general complaint that controls over prices of cars and trucks and of vehicles, without control over the prices of components, are operating adversely in the case of the main producers. While the ancillary producers are passing on the increase in costs of production to their consumers and making even high profits in some cases, the producers of vehicles have found their earnings squeezed.

It has also to be recognised that the automobile and ancillary industries can reduce working expenses and unit costs only if the best use could be made of available facilities and the operations could be rationalised with the installation of balancing equipment. This can be done if demand is stimulated and optimum levels of production are established. In respect of commercial vehicles the difficulties can be overcome if there is an output of even 15,000 or 20,000 units. This is not so, however, in the case of cars. An output of at least 40,000 units is necessary for achieving economies of scale. The question naturally relates to the manner in which sales of cars and commercial vehicles can be encouraged. It is needless to point out that not much thought has been given to this aspect of the problem. Until recently the industry was struggling hard to meet the demand for its products and it was assured that the waiting lists would last for ever.

Ways and means have therefore to be devised for bringing about conditions in which the development of the transport industry can take place on a defined basis and car-owners will not be harried by high maintenance costs. The availability

of easy credit for purchasers of commercial vehicles will be greatly helpful but it has also to be examined how the industry can be given tax concessions and a higher development rebate so that it can improve the return on its heavy investments. There will necessarily have to be a reduction in the burden of direct taxes and excise duties, imposed by the centre and other levies of the state governments. It has been estimated that taxes, direct and indirect, constitute over 40 per cent of the ex-factory selling prices of commercial vehicles and cars while the tax element is very high too in maintenance costs due to the heavy excise duties, central and state, on oil, sales taxes, motor vehicle taxation and the like. Revenue considerations have compelled the central and state governments to impose heavy taxes. But it has to be realised that these taxes have had a regressive effect and have throttled the progress of the industries concerned. It is, therefore, necessary to realise that the central and state governments are virtually foregoing the future revenues which could accrue on an increasing volume of turnover. What is more the provision of transport facilities for the movement of population in urban and semi-urban areas and the carriage of goods through the acquisition of commercial vehicles and cars have been considerably slowed down. There has latterly been some recognition of the problems involved and credit policies have been liberalised for enabling purchases of commercial vehicles. But it is apprehended that, without positive measures for stimulating demand and improvement in the outlook for the economy, consumers will not be keen on taking advantage of the liberalised credit facilities to acquire new commercial vehicles on a hire-purchase basis. The threat of nationalisation of bus transport and even lorry transport has also had an inhibiting effect while the severe drought in the past two years has resulted in a considerable reduction in the volume of traffic that has been handled even by the Railways and the existing road transport operators. There may probably be an improvement in the demand for commercial vehicles and jeeps and light trucks in the coming months with a pick-up in agricultural production. But without a revival of general economic activity, the automobile industry cannot wriggle out of its own particular recession.

Indigenous Content

As already stated, nearly every unit in the industry is engaged in the execution of new schemes for increasing the indigenous content or the output of cars and trucks. The problem of many units, at some stage or the other, has always related to the utilisation of capacity. Yet, it has been necessary to incur heavy expenditure for installing balancing equipment or reducing dependence on imported components. It cannot be denied that considerable success has been achieved in raising the indigenous content of all vehicles and a ratio of 98.50 per cent has been reported. It is now felt that it would be possible to produce vehicles even with 100 per cent indigenous content if arrangements could be made for manufacturing the remaining few proprietary items within the country.

What is, however, really important is the need to give greater meaning to the achievement of a high level of indigenous content. Even though the automobile and ancillary industries are in a position to fabricate the necessary components and parts, they are obliged to import large quantities of raw materials and a few parts so that the charge is made against the industry that even with the grant of protection and the functioning of the industry for over 25 years, foreign exchange expenditure on imports has been very large. The accusation is not correct. There is no doubt that the industry has made rapid progress in the past decade and the main manufacturers themselves have created facilities for producing major components and parts. The ancillary industries have been developed in a big way though the policy of licensing large units for producing some important items could have been adopted earlier in order to bring about a significant reduction in costs. The problem of utilising capacity has created considerable hardship for some units which have just com-

pleted expansion schemes or which are in the midst of their implementation.

The Tata Engineering and Locomotive Company Limited has only recently completed its project for doubling the output of commercial vehicles from 12,000 units per annum to 24,000 units annually in two stages. With the falling off of orders from the defence services and the working out of backlog orders the rate of production is not very much more than 1,500 units monthly. If there is good demand and ready offtake, the facilities could be utilised for even stepping up output to over 2,000 units monthly. The use of only 75 per cent of capacity has naturally meant that no immediate benefit is being derived out of the large expenditure that has been incurred on the expansion schemes with the aid of loans from foreign institutions and with the issue of rupee debentures within the country.

The Hindustan Motors Ltd has been more seriously hit by the recession. It is rather awkwardly placed as the expansion schemes for increasing the capacity of the truck division and for manufacturing diesel engines cannot be slowed down. It has of course been possible for the company to step up its output of Ambassador cars to over 20,000 units in the year ended March 31, 1967. Only, the profit margin on cars is meagre and it has been even pointed out that, in the absence of a suitable adjustment in selling prices for absorbing increasing production costs following devaluation, even losses are being incurred on car sales. The expansion programme for producing trucks to the extent of 15,000 units annually against

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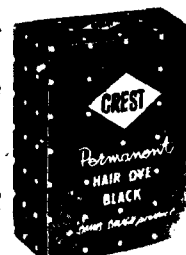
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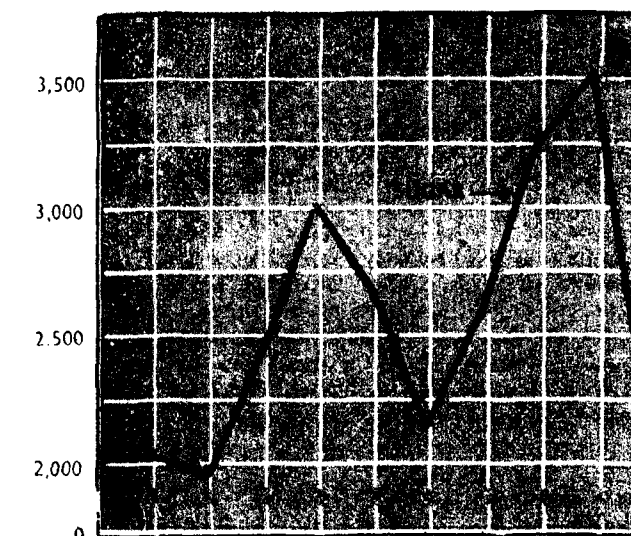
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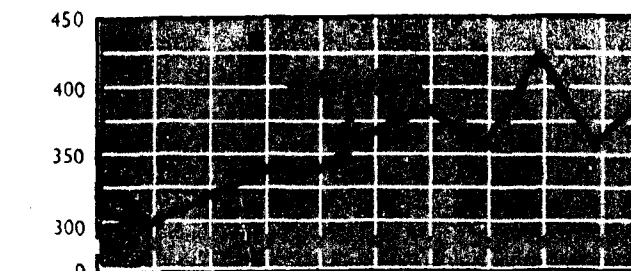
INDUSTRIAL PRODUCTION: 1957-1967

CONSUMER INDUSTRIES

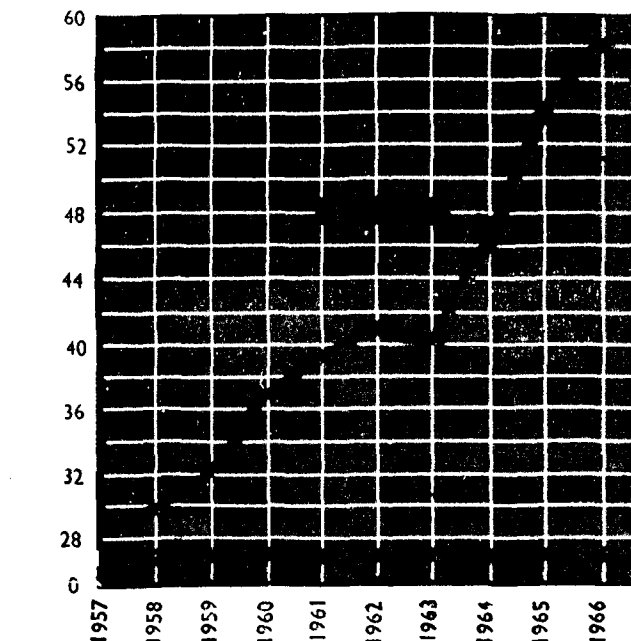
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THOUSAND TONNES

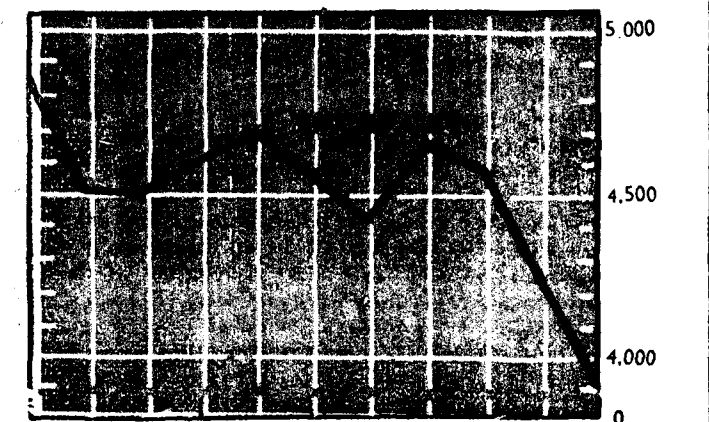


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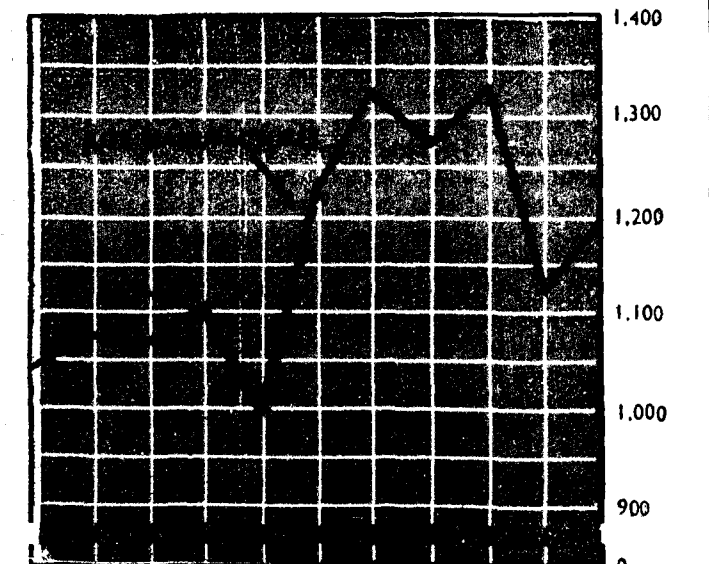


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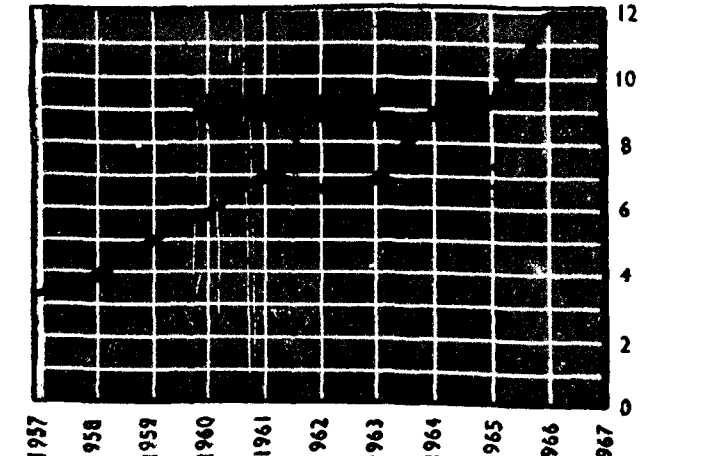
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THOUSAND TONNES



MILLION METRES

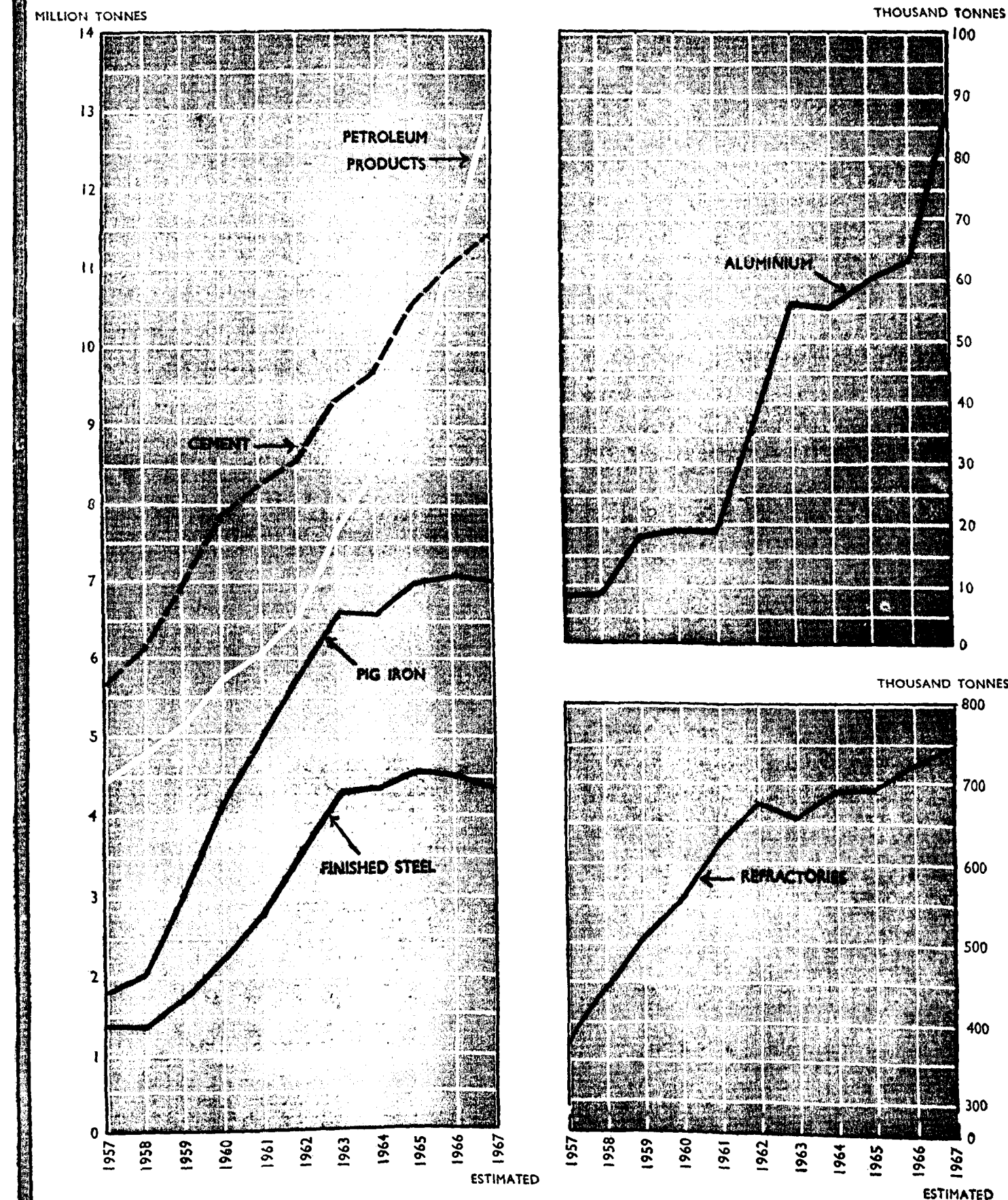


ESTIMATED

BILLION=1000 MILLION

INDUSTRIAL PRODUCTION: 1957-1967

INTERMEDIATE INDUSTRIES



7,500 units at present has been executed. But it was not possible in 1966-67 to produce more commercial vehicles than in 1965-66. The project for producing diesel engines for trucks is also in its final stages and the latest reports indicate that the company has stopped its purchase of diesel engines from outside sources in the past few weeks.

The experience of Premier Automobiles Ltd also reflects the impact of the difficult phase through which the industry is passing. Even though, as in the case of Hindustan Motors, greater emphasis has been laid on the manufacture of cars, against an output of less than 500 cars some time back, the monthly rate of production is over 1,000 units at the present moment. But the company has been stating that it is losing on car sales and a slump in demand for commercial vehicles has seriously affected working results. As there was a very low level of production of commercial vehicles not even 50 per cent of the installed capacity could be utilised and the turnover for 1966-67 was even considerably less than the turnover of the previous year. The company is not in a position to use its press shop fully and it is feared that the profitability of working will be seriously affected unless the level of production could be raised significantly and there is a balancing of the capacity of all the departments.

The same difficulty has been experienced by the Standard Motor Products of India Ltd in Madras. The company has incurred large expenditure in recent years on the creation of pressing facilities and the manufacture of light trucks. The indigenous content in cars and trucks has lately gone up significantly but the current output of 300 cars a month is being absorbed only with difficulty, while in the truck division, the output is not more than 20 per cent of its capacity. The company has naturally been experiencing considerable difficulty in operating on a profitable basis.

Ambitious Programme

Ashok Leyland, which is engaged in the manufacture of medium-sized and heavy duty trucks and has embarked on an ambitious expansion scheme, has been seriously hit by the recession. In 1966-67, the operating results were satisfactory as there was a backlog of orders and even with a falling off in demand for heavy duty trucks in the latter months of the year, there was a record turnover. Since the beginning of 1967 it has been a problem to maintain the output of Comet trucks around 400 units every month and while there has been a drop in sales of heavy duty trucks it is felt that the working results for the current year will be seriously affected if demand does not pick up in the coming months. The liberalisation of credit facilities may be a helpful factor in selling medium-sized trucks. But the policy relating to the nationalisation of bus transport has had an inhibiting effect on replacement orders while it has been pointed out that even the state transport systems are not in a position to place orders because of the lack of funds. It has therefore been suggested that credit facilities should be available for the state transport systems in the same manner as for other organisations and that statutory financial corporations should not have any mental reservation when proposals are put forward by the automobile industry for executing orders on behalf of these bodies. The management of Ashok Leyland has however decided to proceed with the implementation of its expansion scheme as there is a feeling that the recessionary trends will soon be reversed and there would be a good demand for all its products.

Mahindra and Mahindra Ltd, which is an important producer of jeeps and which has a programme of trebling its output to 25,000 units over a period, has experienced for the first time a slump in demand for its products and its dependence on orders from government departments and the defence services has affected production. It will not be possible to step up output without a revival in economic activity and larger spending by government departments.

The above narration will bring out clearly the fact that the automobile industry is in a position to produce from 45,000 to 50,000 cars annually, provided raw materials are available

in the required volume. Commercial vehicles also can be manufactured to the extent of from 50,000 to 60,000 units annually. The immediate needs may therefore be more than fulfilled with the existing facilities. It will also be possible to double the capacity in the next four years by incurring a relatively smaller capital outlay.

What is needed in the present context is an investigation into the gaps in the industrial structure and the institution of arrangements for producing raw materials and components which are in short supply. There will of course have to be some dependence on imports for the industry's requirements of alloy steel and non-ferrous metals, but so far as components are concerned, the ancillary industries have achieved much diversification in production with the result that a very wide range of components is being manufactured within the country—and the list is steadily expanding. Thanks partly to uninhibited technical collaboration with foreign manufacturers of repute, the domestic firms are becoming quality-conscious and their export performance too is consequently very promising. With the achievement of a larger turnover, costs could be significantly reduced and it should be possible for manufacturers not only to lower selling prices but also to improve quality further. The government too has a clear duty to help the industry to get over its problems by, among other measures, reducing taxes on the intermediate products as well as the complete vehicles. It should, above all, give up notions of promoting a new unit for producing small cars in the public sector since so much remains to be done, partly through its own policies, for making the most of the heavy investment of resources which has already been made in the automobile industry. If the government really desires to be of service to the middle-income groups in the community who could greatly benefit from the availability of convenient means of personal transport well within their means, it ought to divert its energies towards increasing the production of scooters and motor cycles with the assistance of the fairly well-developed industry which is already functioning in this field. What is of immediate importance in the automobile field, surely, is the formulation of measures for improving the economies of existing manufacturers and enabling them to get over the stigma of a high-cost producer.



A PROFILE OF INDUSTRIES

Aluminium Has Its Anxieties

THE ALUMINIUM industry has progressed phenomenally in the past few years and the promotion of new units during the third Plan period was responsible for the creation of valuable installed capacity. It was possible to quadruple production in a short period apart from broadening the base of the industry. The development of this basic sector of our economy will be even more spectacular in the coming years in spite of a slowing down of plan expenditure in the past three years. Besides the expansion schemes of the existing units, the public sector is planning a big entry into this field with the erection of a huge integrated unit at Korba in Madhya Pradesh and another in the Koyana area in Maharashtra. It will be easily possible to achieve an output of over 300,000 tonnes by 1970-71 against about 100,000 tonnes at present and about 18,400 tonnes in 1961.

This valuable addition to the production of an important non-ferrous metal has been useful in saving foreign exchange through the avoidance of imports and also the displacement of imports of copper and even zinc to a significant extent. The country is deficient in its resources of copper, lead and zinc. Even here, the shortcomings are being overcome by exploiting effectively the deposits in Rajasthan, Bihar and Andhra Pradesh. But there will have to be maximisation of the production of aluminium. Bauxite deposits are available in abundance in different parts of the country and with electricity being generated on a large scale, there will also be no shortage of an essential raw material. The dependence on imports for petroleum coke, fluorspar and other items necessary for manufacturing aluminium will disappear as petroleum coke is being produced within the country and the remaining catalysts also will be manufactured indigenously before long. Some measure of success has also attended efforts to fabricate the plant and machinery required for the smelters and other allied equipment and large expenditure in foreign exchange, as in the case of many other types of industrial machinery, has been effectively reduced.

Increasing Consumption

The consumption of aluminium has been increasing by leaps and bounds and it is noteworthy that, even in the face of rising production, it has been necessary to import sizable quantities from Canada, the USA, the USSR and elsewhere. It will be noticed, however, from the data given in Tables I and II, that even though the quantum of imports has remained quite large, it has sharply declined as a percentage to the total availability. The main demand for virgin metal is from the manufacturers of aluminium cables but there is also a sizable offtake for producing utensils. The industrial uses, however, promise to become more important in the coming years as aluminium alloys are used for various purposes while the growth of the aircraft industry should lead to a sharp increase in the demand for alloys and components from this source. Aluminium foil and aluminium paste are also being increasingly utilised for packing, painting and other purposes. The industry is now fairly well dispersed throughout the country and when the new schemes are implemented several states will be able to boast of housing large integrated units.

Until a few years back the Indian Aluminium Co. Ltd was the major producer in the country with its smelters at Hirakud in Orissa and Alupuram in Kerala. The alumina works were located at Muri in Bihar and the rolling mill at Belur near Calcutta. The company has doubled the capacity of its smelter at Hirakud and expanded substantially the facilities at Alupuram. A foil plant also has been set up at Kalwa in Maharashtra while an extrusion plant and a rod mill are operating at Alupuram.

But the biggest achievement of the company, which operates in this country in collaboration with Aluminium

Limited of Canada, will relate to the construction of a large-sized integrated plant on the west coast in Mysore state. The completion of the Sharavathy Project has resulted in a considerable improvement of power in Mysore state and it has been considered advisable to utilise the rich bauxite deposits in Kolhapur in Maharashtra. The smelter will be erected in Belgaum district in Mysore state for using Sharavathy power. This unit will ultimately have a capacity of 100,000 tonnes of virgin metal annually, the output in the initial stage being of the order of 30,000 tonnes. The rolling mill will be located in Maharashtra. The necessary agreements have been concluded with Mysore state for the supply of power and other basic facilities. The foreign exchange required for importing essential plant and machinery will be provided by the collaborators and international financial agencies. The first stage is expected to be completed by 1971.

Important Project

In the southern peninsula another important project is taking shape. The Madras Aluminium Company Limited has already produced successfully aluminium based on the bauxite deposits in the Sheveroy Hills in Madras state. This company has plans for increasing its capacity to 25,000 tonnes from 10,000 tonnes annually, the expansion being completed in two stages, first to 12,500 tonnes and second to 25,000 tonnes. The first stage will be completed by the end of next year while arrangements are being made with the help of the Italian collaborators to secure the foreign exchange for doubling capacity in the second stage. The immediate capital expenditure for raising capacity by 25 per cent will be about Rs 50 lakhs as the potline only has to be extended.

But the most spectacular performance goes to the credit of Hindustan Aluminium Corporation Ltd belonging to the Birla group. The corporation's integrated plant at Renukoot in UP has been conceived on ambitious lines in technical collaboration with Kaiser Corporation of USA. It has become the largest producer in the country in a short period and is now accounting for an output of 60,000 tonnes yearly against the output of the remaining three companies of only about 50,000 tonnes. By March next year, the output is expected to rise to about 72,000 tonnes. Ultimately, the capacity will be increased to 1,20,000 tonnes. There will be no difficulty in regard to the availability of bauxite deposits as ample reserves exist in Bihar and even in parts of Madhya Pradesh and Orissa. Arrangements have also been made to overcome the

TABLE I
PRODUCTION, IMPORTS AND AVAILABILITY
OF ALUMINIUM IN INDIA

Year ending March 31	Opening stock with the producers*	Production*	Imports	Total availability (2+3+4)
(1)	(2)	(3)	(4)	(5)
1955-56	1.4	7.4	16.1	24.9
1956-57	0.9	6.8	26.1	33.8
1957-58	1.2	8.0	23.2	32.4
1958-59	1.6	10.3	14.8	26.7
1959-60	2.5	18.0	16.8	37.3
1960-61	3.0	18.3	25.4	46.7
1961-62	3.8	19.9	25.6	49.3
1962-63	3.0	42.6	38.9	84.5
1963-64	9.1	55.8	24.7	89.6
1964-65	9.3	55.1	22.9	87.3
1965-66	4.5	66.7	20.3	87.0
1966-67	4.8	83.6	32.9	116.5

* Relates to virgin metal.

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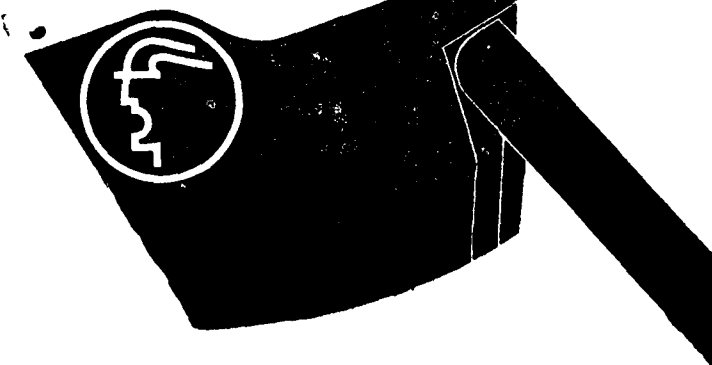
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difficulties relating to power by establishing a thermal unit with a subsidiary company.

The Aluminium Corporation of India is the smallest producer in the country having its plant facilities at Asansol in West Bengal. It has completed its expansion plans recently and has a capacity for producing virgin metal to the extent of 7,500 tonnes. It has, of course, installed rolling facilities with a view to securing the maximum return on the investment. There are new schemes under consideration but they have not assumed any definite shape.

As stated earlier, the central government will enter in a big way into this field by establishing two large-sized units at Korba in Madhya Pradesh and at Koyna in Maharashtra. Arrangements for establishing a smelter and allied facilities at Korba have been completed and it is expected that the plant will be commissioned in all respects by 1971-72. The ultimate cost of the project is estimated at Rs 100 crores. The smelter, which will have an initial capacity of 20,000 tonnes annually, will be erected with the help of Hungary. In the second stage, the capacity will be raised to 100,000 tonnes. The rolling mill, extrusion plant and other facilities will be created with Soviet aid and the necessary arrangements are under way for importing plant and machinery from the USSR. The Koyna project, however, has not taken such a definite shape. But it is expected that the Maharashtra government will hustle the finalisation of the plans and the project will come into being with West German, Italian and French assistance. There is also a proposal to establish a thermal station at Koyna. It is not known whether the recent earthquake in this area will in any way delay the implementation of this project. The Gujarat government too is anxious to start a plant in its region as the bauxite reserves in this region are very rich. But the plans are in a very early stage.

Serious Problems

The future progress of the industry will be seriously affected if a helpful policy is not evolved by the central and state governments for providing the necessary facilities and for ensuring satisfactory profit margins. Even though the Orissa, Uttar Pradesh and Madras state governments expressed great anxiety in the early stages to foster the development of this vital industry in their regions, the producers have been experiencing latterly serious problems in regard to the availability of power on a cheap basis. For some inexplicable reasons, the state governments have been asking for higher rates for additional supplies which threaten to increase the cost of production. As large quantities are required for manufacturing aluminium and the power alone accounts for over 30 per cent of the cost of production it has been emphasised that serious disabilities experienced by producers in any particular part of the country will reduce their competitive ability. Besides, our costs are very high and even after devaluation imported aluminium could be secured much more cheaply. The position is so serious that the implementation of the expansion schemes are likely to be delayed. In fact, some companies are even thinking of moving into new regions for establishing new units where power could be secured on more attractive terms. In Madras state, the integrated plant at Mettur came into being with the encouragement provided by the state government to supply power on a concessional basis. But the benefit of this concession was nullified to a great extent by the imposition of a heavy surcharge. The company is now finding it difficult to operate profitably especially as it is obliged to use inferior grade ore and it is also necessary to import high-grade ore from Saurashtra for blending purposes. Since it is not known how the additional quantities of power required for the expanded plant will be supplied, the implementation of the second stage of the expansion scheme is likely to be delayed. It has been even suggested that the management of the company might think of establishing a new smelter in the border areas of Mysore state, not far away

from the existing smelter at Mettur because of power being available in the neighbouring state at nearly half the rate charged by the Madras State Electricity Board.

The power situation in Kerala has improved considerably with the commissioning of the Sabarigiri project. Until recently, there was an acute shortage of power and it was a problem for the smelter at Alupuram even to use the initially erected capacity of 5,000 tonnes annually. This capacity has been increased to 15,000 tonnes recently in two stages. It is expected that, in the current year, the rated output will be achieved if not exceeded. As power will be available in abundance and cheaply it is being examined how a new plant can be established. It will not be surprising if the Indian Aluminium Company decided to expand the capacity of the Alupuram smelter after it had completed the first stage of the West Coast project. Alumina from this source may be utilised. At present, it is being transported all the way from Muri in Bihar.

Decline in Production

In Uttar Pradesh, too, there was a decline in production on account of an acute shortage of power but with the commissioning of the thermal plant and better storages in the hydel reservoirs the newly created capacity is expected to be used fully. But inadequacy of power and the reported demand of the UP government for higher rates for the additional supplies of electricity may stand in the way of expansion of the Renukoot plant to more than 72,000 tonnes capacity. The same difficulty is being experienced by the Aluminium Corporation which has its integrated plant at Asansol in West Bengal. There is a scheme for increasing further the capacity of the Asansol unit for producing virgin metal. It is, however, felt that it will not be possible to secure a satisfactory return on fresh investments if power is not supplied by the West Bengal government on a more economic basis. Power rates in this state are about the highest in the country. Indian Aluminium will also be prepared to increase its output at the Hirakud smelter by another 10,000 tonnes only if the Orissa government agreed to supply power at lower rates. The negotiations in this regard are still in progress and no definite decision has been taken so far. It is, however, pointed out that the expansion of the Hirakud smelter can be achieved in a very short period as all the allied facilities have been already created and there will not be much difficulty in erecting an additional potline.

Apart from the increase in production costs on account of rising electricity charges and heavier capitalisation, the industry is handicapped severely by the onerous excise duties which have been levied in the last central budget. Even earlier, in order to raise revenue for the exchequer and prevent the manufacturers of virgin metal and aluminium products from making 'excessive' profits, the duties were revised periodically. But the biggest shock came in the form of fan-

TABLE II
TREND OF PRODUCTION OF ALUMINIUM PRODUCTS

Year	Virgin metal	Sheets & circles	Foil	(In tonnes)	
				ACSR	Rods & sections (extruded)
1957	7,920	11,100	1,380	3,336	758
1958	8,316	13,560	1,598	1,632	1,092
1959	17,520	16,056	1,992	4,368	1,260
1960	18,420	16,416	3,000	4,656	1,296
1961	18,384	16,932	3,216	8,292	1,584
1962	35,208	16,296	3,444	11,352	3,060
1963	55,140	22,320	2,424	19,956	3,984
1964	55,056	22,608	2,544	20,736	3,516
1965	59,520	23,568	2,868	24,144	4,596
1966	63,432	31,320	3,564	28,620	6,372

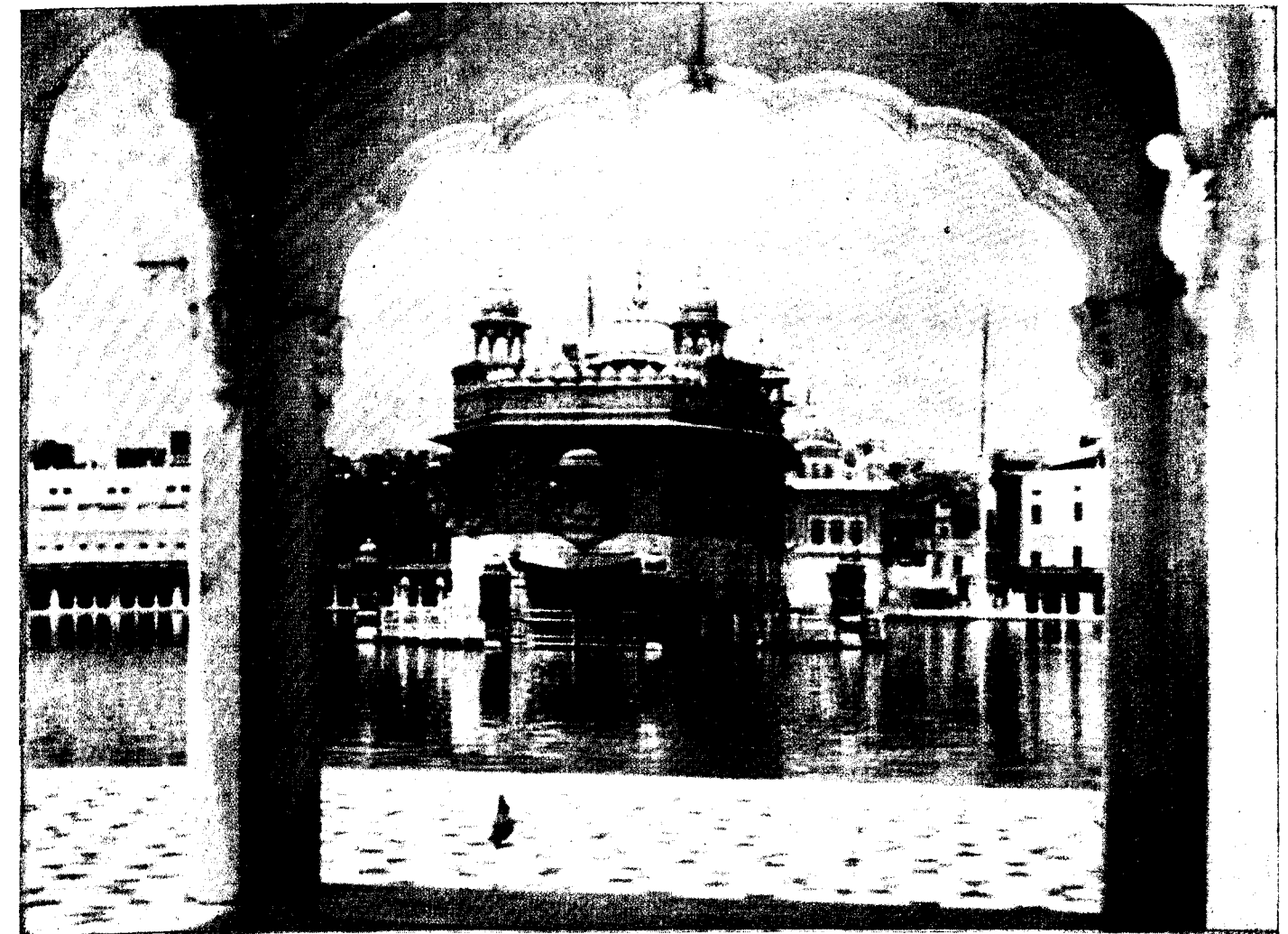


Photo : Courtesy—Amar Nath.
Harimandir—Lord's Abode—popularly known as Golden Temple, Amritsar

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Road Connections : Regular buses for Jammu, Delhi, Kulu and Chandigarh

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Places of Interest : Golden Temple, Durgiana Temple, Jallianwala Bagh, Golden Temple at Tarn Taran—15 miles, International Border at Wagha—18 miles

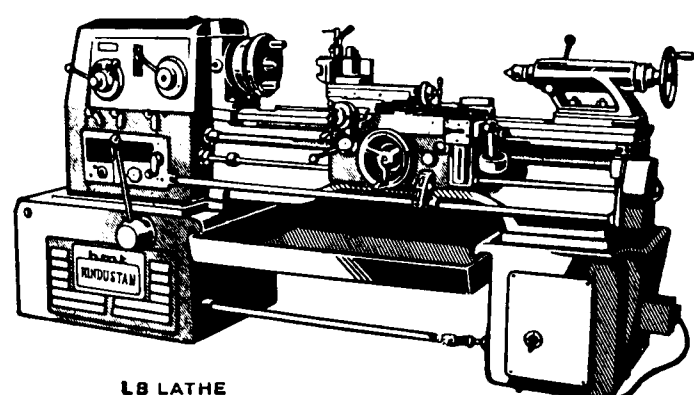
Other Attractions : Indian Academy of Fine Arts, Khalsa College, Irrigation Research Institute

For Assistance : Contact Punjab Government Tourist Bureau. Tel. : 45255—Amritsar

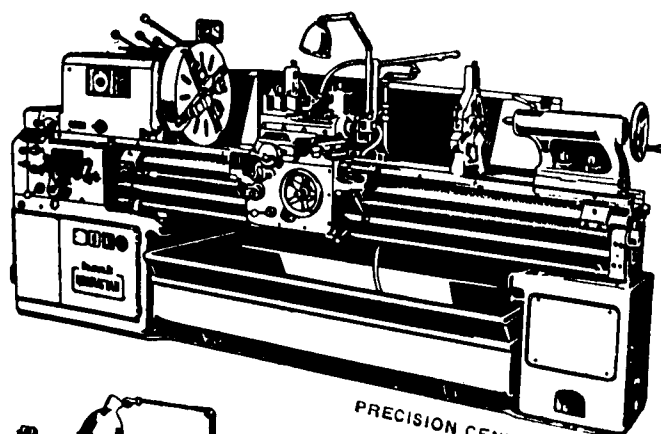
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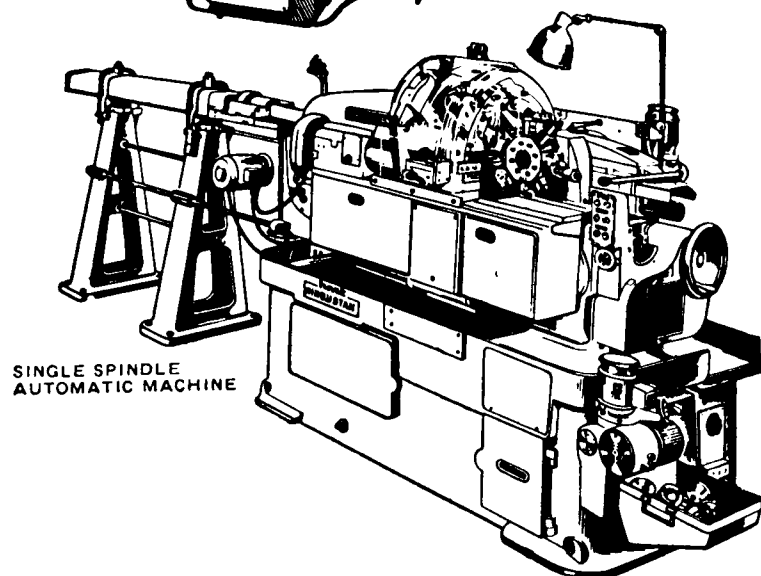
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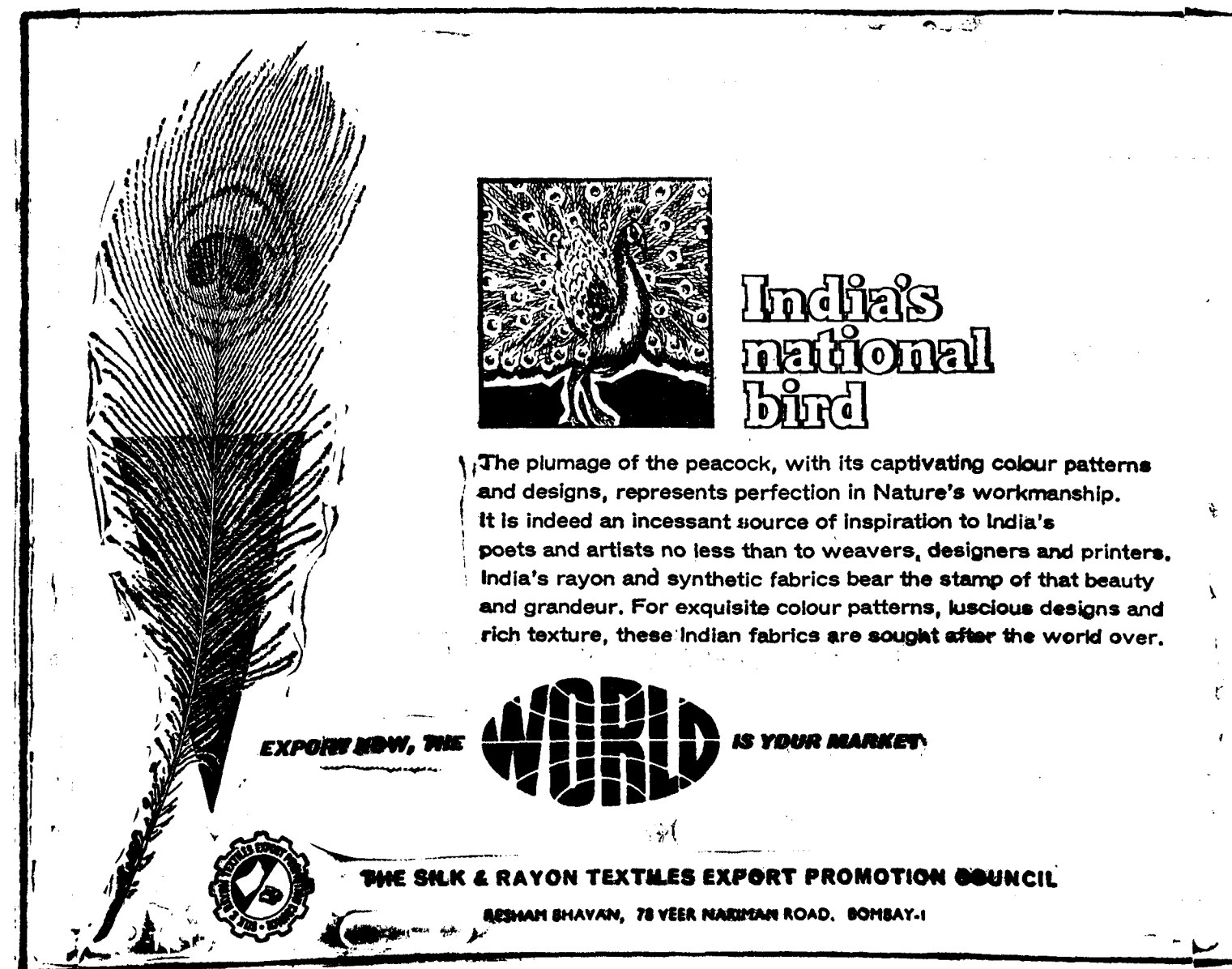
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tastically high duties on virgin metal and different products in February this year, as the union Finance Minister gave the direction to the producers and fabricators that the incidence of the new duties would have to be absorbed by them. It was only after strong representation by the affected interests to Mr Morarji Desai that it was agreed that a good portion of the increase in duties could be passed on to the consumers in the form of higher prices. But even after this relief, the incidence of the excise duty on virgin metal is as much as 25 per cent of the ex-factory selling prices and on rods as high as 40 per cent. Since there has been a slackening of demand on account of the recession and high prices have induced consumer resistance for the first time in several years, a problem of marketing current production has arisen.

The difficulties of aluminium producers have become more acute because of a sharp increase in imports against the liberal licences issued by the government. The position may improve after some time with a curb on imports. But the working results of even the established companies in the current year will be seriously affected as it has been necessary to reduce selling prices and absorb also a greater proportion of the excise duties than was assumed earlier. The use of aluminium in the manufacture of bare conductors and for other purposes is still on a large scale. However, state electricity boards are not placing fresh orders on the cable manufacturers due to the paucity of funds. For some time past, the cable industry, which is the largest consumer of this light metal, has been working out orders on hand and it is apprehended that a stage may soon

be reached where it may not be possible to maintain the output at a high level unless state electricity boards are helped to implement schemes for erecting new transmission lines. It has even been complained that, as a result of non-payment of bills, the producers themselves are in serious financial straits and that the problem of maintaining high-priced stocks has created serious bottlenecks. The developments in recent months only go to show how unimaginative planning and heavy dependence on the offtake of government departments can upset even the calculations of an industry which has been under the impression that it would be a long time before supply caught up with demand and that it would not be possible to dispense with imports. The vulnerability of this assumption has been severely brought out by the recent happenings and it is only to be hoped that the expansion schemes of the different units will not be affected by a temporary slackening in demand.

Since there is much leeway to be made up in rural electrification and aluminium has become very popular for industrial purposes, it is very necessary to ensure that production and offtake was not impeded for the lack of finance. The opportunity afforded for achieving a sustained increase in the output of aluminium and aluminium products should not be missed. As this basic industry is in a position to proceed ahead with its schemes in a big way, it should be the endeavour of the government to provide it with the necessary facilities and not be obsessed by wrong notions of raising revenues through excise duties which will add heavily to the capital cost of industrial users of aluminium and aluminium products.



India's national bird

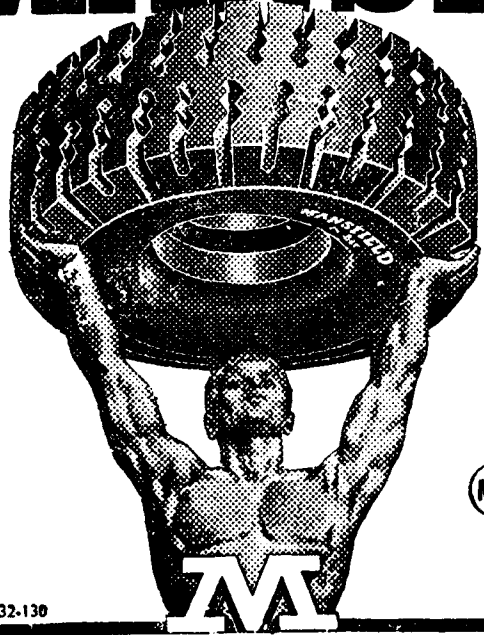
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A PROFILE OF INDUSTRIES

Cement: Blocks and Barriers

CEMENT MANUFACTURERS in this country are concerned over the gradual accumulation of unsold stocks and thinning of order books. The present slackness in demand has been caused by the fall in offtake on government account to a level of nearly 35 per cent of the total cement produced in the country as against 50 per cent earmarked for this purpose. In other words, it is the slowdown in the implementation of the public sector projects that has caused the present slackness in the overall demand of cement. Private construction activity has not been sufficient to compensate for the decline in the demand on government account.

TABLE I
ANNUAL PRODUCTION AND UTILISATION OF CEMENT

Years	Production (Million tonnes)	Utilisation of effective installed capacity (per cent)
1961-62	8.28	88
1962-63	8.85	91
1963-64	9.43	93
1964-65	9.78	91
1965-66	10.82	90
1966-67	11.06	91

The overall picture presented by the official figures (Table II) of production, confirms that demand has slackened, though the extent of the fall does not justify precipitate action in so far as expansion schemes are concerned. Table I above shows that the level of utilization of the installed capacity of this industry has remained as high as 90 per cent during the last six years. The monthly production figures in Table II below reveal that cement producers had continued to operate at this high level of utilization, except in the month of August last, when the utilization dropped to 84 per cent for the first time in several years. That incidentally was the time when the annual installed capacity increased by nearly 400,000 tonnes from 12.78 million to 13.18 million tonnes.

TABLE II
MONTHLY PRODUCTION AND UTILIZATION OF CEMENT

	1966 (Annual installed capacity in million tonnes)	1967 (Annual installed capacity in million tonnes)	1966 (% of '000, utiliza- tion tonnes)	% of '000 utiliza- tion tonnes	1967 (% of '000 utiliza- tion tonnes)	% of '000 utiliza- tion tonnes
January	11.69	12.58	550.3	90	1,009.3	96
February	"	"	887.3	91	808.0	77
March	"	"	980.8	99	995.1	95
April	12.00	"	892.3	89	931.5	89
May	"	"	867.5	88	1,011.7	97
June	"	12.78	852.5	85	953.1	89
July	"	"	897.1	90	944.4	89
August	"	13.18	918.4	92	924.7	84

The cement industry has shown steady rate of growth during the last decade with the result that the index number of cement production (base 1956=100) moved from 113.6 in 1957 to 220.7 in 1966. In other words, over these 10 years cement production increased by nearly one hundred per cent.

In physical terms, the cement industry increased its capacity and production from 6.5 million tonnes and 5.6 million tonnes, respectively in 1957 to 11.7 million tonnes and 10.8 mil-

lion tonnes in 1966. At the end of the third Plan—March 31, 1966—the industry had achieved a capacity of around 12 million tonnes per annum. Subsequently a few more schemes have been completed and new plants set up. This has raised the installed capacity to 13.2 million tonnes. The schemes completed after March 31, 1966 include Jamul expansion in Madhya Pradesh—290,000 tonnes, Porbandar unit in Gujarat—200,000 tonnes, Cherrapunji unit in Assam—84,000 tonnes, Bargarh unit in Orissa—400,000 tonnes and Chittorgarh unit in Rajasthan—200,000 tonnes. Apart from these, the establishment of several other new units and expansion of existing ones are in various stages of execution. By the end of 1969, the capacity of the industry is likely to reach a level of 19.2 million tonnes. In this direction, four public sector units are also likely to contribute nearly 1.2 million tonnes. These are: Government of UP Dalla scheme—400,000 tonnes, Government of Madras Srivilliputhur unit—400,000 tonnes, and two schemes of Cement Corporation, namely, Mandhar scheme in Madhya Pradesh—200,000 tonnes, and Kurkunta scheme in Mysore—200,000 tonnes. The total capacity of 19.2 million tonnes expected to be achieved by 1969 is further proposed to be supplemented by another 1.8 million tonnes capacity in the public sector. The cement production capacity thus may reach 21 million tonnes by 1970-71.

Great Scope

From the above picture of the present and planned capacity, which is likely to be achieved during this period, it appears that the industry will not find it difficult to achieve a capacity of 21 million tonnes by 1970-71, against a target of 23 million tonnes. Cement being a commodity of vital significance in the development of the economy, it seems appropriate that the present state of over-production should not be allowed to cloud the horizon of the producers and induce them to retreat from expansion schemes. In this connection, the experience of 1952-53 should be a valuable guide. At that time, the demand for cement was running a little below production capacity but as soon as the plan projects started materialising following the availability of steel, the demand for cement overtook the supply in no time. There then followed a period of acute scarcity of cement because its supply could not be increased adequately.

This, however, does not mean that no remedial action is required to correct the present maladjustment in the position of supply and demand in the industry. In fact a detailed analysis in terms of regional production will reveal that the cement industry has grown more rapidly in the south, particularly in Madras and Andhra Pradesh. The regional picture presented in Table III shows that output in Andhra Pradesh increased from 262,900 tonnes in 1957 to nearly 1.2 million tonnes by 1966. In Madras state also, production increased from 766,900 tonnes in 1957 to 1.8 million tonnes in 1966. Mysore too recorded a similar increase in output. In other words, the cement industry has moved faster in the south than elsewhere in the country and it is these states which face the problem of surplus capacity. In the absence of an efficient system of transportation, the stocks in these states have accumulated to a substantial extent. The performance of the railways in transporting cement during the recent few months has been quite satisfactory so far as the cement factories in eastern, western and northern zones are concerned. It is only in the southern zone and south central zone that some difficulty has been experienced. It has been estimated that the production of cement in the southern and south central zones has outstripped the regional demand by more than 30 per cent and the commodity has to be moved to the consumers in the eastern and northern regions. The Ministry of Railways

has suggested that further expansion of cement should be so planned that movements of the commodity out of various zones is eliminated as far as possible. This might help to some extent, but output is related not only to the problem of transportation, but also to the availability of raw materials as well as cheap electric power. However, apart from many other factors, it has been suggested that producers in the private sector should take the initiative in establishing vertical shaft plants, each of 30 to 200 tonnes capacity per day, in the deficit regions of northern and eastern zones. The Regional Research Laboratory at Jorhat has developed a process for setting up shaft kilns of 30 tonnes, 100 tonnes and 200 tonnes per day and the Madras State Industrial Development Corporation also has developed similar units of 75 tonnes to 150 tonnes per day. These institutions should be in a position to supply these units if the private sector investors were to come forward to put up such plants in deficit areas.

The union government is understood to be examining a scheme for the export of cement next year at the rate of around 100,000 tonnes every month. The export programme is being drawn up on the basis of production estimates which reveal that nearly 1.2 million tonnes of cement may be available for export next year. There are a number of countries such as Kuwait, Malaysia, Ceylon, Nepal and Indonesia which are prepared to buy cement from this country but the international prices of cement are considerably lower than those prevailing in this country. To meet the problem of price differential, some details are understood to have been worked out to grant a subsidy which might be around 23 per cent on the export of cement. A final announcement regarding this scheme is, however, awaited.

The Cement Corporation

It would be appropriate to say a few words about the Cement Corporation of India, established as a private limited company fully owned by the union government to carry out the survey of cement-grade limestone deposits and establish units in the public sector to help the industry to achieve production targets. The corporation has completed, since its incorporation on January 18, 1965, prospecting operations at Mandhar, Jagdalpur, Neemuch and Katni in Madhya Pradesh, at Sedum and Gokak in Mysore and at Tandur in Andhra Pradesh. Investigations are in progress at Alampur and Yeraguntla in Andhra Pradesh and Chittorgarh in Rajasthan. Similar work is to be taken up in Bokajan in Assam. The Geological Survey of India has also been doing prospecting work on behalf of the Cement Corporation at Paonta in Hamachal Pradesh. The corporation also proposes to take up investigation at Mandarav in Dehra Dun district of UP. Of these sites, project reports for Mandhar and Sedum (Kurkunta) have already been prepared and are at present under the consideration of the government. The corporation has already placed orders for plant and machinery with K. C. P. Ltd. for

Mandhar and with Walchandnagar Industries for Sedum (Kurkunta). Project reports for three more sites, namely, Neemuch, Jagdalpur and Tandur are under consideration. It has also submitted proposals for the establishment of a masonry cement plant of the capacity of 50,000 tonnes per annum for establishment at Mehrauli (Delhi).

The course of the cement industry has been influenced considerably by the pattern of distribution and prices which have remained under control in various ways. It was through the Cement Control Order, 1956, that the State Trading Corporation was appointed the sole authority to handle the sale and distribution of this commodity. Both distribution and prices remained under control till the end of 1965. It was the success of partial decontrol of steel following the Raj Committee report that the government considered the relaxation of cement distribution and prices. Consequently, statutory control on the price and distribution of cement was lifted early in 1966 and the cement industry agreed to maintain the same pattern of distribution and prices as existed before decontrol.

In order to maintain that structure, a central organisation called the Cement Allocation and Co-ordinating Organisation (CACO) was set up to regulate the sale of cement throughout the country at the same f.o.r. price at all rail destinations. It was also realised that the price of cement had been fixed to the disadvantage of producers. Therefore, to provide resources for development and expansion, the f.o.r. price was allowed to be increased by Rs 16 per tonne with a rebate of Rs 6 per tonne for supplies under the DGS & D rate contract. Nearly 50 per cent of cement was expected to be despatched to rate contract consumers. It was estimated that the average increase would work out to nearly Rs 13 per tonne. The industry agreed to credit net reserves of this increase for ploughing back and therefore a sum of Rs 4 per tonne was credited to a separate account, withdrawals from which were to be made only for expansion. As has been mentioned above, the orders from the various projects were not being received to the estimated level during the year 1966. The consumption of cement by the rate contract consumers, therefore, was below 50 per cent of total production. The CACO was asked to credit the additional accruals on account of large offtake by private consumers to the expansion reserve account. By and large, the proof of which is available in their increasing capacity. The distribution of cement, it has now been decided, should be transferred from the CACO to the Cement Corporation of India. The implications of this decision can be assessed only when its details are spelt out. It is, however, hoped that the flow of funds from the expansion reserve account will not be retarded so as to affect the expansion of the private sector cement plants adversely.

On April 1, 1967, the price of f.o.r. selling price of cement per tonne was increased by Rs 1.20 per tonne in the light of

TABLE III
STATEWISE DISTRIBUTION OF CEMENT PRODUCTION

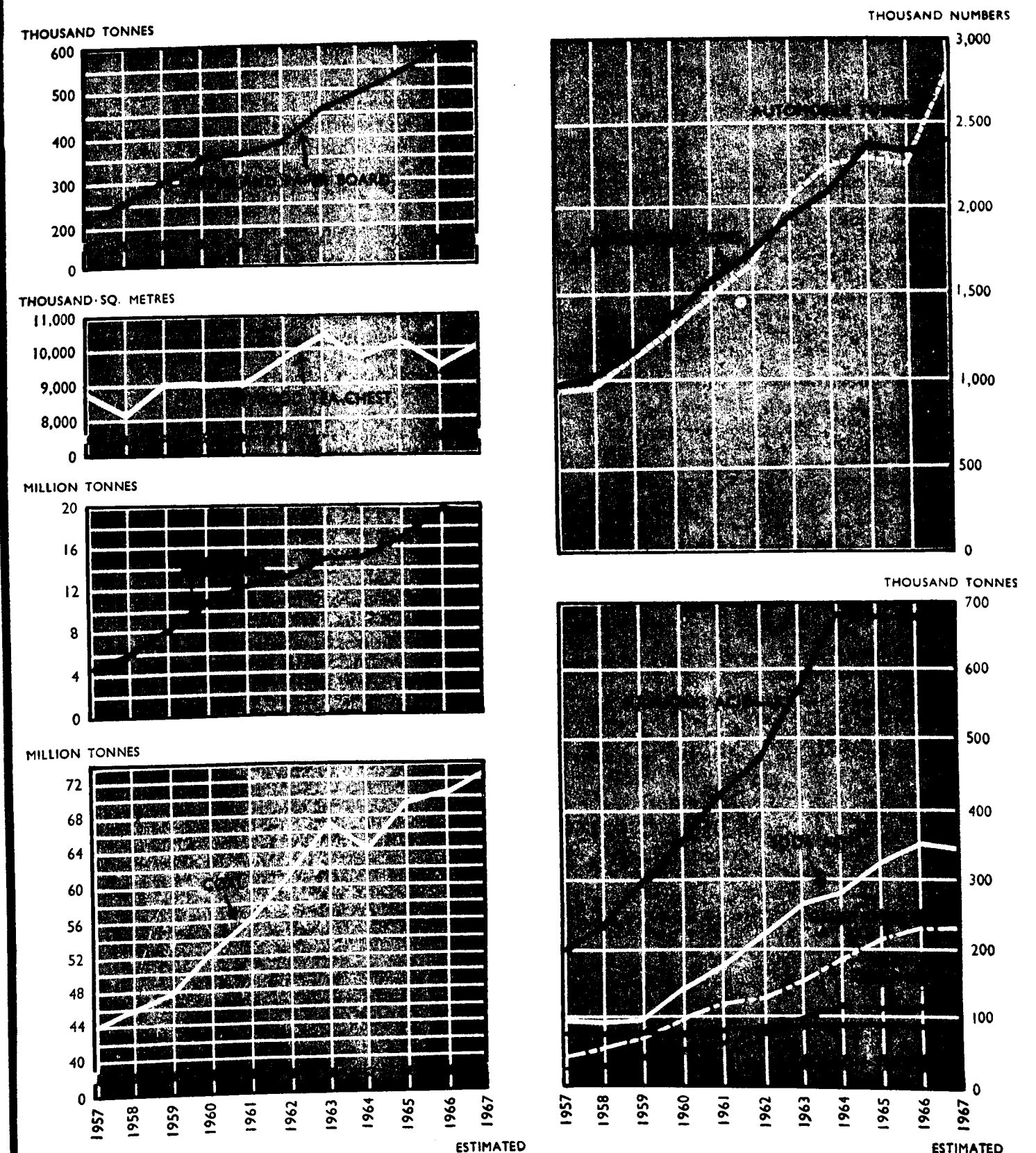
Year	Andhra	Madras	Mysore	Kerala	Bihar	Orissa	Madhya Pradesh	Gujarat	Rajasthan	Punjab	Uttar Pradesh	Total
												('000 tonnes)
1957	262.9	766.9	581.8	48.5	1,097.4	286.9	423.8	849.9	641.4	420.1	221.4	5,601.1
1958	378.6	736.3	609.2	53.4	1,265.3	349.1	374.9	819.6	765.8	495.4	220.9	6,068.6
1959	577.7	896.1	636.4	30.9	1,383.2	258.6	517.4	856.9	923.3	534.6	211.3	6,828.4
1960	720.3	1,128.1	676.9	67.0	1,534.8	357.1	652.7	911.1	958.4	601.8	236.5	7,844.6
1961	729.2	1,185.2	757.5	53.1	1,421.8	372.9	788.1	981.5	1,089.9	639.9	217.3	8,236.3
1962	799.7	1,271.4	730.6	54.7	1,503.9	380.4	794.7	1,099.1	1,075.2	608.6	267.9	8,586.3
1963	944.7	1,281.2	839.1	52.4	1,563.1	353.3	812.9	1,225.3	1,190.0	670.9	421.9	9,354.8
1964	975.0	1,592.3	806.9	61.1	1,597.3	370.5	917.5	1,309.4	1,068.7	572.3	418.5	9,689.6
1965	1,213.3	1,633.1	866.5	43.5	1,627.9	411.6	1,369.0	1,375.0	1,047.7	565.2	424.8	10,577.6
1966	1,094.9	1,888.7	920.8	46.9	1,615.3	404.1	1,419.8	1,598.1	1,124.4	542.1	397.8	11,052.9

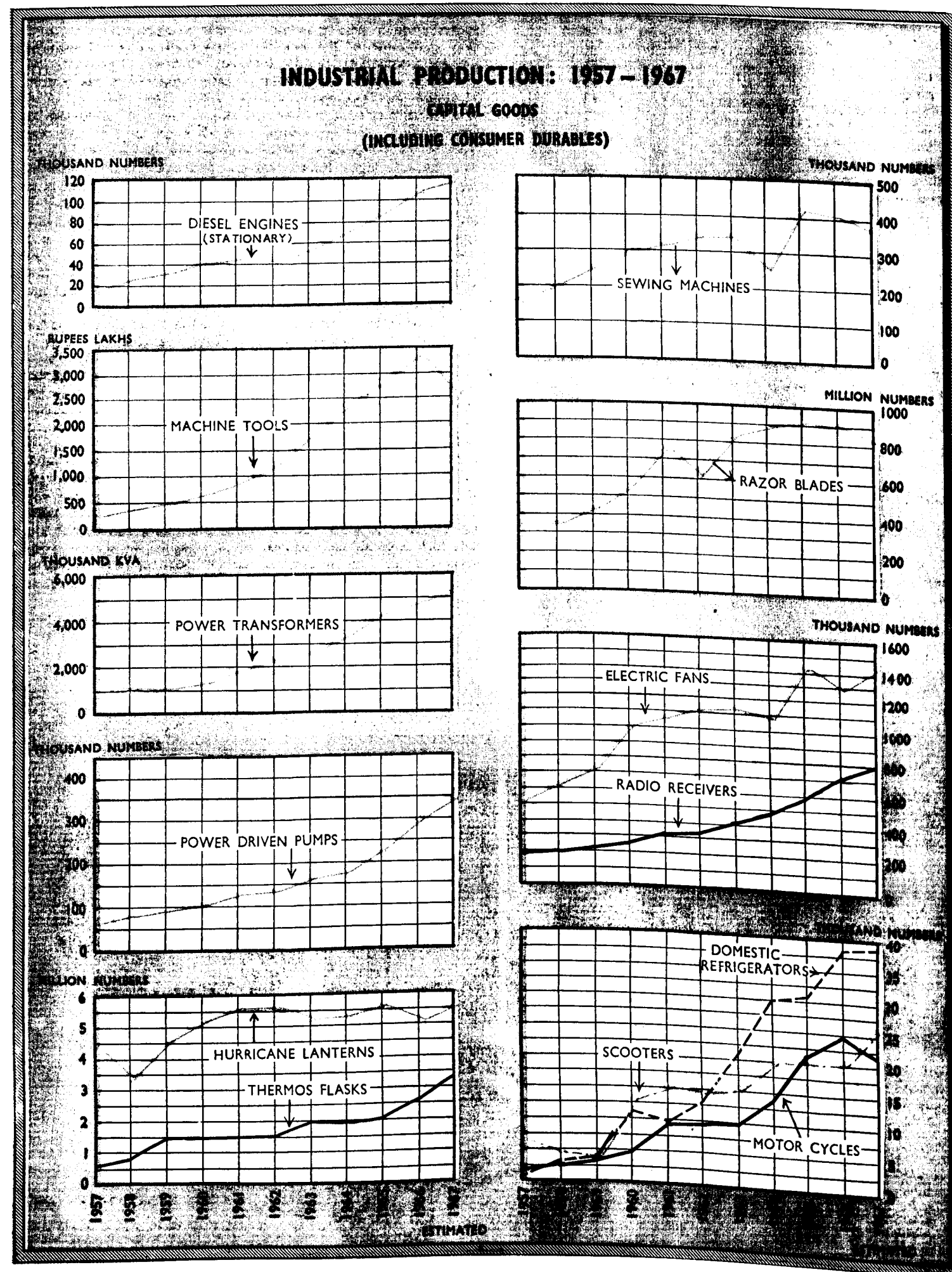
Note: Figures for 1957, 1958 and 1959 are in tons and for 1960 and later they are in metric tons.

Source: Monthly Statistics of the Production of Selected Industries of India.

INDUSTRIAL PRODUCTION: 1957-1967

INTERMEDIATE INDUSTRIES





increase in freight so that the current f.o.r. destination price is Rs 172.25, the breakup of which is given below:

	Rs per tonne
Excise duty	28.32
Packing charges	18.40
Railway freight (average provision)	25.48
Remuneration to CACO	0.25
Selling agent's remuneration	1.25
Rebate for rate contract supply through DGS&D	3.00
Contingency	0.35
	77.05
Provision available for payment of retention price at the three differential prices and for payment of oil subsidy.	95.20
	172.25

The amount of Rs 95.20 per tonne allowed for disbursement to cement producers is to be utilized as follows:

- Basic retention price at Rs 90.50, Rs 93.50 and Rs 96.00 to the low cost, middle cost and high cost units of the industry respectively on the basis of actual production of each unit; and
- Payment of compensation to some of the units to offset the extra cost involved in the use of oil instead of coal for the period 1-1-67 to 31-3-67.

The CACO also approached the government with the request that the amount saved on account of the discontinuance of oil subsidy may be permitted to be used in order to bring the retention prices to one slab, to which the government

responded by saying that this should be used for freight equalisation.

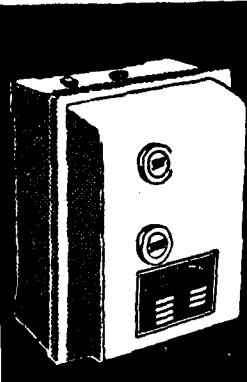
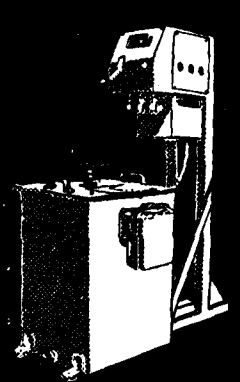
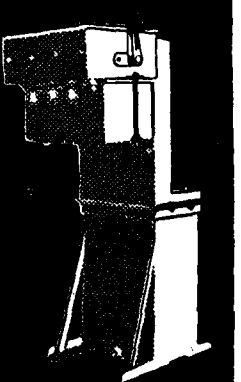
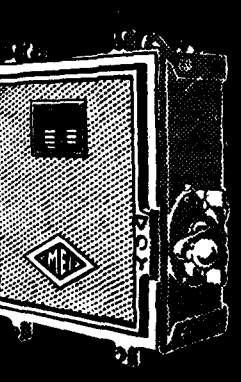
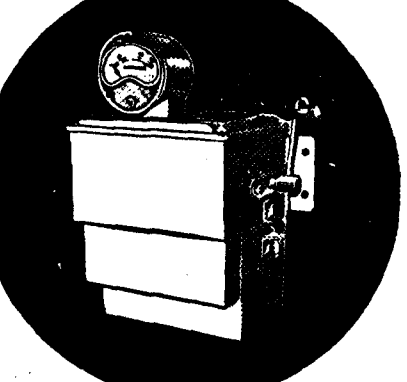
Sufficient advance has also been made in the field of research and cement manufacturers have made considerable contribution in this direction. It will be appropriate to mention that some of the manufacturers such as the Associated Cement Companies, Shree Digvijay Cement Company and Rohtas Industries have already made progress to the extent of organising their own research units. The unit of ACC located near Bombay is perhaps one of the most up-to-date in the country. The pioneering research done by this unit has been in the development and manufacture of slab cement, oil well cement, high alumina cement and hydrophobic cement. The industry has also set up a Cement Research Institute of India and for which it is contributing 10 paise per tonne of cement sold to the consumers. This research institute is proposed to help the industry in the development of cement production, and also undertake research for development in the varieties of cement which can be easily taken up for production in the country according to the availability of necessary raw materials.

In the light of the fact that no machinery is to be imported for expansion schemes and new units, the country seems to be well equipped with the capacity to manufacture plants independently. At present there are eight units licensed for the manufacture of cement machinery and the total installed capacity for the manufacture of cement making machinery, expressed in terms of complete plants of a capacity of 200,000 tonnes a year, is 17 units a year. The capacity already established and licensed would be sufficient to meet the requirements of the industry during the current plan period. The import content for a standard plant of 600 tonnes per day crushing capacity has come down to a figure of Rs 27.50 lakhs for the first lot of 16 plants which are under fabrication and this has been further reduced to Rs 8 lakhs per plant for the second lot for wet process and Rs 12 lakhs for dry process on pre-devaluation basis. So far, foreign exchange has been released to manufacturers for processing 17 plants.

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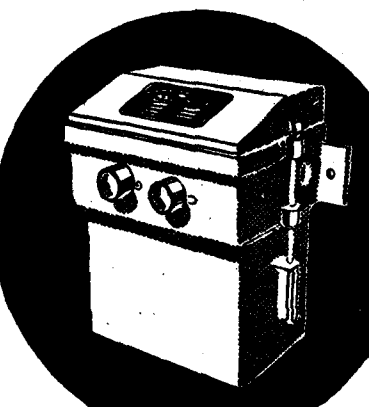






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A PROFILE OF INDUSTRIES

Oil: Accent Must be on Exploration

IT IS possible that our performance on the oil front during the last one and a half decades would have been better than what it has been, had Mr K. D. Malaviya, during his tenure as the Minister for Mines and Fuel in the crucial years of the late 1950s and early 1960s, not introduced ideological considerations in our oil policy. But there is no denying the fact that our oil industry has made substantial progress during this period.

As against less than half a million tonnes refining capacity at Digboi in 1951-52, we have today capacity to process as much as 15.25 million tonnes of crude oil. This capacity is spread over as many as eight refineries. The four private sector refineries—two at Trombay (Burmah-Shell and Esso), one at Visakhapatnam (Caltex) and one at Digboi (Assam Oil Company)—account for 7.8 million tonnes of the effective refining capacity (Burmah-Shell and Esso can both run to nearly a million tonnes additional capacity, but this capacity is lying idle for want of government sanction). The three wholly government-owned refineries at Noonmati, Barauni and Koyali have a combined effective capacity of 4.95 million tonnes. The eighth refinery, also in the public sector (by virtue of the government holding majority share in it) is at Cochin. It has 2.5 million tonnes capacity.

By the end of 1968, the capacities of the refineries at Barauni and Koyali will be expanded to three million tonnes each. Another refinery in the public sector (majority participation by the government) will come up at Madras. It will have a capacity of 2.5 million tonnes. Still another wholly government-owned refinery has been sanctioned recently for Haldia. This refinery, which is expected to come up by 1970-71, will also have 2.5 million tonnes capacity. In 1970-71, the Koyali refinery may be working even to 3.5 million tonnes if the process of removing bottlenecks is completed by then. By virtue of its Lube Plant agreement, the Esso Refinery should be processing in that year 2.7 million tonnes of crude oil. The Haldia refinery, however, may work in 1970-71 to an effective capacity of only about a million tonnes. All these developments will raise our oil refining capacity at the turn of the present decade to nearly 21.3 million tonnes. The multiplication of our 1951-52 refining capacity by nearly 43 times in a span of barely 20 years, indeed, is no small achievement.

Wide Range of Products

Along with the rapid expansion in our refining capacity, the range of the products turned out has also expanded fast. Except a few specialities, we are now producing almost all the products required by our economy. The output of some products such as aviation fuel, superior kerosene and lubricants, however, falls short of demand. But then the production of some items such as motor spirit, naphtha, industrial furnace oil and diesel oil exceeds the requirements. Efforts are being made to correct this imbalance in production, but since success depends on the type of crude available and such other factors as fiscal policy, some imbalance cannot be avoided.

The progress made in the production of crude oil has also been significant, although it does not compare so favourably with the expansion of our refining capacity. In 1952-53 we used to produce crude oil just sufficient to run the tiny Digboi refinery to less than half a million tonnes capacity. Last year our production of crude amounted to nearly five million tonnes. This year the output may be about six million tonnes. Our proved and indicated reserves of crude oil today are approximately 150 million tonnes. This has dispelled the belief held in the early 1950s that our country is deficient in the oil-bearing structures. As a result of the exploration work undertaken during the past 10 years, it has been learnt that we

have nearly 400,000 square miles of potential oil-bearing sedimentary areas on land, about 100,000 square miles off-shore with water depth up to 50 metres and still another 30 million square miles (comprising the continental shelf) with water depth up to 200 metres.

Commercially exploitable resources of crude oil or natural gas have been established in upper Assam in the Nahorkatiya and Moran concessions of the 50:50 partnership of the Government of India and the Burmah Oil Company—Oil India—and the Rudrasagar, Sibsagar and Lakwa concessions of the public sector organisation—the Oil and Natural Gas Commission (ONGC). The ONGC has also established commercial production of crude oil in the Ankleshwar-Kalol area in Gujarat and natural gas in the Cambay region also in Gujarat. Crude oil has been found by the ONGC in the Nawagan area of Gujarat as well.

Unsuccessful Attempts

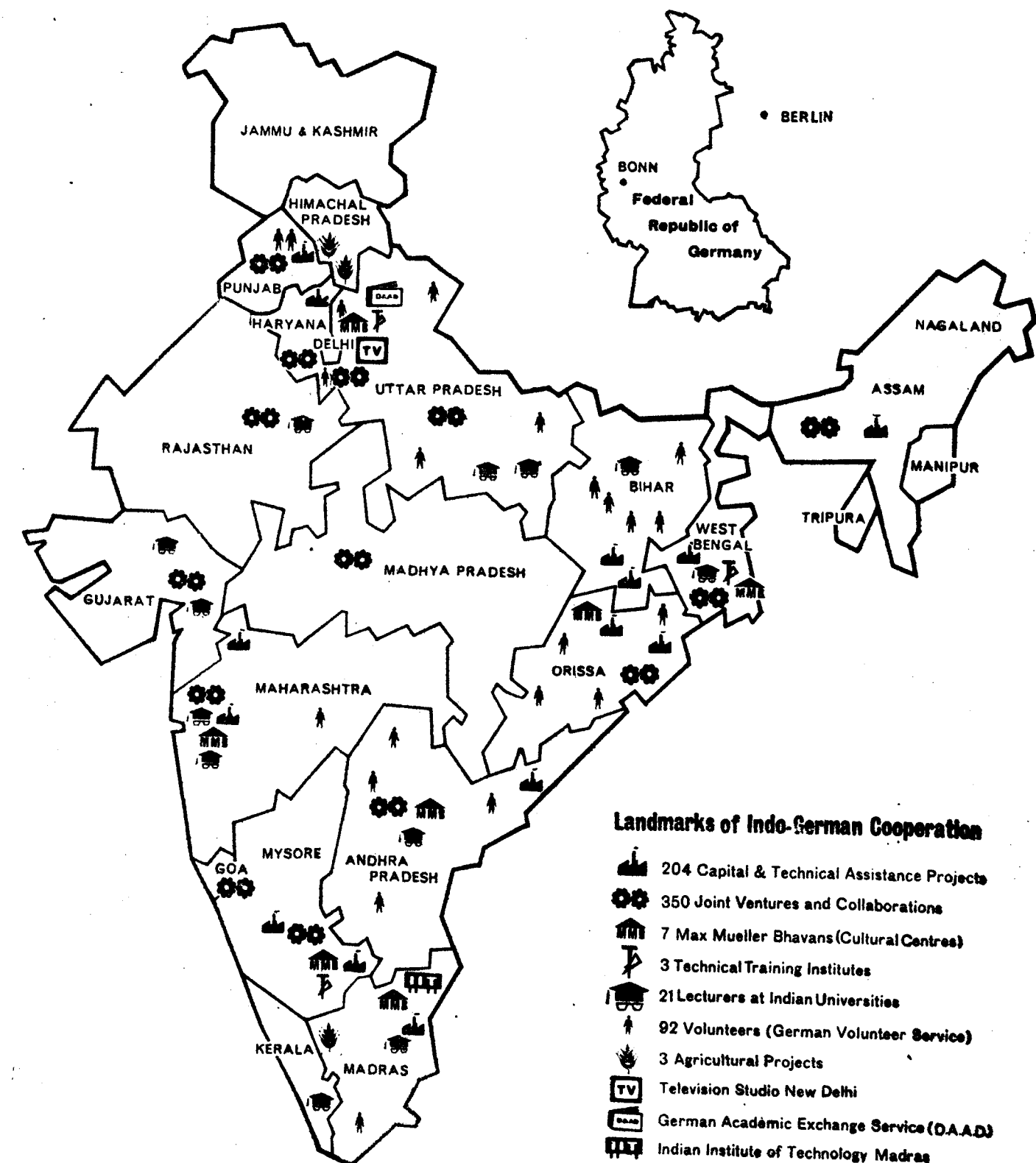
The attempts of the ONGC at finding oil or natural gas in the Indo-Gangetic plain and the Jaisalmer area in the north and at Karaikal, Nagapattinam and Tiruthurai in the Cauvery basin, however, have not yielded any fruitful results. The renewed effort at exploration in the Port of Canning area in West Bengal (this area was explored some years ago by the Standard Vacuum Oil Company—now Esso Standard Eastern—without any success) have met with an unexpected problem arising out of high pressure of gas.

Despite these failures, which have led to stoppage of further drilling for the time being in Punjab, Uttar Pradesh and Bihar in the Indo-Gangetic plain and slowing down of the exploration activity in West Bengal and the Cauvery basin, the crude oil production from the already established oilfields and the areas where oil has been struck but not commercially exploited as yet is expected to go up to 9/9.5 million tonnes a year by 1970-71. The ONGC has been asked to step up its production from the upper Assam and the Gujarat concessions. The crude oil from the ONGC's upper Assam concessions may start flowing through the Oil-India pipeline shortly if the negotiations with Oil-India, started recently, are fruitful.

The success achieved in the Iran concessions of the ONGC, where exploration was taken up by it in partnership with the ENI of Italy and Phillips Petroleum of the United States, may make available in the near future another one million tonnes of crude oil as the ONGC's share in this venture. Another one million tonnes may be available from the ONGC's partners on rupee payment. So by 1970-71, we should have nearly 11.50 million tonnes of crude from the indigenous sources or on rupee payment. Although a supply of this order will meet just about half of our 1970-71 requirements, provided the refining capacity in that year remains at 21.3 million tonnes as stated earlier, it is also no small achievement.

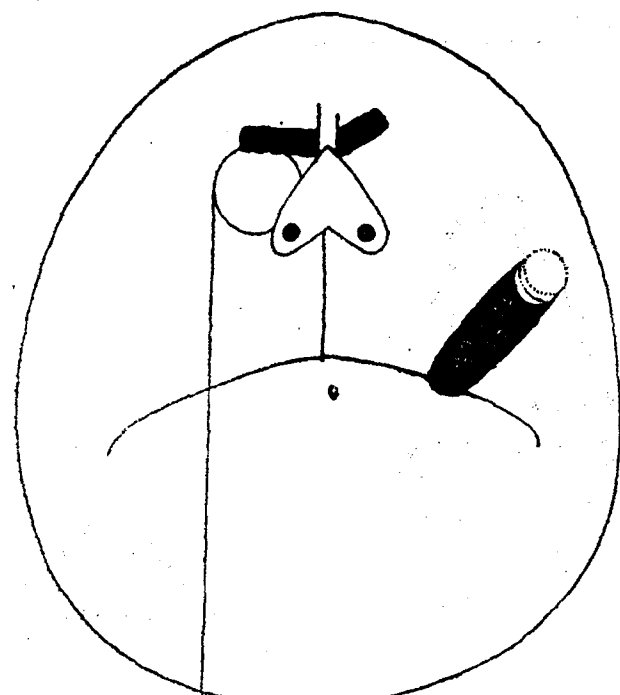
But will a refining capacity of 21.3 million tonnes produce enough petroleum products to meet our demand? During the last three years, there have been three downward revisions of the estimates of our 1971 requirements. Originally, just before the draft outline of the fourth Plan was finalised, the requirements were assessed at 26 million tonnes. In early 1965 the estimate was scaled down to 24 million tonnes. Subsequently, when measures were initiated in 1965 to curtail the consumption of kerosene and furnace oil, the requirements came to be assessed around 22 million tonnes. In its 1966-67 annual report, the Indian Oil Corporation (IOC) has put the likely demand for petroleum products in 1971 at 23.05 million tonnes. A plausible explanation for this slight upward revision in the estimate can be that, as against a four per cent growth in the consumption of petroleum products last year, this year's

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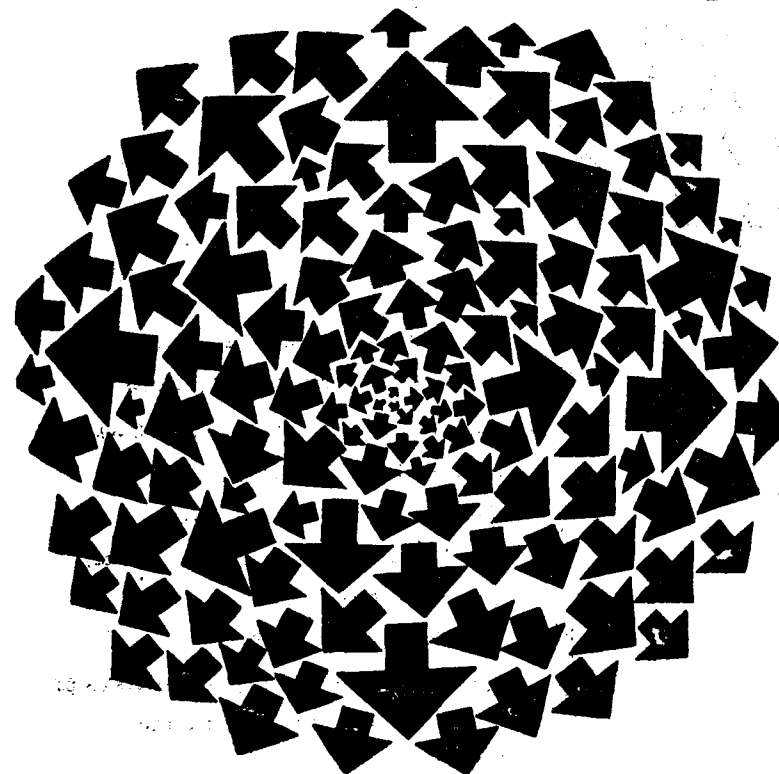
Or when we must reject what our own factories have produced, which do not conform to specifications.

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growth is said to be around eight per cent. Non-official sources, however, suggest that we may require in 1971 slightly less than 23 million tonnes of petroleum products.

The approximate break-up of the IOC's estimate of 23.05 million tonnes consumption of petroleum products in 1971 is as follows:

	(Million tonnes)
Light Distillates	4.55
Kerosenes	4.27
Diesels	5.40
Heavy Fuels	5.69
Lubricants	0.80
Bitumen	0.80
Others	1.54
	23.05

For meeting these requirements, we shall need at least 24.5 million tonnes of refining capacity. Even then, however, the production of such products as kerosene, feedstock for lubricants and furnace oil may fall short of demand by a small margin. There may be surpluses in such products as motor spirit and diesels. But by and large a balance will be struck between the demand for and the supply of various products.

There is thus a strong case for expanding our refining capacity by about three million tonnes by 1971. It may be argued that the Cochin refinery in that year can be run to more than 2.5 million tonnes—possibly to 3.5 million tonnes—but such a move will obviously distort the regional supply position. The export performance of the Cochin refinery too has not been encouraging; it is reported to be finding it difficult to export its surplus gasoline. Efforts, however, can be made to run the Haldia refinery to about two million tonnes, instead of one million tonnes assumed in the above analysis. But even then there will remain a gap between the likely installed capacity and minimum capacity required in 1971.

Judicious Expansion

Apart from the fact that it is judicious to meet the entire domestic demand from the products of the indigenous refineries and that too without creating undue regional imbalances, there is another consideration that should weigh with the government in taking decisions about the expansion proposals of refineries. As an offshoot of the recent Arab-Israeli conflict and the consequent closure of the Suez Canal, we may well become a country exporting substantial quantities of petroleum products to the neighbouring nations. Sizable exports of furnace oil, gasoline and diesel oil have been effected by the IOC this year. Ceylon had asked for gasoline when supplies from eastern Europe were delayed by the Suez closure. If export business can be established on a long-term basis, it will be judicious to expand our refining capacity to even more than 24.5 million tonnes.

Exporting petroleum products, however, is no easy task. No doubt the IOC expects to earn nearly seven crores of rupees through exports this year, but a good portion of this earning can be attributed to the fortuitous circumstances arising out of the Suez closure. The international oil companies operating here, of course, should be able to take up this challenge. But will they do this?

The international oil companies have been exporting hitherto only the surplus products—naphtha and motor gasoline. But if they are allowed to expand their capacities, they may well be interested in making this country a base for their exports to the eastern hemisphere. If there is a sizable net accrual of foreign exchange to us (after deducting the import bill—on account of the additional imports of crude oil and such other chemicals which are currently imported for the

processing of crude—and also the additional dividend remittances), we should have no objection to the private oil refineries being run to a higher capacity than hitherto. A part of the additional production of such deficit products as kerosene should help us in meeting the domestic requirements too. This will save us a good deal of foreign exchange, especially as, after the devaluation of the rupee, the import price of such products has gone up by 57.5 per cent.

An important field on the refining side in which more energetic action is called for is the production of lubricants. Presently, we have only a small capacity for producing lubricants at Digboi and Barauni. The three other projects which have been approved for meeting the requirements of lubricants—(i) the Esso-government scheme for setting up a lubricants plant at Trombay with a capacity of 145,000 tonnes; (ii) the Madras refinery's plan to turn out annually 200,000 tonnes of feedstock of lubricants; and (iii) the programme to produce 140,000 tonnes of lubricants at Koyali—have yet to materialise. The Koyali refinery may start producing lubricants next year. But production from the Esso-government plant and the Madras refinery can be expected only towards the end of 1969. Even if the proposed Haldia refinery starts producing lubricants to the envisaged level of 150,000 tonnes in the early 1970s, we will have a total lubricants capacity of the order of about 750,000 tonnes. The demand in 1971 itself is estimated at 800,000 tonnes. Expansion of capacity for producing lubricants thus is urgently called for. The production of chemicals required by the oil industry for the manufacture of lubricants and improving the quality of other petroleum products, it may be mentioned, may start next year. An agreement for the purpose was signed by the government last year with the Lubrizol Corporation of Cleveland, Ohio, USA.

The most important task facing our oil industry, however, is the stepping up of crude oil supplies from the indigenous sources. As stated earlier, we may be able to meet in 1971 only about 50 per cent of our requirements of crude oil from the indigenous sources and the concessions of the ONGC and its partners in Iran, provided our refining capacity in that year is of the order of 21.3 million tonnes. If the refining capacity is augmented to 24.5 million tonnes or more, the imports of crude oil will go up proportionately.

The reservation of all future on-land exploration exclusively for the ONGC, either to be undertaken by it on its own or through contractors, evidently has not paid the dividends

TABLE I
PRESENT EFFECTIVE CAPACITIES OF OUR
OIL REFINERIES

	Million tonnes crude throughput
(A) Private Sector.	
(1) Burmah-Shell	3.75
(2) Esso	2.50
(3) Caltex	1.05
(4) Digboi	.50
	7.80
(B) Public Sector:	
(a) Noonmati	.75
(b) Barauni	2.00
(c) Koyali	2.20
(d) Cochin	2.50
	7.45
Total:	15.25

expected by the framers of this policy. As Table II shows, the ONGC is not in a position even today to accomplish the modest oil prospecting targets set for it. Between April 1, 1967, and September 30, 1967, only 26 wells have been drilled by the ONGC to a total depth of nearly 71,200 metres; as against the target of drilling 72 wells to a total depth of 201,800 metres. The rainy season might be held responsible for this poor performance. But obviously the slackness cannot be entirely due to this factor.

It is high time that our oil exploration policy is streamlined and efforts are renewed to interest foreign explorers in oil prospecting here. The prospects of larger investments in search for oil in the non-Arab countries of Asia and Africa were perhaps never so bright as they are today. This is because of the imposition of embargo (later on lifted) on supplies of Arab oil to some of the west European countries after the recent Arab-Israeli conflict.

Inhibiting Factors

Besides the reserving of all future on-land oil exploration for the ONGC, the three other major factors that inhibit the foreign explorers from taking an active interest in oil prospecting in our country are (i) the desire of the government to have majority interest in the joint ventures to be floated for this purpose, (ii) heavy taxation, and (iii) frequent changes in our fiscal policy. The first factor raises in the minds of foreign investors fears of undue interference by bureaucracy in strictly business decisions. High rates of taxation scare away foreign capital in hazardous enterprises to which category oil exploration surely belongs. Too frequent changes in the fiscal policy hamper long-term assessment of returns. While the Finance Ministry ought to bestow thought on the last two issues, the Ministry of Petroleum could allay the fears of undue bureaucratic interference in business decisions through providing, specially in agreements with foreign oil explorers, adequate arbitration clauses and safeguards against the overruling of technical advice by non-technicians.

It will be sensible on the part of the government to ask the ONGC to concentrate on oil exploration in areas where its operations are in an advanced stage. Diffusion of energies over wide areas is neither in the interest of the ONGC nor in the interest of the country. Foreign oil explorers should be invited for prospecting in areas where the ONGC's operations are only in the preliminary stages. Oil-India can also be urged to extend its operations now since the task of bringing the Nahorkatiya-Moran oilfields to an optimum level of production has been more or less accomplished. With a view to strengthening the expertise of the ONGC, the recent acquisition of the services of the noted geologist, Mr W. B. Metre, is welcome.

As regards off-shore exploration on the western coast, it is, indeed, encouraging that a satisfactory arrangement has

been reached with west European explorers. The foreign collaborators are understood to have agreed to a minority participation in this venture. The seismic survey of the area indicates that there are very good possibilities of striking oil here. If this expectation materialises, the supply of crude oil from indigenous sources should improve considerably three or four years hence. But this does not obviate the necessity of further expediting exploration, particularly in the on-shore areas, through inviting foreign investments.

Oil is wealth only when it is taken out and used. Undue delays at discovering it may cost us heavily. In the mid-1970s we may require on the basis of a recent study by the Indian Petroleum Institute, at least 32 million tonnes of crude oil. Are we to remain largely dependent on imports of crude? Even for our modest requirements at present, we have to spend over Rs 100 crores on imports of crude oil and petroleum products—mostly on imports of crude. The import bill will become intolerably heavy if oil exploration is not accelerated appreciably.

Much concerted action—more than has been taken hitherto—is also needed in the field of petro-chemicals. The manufacture of synthetic organic chemicals from petroleum and natural gas is fast replacing the production of such chemicals from coal and vegetable matter. The petro-chemical industry today is one of the most rapidly growing industries in the world. Currently it contributes to well over 60 per cent of the world production of organic chemicals. It is anticipated that in the next five years this percentage will go up to 80.

Of Vital Importance

For a developing country such as ours, a rapid growth of the petro-chemical industry is of vital importance. Besides helping in raising agricultural production, it is estimated that even at the current stage of our industrial development, a well developed petro-chemical industry can substitute imports of such materials as ferrois and non-ferrous metals, natural fibres like cotton and wool, vegetable oil and tallow (in the production of soap), rubber, paper, asbestos, etc. to the tune of nearly Rs 200 crores per annum.

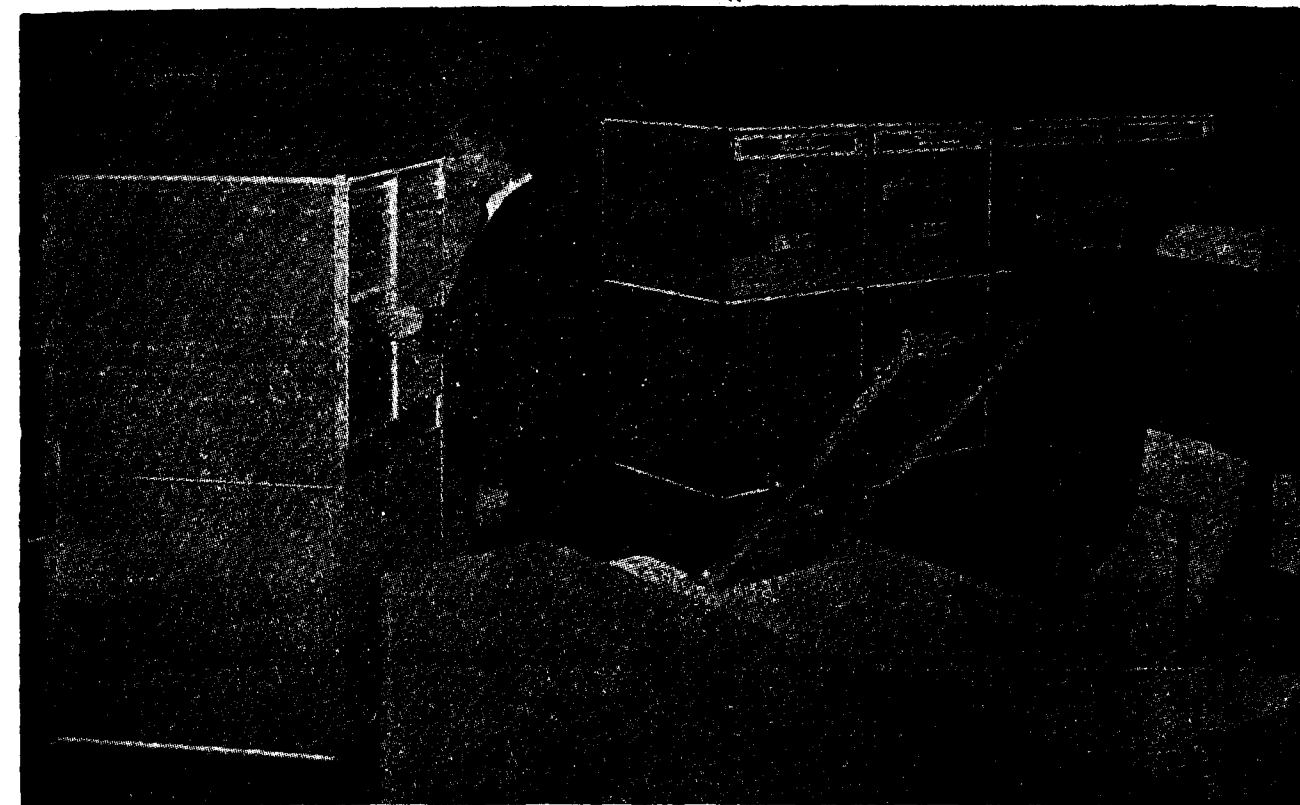
Before the draft outline of the fourth Plan was prepared, the government had in mind an ambitious programme for the manufacture of petro-chemicals during the five years to 1970-71. It was felt that in addition to the two private sector units to be set up near Bombay, sizable petrochemical complexes should be built at Koyali, Barauni and Cochin during this period, with provision for further expansion in the fifth and the sixth Plans. Due to difficulties of securing technical and financial assistance from abroad and the scaling down of the target for the oil refining capacity, this ambitious programme, however, suffered a setback. The draft outline of the fourth

TABLE II
PROGRESS OF O.N.G.C.'s OIL PROSPECTING

Exploration Area	Targets for 1967-68		Progress between April and September 1967-68		Progress since ONGC's inception	
	Wells to be drilled	Total drilling ('000 metres)	Wells drilled	Total drilling ('000 metres)	Wells drilled	Total drilling ('000 metres)
(i) Ankleshwar	8	11.60	3	5.85	230	311.54
(ii) Kalol-Ahmedabad	26	57.80	9	18.26	110	202.28
(iii) Cambay-Nawagon	16	37.20	6	10.08	86	189.91
(iv) Sibsagar, Rudrasagar and Lakwa	18	80.00	8	32.73	60	228.30
(v) Punjab	—	—	—	—	5	18.71
(vi) Uttar Pradesh	—	—	—	—	2	4.35
(vii) Bihar	—	—	—	—	1	2.86
(viii) West Bengal	1	3.70	1*	0.50	1*	3.82
(ix) Cauvery Basin	3	8.50	3*	3.78	3	12.40
(x) Jammu and Kashmir	—	3.00	—	—	—	—
(xi) Contract drilling	—	—	27	71.33	507	1005.24

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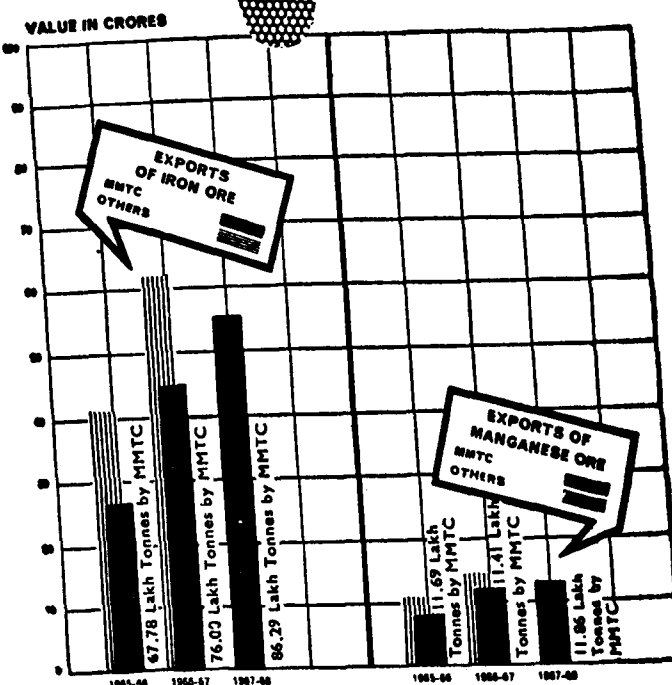
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Although a late-comer in the field, the MMTC has made tremendous strides in the exports of minerals, metals and ores. A sizeable part of the total Indian trade in this sphere has accrued to the MMTC by virtue of its superior bargaining position. But there is no question of resting on past laurels - the MMTC is always alert for the opportunity to diversify and expand foreign markets.



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Plan, therefore, provided for only a modest programme for the petro-chemical industry. In addition to the two private sector units near Bombay, it was decided that only one additional complex—at Koyali—should be developed. A beginning, of course, was to be made for the development of the second complex at Barauni. The following targets were proposed for the production of the end-products of petro-chemicals:

		(000 tonnes)
Plastics :		
Polyethylene	...	100
PVC	...	100
Polystyrene	...	35
Synthetic Fibres :		
Nylon	...	28
Polyester	...	10
Acrylics	...	10
PVA	...	10
Synthetic Rubber :		
S. B. R.	...	30
Polybutadiene/butadiene based rubber	...	20
Butyl	...	20

Though no specific targets were proposed for the manufacture of intermediates for pesticides, drugs, pharmaceuticals and other chemical products, a sizable production of these was envisaged.

The targets for the manufacture of plastics and synthetic rubber have now been pruned as is evident from the following table:

		Current targets for 1971 (000 tonnes)
Plastics		196
Synthetic fibres	...	58
Synthetic rubber	...	50
Intermediates for pesticides, drugs, pharmaceuticals, explosives, etc.		300

The first private sector integrated petro-chemicals unit at Trombay was commissioned towards the close of the last year. The second somewhat larger complex in the private sector near Thana has gone on stream recently. By the end of next year the following capacities in the petro-chemical industry should be in full production: plastics 157,000 tonnes; synthetic fibres 25,100 tonnes; synthetic rubber 30,000 tonnes; and intermediates for pesticides, drugs, pharmaceuticals, explosives, etc., 190,000 tonnes.

Sizable Gap

There will thus be a sizable gap between the installed capacity and even the modest 1971 targets currently talked about. Further capacities to the extent of 1,600 tonnes of plastics, 46,000 tonnes of synthetic fibres and 66,000 tonnes of intermediates for pesticides, drugs, pharmaceuticals and explosives has been approved. But work on the implementation of this capacity has yet to gather momentum. Proposals for augmenting the plastics manufacturing capacity by 60,000 tonnes, of synthetic rubber by 30,000 tonnes and of intermediates for pesticides, drugs, pharmaceuticals and explosives by 45,000 tonnes are stated to be under the consideration of the government.

Although the technology for the manufacture of petro-chemicals is expected to undergo a rapid change in the coming years, as a result of the massive research that is being carried on on a global basis, it is apparently desirable that the pace of development of this industry in our country should be stepped up immediately. The results even in the short run can be spectacular. The factors that inhibit foreign collaborators from taking an active interest in the development of our petro-chemical industry are not much different from those which have hampered the inflow of foreign investments in general and foreign collaborations in oil exploration in particular. A pragmatic approach to the problem will save us a rupee tomorrow at the cost of a paisa today.

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A PROFILE OF INDUSTRIES

Jute: Another Critical Year

THE CHAIRMAN of the Indian Jute Mills Association (IJMA), at its annual meeting in March 1967, remarked that the jute industry had passed through "extremely difficult financial and trading conditions" in 1966. He expressed the hope that, at least in 1967, the industry would be able to improve its prospects and derive some benefits arising from the devaluation of the rupee. But these expectations have not materialised. Though the availability of raw jute improved substantially, the demand for jute goods, foreign and domestic, continued, on the whole, to be disappointing as will be seen from the tables given here. The wide disparity between the prices of raw jute and jute goods, the rise in the industry's monthly wage-bill from Rs 2.5 crores in 1963 to Rs 3.2 crores in 1967 and scarcity of working capital generally affected the finances of the industry which is said to be losing at the rate of about Rs 1.5 crores a month.

The levy of heavy export duties has prevented the industry from playing its part effectively in export promotion. The IJMA pointed out in March 1967 that India was being priced out of the market by roughly the amount of export duty on hessian and sacking. It was stated that, without the export duty, the break-even selling price in pound sterling for Pakistan hessian was £ 112 compared with £ 113 for our country; and for sacking, the figure was £ 86 for Pakistan and £ 85 for our country. The Finance Minister, admitted in his budget speech on May 25, 1967, that our exports of jute manufactures had declined and that some of the promising lines were being threatened with competition from substitutes. He therefore reduced the export duty on jute goods, a decision which involved a loss of revenue of Rs 13.5 crores in a full year. This gesture however did not fully meet the needs of the situation; for, even with the rates per tonne of Rs 450 for sacking, Rs 750 for hessian, and Rs 600 for carpet backing and specialities, the Indian goods are not fully competitive.

Sharp Set-Back

In recent years, our jute goods, especially sacking, have experienced a sharp set-back in many countries. For example, the export of sacking to Africa declined from 81,400 metric tons in 1964-65 to 55,400 metric tons in 1965-66 and 49,800 metric tons in 1966-67. The off-take of sacking by the UK, the Far East, and Argentina has also not been substantial as will be seen from the tables here. It is estimated that our jute industry exports only about 40 per cent of its sacking production. Moreover, nearly 60 per cent of its sacking exports goes to rupee payment countries, which does not help to augment our earnings of free foreign exchange. Our share in the

TABLE I
PRICES OF JUTE AND GUNNIES AT CALCUTTA

	Jute		Gunnies	
	Assam	Hessian	Sacking	
	Mid	Bot	40" 10 oz	B.Twill
			(Ready)	(Ready)
	Rs per md		Rs per	
			100 yds	100 bags
1965 September				
Maximum	50.00	47.50	66.00	183.50
Minimum	45.00	42.50	58.00	164.00
1966 September				
Maximum	54.50	51.50	62.05	166.00
Minimum	50.00	47.00	59.35	153.00
1967 September				
Maximum	43.75	40.50	57.50	152.50
Minimum	41.50	38.50	55.25	144.00

total world jute trade has gone down from 83 per cent in 1957 to 58.5 per cent in 1966.

The need for reconsidering the export duties becomes all the more urgent in view of the devaluation of the pound sterling in November 1967 and the increasing competition from Pakistan whose share in the world jute trade has gone up from 6.8 per cent in 1957 to 33½ per cent in 1966. Pakistan's export of jute goods increased from 316,000 tons in 1965-66 to 350,000 tons in 1966-67, the rise in earnings being from Rs 5.75 crores to Rs 6.3 crores. The Pakistan Minister of Commerce disclosed recently that his country had a total of 22,750 looms, either installed or placed on order, out of the third plan's target of 27,000 looms. The loomage ratio which formerly was 50:50 between hessian and sacking is now 60:40 but it is reported that the ratio in the new units will be 70:30 in order to provide for a wider range of production. The minister also emphasised the need for a quicker expansion of the capacity for the production of hessian and speciality goods and for a slower rate of growth in sacking. Apart from the availability of better and cheaper fibre and more modern machinery, exporters in Pakistan have powerful incentives in the form of bonus vouchers. It is significant to note that while hessian imports from India into the USA went up from \$ 63 million in 1956 to \$ 161 million in 1966, the imports from Pakistan rose from \$ 4 million to \$ 28 million that is, by 275 per cent as compared to 130 per cent in our case. Table V (p. 1267) shows the trend of US imports of hessian from India and Pakistan. Our jute industry therefore should be given all facilities to improve its profitability.

TABLE II
STOCKS OF JUTE GOODS
(000 tonnes)

Particulars	End of Oct.	End of Sept.	End of Oct.
	1967	1967	1966
Hessian	49.6	50.2	35.1
Sacking	68.7	71.4	52.9
Carpet backing	11.2	13.2	10.9
Others	12.4	12.9	9.4
Total	141.9	147.7	108.3

In July 1967, the IJMA proposed the following four-point programme for reviving the industry's health: closure of mills every Saturday in August, September, November and December; suspension of futures trading in jute goods; fixation of minimum prices of jute goods for the internal market; and the establishment of a jute goods buffer-stock association. The association hoped that by implementing this programme it would be possible to adjust production to demand with minimum impact on labour; stabilise the prices of fibre and finished goods; distribute the effect of the recession on the whole industry and thereby save the weaker mills; and enable the industry to work economically. The government accepted the proposal to set up a jute goods buffer-stock association and agreed to suspend futures trading from time to time. But it did not accept the other two proposals.

The production of raw jute in the current year amounting to about 76 lakh bales has been encouraging. In this context it is worth noting that in the period of the third five-year Plan, there was a net increase in the production of raw jute of 40.04 lakh bales over 1947-48. Of this increase, extension of area accounted for 32.64 lakh bales and the balance of 7.40 lakh bales was largely due to the intensive use of inputs. But the problem of holding jute prices at the statutory minimum level of Rs 40 per maund in terms of Assam Bottom has not been easy. Compulsory buying by mills of certain minimum

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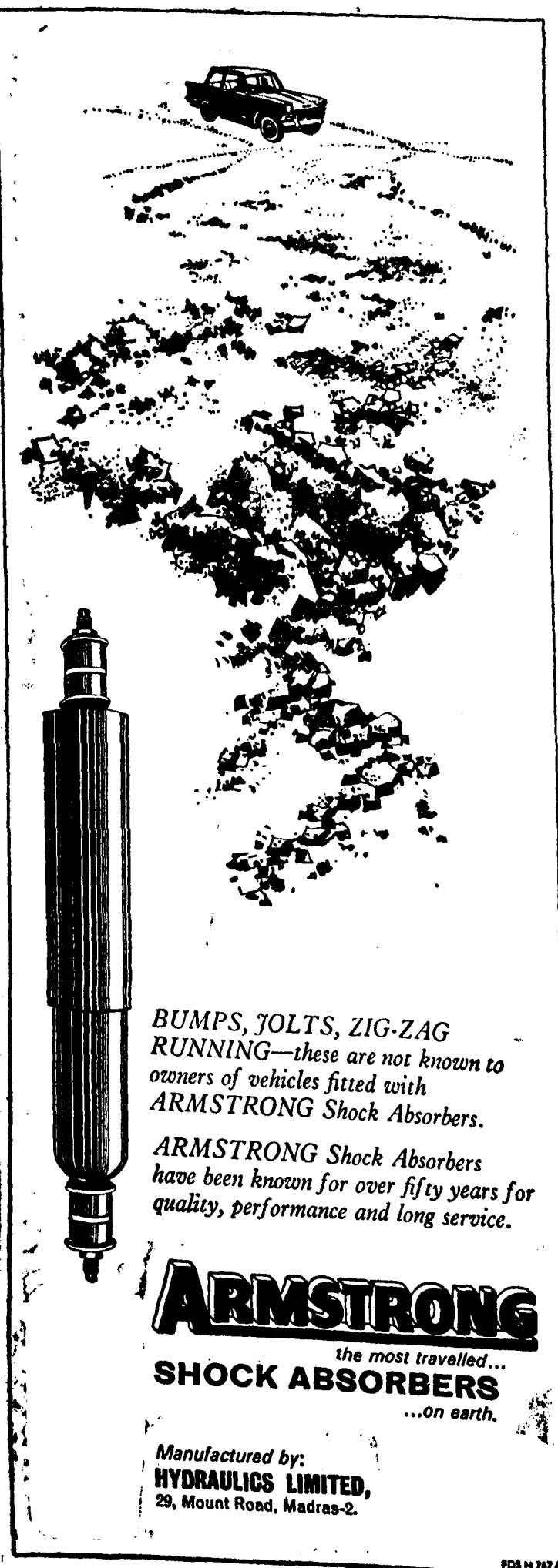
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quantities of raw jute and purchases by the Jute Buffer Stock Association have not had the desired effect. In November 1967, raw jute prices (basis Assam Bottom) slumped to Rs 36 per maund, f.o.b. Calcutta; and the Government of India directed the State Trading Corporation to purchase raw jute direct through the state governments which, in turn, will entrust the job to the co-operatives. It remains to be seen how far this arrangement will help to give the grower a fair deal.

The proposal to export raw jute has understandably caused concern to the industry which fears that it will only help its competitors in Europe and elsewhere. Moreover, the industry believes that its stock position is not as comfortable as it should be. The current season has begun with only about 1.16 million bales and, even with the production of 7.6 million bales, the carry-over at the end of the season is not expected to exceed two million bales. The industry regards this as the minimum that is required in case the output next year does not turn out to be satisfactory. It may be recalled that the opening stocks stood at 2.7 million bales in 1962-63, 3.1 million bales in 1963-64, 2.8 million bales in 1964-65 and two million bales in 1965-66.

Weak Financial Position

At the meeting of the Jute Development Council held in Calcutta on October 4, 1967, Mr Dinesh Kumar Singh, the chairman, said that if immediate steps were not taken to create a matching demand commensurate with the flow of arrivals, and if prices were not supported at the desired level, the country should be prepared for a short crop next year. He said that for such an eventuality, the industry alone would be responsible. This view is hardly fair because so long as the industry's financial position continues to be as weak as at present, it will be difficult for the mills to be generous to the grower or build up stocks on a large scale. It should also be pointed out that no progress has yet been made in evolving scientific grade and standards for raw jute; and the fertilisation programme also has not been making satisfactory progress because of administrative shortcomings. The Development Council has estimated that for effecting the desired improvement in quality, additional retting facilities are required for 34 lakh bales of fibre by 1970-71 for which nearly 1720 community retting tanks occupying 29,000 acres would be required. But a programme of this magnitude can be implemented only with adequate financial assistance from the

centre. The IJMA has also been actively assisting the grower to increase production and improve the quality. For nearly seven years, the IJMA has been carrying out demonstrations of intensive cultivation of jute and mesta. It has about 15 blocks of 100 acres each. The average yield per acre of jute on the IJMA's blocks is about 3.59 bales compared to 2.78 bales in the neighbouring areas. It should not be difficult to step up these yields further provided more strenuous efforts are made by government and industry. The improvement of quality should also receive more attention. Our jute industry still depends on imports for its requirements of high quality raw jute for the manufacture of carpet backing; and in November 1967, the industry asked for foreign exchange for importing one lakh bales of such jute.

The labour situation in the jute industry continued to be unsatisfactory. The dispute over bonus, gheraos and other unlawful activities caused much concern to the industry. Full labour statistics for 1967 are not yet available. But it is significant that in the decade 1957-66, there has been a sharp increase in the number of strikes and lock-outs as well as the man-hours lost, as will be seen from the following figures:

Year	Number of strikes and/or lock-outs	Man-hours lost
1957	15	21,23,115
1958	15	15,16,893
1959	124	32,73,382
1960	58	64,00,620
1961	87	64,27,749
1962	11	46,40,483
1963	15	21,04,280
1964	86	58,70,328
1965	30	56,00,487
1966	145	1,15,95,834

What is disturbing about the figures of 1966 is that 91 per cent of these stoppages, involving 538,857 workers and a loss of 4,497,694 man-hours, had nothing to do with any industrial dispute. They were caused by political factors like hartals.

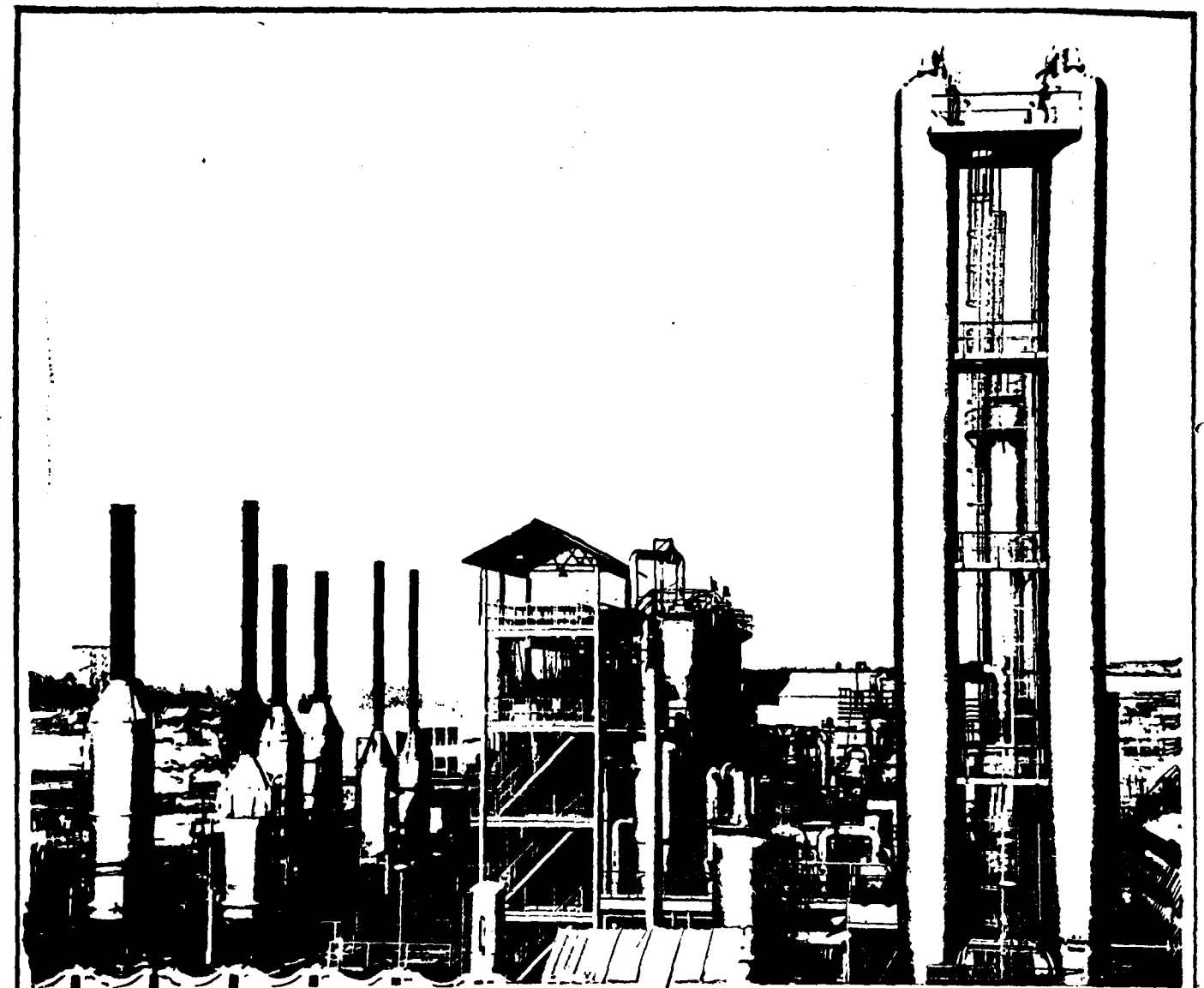
Although the jute industry has been facing the threat from substitutes for some time, of late it seems to have become more intense. It is therefore gratifying to find that the jute industry is making earnest efforts to find new uses for jute. The remarks of the Commerce Department of the Indian

TABLE III
PRODUCTION OF GUNNIES

July-June	Hessians		Sacking		Carpet backing '000 tonnes	Cotton bagging '000 tonnes	Others	Total production	Equiv. jute consumption lakh bales (estimated)
	'000 tonnes	'000 metres	'000 tonnes	'000 metres					
1963-64	5,33.8	1,76,47,60	4,95.5	1,07,97,06	95.5	49.0	75.3	12,49.1	72.04
1964-65	5,26.6	1,72,58,77	5,74.3	1,23,56,29	97.1	49.8	72.5	13,20.3	75.85
1965-66	4,88.2	1,61,97,87	5,47.7	1,18,85,39	93.9	35.7	61.2	12,26.7	70.36
1966-67	4,42.7	1,48,16,65	5,07.6	1,10,22,61	119.9	10.9	71.0	11,52.1	65.94

TABLE IV
EXPORT OF GUNNIES FROM INDIA: COUNTRY-WISE

Years	UK	Rest of west Europe	USSR	Rest of east Europe	Far East	Africa	USA	Canada	Argen-tina	Rest of Ame-rica	Aus-tralia	New Zea-land	Others	Total	Carpet backing (included in hes-sian)
1963-64	31.7	27.1	68.7	15.3	6.3	26.0	246.1	52.0	62.7	15.7	18.9	5.4	7.6	583.5	NA
1964-65	28.9	17.3	69.2	19.4	11.7	39.3	246.3	43.8	38.8	16.6	19.5	4.7	7.2	562.7	NA
1965-66	28.3	16.6	83.8	15.5	6.0	27.8	267.0	46.0	9.0	12.1	18.8	4.6	10.8	546.3	107.8
1966-67	23.4	11.7	47.8	27.9	2.9	17.6	261.3	42.8	4.5	14.1	25.5	6.2	12.3	498.0	133.9



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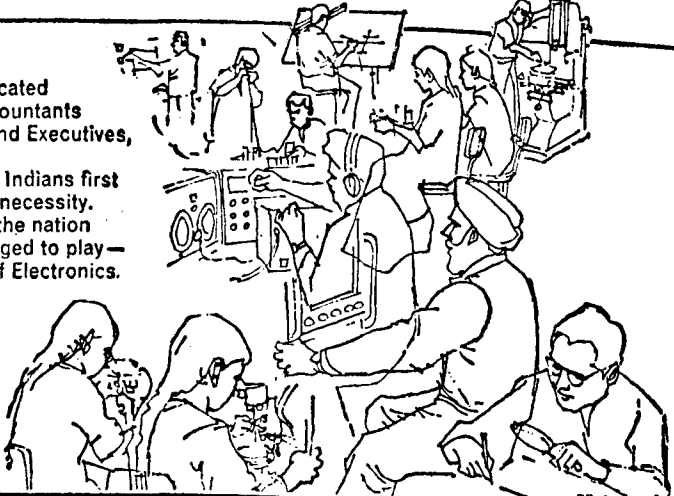
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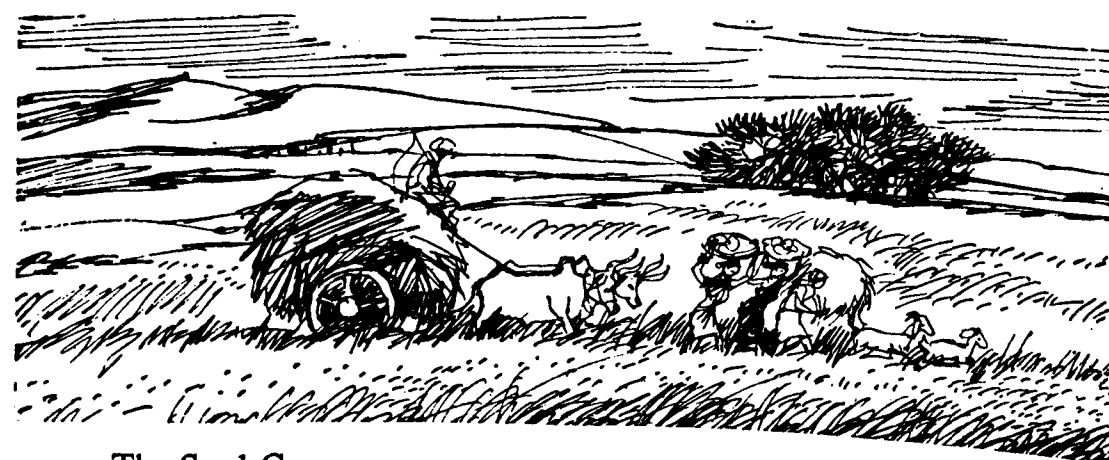


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TATA ENTERPRISES

High Commission in London are interesting in this connection. It says in a recent report:

"Jute has been making inroads into the fashion trade, and the various uses to which it can be put such as hats, dresses, shower-proof coats, shoes, handbags, hipster belts and rope soled slippers were clearly illustrated in a TV programme shown during the course of the year (1966-67). The acceptance of jute as a decorative fabric has in recent years brought a great deal of new business to the industry. These and other developments which have yet to follow provide increasing evidence of the determination of the industry to maintain its hold over the community despite the continuing threat from substitutes. This is not to say that substitutes do not pose a significant threat to the jute industry. The introduction of polypropylene yarns, cloth and bags does represent a problem but they are in the early stages of development and have yet to prove their superiority over jute. Only time will tell whether this is an ideal substitute for jute bags. In the meantime, the possibility exists that their influence can be defeated by a little more care in the formulation of the price structure of our jute manufactures and by a greater effort to provide a sufficiency of the raw material at reasonable prices. It is the failure to give due consideration to these two factors that is providing the stimulus for the introduction of synthetic materials into the markets of the world. The great virtue of substitutes is that they offer sufficient scope for the maintenance of stable prices and are available all the year round and not subject to the vagaries of the weather like jute".

The Indian jute industry, despite its unsatisfactory finan-

cial position, continues to give considerable attention to research. Its activities and achievements include the development of a new light weight woolpack as an answer to the threat posed by the polypropylene Japanese pack; use of jute netting for the prevention of soil erosion in Indian conditions; evolution of a bag suitable for packing sugar, fertilizers, cement and talcum powder; and several projects in the field of decorative fabrics.

This survey for 1967 brings out clearly the imperative need to strengthen the jute industry and make its products competitive. While several measures are necessary for this purpose, an immediate need is to cut the export duty. It is

TABLE V
U.S. BURLAP (HESSIAN) IMPORTS
(Figures in millions)

Year	Total imports		Imports from India		Imports from Pakistan	
	Lakh yds	\$	Lakh yds	\$	Lakh yds	\$
1956	899	81	780	63	53	4
1957	856	81	752	65	63	5
1958	850	76	747	63	52	4
1959	967	91	839	74	75	6
1960	884	95	745	77	79	7
1961	817	108	688	89	83	9
1962	994	130	829	108	91	9
1963	1085	168	918	140	106	11
1964	963	171	808	141	98	12
1965	993	187	841	159	NA	15
1966	NA	203	NA	161	NA	28

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regrettable that this issue is not seen realistically by the government. For instance, the chairman of the Jute Development Council said in October 1967: "Since the devaluation of the rupee, there is a tendency in certain quarters to regard the reduction of export duty as the nostrum for gaining competitive strength of the Indian jute goods in the world market. It is painful to note that consequences of indulging in a price war with the neighbouring country with the help of govern-

ment relief alone are not understood yet by the captains of trade and industry in their proper perspective. This approach will lead us nowhere but would only confuse our thinking". But the fact is that unless the export duties are reduced substantially and ultimately abolished, it is difficult for exports to pick up steadily. As Mr R. H. Morrison, a former chairman of the IJMA, has said recently, "The outsider finds it difficult to appreciate the centre's failure to grasp the basic essential—that exports of Indian jute goods must decline so long as export duties remain. While sympathy there is in plenty for the Indian trade, orders bypass Calcutta and will continue to do so until Indian jute goods are more competitive with Pakistan and with synthetics".

The cut on import duties under the Kennedy Round should help India's jute industry though the concessions are not as substantial as it had expected (Table VI). In the European Economic Community, the duty on sacking has been cut from 23 per cent to 15 per cent, on heavier hessian from 23 per cent to 20 per cent and on carpet backing from 23 per cent to 22 per cent. The USA has agreed to remove the duty of $\frac{1}{2}$ per cent per lb on jute fabrics and reduce the duty on jute bags and sacks by 50 per cent. Japan has offered to reduce its import duty on jute goods from 25 per cent to 20 per cent. Norway has agreed to abolish the import duty on jute goods while Sweden will lower it from 11 per cent to eight per cent. Denmark had already removed the import duty on jute goods at the initial stages of the Kennedy Round. It is true that some countries of Europe still retain the quota system. But if only the Indian jute mills are able to function at the highest level of efficiency, and there is close co-operation between the industry and the government, surely, the country can substantially augment the earnings of foreign exchange by the export of jute goods.

TABLE VI

KENNEDY ROUND CONCESSIONS ON JUTE MANUFACTURES, JUTE FABRICS

- (i) India's total exports to all countries: (1964) Rs 1,020 million.
 (ii) India's total exports to non-preferential developed countries participating in the negotiations: Rs 620 million.

Countries offering the concession	Concessions	Value of India's exports to the country
1. USA	Elimination of existing duty of $\frac{1}{2}$ per cent per lb	Rs 610 million
2. EEC	(i) Sacking weighing 500 gm and above per sq. metre—duty reduced from 23 per cent to 15 per cent (ii) Heavier Hessian weighing 310 gm per sq metre—duty reduced from 23 per cent to 20 per cent (iii) Carpet backing i.e. fabrics with width of 150 cm and above—duty reduced from 23 per cent to 22 per cent	Rs- 6.4 million
3. Denmark	Duty eliminated at previous negotiations	
4. Norway	Duty eliminated	Rs 1.4 million
5. Sweden	Duty reduced from 11 per cent to 8 per cent	Rs 1.0 million
6. Japan	Duty reduced from 25 per cent to 20 per cent	Rs. .66 million
	Jute bags and sacks	
(i)	Total exports to all countries (1964): Rs 600 million.	
(ii)	Total exports to non-preferential developed countries participating in the negotiations: Rs 78 million.	
1. USA	Duty reduced by 50 per cent.	Rs 58 million
2. EEC	(i) Sacking bags from fabrics weighing 500 gm and above per sq. metre—duty reduced from 23 per cent to 15 per cent. (ii) Hessian bags from fabrics weighing 310 gm and above per sq metre—duty reduced from 23 per cent to 19 per cent. (iii) Hessian bags from fabrics weighing less than 310 gm per sq. metre—duty reduced from 23 per cent to 20 per cent	Rs 17 million


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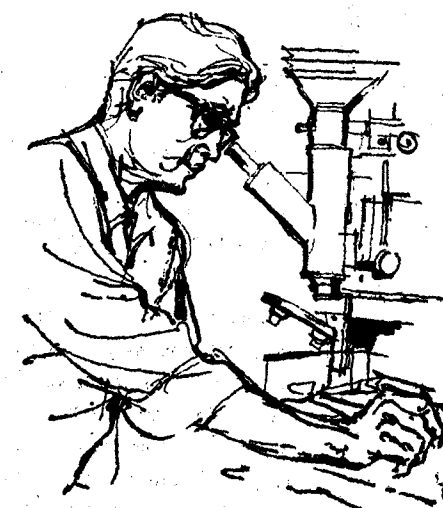
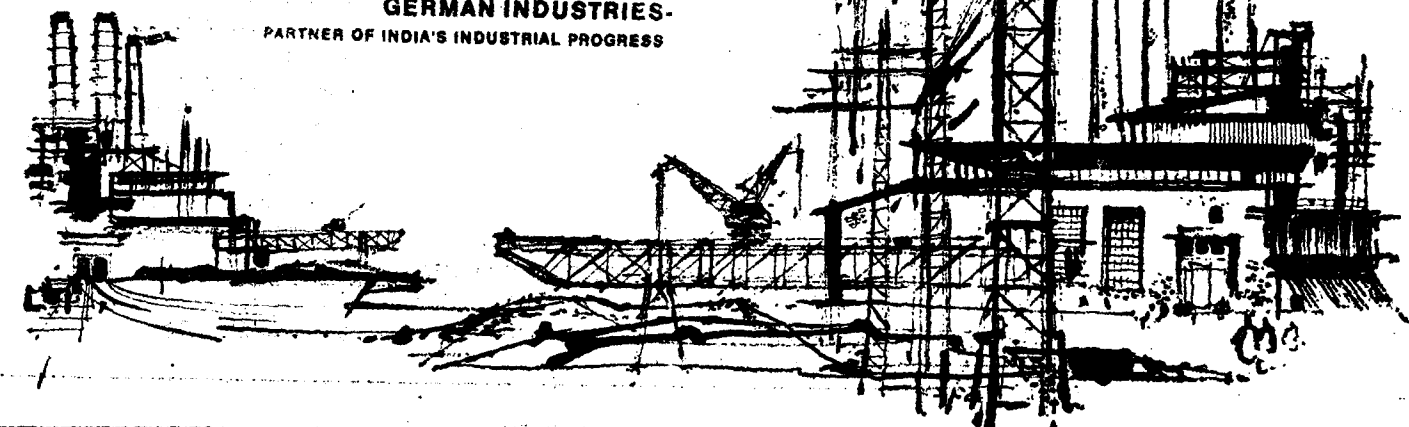
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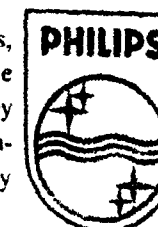


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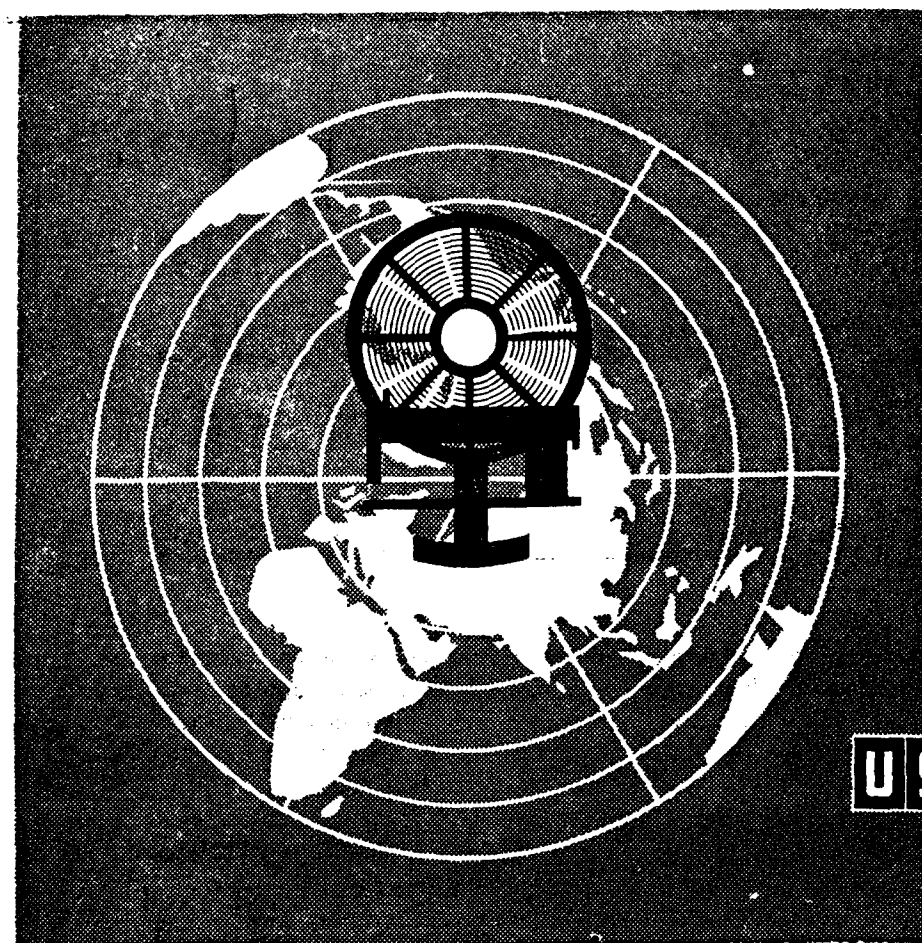
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JG/43

A PROFILE OF INDUSTRIES

Paper: A Case of Cost-Price Squeeze

THE PAPER industry finds itself hamstrung by a scheme of price control which has rendered it an unprofitable proposition for investors. In the absence of fresh capital, there has been little expansion of capacity or output during the last few years. Time and again representatives of the industry have approached the government with appeals for fixing selling prices at a realistic level, but the government has been delaying a decision. It was in 1959 that the Tariff Commission examined the structure of costs in the paper industry on the basis of which selling prices were fixed in 1960. Since then the cost of production has gone up considerably. Between 1960 and 1967, there has been a substantial rise in the prices of chemicals, fuel, power and spare parts and marked increases have occurred in freights, wages and salaries. The cost of coal, for instance, has increased by 60 per cent from Rs 50 per tonne in 1960 to Rs 80 per tonne in 1967. The price of glauber salt, one of the principal chemicals used in this industry, has increased in the same period from Rs 300 per tonne to Rs 700 per tonne. Railway freights and electricity charges have gone up by Rs 30 and Rs 40 per tonne of paper, respectively. Prices of felts, wire, spare parts and other materials imported from abroad have also increased by nearly 60 per cent, especially after the devaluation of the rupee.

Increased Costs

Besides this, paper mills are required to obtain their essential spares and maintenance stores under the US Aid loan and because of the higher American prices, there is a resultant increase in costs. The industry has also to bear levies such as central sales tax, excise duties, import duties and some state levies such as electricity duty and road tax, which have continuously been increasing. Finally, there have been periodical increases in the dearness allowance paid to the employees following enhancement in the prices of food, clothing and other consumer articles. All these factors have pushed up the costs considerably and rough estimates place this increase over the years from 1960 to 1967 at around Rs 400 per tonne of paper. In terms of investment in new units also the cost of establishing a unit with a capacity of 100 tons per day has been estimated at Rs 12 crores now as against Rs 8 crores five years ago. The government, however, has done nothing to compensate for this increase in costs. The only time a minor increase in the selling price of paper was granted between 1960 and 1967 was in 1962. The present attitude of the government appears all the more unreasonable in view of the fact that an appraisal committee appointed by the Ministry of Industrial Development and Company Affairs to examine project reports in the public sector stated clearly, in the context of the Dandakarnya project for making writing and printing paper, that it was unlikely to yield profit "if the prices of paper are maintained at the present level".

In the face of the increase in costs, the profitability of paper mills has shrunk considerably. This fact is substantiated

TABLE I
PROFITABILITY IN PAPER INDUSTRY
(Based on 20 Company reports)

Year	Gross Profit as % of total capital employed	Profit after tax as % of net worth	Profit retained as % of profit before tax
1960-61	9.5	9.9	28.4
1961-62	8.4	8.0	19.0
1962-63	8.4	7.1	16.2
1963-64	7.9	8.8	27.3
1964-65	6.6	6.0	7.8

conclusively by the Reserve Bank of India study of 20 balance sheets of paper manufacturers summarised in Table I wherein it is apparent that between 1960-61 and 1964-65 (the last year covered by the study) the profitability declined to a marked extent. It may be observed that the ratio of gross profit as a percentage of capital employed declined from 9.5 in 1960 to 6.6 in 1964-65. Similarly, the ratio of profit after tax as percentage of net worth declined from 9.9 in 1960-61 to 6.0 in 1964-65. As a result of the erosion of profits the paper manufacturers have been left with little funds for ploughing back by way of reinvestment. The results reveal that the ratio of profits retained as percentage of profit before tax declined steeply from 28.4 in 1960-61 to as low as 7.8 in 1964-65. It may be added that in 1964-65 the overall ratio of profits retained as percentage of profits before tax for all the 1,333 companies examined by the Reserve Bank worked out to 19.4 against 7.8 for paper. In other words, in 1964-65, paper was one of the few industries in which the profits retained dropped to an exceptionally low level. These results covered the years 1960-61 to 1964-65 and it is unlikely that the dismal picture presented by these results had changed for the better in the following years—1965-66 and 1966-67—for which the Reserve Bank has not yet published its findings. On the contrary, the performance of some of the leading units confirms the fact that the profitability has continued to decline further. Titagur Paper with its three mills, for instance, recorded an increase in its sales of paper from Rs 11.72 crores in 1965-66 to Rs 12.68 crores in 1966-67 and against this increase in production and sales, it recorded a loss of Rs 8.77 lakhs in 1966-67 as against a profit of Rs 21.87 lakhs in 1965-66.

The steep decline in profitability has been reflected in the arrested growth of the paper industry during the last few years. This stagnation, however, stands in sharp contrast to the performance of the industry before 1960. It may be observed from Table II that targets fixed for 1955-56 and 1960-61 were achieved more or less to the extent of 100 per cent and the out-

TABLE II
TARGETS AND PRODUCTION IN PAPER INDUSTRY
(In '000 tonnes)

Year		Capacity	Production
1950-51	Target	136.6	114.0
	Actual Production	136.6	114.0
1955-56	Target	211.0	200.0
	Actual Production	210.0	189.8
1960-61	Target	450.0	350.0
	Actual Production	410.0	343.2
1965-66	Target	820.0	700.0
	Actual Production	669.0	540.0
1970-71	Target	1100.0	900.0

put of paper increased by 64 per cent during the first Plan and by 85 per cent during the second Plan. After 1960-61, however, it was a different story. There was a substantial shortfall during the third Plan period so that the output of paper towards the end of 1965-66 touched a figure of 5,40,000 tonnes as against a target of 7,00,000 tonnes.

The Planning Commission tried to be more cautious and conservative while drawing up programmes for the fourth Plan and targets for 1970-71 were fixed in consultation with the industry. The latter recommended through the Development Council of Paper a capacity target of 1,100,000 tonnes of paper and paperboards including 3,00,000 tonnes of low-priced printing paper suitable for newspapers. This capacity corresponded to a production of 9,00,000 tonnes. These targets were based on the estimated demand for 1970-71. The actual performance after

1965-66, however, has continued to be discouraging, although schemes amounting to substantially more than the targets fixed for 1970-71 have been licensed for paper. It may be added that additional capacity licensed which has yet to be implemented is estimated at 4,50,000 tonnes. From present indications it appears that not more than 1,05,000 tonnes of this capacity will mature by 1970-71. Even the existing units which have to increase their capacity by adding balancing equipment are not very enthusiastic in their execution. As Table III shows, towards the end of 1966, out of 55 units in operation as many as 21 got their plans for expansion approved so that they proposed to add a capacity of 2,05,836 tonnes to their existing capacity of 665,920 tonnes. Similarly several new units were approved for a capacity of 1,96,200 tonnes. (Table IV) But progress on account of expansion schemes as well as new units has been extremely slow and there is no precise assurance of tangible achievements. Even the recent decision of the government to delicense the paper industry has not improved the situation.

TABLE III
STATEWISE DISTRIBUTION OF EXISTING UNITS WITH
PRESENT AND PROPOSED CAPACITY

States	No. of existing units	Present capacity (Tonnes)	No. of existing units proposing expansion.	Proposed capacity for expansion.
West Bengal	9	122,280	4	41,996
Uttar Pradesh	2	34,200	1	13,800
Bihar	2	63,000	1	37,500
Orissa	3	102,000	2	17,600
Haryana	4	45,760	3	11,740
Madhya Pradesh	3	57,000	...	...
Gujarat	6	18,390	2	6,600
Maharashtra	14	73,110	3	9,100
Andhra Pradesh	2	43,000	2	42,900
Mysore	5	56,640	2	18,200
Kerala	2	14,340	...	...
Madras	3	26,000	1	6,400
Total :	55	665,920	21	205,836

In the case of newsprint, the only expansion scheme in progress is that of Nepa which is expected to increase its capacity to 75,000 tonnes before 1970-71. At present Nepa has a capacity of 30,300 tonnes and its output has moved slowly from 22,590 tonnes in 1960 to 29,220 tonnes in 1966 (Table V). Three schemes licensed in the private sector have not made satisfactory progress and it would not be realistic to count on any of them materialising during the next three or four years. There has been a proposal for a new newsprint unit with large capacity in the public sector to be set up by the proposed Paper and Pulp Development Corporation and in this respect a detailed project report for a bagasse-based plant has been under the consideration of the government. It is obvious, however, that the achievement of the target of 2,25,000 tonnes of newsprint indigenously by 1970-71 is not going to be realised. Nearly 70 per cent of the domestic demand is met by imports which cost the country around Rs 7 to 8 crores every year. Under these circumstances of acute shortage, Shree Gopal in Punjab and Birla Gwalior in UP will have to be given substantial incentives to implement their schemes in the face of low profitability.

A break-down of paper production in various categories in Table VI reveals that the production of writing paper increased between 1961 and 1966 by nearly 66 per cent, from 2,29,000 tonnes to 3,80,000 tonnes, while that of wrapping paper increased from nearly 60,000 tonnes to 103,000 tonnes during the same period showing an increase of nearly 90 per cent. In other words, the pressure of demand was maximum from industrial users. The output of special varieties of paper in fact

declined from nearly 9,000 tonnes in 1961 to 6,000 tonnes in 1966, reflecting the impact of the present crisis in the industry on this section of producers. Much of the demand for special varieties paper is being met by imports.

Table VII gives the statewide distribution of paper production which shows that Maharashtra and Mysore were among the states which recorded larger increases in production. As is evident from Table III, the major expansion schemes are sponsored by units in Andhra Pradesh, West Bengal, Bihar, Mysore and Orissa. Out of the new units, large schemes have been approved in Maharashtra, Mysore, Haryana and Kerala states. It may be added that further expansion in Bihar, UP, Maharashtra and Mysore will have to be mostly through units

TABLE IV
NEW UNITS LICENSED AND APPROVED FOR PAPER

	Location	Capacity (Tonnes/Yr.)
Mysore	1. M/s Krishna Flour Mills * (Kasturi Paper Mills) Old Tharagupet, P.B. No 515, Bangalore.	Ghataprabha 21,000 Belgaum Distt.
	2. M/s Gopalan & Co. * Shri Krishna Building, Avenue Road, Bangalore.	Kampli 12,000
Bihar	3. M/s Ashok Paper Mills Ltd. * 2, Brabourne Road, Calcutta-1.	Darbhanga 15,000
Madras	4. M/s Papanasam Paper Mills Ltd., Palayam House, Tallakulam, Madurai (Madras).	Papanasam 9,000
Maharashtra	5. Shri Sohan Lal, * (M/s Godavari Paper Mills Ltd.) 16, Golf Links, New Delhi-3.	Rahuri 42,000
	6. M/s K. L. Gupta & Co., * 214, Marine Drive, Bombay, (Shrirampur Pulp & Paper Mills Ltd.)	Nasik/ Ahmednagar 37,200
Punjab	7. M/s Bedi & Co. (P) Ltd. * 14, Palace Road, Bangalore-1. (Panipat Paper Mills)	Panipat 30,000
Kerala	8. M/s Packaging Paper Corporation Ltd. Post Box No. 134, K. K. Road, Kottayam.	Angamali Ernakulam 30,000 (Fluting Media & Liner Paper)
Total:		196,200

* These Units are bagasse based units.

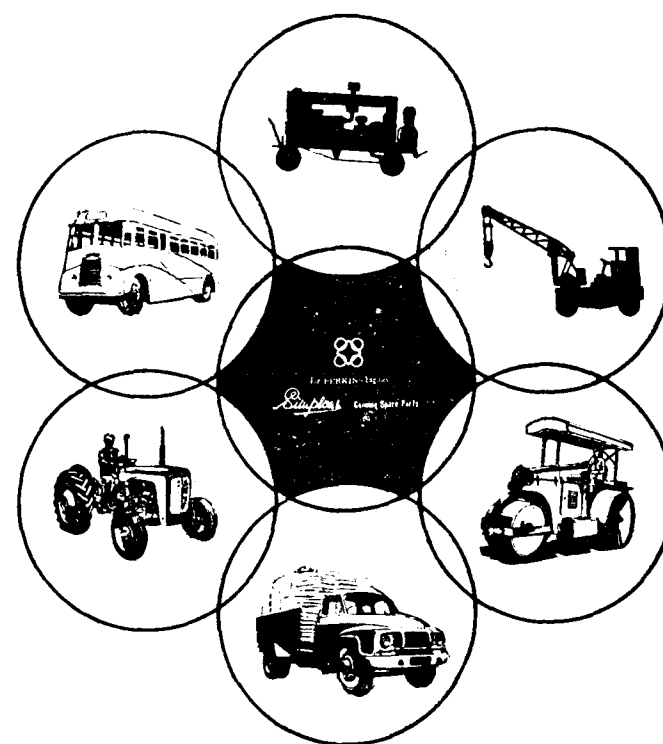
TABLE V
PRODUCTION OF NEWSPRINT

Year	Output ('000 tonnes)
1956	
1960	
1961	
1962	
1963	
1964	
1965	
1966	

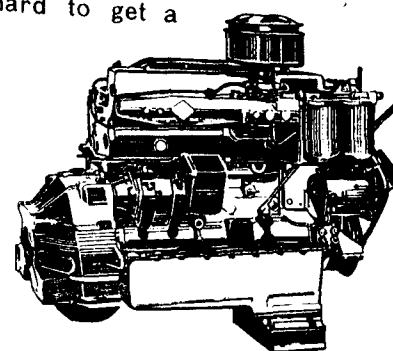
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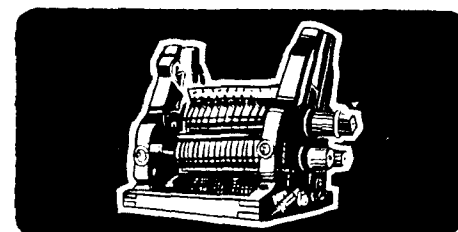
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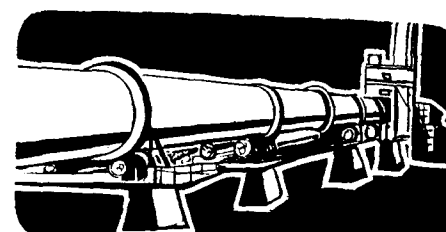
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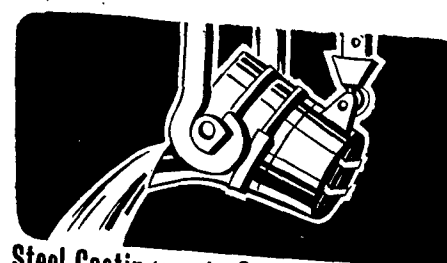
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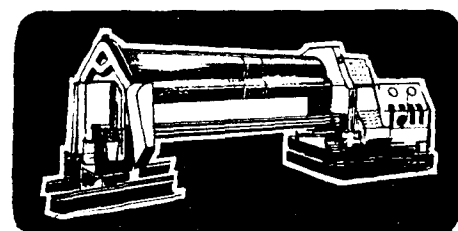
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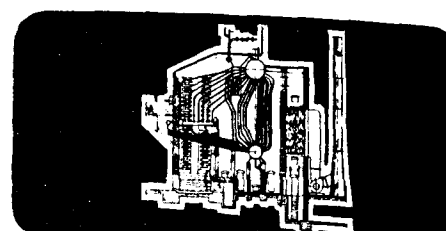
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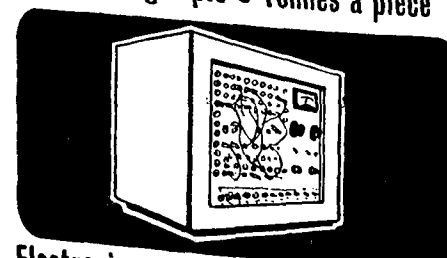
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using bagasse and in Assam and Madhya Pradesh through units using bamboo.

It would be interesting to add a few words about the small paper mills proposed to be set up with a capacity of around five tonnes per day mostly for the manufacture of cheap type of printing and writing paper. The idea of small units was also to achieve more dispersal in location and to encourage several entrepreneurs of modest resources to put up small mills of nearly five tonnes daily capacity. It was also argued that small paper mills could be brought into being in a short time. Quite a number of investors were attracted by this proposal and nearly 30 paper mills came into being to develop a capacity of nearly 50,000 tonnes. An additional capacity of 50,000 tonnes was in various stages of implementation under this scheme. The experiment, however, has not been successful and small producers found it sometimes difficult to compete with large mills having advantages of economies of scale. In fact, it is widely held now that an economic unit for paper should have a minimum daily capacity of 100 tonnes.

Production of Pulp

An important element in the growth of the paper industry is the production of paper-grade pulp which has not yet been developed in our country. Only one unit with an annual capacity of 22,500 tonnes is being set up in Gujarat in the private sector. This unit will meet only a part of the demand, as some 2,20,000 tonnes are now being imported annually. The proposed Paper and Pulp Development Corporation is likely to set up a paper-grade pulp mill in public sector for which the preliminary report has been prepared. So far as rayon-grade pulp is concerned, one unit with an annual installed capacity of 54,000 tonnes was established in Kerala during the third Plan period. This plant, which is in the public sector, has pioneered the utilisation of bamboo in the manufacture of rayon-grade pulp. Another unit with a capacity of 33,000 tonnes is expected to come up in Madras by 1970-71. Additional licensed capacity which is yet to be implemented is placed at around 75,600 tonnes per year. The actual production, however, has increased slowly from 31,610 tonnes in 1963-64 to nearly 50,000 tonnes in 1966-67 and the country has to import rayon-grade pulp to the extent of 1,06,000 tonnes every year.

The exploitation of bamboo, the main raw material for the paper industry, has given rise to controversy. The entire resources of bamboo in this country are estimated at nearly two million tonnes from which only 6,50,000 tonnes of paper can be produced every year. Obviously, the entire quantity of bamboo cannot be made available to the paper industry. The producers have often complained that forests being a state subject, several state governments auction forest areas to contractors in competition with paper mills. Most of the state governments lease the forest areas to paper mills for short periods only. This procedure creates considerable amount of uncertainty for the paper mills regarding the supply of bamboo. The paper industry has also complained that there exists a wide disparity

in royalties varying from Rs 1.25 per tonne in some states to as much as Rs 40 in others. Some of the states also refuse to grant lease of forests to mills not situated within their geographical boundaries.

In fact, a sub-committee on raw materials of the Panel for Paper and Pulp Industries examined some years back in detail the problems connected with the supply of cellulosic raw materials to the paper industry. It made a few suggestions and recommended that state governments should make available fallow lands to paper mills on long-term leases to enable them to take up plantation of cellulosic raw materials. Progress on this recommendation has, however, been very slow. The shortage of bamboos was proposed to be solved by the use of increased quantities of bagasse by paper mills situated in areas where sugar mills are in existence. A special report was prepared by a team of British and Mexican specialists regarding the use of bagasse for setting up paper and pulp production units by the proposed Paper and Pulp Corporation, but in view of the short supply of bagasse following a crisis in sugar industry, the scheme has been kept in abeyance. More recently the official view has tended to be that it would be better for the paper mills to base future manufacturing units on eucalyptus, the large-scale plantation of which has been taken up by some states including Uttar Pradesh and Kerala.

By way of conclusion it will be necessary to add a few words about the paper-making machinery industry in the country. Prior to 1960, the production of paper-making machinery was practically negligible and it was only towards the

TABLE VI
PAPER PRODUCTION BY CATEGORY

('000 Tons)

	Installed capacity (Total)	Production			
		Total	27.11 Print- ing & writing	27.12 Wrap- ping variet- ies	27.13 Special Boards
1953	151.00	139.70	94.91	21.14	3.42
1954	173.70	155.33	102.88	24.16	4.79
1955	186.20	184.88	119.50	28.32	5.60
1956	211.90	193.40	122.99	30.92	5.77
1957	252.00	210.13	126.52	38.02	7.20
1958	268.80	253.00	154.42	40.01	6.30
1959	321.00	294.02	177.42	55.61	5.33
1960	400.00	345.32	215.17	64.91	8.59
1961	409.99	363.91	229.35	59.86	8.96
1962	433.80	387.64	234.38	75.54	8.04
1963	502.25	462.61	299.39	76.75	7.91
1964	555.94	490.66	319.73	85.04	6.18
1965	643.87	537.05	334.14	96.12	5.56
1966	643.87	584.98	381.16	103.43	6.46

TABLE VII
STATEWISE PRODUCTION OF PAPER AND PAPER BOARD

Period	West Bengal	Uttar Pradesh	Orissa	Punjab	Maha-rashtra	Andhra Pradesh	Mysore	Other States*	Total
1962	94,562	25,039	73,272	37,725	24,354	24,922	38,551	69,211	387,637
1963	98,205	29,402	91,349	40,571	28,536	37,624	47,920	91,007	464,614
1964	104,972	31,397	88,355	39,540	42,991	34,030	51,639	97,125	490,649
1965	107,772	30,909	94,814	38,268	56,396	35,646	57,299	118,374	538,529
1966	120,149	29,366	95,126	40,400	62,889	32,507	58,080	145,970	584,987

* Include Bihar, Madhya Pradesh, Gujarat, Kerala and Madras.

end of the second Plan that some schemes for the manufacture of paper machinery reached varying stages of execution (Table VIII). During the third Plan period also some more producers entered the field in collaboration with foreign manufacturers well-known in the line. With the exception of a few units, the progress has not been very good because many of the machinery-makers were depending on sub-contractors. Moreover, they could not provide adequate service by consulting engineers. In some cases deliveries were protracted and costs were higher than the imported machines. As a consequence, the government has been allowing the import of paper-making machinery by actual users on an ad hoc basis. Quite recently the government gave indications that foreign exchange will be made available more freely than now to those who want to import machinery for the establishment of new manufacturing units.

TABLE VIII
PAPER MAKING MACHINERY

Firm	Type of Machinery	Annual capacity (Rs lakhs)
Schemes approved during Second Plan		
M/s Telco Jamshedpur	Large plants of capacity 50 tons/day.	195
M/s Paper Mills plant & Machinery Mfrs. Bombay	Small and medium plants of capacity 10 to 3 tons/day.	50
M/s Rohtas Industries Ltd, Dalmianagar.	-do-	40
M/s Paper & Pulp Conversions Ltd. Poona.	-do-	16
M/s Easter Paper Mills Ltd, Calcutta	Small plant of 2 tons capacity & Board Mill Plant	15
M/s Garlick & Co. Ltd.	Accessories and components.	39.4
M/s Port Engg. Works Ltd. Calcutta.	-do-	10
M/s Dynacraft Machine Co., Bombay.	-do-	1
M/s Berry Brothers, Sukchar (W. Bengal)	-do-	4
Total:		370.4
Schemes approved during Third Plan		
M/s ACC Ltd, Shahabad	Large plant of capacity 50 tons/day	80
M/s Bertram Scott Ltd, Titagarh	Against designs of Earnest Scott & Co., Scotland; James Bertram Sons, England	289
M/s Utkal Machinery Ltd, Rourkela	-do- J. M. Voith, West Germany.	100
M/s Shalimar Industries Ltd, Howrah	Accessories & components	20
M/s Bharat Machine Wire Co., Chandigarh	-do-	35
M/s Jagdish Lal & Bros., Chandigarh	-do-	12.2
Total:		516.2

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Car Co. (1934) Pvt. Ltd., (for J & K) G.T. Road,
Jullundur City. Upper India Trading Co. Pvt.
Ltd., 1/18, Mount Road, Madras.

Sub-Distributors & Stockists
Punjab. British Motor Car Co. (1934) Pvt. Ltd.,
G. T. Road, Jullundur City.
Assam. National Automobiles, 3, Princep Street,
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A PROFILE OF INDUSTRIES

Cotton Textiles: Fighting Against Odds

AN INDUSTRY may be very old and may also be the largest in size, but it does not necessarily follow that it should be free from difficulties. This is amply borne out by the glaring example of our cotton textile industry, which is more than a hundred years old and is today the second largest cotton textile industry of the world. In our economy also, this industry holds a vital place, being the largest organised industry with a percentage of 32.10 in respect of its weightage of industrial production. From the point of view of its employment potential too, it is important, inasmuch as it provides direct employment for over 900,000 workers, or roughly one-fifth of the total number of workers employed in all the organised industries in our country. For the same reason, its wage bill exceeds Rs 200 crores, or, in dollars, \$267 million. From the point of view of the export trade of the country as well, the role of the industry is significant, in that exports of cotton textiles, besides being the third major item of our exports, have accounted for foreign exchange earnings to the tune of about 120 million dollars in recent years. In spite of all this, the industry has been dubbed as a sick industry or a problem industry. Although, in the prevailing circumstances, this description may apply as aptly to any other industry, it does not exaggerate the existing state of affairs in regard to the textile industry, and there are a number of reasons for it.

In the first place, our cotton mill industry is a very old industry, though not as old as its counterparts in Europe and the USA. Due to several causes, the condition of machinery in our textile industry leaves very much to be desired. In the absence of a rational import policy for textile machinery, we have today specimens of textile machinery of all ages from all over the world, so much so that they could well make a veritable museum of such machinery. Secondly, the process of modernisation, or even proper maintenance, of mill machinery has not kept pace with the requirements of the changing situation. To some extent, this is explained by the financial posi-

tion of the industry which has unfortunately been far from comfortable, especially since the end of the second world war. Scores of cotton mills have been suffering losses and the number of such mills has been increasing from year to year. A recent study of the Indian Cotton Mills' Federation (ICMF) of the results of 297 mill companies, representing 75 per cent of the installed capacity, showed that, from a profit (after tax) of Rs 16.1 crores in 1964, the position was converted into a loss of Rs 4.99 crores in 1965! The position was no doubt a little better in 1966, but it is common knowledge that the results of the industry for the current year would be far from satisfactory. The present tight money conditions and the dear money policies have only added to the dimensions of the problem of modernisation and rehabilitation to which we shall revert later.

Peculiar Problems

The problems of our cotton textile industry differ from those of this industry in other countries by reason of its unusual structure, as also because of the peculiar approach of the authorities to the different sectors. There are two broad sectors, namely the mill sector called "the organised sector" and the powerloom, the handloom and the 'khadi' sections which together constitute "the decentralised sector." Between them, it is necessary to bear in mind, the latter accounts for relatively larger employment. According to an official estimate, the 2.2 to 2.3 million handlooms provide direct employment to about six million persons, while the 220,000 powerlooms provide direct employment to about 500,000 persons. The share of the decentralised sector in the total production of cotton textiles in 1966 was 3,097 million metres, as against the mill sector's share of 4,239 million metres. Table I gives an idea of the trend of cotton textile production and the relative shares of the organised and the decentralised sectors.

The production of cloth in the mill sector, which was 3,727 million metres in 1951, rose to 4,862 million metres in 1957

TABLE I
PRODUCTION, EXPORTS AND HOME CONSUMPTION OF COTTON FABRICS

Year	Production of cloth (Million metres)		Exports (mill-made & handloom) (million metres)	Total cloth available for home consumption (million metres)	Mid-year population (Millions)	Per capita availability of cotton cloth (Metres)
	Mill sector	Handloom/Powerloom sector (estimated)				
1951	3,727	1,013	669*	3,992	363.30	10.99
1952	4,205	1,313	496*	4,972	369.45	13.46
1953	4,461	1,410	542*	5,273	375.94	14.03
1954	4,570	1,512	735*	5,293	382.78	13.83
1955	4,658	1,620	633*	5,595	390.00	14.35
1956	4,852	1,663	625*	5,847	397.62	14.71
1957	4,862	1,811	801	5,882	405.67	14.50
1958	4,505	1,968	564	5,913	414.16	14.28
1959	4,504	2,075	778	5,806	423.12	13.72
1960	4,610	2,013	662	5,971	432.56	13.80
1961	4,701	2,372	548	6,527	442.57	14.75
1962	4,560	2,412	491	6,482	453.24	14.30
1963	4,423	2,876	519	6,780	464.16	14.61
1964	4,654	3,066	541	7,179	475.35	15.10
1965	4,587	3,056	547†	7,097	486.81	14.58
1966	4,239	3,097	461†(P)	6,865(P)	498.54(P)	13.77(P)

(P) = Provisional.

Note: Total cloth available for home consumption is estimated as total cloth produced in the mills and the decentralised sector plus actual imports and minus actual exports of cloth.

* Mill-made cloth only up to 1956.

† Square metres.

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and thereafter it has been steadily declining (except for three or four years) to touch the lowest level since 1951 of 4.239 million metres in 1966. On the basis of the available production figures for the first ten months of the current year (3,341.2 million metres) and making allowance for the increase in production following the abolition of short-time working since September 1, last, the 1967 total bids fair to be even lower than in 1966, if not in 1951! In striking contrast to this has been the steady and sharp rise in production in the decentralised sector, the rise since 1951 being more than three-fold. To be precise, from 1,013 million metres in 1951, production of cloth by the handloom and powerloom sectors jumped to 3,097 million metres in 1966, and highest on record.

Apart from other causes, the main factor responsible for the differing trend in growth of the two sectors of the industry has of course been the official policy. The central government's avowed policy has been actively to encourage the production in the decentralised sector by placing a virtual ceiling on the weaving capacity of the mill sector. Thus, there has been very little increase in the loomage practically since planning began; over the past 16 years, the number of looms has risen by less than 14,000 i.e., from 1,95,000 to 2,09,000. The rationale behind this policy is to provide greater employment opportunity, especially in rural areas and small towns, and to decentralise ownership of manufacturing capacity in line with the socialistic pattern of society concept of the party in power.

Remarkable Rise

Unlike the slow rise in the number of looms, the rise in the number of spindles has been remarkable. It advanced from 11 million to 16.7 million, or by over 50 per cent. It is noteworthy that about half of this increase has been in the composite mills, while the other half has been in the spinning mills. The number of composite mills, which was 275 in 1951, rose to 292 at the beginning of this year, or by only 17, as against which the increase in the number of spinning mills over the same period was 214. In 1951, the share of the purely spinning mills out of the total spindleage in that year was only 1.84 million or 16.4 per cent; today, their share has risen to 4.85 million spindles out of a total of 16.7 million spindles, or to about 27.5 per cent. This pattern of growth, which has differed from the pattern in other textile-producing countries, has, to no small extent, been responsible for our relative inability successfully to compete in the textile export markets of the world. Add to this the lagging behind of our industry vis-a-vis the other textile-producing countries in the matter of introducing automatic looms and high speed spindles and you have the explanation for this country not being able to compete in the world markets. True, some progress has been made in the introduction of automatic looms lately, but, with only 30,000 automatic looms in 1966 out of the total weaving capacity of 208,000 looms, our percentage of automatic looms has been the lowest in the world at 14.2, as against Hong Kong's and USA's 100 each, Canada's 99.5, Austria's 88.8, Italy's 87.6, Russia's 69.5, Pakistan's 65.5. Mainland China's 40.6, UK's 38.3 and Japan's 24.2. Had our ordinary looms at least been new, i.e., had they been promptly replaced, the position need not have occasioned concern, but it is known that the majority of them are very old indeed.

Even in regard to spindles, about half of the total spindleage in commission today is said to be of pre-war origin. Only a third of the spindleage is new, but even this new spindleage is not as up-to-date as that in the developed countries. To take Japan, for example, the spindle speed of the new ring frames in that country ranges between 14,000 and 16,000 r.p.m., as against only 11,000 r.p.m. of the best high speed spindles in our so-called new mills.

Modernisation thus brooks no delay. A heartening feature is that this is recognised by both the industry and the government. A former union Commerce Minister has expressed the

view that, "if the quality of Indian cloth has to be flawless, uniform in texture and comparable in international standards, it is most essential that at least 50 per cent of our looms, i.e. one lakh looms in the composite mills, are converted from ordinary looms to automatic looms of different types and sizes."

As important as the structure of the industry is the pattern of production. The bulk of our cotton textile production consists of medium counts, although the recent trend has been towards producing finer units. The same trend is manifesting itself in the production of yarn as well. This trend faithfully reflects the growing preferences of consumers and their increasing demand for finer and better varieties of fabrics. In fact, there has lately been a perceptible increase in the output of fabrics which are piece-dyed, printed or otherwise processed. The production of piece-dyed cloth, for instance, increased from 722 million metres in 1960 to 855 million metres in 1966. Over the same period, the production of printed cloth rose from 568 million metres to 816 million metres. Tables II and III illustrate the trend of production in cotton textiles as well as in cotton yarn.

The cotton mill industry which was mainly in the corporate sector until recently is also being served now by the co-operatives, thanks, again, to official policy. There are today 24 co-operative spinning mills with an aggregate capacity of over 300,000 spindles. Every encouragement is being given to the growth of this sector and new licences have been given for the establishment of 39 co-operatives. When all the 63 co-operative spinning mills are commissioned, they will account for a total number of over 12 lakh spindles.

Although the cotton mill industry is said to be the king-pin of our economy, it is surprising that nothing concrete has been done by the government, despite the fact that the industry has been passing through an unprecedented crisis for over two

**TABLE II
PRODUCTION OF COTTON FABRICS BY MILLS**
(Million Metres)

Year	Coarse	Lower Medium	Higher Medium	Fine	Super- fine	Total
1960	644 (14.0)	1,590 (34.4)	1,897 (41.1)	209 (4.5)	276 (6.0)	4,616 (100.0)
1961	790 (16.8)	1,528 (32.6)	1,886 (42.2)	179 (3.8)	213 (4.6)	4,701 (100.0)
1962	761 (16.7)	1,404 (30.6)	1,946 (42.7)	197 (4.3)	253 (5.5)	4,561 (100.0)
1963	818 (18.3)	1,321 (29.9)	1,808 (40.9)	204 (4.6)	280 (6.3)	4,423 (100.0)
1964	869 (18.7)	1,475 (31.7)	1,808 (38.8)	195 (4.2)	307 (6.6)	4,654 (100.0)
1965	803 (17.5)	1,404 (30.6)	1,840 (40.1)	219 (4.8)	321 (7.0)	4,587 (100.0)
1966	720 (17.0)	1,130 (26.7)	1,862 (43.9)	209 (4.9)	318 (7.5)	4,239 (100.0)
1967						
January	53.9	95.0	135.7	14.7	24.3	323.6
February	47.5	89.4	119.6	12.3	22.2	291.6
March	50.4	98.4	137.9	13.6	25.7	326.0
April	50.5	96.4	133.5	12.3	25.0	317.7
May	56.2	100.3	152.6	13.7	27.2	350.5
June	57.3	97.2	153.4	13.2	27.3	348.4
July	59.5	97.6	155.0	13.2	28.2	353.5
August	61.5	97.6	150.7	13.2	27.4	350.4
September	68.3	99.0	159.9	16.0	29.8	373.0
October	...	...	...	...	...	307.1*

3,341.2

* Provisional.

Note: Figures in brackets indicate percentage to total.



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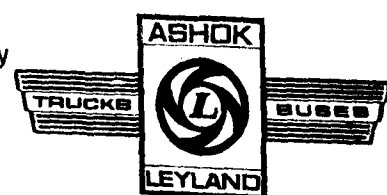
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years, if not more. It is known that this crisis is due to both national and international factors. If, therefore, the industry is to be put on a sound basis comparable to that of its competitors in other textile-producing countries, early steps must be taken to bring up the industry to international standards of operation. In other words, a thorough rethinking is called for with regard to the organisation of the industry as well as the approach to its problems.

Low Productivity

Take, for example, the question of productivity, labour as well as machine. A joint productivity survey which was undertaken by ATIRA, BTRA and SITRA has revealed how low productivity in Indian mills has been, it being only one-ninth of that of a typical American mill, and about one-fifth of that of a modern mill in Lancashire or Germany. There are, of course, mills in India which are as modern as one could expect and their record of performance also compares very favourably with those of mills abroad, but the majority of our cotton mills have an extremely low productivity record. This applies both to labour productivity and to machine productivity. And a rather unusual feature is the vast difference in the degree of productivity between mill and mill, which varies from over 400 per cent to 550 per cent. Not only is productivity low, but the rate of increase in productivity also compares unfavourably with that in other countries. Thus, the increase in labour productivity in India (SITRA member-mills) of 4.5 per cent per year contrasts with a rate of increase of 6.5 per cent per year in the Japanese industry. Both the low productivity and the low rate of increase in productivity in the Indian textile industry thus is largely to be attributed to the deplorable obsolescence of its machinery. In many mills the machinery and equipment are so old that they need immediate replacement, as also modernisation, to come anywhere near the standards of plant and machinery of other textile-producing countries. This means a large-scale conversion of our old ring frames into

high-speed spindles and of our old ordinary looms into automatic looms. Of course, this entails a very heavy investment, the more so, because other textile-producing countries have also been at the same game since the past several years.

In the US, for example, the total investment in the textile industry between 1959 and 1963 was Rs 20,000 million, in Japan Rs 8,200 million, in the UK Rs 5,600 million (for only a four-year period, i.e., between 1959 and 1962) and in France Rs 4,200 million. To take a more recent example, over the four years ended 1965, West Germany's total investment in the textile industry was of the order of Rs 9,000 million. This investment has been steadily increasing, the rate of increase in the case of Japan, France and the UK being 100 per cent each and that in the case of the USA being 65 per cent. What is significant about the process of modernisation in these countries is the almost simultaneous steady reduction in the number of looms and spindles installed (except in the case of Japan), as also a decrease in the number of persons employed. According to an International Comparison of Work Assignments, a worker in the USA minds 1500/2100 spindles and a worker in Japan 1600/2000 spindles, whereas a worker in India minds only 450/500 spindles. Similarly, as against 60 automatic looms operated by a worker in the US and 48 automatic looms operated by a worker in Japan, a worker in India operates only 12/32 automatic looms. The production per worker per annum in the Indian textile industry accordingly is the lowest. A GATT study on cotton textiles published last year provides indices on production and man-power data for the year 1964 (see Table IV).

It will thus be seen that our cotton mill industry has to employ six times the number of workers to do the same job in the spinning sector and three times the number of workers to do the same job in the weaving sector as in the USA.

It has been the repeated complaint of developed countries that Indian textiles are the products of a low-wage country.

TABLE III
PRODUCTION OF COTTON YARN BY MILLS

		(Million Kgs.)							
Year		1s to 10s	11s to 20s	21s to 30s	31s to 40s	41s to 60s	61s to 80s	Above 80s	Total
1960	...	78 (9.9)	260 (33.0)	256 (32.5)	134 (17.0)	32 (4.1)	20 (2.5)	8 (1.0)	783
1961	...	88 (10.2)	295 (34.3)	274 (31.8)	145 (18.8)	35 (4.1)	17 (2.0)	7 (0.8)	861
1962	...	98 (11.4)	280 (32.6)	259 (30.2)	148 (17.2)	43 (5.0)	22 (2.6)	9 (1.0)	859
1963	...	104 (11.7)	304 (34.0)	259 (29.0)	150 (18.8)	43 (4.8)	23 (2.6)	10 (1.1)	893
1964	...	115 (11.9)	331 (34.3)	282 (29.2)	154 (18.0)	42 (4.4)	30 (2.1)	11 (1.1)	965
1965	...	100 (10.6)	303 (32.3)	291 (31.0)	153 (16.3)	50 (5.3)	30 (3.2)	12 (1.3)	939
1966	...	103 (11.4)	274 (30.4)	264 (29.3)	159 (17.6)	60 (6.7)	26 (2.9)	15 (1.7)	901
1967	...	...	...	...	...	...	...	...	...
January	...	8.4	21.9	21.4	11.8	4.7	2.2	1.6	71.4
February	...	7.4	19.1	20.1	11.2	4.0	1.7	0.9	64.4
March	...	7.8	20.4	22.2	13.4	5.1	2.1	1.2	72.2
April	...	7.8	19.9	21.4	13.6	4.8	2.1	1.0	70.6
May	...	8.4	22.2	23.7	14.6	4.4	2.6	1.2	77.1
June	...	8.2	22.1	23.4	14.0	4.1	2.2	1.4	75.4
July	...	8.9	22.3	23.8	13.9	4.7	2.0	1.5	77.1
August	...	9.2	22.9	24.2	12.6	4.9	1.9	1.3	77.0
September	...	9.8	24.4	24.9	13.1	5.6	1.9	1.3	81.0
October	...	...	...	...	...	...	...	...	...
Total:									743.8

* Provisional.

Note: Figures in brackets indicate percentage totals.

Source: Indian Cotton Mills Federation Journal.

The complaint, of course, is not justified, in that it takes only the money wage per worker and not the cost wage per unit of production, as should be done. It may not be known to many (or, conveniently ignored by some developed countries) that the number of operative hours required for producing 100 kgs of 20s yarn in the best mill here is anywhere between 25 and 35, as against only 5 to 9 in a comparable foreign mill. Even in an average mill in foreign countries, the time required is no more than 13, as against as many as 55 hours taken by an average mill in this country.

Any comment on the level of wages in an industry in a country must take note of the level of wages obtaining in the other manufacturing industries also in that country. On this basis, the annual wages of an operative (getting less than Rs 200 p.m.) in an Indian cotton mill in 1964, for instance, was Rs 1821, whereas it was only Rs 1475 in the other manufacturing industries. Table V, giving the average earning of textile workers as percentage of earnings in all industries, shows that wages in the Indian textile industry are 105 per cent of the average industrial wage in the country, as against 82.5 per cent in the UK, 70.7 per cent in the USA and 63.4 per cent in Japan.

TABLE IV
PRODUCTION PER WORKER PER ANNUM AS OF 1964
(United States=100)

	Yarn	Cloth
USA	100	100
Finland	49	89
France	39	70
UK	29	68
Italy	25	44
Hong Kong	33	48
Israel	25	41
India	17	35

These handicaps of our textile industry—old machinery, lack of adequate finance for rehabilitation and modernisation and low productivity—have affected cotton goods production for domestic use as well as for exports. But several other difficulties besides have supervened, such as acute shortage of cotton and heavy inflation, especially since the last three years. Following two years of poor yield, thanks to the back-to-back drought of these years, cotton production averaged a little over 53 lakh bales per year, while, over the last two and a half years, there has been an increase of 1.40 million in the number of spindles to 16.83 million with the consequent increase in the pressure of demand for available cotton. The resulting tight cotton supply position led to a steep rise in cotton prices much beyond world parity and the consequent sharp increase in the cost of production of Indian textiles. Similarly, the heavy inflation of recent years not only pushed up the cost of production via the mounting wage bill (thanks to wages being linked to variations in the cost of living index), but also pushed down the consumer's purchasing power and his ability to buy cloth.

It is not surprising that, in the result, our cotton textiles have begun to be priced out of export markets. After having

emerged as the leading exporter of cotton textiles following the second world war, our country has gradually yielded place to Japan and is today finding it difficult to compete even with countries like Hong Kong, Pakistan, China, Portugal and Spain. The geographical pattern of our export trade also has changed vastly over the past few years. No longer can we count on those markets in Asia and Africa which had been our mainstay in the earlier years. Though the exports to Europe and the United States have gone up in recent years, the future outlook is not hopeful as discussions at the recent New Delhi session of the International Federation of Cotton and Allied Textile Industries have clearly shown. Tables VI and VII show how our cotton textile exports fared during the latest two half-years for which statistics are available, both variety-wise and destination-wise.

TABLE V
AVERAGE EARNINGS OF TEXTILE WORKERS AS %
EARNINGS IN ALL INDUSTRIES

Country	1953	1956	1959-60
Australia	83.4	80.9	78.2
Belgium	78.2	80.8	78.5
Canada	79.4	76.5	75.5
France	NA	84.5	83.0
West Germany	82.4	80.9	83.4
Italy	84.6	80.3	79.7
New Zealand	NA	89.1	91.2
Norway	83.4	81.5	80.0
Switzerland	82.5	81.0	81.3
United Kingdom	87.0	83.0	82.5
United States	77.4	73.2	70.7
Japan	62.9	62.1	63.4
Argentina	89.2	97.8	83.0
Brazil	NA	84.5	84.0
Chile	87.6	93.2	98.0
India	100.4	101.0	104.9
Mexico	84.4	96.4	93.9
Pakistan	100.0	89.0	88.5
Philippines	NA	113.6	99.2
South Korea	NA	79.3	88.0
UAR	102.2	99.5	98.1
Yugoslavia	NA	89.0	89.8

Source: International Labour Review, January 1963.

The main causes for the fall in exports to Asia and Africa, apart from the high cost of our cotton piecegoods and the inability of our mill industry to adapt its production to the changing pattern of imports in these markets, are the establishment of domestic textile industries by a number of developing countries in these regions and the tariff barriers introduced to protect them, the restrictions on imports due to balance of payments difficulties, and the emergence of new competitors. Even the relatively better export outlets in Europe, such as France and West Germany, are beginning to slacken their interest. The UK—the single largest market for our textiles—has also been gradually reducing its offtake since 1964, notwithstanding a quota, while the position is no better

TABLE VI
EXPORTS OF COTTON TEXTILES DURING JANUARY-JUNE 1967 & 1966

	Cotton piecegoods		Cotton Yarn		Apparel Hosiery		Other Cotton Mfrs.	Total
	Qty. in million metres	Value in million US \$	Qty. in million Kgs.	Value in million US \$	Value in million US \$	Value in million US \$	Value in million US \$	Value in million US \$
January-June 1967	179.16	34.06	5.60	4.62	0.52	0.06	7.34	46.60
January-June 1966	248.05	45.71	8.49	7.73	2.54	0.15	8.54	64.67

in regard to the other EFTA countries. With all the encouragement for the growth of the intra-Common Market trade, the offtake of ECM countries too does not bid fair to go up. Only the trade with the east European countries, especially Russia, has gone up, but this is a highly uncertain field, depending eventually, as it does, on the extent of Russian aid to and interest in our projects, a cooling off in which has already been in evidence. Our textiles have also been losing ground in Australia and New Zealand, but, in Canada and the USA, the position has been somewhat encouraging. Even so, the growing pressures of textile interests in the US might upset our hopes, notwithstanding the LTA which will be in force up to September 30, 1970. All in all, the outlook for our textile exports does not seem bright. If anything, it has worsened, what with freight increases to all destinations served via the Suez canal and increased surcharges even to the Middle East pending the re-opening of the canal.

TABLE VII
EXPORTS OF COTTON PIECEGOODS DURING
JANUARY-JUNE 1966 and 1967

		(In million square metres)	
Region		1966	1967
Asia	...	45.86	30.85
Nepal	...	23.35	16.89
Africa	...	31.90	24.20
UK	...	68.46	53.52
Europe excluding UK	...	32.04	12.59
USA	...	22.82	24.69
America excluding USA	...	9.27	7.33
Oceania	...	13.35	9.09
Total	...	248.05	179.16

Our trade in cotton fabrics has suffered a relative decline vis-a-vis world exports, the proportion of our exports to world exports coming down from 16 per cent in 1957 to 9.5 per cent in 1966, indicating a long-term deterioration in this country's competitive ability. Ironically enough, today, more than at any time before in her history, our country needs to maintain, nay augment, her textile exports to earn the foreign exchange needed not only to finance her growing imports but also to service her steadily rising debt charges and repay her heavy loans. During the third Plan, exports of cotton textiles yielded \$680 million and, if anything, this has to be greatly improved upon immediately. Will the industry be able to do it? The answer depends not only on how far we are prepared to meet the challenge but also on the co-operation of the importing countries by adopting less restrictive policies in regard to imports from India. Also, our textile industry

must go all out to exploit the hitherto untapped markets by a change in the product pattern of exports which can come only from an improved level of efficiency and a technological progress that the industry will be able to achieve as early as possible. Obviously, by itself, the industry cannot do this, for the task is truly Herculean, due, if only, to the extent of the backlog of modernisation that has to be made up by the industry. As early as in 1960, the Working Group for the Cotton Textile Industry had estimated that the total rehabilitation cost for the industry would be about Rs 800 crores. Since then costs have gone up further, due to inflation and devaluation, so much so that the bill might now go up to nearer Rs 1200 crores. The estimated requirements of the industry for rehabilitation and modernisation during the five years 1966-67—1970-71 alone has been estimated by the ICMF at Rs 552 crores.

The Question of Finance

The question now is whether the industry can raise all this finance. Criticism of its past policy—whether justified or not—apart, the industry is in no position to find the funds, either through raising of further capital or through bank credit. Nor can it fall back upon the National Industries Development Corporation (NIDC) which has ceased to process any loan applications from textile mills since 1964. The NIDC had granted loans of over Rs 14 crores till then to the industry. Although there are agencies like the IFC and the IDBI, the industry is in no position to face up to the much stiffer terms of these financial institutions. Nor has the LIC been able to extend adequate assistance to textile mills. In the circumstances, the only course open, if the industry is to survive and make its vital contribution, is for the government to permit the industry to revalue its assets for purposes of long-term loans, to relax for at least a period the Reserve Bank restraints on fixed deposits with non-banking companies and to liberalise loan terms granted by the IFC and the IDBI. There is also the further suggestion that the proposed Textile Corporation should act as a suitable financing agency for the rehabilitation and modernisation of the textile industry. But Mr Manubhai Shah is opposed to this suggestion of Mr Naval Tata and advocates the resuscitation of the NIDC as the only appropriate agency, both by virtue of the Charter under which it was started and by reason of its past experience of promotional work. Be that as it may, both are agreed on the need for some financial institution to come to the help of the industry to rehabilitate and modernise itself, without which it cannot face competition in the export markets. It is up to the government now to apply its mind immediately to a solution of this problem. There is no time whatsoever to lose, for, with foreign aid prospects visibly receding and hardly any foreign exchange in the till, the country has only the Hobson's choice of export or perish.



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A PROFILE OF INDUSTRIES

Man-Made Fibres: Changing Patterns of Consumption

ALTHOUGH A late-comer in the industrial field, the man-made fibre industry—it began to grow significantly only since the second world war—has made remarkably rapid strides. From only a few thousand looms engaged in turning out man-made fibre fabrics before the war, the number has risen to nearly 70,000, including unauthorised powerlooms regularised between the years 1956 and 1964. Being the nearest substitute to silk, the industry naturally received a fillip when there was a shortage of natural silk accompanied by a steep rise in silk prices. The growth was also facilitated especially after 1960, since when man-made fabrics started invading the field of men's wear also. Until then, that is, prior to 1960, art silk was mostly used by women, what with their inherent liking for everything silken.

The phenomenal growth of the art silk weaving industry in the country, which is almost exclusively in the decentralised sector, was vividly highlighted by the recent controversy on the report of Mr Kampani, Director of Inspection, on the estimates of imports of synthetic yarn required to avoid excessive idle capacity for weaving. According to this estimate, 24 million kgs of synthetic yarn, involving an expenditure of Rs 33 crores of foreign exchange, are required during the next five years. True, the Association of Man-made Fibre Industry (AOMFI) has strongly questioned the correctness of this estimate. But the fact remains that there has been a spectacular increase in art silk production to about 103 million kgs for 1968. As against this, the requirements of rayon/synthetic yarn, on the basis of existing loom-capacity are estimated to be less than 89 million kgs per annum, vide Table I alongside.

According to the Association of Man-made Fibre Industry, the effective number of powerlooms may not exceed 65,000 which seems to be more or less borne out by the available data which is as follows:

At the close of 1958 the Tariff Commission estimated the number of powerlooms as	44,550
The records of the erstwhile Distribution Committee for Artsilk Yarn show the number of loom shift as 1.5 per day and the number of powerlooms as	48,128
The Asoka Mehta Powerloom Enquiry Committee in May, 1964 estimated their (loom shift as 1.75) number as	62,000
The Textile Commissioner in his Report to the Planning Commission (in 1965) has estimated it as	67,000

TABLE II
PRODUCTION OF ARTIFICIAL FIBRES/FABRICS

Year	Viscose Staple (000 kgs)	Acetate Staple Fibre (000 kgs)	Polyester Fibre (000 kgs)	Staple Fibre Yarn (000 Kgs)	Synthetic Yarn (000 Kgs)	Rayon Filament (000 Kgs)	Man-made Fibre Fabrics (Powerloom & Hand- looms) (000 Metres)	Staple Fibre Fabrics (Cotton Textile Mills) (000 Metres)
1951	—	—	—	10,863	—	2,461	286,512	12,975
1954	4,224	—	—	13,208	—	5,405	307,954	5,725
1956	7,903	—	—	19,939	—	9,004	429,991	6,201
1961	26,061	—	—	21,989	—	23,468	570,090	2,070
1965	37,151	1.64	1,385	40,724	1,480	37,246	866,472	3,812
1966	42,769	451.00	2,547	46,125	1,917	34,648	840,000	12,646
1967*	46,652	148.80	2,616	46,728	2,294	34,771	855,600	4,800

* Estimated.

Statements prepared on the basis of yarn availability and fabrics production give out the number as ranging from 44,857 to 65,714

TABLE I
REQUIREMENTS AND PRODUCTION OF
RAYON/SYNTHETIC YARN

Requirements	Million kgs annum
65,000 Powerlooms at 2 kgs per loom per shift, 300 working days per annum and 1.75 loom shift working as estimated by the Asoka Mehta Powerloom Enquiry Committee	68.25
50,000 Handlooms working on 100% artsilk yarn and 50,000 handlooms working on mixed fabrics containing artsilk yarn.	7.50
400 warp knitting machines consuming 20 kgs per loom, 300 days working, 2 shifts basis	4.80
125 Rachel/lace knitting machines, consuming 10 kgs per loom, 300 days working on 2 shifts basis.	0.75
Hosiery Industry as per the estimates of the working group on Hosiery and Embroidery industries	5.00
Miscellaneous Industries like Embroidery, Gas Mantles, Ropes, Cordages, etc.	2.00
	88.30
Production (estimated)	Million kgs
Viscose	1967
Staple Fibre	34.65
Acetate	57.75
Nylon, converted to viscose @ 1:3	2.10
Polyester Staple	6.30
	2.10
	102.90
	125.47

To dwell at some length thus on the growth of the art silk weaving industry is necessary, if only because it is the sizable growth of this industry that paved the way for the establishment of the man-made fibre spinning industry in India (Table II). The first spinning unit in the country went into production only as late as in 1950. Since then, it may be stated, the growth

of the two sections of the industry has been interdependent, the growth of the one stimulating, in turn, the growth of the other. The total number of spinning units today is 21.

It will be seen from Table II that in the sixteen years ended 1967, the production of staple fibre yarn has gone up from 10.86 million kgs to 46.72 million kgs (estimated); production of rayon filament over the same period has risen from 2.46 million kgs to 34.77 million kgs (estimated); similarly, production of man-made fibre fabrics increased from 286.5 million metres to 855.6 million metres (estimated) for 1967.

The per capita consumption, which was less than a metre

TABLE III
LICENSED CAPACITY OF CELLULOSIC AND NON-CELLULOSIC FIBRES

	Licensed capacity per annum			Licensed capacity per annum		
	Per day in tons	In mil- lion kgs	In tons	Per day in tons	In mil- lion kgs	In tons
I. CELLULOSICS						
A. Textile						
i. Viscose Filament Yarn						
a) The Travancore Rayons Ltd	13.60	4.90	4896			
b) The National Rayon Corpn. Ltd	25.00	9.00	9000			
c) Century Rayon	25.00	9.00	9000			
d) J. K. Rayon	11.11	4.00	4000			
e) Kesoram Rayon	11.11	4.00	4000			
f) South India Viscose Ltd	11.11	4.00	4000			
g) The Baroda Rayon Corpn. Ltd	9.00	3.24	3240			
h) The Indian Rayon Corpn. Ltd	10.00	3.60	3600			
Total :	115.33	41.74	41736			
ii. Acetate Filament Yarn						
a) Sirsilk Ltd	10.55	3.80	3800			
b) Mody Rayons	5.56	2.00	2000			
c) Mysore Spinning Group	8.00	2.88	2880			
Total :	24.11	8.68	8680			
iii. Viscose Staple Fibre						
a) The Gwalior Rayon	80.00	28.80	28800			
b) South India Viscose Ltd	30.00	10.80	10800			
Total :	110.00	39.60	39600			
iv. Acetate Staple Fibre						
a) Sirsilk Ltd	6.00	2.19	2190			
b) Mysore Spinning Group	2.00	0.73	730			
Total :	8.00	2.92	2920			
B. Industrial						
i. Tyre Cord (Viscose Filament yarn—Industrial)						
a) National Rayon Corpn. Ltd	19.40	6.98	6984			
b) Century Rayon	18.99	6.84	6836			
c) Shriram Rayons	15.64	5.64	5636			
Total :	54.03	19.46	19456			
C. Others						
i. Cellulose Film (Transparent paper)						
a) The Travancore Rayons Ltd	18.00	6.48	6480			
b) Kesoram Rayon	10.00	3.60	3600			
Total :	28.00	10.08	10080			
D. Raw Materials						
i. Rayon Grade Wood Pulp						
a) South India Viscose Ltd (Eucalyptus)	60.00	21.60	21600			
b) Travancore Rayons Ltd (Cotton Lintres)	18.33	6.60	6600			
c) Gwalior Rayons (Bamboos)	150.00	54.00	54000			
Total :	228.33	82.20	82200			
II. NON CELLULOSICS						
A. Textile						
i. Nylon Filament Yarn						
a) J. K. Synthetics Ltd	4.90	1.76	1760			
b) Nirlon Synthetic Fibres & Chemicals Ltd	6.94	2.50	2500			
c) Plastic Packaging (P) Ltd	2.10	0.76	756			
d) Century Enka Ltd	6.50	2.34	2340			
e) Gujarat Polyamides	5.00	1.80	1800			
f) Maharashtra Nylon Spinners	2.15	0.77	773			
g) Modipon Ltd	5.00	1.80	1800			
h) Stretch Fibres (India) Ltd	1.50	0.54	540			
Total	34.09	12.27	12269			
ii. Nylon Staple Fibre						
a) Maharashtra Nylon Spinners	0.82	0.30	295			
b) J. K. Synthetics Ltd	5.00	1.80	1800			
Total :	5.82	2.10	2095			
iii. Polyester Filament Yarn						
a) Nirlon Synthetic Fibres & Chemicals Ltd	2.00	0.72	720			
Total :	2.00	0.72	720			
iv. Polyester Fibre						
a) Chemicals & Fibres of India (ICI)	12.62	4.55	4545			
b) Indian Produce Export Corporation	5.56	2.00	2000			
Total :	18.18	6.55	6545			
v. Acrylic Fibre						
a) J. K. Synthetics Ltd	11.00	4.00	4000			
b) Manjushree Industries	11.00	4.00	4000			
c) Rama & Sons (Calcutta) Pvt. Ltd	5.56	2.50	2500			
Total :	27.56	10.50	10500			
vi. P. V. A./P.V.C. Fibre						
a) Bharat Commerce & Industries	27.80	10.00	10000			
Total :	27.80	10.00	10000			
B. Industrial						
i. Nylon Tyre Cord						
a) Nirlon Synthetic Fibres & Chemicals Ltd	4.00	1.44	1440			
b) J. K. Synthetics Ltd	2.75	1.00	1000			
c) Bombay Fine Worsted Mfgs.	1.80	0.58	576			
Total :	8.35	3.02	3016			
C. Raw Materials						
i. Caprolactum						
a) Gujarat Polyamides	14.00	5.00	5000			
b) Nirlon Synthetics	13.00	4.68	4680			
c) Bombay Fine Worsted Mfgs.	13.00	4.68	4680			
Total :	40.00	14.36	14360			

lion kgs of art silk yarn. This would naturally mean an expansion of both the spinning and the weaving sections of the industry. The Planning Commission has endorsed the Power Loom Enquiry Committee's suggestion to set up 40,000 powerlooms for the production of art silk fabrics. This addition should help achieve the production level of 1,500 million metres postulated by the Textile Commissioner.

All this applies only to textile fabrics. There are several other uses, besides, for the rayon filament and synthetic fibres, such as tyre cord, knitting and hosiery industries, gas mantles, fishing nets, etc. At present, the demand for rayon/synthetic tyre cord for the tyre industry is about 10 to 11 million kgs per annum, which is expected to increase by 1970-71 to 22 million kgs. But the whole of this is not expected to be in the form of rayon tyre cord, as nylon tyre cord has lately begun to come into greater favour. Taking all these into account, the Planning Commission has envisaged roughly 16 million kgs of rayon tyre cord and 6 million kgs of nylon tyre cord as the probable requirements in 1970-71. On this basis, and also taking into account the requirements of other miscellaneous industries, the overall industrial requirements of rayon/synthetic yarn have been put at 29 million kgs, made up of 16 million kgs of rayon and 13 million kgs of nylon.

In any assessment of the growth of this industry, a very important consideration is the changing pattern of consumption even as between rayon and synthetic fibres. A study of the pattern of consumption during the third five-year Plan has indicated that, whereas the growth rate in the consumption of rayon has more or less remained steady, that of synthetic fibres has recorded a remarkable rise. Thus, as against 2.5 million kgs. of synthetic fibres consumed in 1961-62, the consumption level in 1965-66 was nearly five times as much, that

is, about 12 to 13 million kgs. May be, this would have been even higher but for the restricted availability of these fibres on account of the acute shortage of foreign exchange which perhaps explains the large-scale smuggling of nylon goods in recent years. Further, the possibility of mixing synthetic fibres with locally available cotton or indigenous and imported wool promises considerable scope for the growth of the synthetic fibre industry. Moreover, unlike in the case of the rayon industry, there are more immediate prospects in respect of the synthetic fibre industry getting its supplies of raw materials from indigenous sources. In fact, the development of the petro-chemical industry is expected to accelerate this process. The scope for the growth of the synthetic fibre industry is, therefore, relatively greater.

Severe Limitation

In contrast, the future expansion of the rayon industry, especially of the viscose type, depends on the continued import of rayon grade pulp and sulphur. Only one large unit has so far been set up for the production of rayon grade pulp suitable for making viscose staple fibre. The limited availability of suitable cellulosic raw materials (although soft wood such as eucalyptus and wattle is being successfully experimented upon) imposes a severe limitation on the prospects of setting up adequate capacity for all the rayon grade pulp required by the viscose filament industry. An even more serious handicap is the non-availability of sulphur. Here, one has to reckon not only with the physical availability of sulphur in the international market but also with the requirements of the relatively more essential industries such as fertilizers in this country itself.

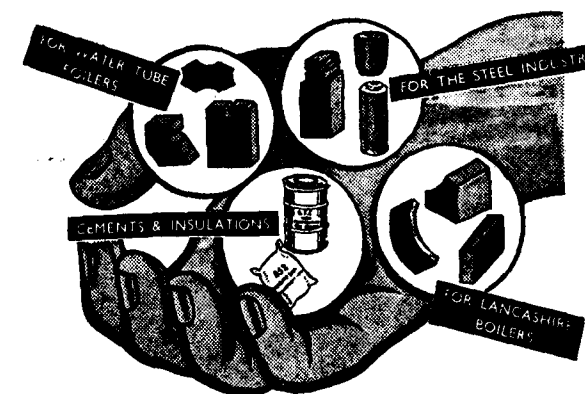
Apart from the availability of raw materials, the progress of the viscose rayon industry is also handicapped by an utterly unimaginative fiscal policy. It seems to have become a prac-

tice with the authorities lately to ask the industry to absorb any increase in excise duty and maintain pre-budget selling prices. In the year 1960, for example, the rayon industry was asked by Mr Morarji Desai, the then union Minister of Commerce, to absorb the increase in excise duty proposed in that year's budget. In the latest budget, again, there was a further increase in excise duty. When the industry was asked to absorb the duty for a second time, it could not but resist it, if only because of increases in cost of production all round in recent years, not to speak of the effects of devaluation. This fact was admitted even by the Textile Commissioner, when his attention was drawn to the difficulties of the industry. The incidence of the excise burden has particularly affected the larger units i.e., units producing more than ten tonnes. As a result of this unfair and unreasonable treatment, the larger units have been finding it difficult to set aside adequate funds

for replacement of assets at current prices. The fact that depreciation allowed for tax purposes has been on the meagre historical value basis has further affected the capacity of the industry to find funds for replacement. As it is customary these days to attack everything big, the case of the larger units often tends to go unheeded, but economic considerations and the larger interests of the country demand that there must be a comprehensive examination by a statutory body, viz, the Tariff Commission, to enquire into the cost structure of the spinners and the weavers with a view to ascertaining as to whether the spinners or the weavers have greater capacity to absorb the now-not-infrequent increases in excise duty in their production costs. Until this is done, we are afraid, the wrangle on the respective ability of spinners and weavers to absorb any increases in excise duty or other rises in production costs would continue unabated.

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TABLE IV
AVAILABILITY OF MAN-MADE FIBRES FROM 1962 TO 1965.

Year	Particulars	Viscose filament yarn	Acetate filament yarn	Cupramonium rayon yarn	Other filament*	Viscose/acetate staple fibre	Nylon staple fibre	Polyester staple fibre	Acrylic polypropylene etc.	Total
('000 Kgs)										
1962	Production	26239	1400	—	175	32382	—	—	—	60196
	Imports	8835	1332	3474	3628	18	69	72	1199	18627
	Availability	35074	2732	3474	3803	32400	69	72	1199	78823
1963	Production	31247	1953	—	742	32245	—	—	—	66187
	Imports	4992	610	2036	4610	4374	1280	1028	2449	21379
	Availability	36239	2563	2036	5352	36619	1280	1028	2449	87566
1964	Production	35291	1838	—	1177	36815	—	—	—	75121
	Imports	1734	879	2123	6763	42	894	1362	655	14252
	Availability	37025	2717	2123	7940	36857	894	1362	655	89373
1965	Production	35273	2033	—	1480	37151	—	1401	—	77338
	Imports	211	297	801	5061	161	309	1406	452	8698
	Availability	35484	2330	801	6541	37312	309	2807	452	86036
1966	Production	33405	1337	—	1920	42944	—	2549	—	82155
	Imports	284	14	45	4496	17	211	360	357	5784
	Availability	33689	1351	45	6416	42961	211	2909	357	87939

* Including nylon, acrylic polyester, polypropylene, PVC, PVA filament yarn, etc.

A PROFILE OF INDUSTRIES

Tea Tries to Regain Its Crown

OUR COUNTRY is the largest producer of tea in the world and this position has not been challenged so far by any of our competitors. Also, we were the leading exporter of tea for nearly 60 years till we conceded that position to Ceylon in 1965 and 1966. Complete details regarding production and exports in 1967 both of this country and of our competitors are not available as yet but the trend of export performance is in our favour and there is every chance of our regaining our premier position in the world's tea trade. In the 10 months ending October 1967, our exports of tea showed a sizable improvement over the exports of the corresponding period of the preceding year. Whereas in the period January-October 1966, this country had exported tea of the order of 138.4 million kgs, the figure for the corresponding period this year is estimated to be around 158.8 million kgs. The increase in the volume of exports is accompanied by a proportionate rise in earnings as well which at pre-devaluation rates of exchange, were placed at Rs 87.6 crores as compared to Rs 74.3 crores during the same period last year. As against exports of 179.21 million kgs in 1966, the Tea Board is of the view that we may touch the level of exports recorded in 1964 i.e. 210 million kgs. The industry, however, takes a conservative view: according to it there is a strong possibility of our just crossing the 200 million kgs level.

Ceylon's Exports

Ceylon's exports of tea in 1966 were placed at 200 million kgs but this year it is not likely to come up to that level because of unfavourable weather conditions which have resulted in reducing its total output. During the current year, our other big rivals, namely, Kenya, Uganda, Tanzania and Malawi also encountered a number of difficulties and tea produced there by the end of August was substantially below the level attained in the preceding year. In fact, world production of tea at the end of September this year is estimated to be six million kgs below that of the similar period in 1966. Thus, there is a strong possibility of our becoming once again the largest exporter of tea this year, though not due to any assistance from the government but entirely due to the failure of tea crops of our major rivals. The production of principal producing countries of tea between 1951 and 1966 is given in Table I.

During the last two years when the agricultural crops in this country had suffered heavily because of the failure of the

TABLE I
SHARE OF PRINCIPAL PRODUCING COUNTRIES IN
TOTAL WORLD TEA PRODUCTION FROM
1951, 1961 AND 1966

Countries	1951		1961		*1966	
	Qty.	%	Qty.	%	Qty.	%
India	285	43.6	354	35.2	375	34.5
Ceylon	148	22.7	206	20.4	222	20.4
Indonesia	47	7.2	44	4.4	44	4.1
East Africa @	17	2.6	37	3.7	59	5.4
China	65	10.0	158	15.7	159	14.6
Others	91	13.9	208	20.6	228	21.0
Total	653	100.0	1,007	100.0	1,087	100.0

* Provisional.

@ Includes Kenya, Uganda, Tanzania and Malawi.

Note: Other countries consisting— 1) Formosa, 2) Japan, 3) Malaya, 4) Vietnam (South), 5) Iran, 6) Turkey, 7) USSR, 8) Argentina, 9) Brazil, 10) Peru, 11) Pakistan, 12) Mozambique, 13) Mauritius etc.

monsoons, tea did not suffer any setback and was able to continue its upward trend in production so as to attain an all-time peak in 1966 at 374.81 million kgs. Ceylon's output last year was 222.32 million kgs followed by Japan (83.14 million kgs), Indonesia (44.18 million kgs), Formosa (21.0 million kgs), Argentina (16.28 million kgs), Malawi (15.37 million kgs) and Uganda (11.23 million kgs). Between 1947 and 1966, the total increase in the production of the exporting countries was of the order of 317 million kgs out of which our share was 121 million kgs, followed by Ceylon at 87 million kgs and east African countries at 57 million kgs. This, however, does not imply that we can afford to neglect expansion in production. In fact, the Tea Finance Committee which went into the question of increased production laid special stress on the urgent necessity of new planting as more than half of the existing bushes are over-aged and uneconomical. As Table II below shows, 52.1 per cent of the tea bushes were between 26 and 60 years of age and 21.4 per cent were more than 60 years old.

TABLE II
AGE GROUPS OF TEA BUSHES AS ON MARCH 31, 1963
(Percentage)

State	Below 10 years	10-25 years	26-60 years	Above 60 years
Assam	15.5	18.6	47.1	18.8
West Bengal	13.2	9.3	43.0	34.5
Total North India	14.5	15.2	46.3	24.0
Kerala	5.4	6.0	71.6	17.0
Madras	15.3	6.4	69.6	8.4
Total South India	9.7	6.1	71.4	12.8
Total All India	13.4	13.1	52.1	21.4

Source: Report of the Tea Finance Committee, 1964.

Sizable areas thus need to be re-planted for which various schemes of long-term finance have been in operation. The three schemes under which the industry can procure finance for development are (a) Tea Plantation Finance Scheme, (b) Irrigation Loan Scheme and (c) Tea Machinery and Irrigation Equipment Hire-Purchase Scheme. All of these are operated by the Tea Board. The industry has not been able to profit much from these schemes so far because high taxation has tended to reduce the volume of retained profits making it difficult to repay the annual instalments of these loans. The industry has therefore pleaded that either the tax burden should be reduced or the terms on which long-term finance is provided should be softened.

Though we have continued to expand our output of tea, our share in the world tea market has been declining. In 1951, our exports of tea constituted 45.0 per cent of the world total but by 1966, the percentage had declined to 32.5 (Table III). During the past eight years in particular, our percentage share has been declining and has been consistently below 40. Will it be possible for us to arrest this decline not for a year or two but on a permanent basis? One thing which is obvious from a study of our production figures is that if we have failed to hold our share of the world tea market, it is not due to any short-fall in production or productivity. In the period 1950-65, the area under tea plantations increased by eight per cent, production by 28 per cent and yield by 18.3 per cent. In fact, the yield per hectare in this country is the highest in the world

except for Japan which, however, is not in the list of our chief rivals in the world market.

An increasing share of our production has been consumed within the country. The estimates of internal consumption show that from 82.67 million kgs in 1953-54, it rose to 166.02 million kgs in 1965-66 (Table IV). The industry has been blamed that it has catered to the domestic market at the expense of exports while it is the view of the industry that production and export promotion are separate functions and the failure in one should not reflect on the performance in the other, especially because the full functional responsibility in regard to exports was taken over by the government under the Tea Act, 1953.

Aggressive Salesmanship

It may be recalled that this country withdrew from the International Tea Market Expansion Board in 1952 and ever since, our competitors have been able to snatch a larger share of the world market. Ceylon in particular has adopted aggressive salesmanship and has spent much larger sums of money on publicity and promotion than we have done. Apart from the failure of the Tea Board in its promotional efforts, it is necessary that planned progress in production of tea should be accompanied by measures which result in increased export earnings while satisfying the domestic demand. If the internal demand is curbed and the industry is forced to enhance its volume of exports, it may result in reduced earnings of foreign exchange without benefiting us as the world demand, according to the FAO, does not grow by more than three per cent a year. It might be argued that if excess supply tends to depress the world prices of tea, it applies to our competitors as well, as despite this over-riding factor, they did enhance their share of the market.

Those who argue in this way forget that the tea industries in Ceylon and the east African countries are favourably placed in regard to the taxation policies of their governments and, hence, are able to offer a stiff competition to us. It is

TABLE III
SHARE OF DIFFERENT PRODUCING COUNTRIES IN
TOTAL WORLD EXPORTS DURING 1951, 1961 AND 1966

Countries	1951		1961		**1966	
	Qty.	%	Qty.	%	Qty.	%
India	206.0	45.0	206.3	37.9	179.2	32.5
Pakistan	21.9	4.8	2.6	0.5	2.3	0.4
Ceylon	138.4	30.2	193.1	35.4	200.1	36.2
Indonesia	40.6	8.9	33.4	6.1	@25.0	4.5
East Africa (a)	14.6	3.0	32.4	5.9	54.3	9.8
China	12.7	2.8	38.9	5.7	@28.6	5.2
Formosa	11.3	2.4	14.6	2.7	19.6	3.6
Japan	8.7	1.9	7.7	1.4	1.9	0.3
Malaya	0.8	0.2	1.8	0.3	1.7	0.3
Other Countries	3.7	0.8	22.3	4.1	(e)39.7	7.2
Total	458.1	100.0	545.0	100.0	552.4	100.0

** Provisional.

@ 1964 figures.

(e) Estimated.

(a) Includes Kenya, Uganda, Tanzania, Malawi and Southern Rhodesia.

not prudent to unload increasing quantities of tea on the world market without regard to the unit value realised. In any case, the Barooah Committee which is currently investigating the various problems facing the tea industry in this country

TABLE IV
ESTIMATE OF INTERNAL CONSUMPTION OF
TEA IN INDIA

Year	Opening stock as on 1st April	Production during the year	Exports during the year	Closing stocks at the end of the financial year	Estimated consumption
	(1)	(2)	(3)	(4)	(5) (6)
1953-54	49,115	278,777	213,500	31,727	82,665
1954-55	32,084	295,519	208,462	39,922	79,219
1955-56	39,652	307,704	183,769	63,367	100,220
1956-57	63,367	308,719	233,088	51,554	87,444
1957-58	51,554	310,802	191,755	58,104	112,497
1958-59	58,104	325,225	217,322	57,132	108,875
1959-60	63,933	328,011	215,459	60,559	115,926
1960-61	60,559	322,429	196,473	59,709	126,806
1961-62	59,709	355,493	205,329	70,231	139,642
1962-63	70,231	344,551	220,800	58,268	135,714
1963-64	58,268	344,705	209,328	52,978	140,667
1964-65	52,978	372,984	212,255	64,701	149,006
1965-66	64,701	375,885	197,385	77,185	166,016

N.B.: Production for the years 1953-54 to 1958-59 related to calendar year while those of 1959-60 to 1965-66 related to financial year.

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must go into this question of striking a balance between exports and internal consumption. It must assist in the evolution of an export policy which removes some of the difficulties of the tea industry, discussed hereafter, so that it may be able to face the challenge of selling increased quantities of this beverage abroad and at the same time realise a stable unit value.

Market reports from some of the European cities have indicated that the difference between the unit export value of tea realised by us and the unit value paid by the consumer is large. The middleman tends to inflate prices, with the result that our export earnings are hurt. To tide over this difficulty, a suggestion has been put forward to the Government of India that a consortium of producers should be set up in order to export packeted tea to the principal European markets. This is an idea which needs to be pursued. Granted that it will take considerable time to create a favourable image for the new packeted tea and sizable expenditure of foreign exchange will be needed to establish a sufficient number of outlets in the European markets, this is an experiment which it will be worth our while to undertake.

Profitability of the Industry

The Tea Finance Committee—popularly known as the Chari Committee—consisting of officers of the central and the state governments analysed in 1966 the profitability of the tea industry in this country for the years 1950 to 1965. Its findings were based upon the experience of 10 south Indian tea companies. As Table V shows, the index of gross profit during this period improved by 44.5 per cent while the tax burden multiplied more than three times.

It is in this context that the committee commented as follows: "The committee has come to the conclusion that there is a downward trend of the net return over a period of years and this downward trend has apparently had a dampening effect so far as the incurring of fresh developmental expenditure on new plantations is concerned. A financial incentive, therefore, in the opinion of the committee is called for in order to encourage the industry to embark on a programme of development with a view to achieving the targets expected of it."

The Reserve Bank of India has also analysed the working results of 142 tea companies in the country for the period 1960-61 to 1964-65. It has come to the conclusion that profits after tax as percentage of net worth in tea companies are significantly lower than that of all other companies. Whereas in the case of 1,333 companies covering all industries, this profitability ratio was 10.9 in 1960-61, the corresponding figure for tea

plantations was 8.9 (Table VI). Again in 1964-65, this profitability ratio was 9.2 per cent in the case of 1,333 companies while the corresponding figure for tea plantations was 6.0 per cent. No additional evidence is needed to show the low profitability of this industry.

TABLE VI
PROFITABILITY OF TEA INDUSTRY

	Number of companies	1960-61	1961-62	1962-63	1963-64	1964-65
Gross profits as percentage of total capital employed:						
Tea plantations	142	12.0	9.4	10.9	8.8	9.5
All Industries	1,333	10.2	10.1	10.2	10.6	10.3
Gross profits as percentage of sales:						
Tea plantations	142	20.1	15.5	17.8	14.3	16.2
All Industries	1,333	10.3	10.2	10.2	10.3	10.0
Profits after tax as percentage of net worth:						
Tea plantations	142	8.9	6.1	5.5	5.3	6.0
All Industries	1,333	10.9	10.0	8.6	9.4	9.2

Source: Reserve Bank of India.

The tea industry has been overburdened both with export and excise duties. During the first three Plans, the total export duty realised from this industry was estimated at Rs 165.71 crores. During the same 15 years, the government realised by way of excise duty a sum of Rs 110.97 crores. Thus, both the export and excise duties collectively yielded to the central exchequer a sum of Rs 276.68 crores. The total burden of excise duties and export duties in these 15 years worked out to be about 89 paise per kg. While the cost of production of tea varies between four and five rupees per kg, the additional burden

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of 89 paise per kg is not small. It assumes significant importance in view of the fact that some of our competitors are not called upon to shoulder this burden.

The devaluation of the pound sterling accompanied by Ceylon's devaluation by 20 per cent poses a threat to our tea exports. It needs to be underlined that about 55 per cent of our tea is bought by the UK (Table VII). Because every pound will now fetch three rupees less, the tea exporters will lose in a year anything between Rs 25 to 30 crores. The demand has therefore been made by the industry that the export duty on tea should be abolished even though it will mean some loss in revenue. It is argued that the advantage of increased export earnings will far outweigh the loss in revenue.

TABLE VII
IMPORTS OF TEA INTO U.K. FROM PRINCIPAL PRODUCING COUNTRIES

(Figures in '000 kgs)			
Countries	1938	1961	1966
India)	132,674	127,780	98,001
Pakistan)		962	2,370
Ceylon	75,782	72,477	70,597
Indonesia	13,698	5,671	2,522
Malawi (a)	4,638	10,638	8,544
Kenya	3,784	5,740	18,441
Uganda	57	1,487	2,666
Tanzania	131	2,667	4,917
Others	8,150	24,581	25,661
Total:	238,914	252,003	233,669

(a) From 1955 to 1964, Federation of Rhodesia and Nyasaland.

Reduced profitability due to high taxation is not the only dampening factor in the case of this industry. It has suffered heavily because of the socialistic policy pursued by the government in its dealings with this industry. The Plantations Labour Act, 1951, had provided for a number of welfare measures which threw a heavy burden on it. The construction and maintenance of hospitals and houses for labour put a sizable burden on the industry. The Plantations Enquiry Committee, more than a decade ago, had estimated that the cost of construction of houses alone was around Rs 60 crores. The welfare measures costing crores of rupees had to be financed by the industry out of the taxed profits. In some cases, the industry was able to honour its commitments only through borrowings.

Promotional Work

As stated earlier, our government had decided to withdraw from the International Tea Market Expansion Board (ITMEB) in 1952. This Board was supported at that time not only by India but by a number of other countries, including Ceylon, Indonesia, Pakistan and east African countries. The ITMEB was doing useful promotional work in the USA, the UK, the Netherlands, Canada, Nigeria, Egypt, Switzerland, West Germany, Ireland, Iraq, Australia, New Zealand and a number of other countries. It had nine offices situated in London, New York, Toronto, Amsterdam, Zurich, Cairo, Ibadan and Sydney. There were also some sub-offices. Our withdrawal and subsequently of Pakistan, Indonesia and east African countries brought about a virtual collapse of the Board but Ceylon continued to finance it so as to maintain the essential centres. While Ceylon has been able to make substantial gains through its support to the ITMEB we have lost ground because of our approach to uni-national expansion as is shown in Table VIII.

Between 1952-53 and 1966-67 our exports to the major campaign countries of the ITMEB fell from 368.8 million lbs to 273.2 million lbs. During the same period, Ceylon made a substantial gain in the same countries from 237.4 million lbs to 342.4 million lbs. These figures amply illustrate the failure of our policy in this regard. The promotional efforts of the Tea Board have been without doubt inferior to the aggressive techniques adopted by Ceylon. It must be conceded that Ceylon has been spending considerably more on export promotion than has been the case with us. For example, we spent no more than Rs 8.3 million in five years (1960-61 to 1964-65) on export promotion while Ceylon spent about Rs 30 million in the same period and for the same purpose.

During 1967 discussions were held between the governments of India and Ceylon to work out a plan of co-operation between the two countries in so far as the sale of tea in the foreign markets was concerned. It was felt that if both the countries joined hands, none in the world could exploit them. At one time, Ceylon had shown sufficient eagerness to work out the details of the joint action, but its decision to devalue the currency by 20 per cent in the wake of the devaluation of the pound seems to have blunted its anxiety to go ahead with it. It is not certain at the time of writing if Ceylon is still eager to put this scheme into action.

A two-day seminar on tea exports was organised at Calcutta in June this year by the Indian Institute of Foreign Trade in collaboration with the Tea Board where the working of the latter came in for severe criticism. A number of meaningful suggestions for the effective working of the Tea Board were made. The salient ones were:

- that the Tea Board should take steps to bring all promotional activities in a particular country, whether through tea centres or through advertising media, under a local board of management, consisting of representatives of Tea Board, the producers and the trade. These local boards of management should have complete autonomy and their own financial resources.
- that resources available to the local Tea Promotion Councils should have a direct relation to the percentage of India's sales in the country concerned. Also, not less than 90 per cent of the funds available should be actually employed in promotion and that only a maximum of 10 per cent of such funds should be allowed for the administration of such promotion. The local boards of management in different countries should have full authority to engage professional agents for market research and promotion.
- that the Tea Board should examine the formation of

TABLE VIII
EXPORTS BY INDIA AND CEYLON TO MAJOR CAMPAIGN COUNTRIES OF THE I.T.M.E.B. SINCE 1952 (In million lbs)

Countries	India		Ceylon	
	1952-53	1966-67	1952	1966
UK	281.1	211.5	113.3	155.0
Ireland	12.4	11.2	0.7	4.0
Netherlands	7.6	5.9	5.8	7.8
Canada	22.6	8.9	20.2	16.3
USA	29.0	17.3	34.9	44.6
Iraq	2.1	3.8	14.7	47.7
Australia & New Zealand	14.0	14.6	47.8	47.0
Total:	368.8	273.2	237.4	322.4

Source: ITC Bulletin, 1967.

consortia for tea exports in small specialised markets, in particular those dealing exclusively or largely in Indian tea.

- d) that the Tea Board should examine, in consultation with the Indian Institute of Packaging, the export possibility of tea in consumer packs with particular reference to meeting the various tastes of consumers in importing countries.

At the seminar, the union Minister of Commerce, Mr Dinesh Singh, chastised the sterling tea companies for having repatriated sizable profits abroad for expansion of the tea industry in other countries. The sterling companies have, however, presented their case in a memorandum which was printed in a special supplement of this journal along with its issue of December 15, 1967. Basing its analysis on the audited accounts of the sterling companies and other official records, the Indian Tea Association, which prepared this memorandum, came to the conclusion that

(1) the sterling tea companies have consistently produced a much higher percentage of crop from its area under tea than the rest of the industry;

(2) the sterling companies have always been in the forefront of those manufacturing quality teas designed for the international export market;

(3) on average, in the five years 1961-65, the sterling companies exported 72.29 per cent of their annual crop as against 52.51 per cent only for the rest of the industry;

(4) the return on net worth (paid-up capital plus reserves plus undistributed profits) as a percentage of net worth in the case of the sterling companies is exceedingly low;

(5) a small part of the profits after taxation (70 per cent in the case of sterling companies) earned in the period 1961-65

was remitted to the United Kingdom. This is illustrated in Table IX.

The memorandum also stresses the point that it is the discouraging pattern of return on capital (besides the declining share values) which has served as the greatest inducement to disinvestment in the past years and has remained so even today. The other factors which have encouraged disinvestment are the tendency to political instability and labour indiscipline in some of the tea districts, the food shortages and the immense problems which these entail for the management and the general industrial recession in the country as a whole.

TABLE IX
REMITTANCE OF PROFITS BY STERLING
COMPANIES TO U.K.

Year	(Rs crores)	
	Profits after taxation	Profits remitted to the UK in respect of the year in question
1956	...	6.49
1957	...	3.15
1958	...	2.94
1959	...	3.03
1960	...	2.62
1961	...	2.91
1962	...	2.54
1963	...	1.91
1964	...	0.74
1965	...	0.60
	1.91	0.04

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PROFILE OF INDUSTRIES

Sugar: Premium on Inefficiency

THE SUGAR Enquiry Commission headed by Mr S. R. Sen stated two years ago that fluctuations in the fortunes of the sugar industry were of two types, natural and man-made. While the natural causes cannot be remedied in the short period, the man-made causes, according to the commission, can certainly be tackled quickly so as to assist the industry. What the commission deplored was the policy of "ad-hocism" adopted by the government and its failure to formulate a "policy based on well-defined principles". It is doubtful that this criticism has lost its point through the measures taken, by the government for the sugar season 1967-68, initiating partial decontrol of sugar. The withdrawal of complete control over the sugar industry would have gone a long way in raising the output of sugar and easing the supply position but the government has refrained from it because of its anxiety not to earn the wrath of the farmer and gur and khandsari producers. The sugar industry is tied up with politics—the politics of the government's anxiety to win over the farmer through increases in sugarcane prices and pampering gur and khandsari producers, without regard to the interests of the industry and the consumers.

In the sugar season 1966-67, the industry was beaten down to its knees by khandsari and gur producers as under the statutory control it was not able to buy all the cane that it needed at prices fixed by the government and, consequently, output fell to 2.2 million tonnes as against 3.5 million tonnes in the preceding year. This was the result of an unequal race where in the sugar industry was handicapped by fixed sugarcane and sugar prices while gur and khandsari producers were left free. At the beginning of the current season, it became apparent to the government that sugar production would be drastically reduced if the statutory controls on sugarcane and sugar prices were continued. It was estimated that on the pattern of controls existing then, production would vary between 1.5 and 1.7 million tonnes.

Partial Decontrol

The union Minister of Food and Agriculture, Mr Jagjivan Ram, announced on August 17 this year the new scheme of partial decontrol of sugar which implied that sugar manufacturers were to surrender to the government for distribution in the rationed areas 60 per cent of their produce at prices fixed by the government based on the enhanced sugarcane price of Rs 2.75 per maund while they were free to dispose of the remaining 40 per cent of their output at market prices. Concessions in excise duty were also provided in regard to production exceeding the level attained in the previous year. The six ingredients of this new policy were:

(i) The minimum price of sugarcane will be Rs 2.75 per maund (Rs 7.37 per quintal) for a recovery of 9.4 per cent or less with two paise per maund (5.36 paise per quintal) for every increase of 0.1 per cent in recovery above 9.4 per cent.

(ii) The basic excise duty on factory sugar will be reduced by Rs 8.35 per quintal and the benefit of this will be given to the consumer in fixing the levy price of sugar.

(iii) A quantity equal to 60 per cent of the production, achieved from October 1, 1966 to September 30, 1967, will be procured from the sugar factories from their production from October 1, 1967, to September 30, 1968; at a fixed levy price.

Factories will be free to sell the balance production anywhere in the country at free market prices subject to releases from factories sanctioned by the Government of India. The levy scheme will commence after the production of 1966-67 has been exhausted.

(iv) The levy price will be fixed according to the schedules of the Sugar Enquiry Commission for the five zones recom-

mended by it having regard to the minimum price of sugarcane and reduction in excise duty mentioned above.

(v) A rebate at a flat rate of 50 per cent of the basic excise duty on sugar will be allowed to factories on such production of sugar from October 1, 1967, to September 30, 1968, as is in excess of 80 per cent of the production achieved during the period from October 1, 1966, to September 30, 1967. There will be a special provision for new factories or those which did not work in 1966-67.

(vi) Exports of sugar will be maintained for destinations which yield better prices.

A slight change in the above policy was made by altering the base year from 1966-67 to 1967-68 because the sugar industry represented to the government that 1966-67 as base would affect the interests of a large number of factories which had more or less normal production in that season and are located in areas where there is likely to be considerable fall in sugarcane production in the current season. An unfavourable feature of the sugarcane crop in the current season is that the area has dropped by 15 per cent compared to the preceding year. The decline was caused mostly by the unfavourable weather conditions at the time of sowing and shifting of acreage from cane to foodgrains. Table I shows that the area under sugarcane in 1967-68 is likely to be the smallest in ten years.

The revised prices of rationed sugar for the five zones suggested by the Sen Commission are set out in Table II. It shows that the price of sugar has not been raised in every state. There are such states as Gujarat, Andhra Pradesh, Kerala and Madhya Pradesh which have benefited from this revision in the sense that the revised prices are lower than the old prices. In all other states, the levy price has been increased.

The dual market mechanism under partial decontrol is indeed a new experiment and it will take some time to understand its full implications. The consumer has been hit hard in

TABLE I
SUGARCANE: TRENDS IN AREA AND PRODUCTION

Year	Area		Production	
	Index of area (Base: 1949-50=100)	Percentage change (+) or (-) over preceding year	Index of production (Base: 1949-50=100)	Percentage change (+) or (-) over preceding year
1950-51	116	—	114	—
First Plan				
1951-52	132	(+)14	123	(+) 3
1952-53	118	(—)10	102	(—)17
1953-54	96	(—)15	90	(—)12
1954-55	110	(+)14	116	(+)29
1955-56	125	(+)14	120	(+) 4
Second Plan				
1956-57	139	(+)12	137	(+)14
1957-58	140	(+) 1	138	(+) 1
1958-59	132	(—) 6	142	(+) 3
1959-60	145	(+)10	153	(+) 7
1960-61	164	(+)13	184	(+)20
Third Plan				
1961-62	166	(+) 1	174	(—) 6
1962-63	152	(—) 8	153	(—)12
1963-64	152	(—)	173	(+)13
1964-65	173	(+)14	200	(+)16
1965-66	188	(+) 9	201	—
1966-67	158	(—)16	158	(—)21
1967-68	132	(—)15	—	—

the first two months after the commencement of partial decontrol. In the first place, in most of the rationed areas, the monthly quota has been reduced. In Bombay it has been scaled down from 700 grams to 500 grams and in certain other cities it has come down to as low as 400 grams. In order to make up for this shortfall, the consumer is now obliged to buy sugar from the free market at prices which range from two to three times the controlled prices. The consequences of the new policy had been visualised by the government and it was known that free market prices would not fall in the first few weeks. As increased quantities of free sugar reach the market, the prices are bound to drop.

TABLE II
REVISION IN REGULATED SUGAR PRICES

Price per quintal of D-29 grade of sugar		
	Old prices (Rs)	New prices (Rs)
Zone I		
Maharashtra	132.56	145.00
Gujarat	149.97	"
North Mysore	133.62	"
North Andhra Pradesh	161.57	"
Zone II		
Orissa	149.05	161.00
Rest of Andhra Pradesh	161.57	"
South Mysore	142.31	"
Madras	143.85	"
Pondicherry	162.19	"
Kerala	170.57	"
Zone III		
West UP (Districts of Meerut, Muzaffarnagar and Bulandshahr)	160.32	169.50
Punjab	152.58	"
Haryana	142.25	"
Rajasthan	159.52	"
Madhya Pradesh	171.91	"
Zone IV		
Central and rest of West UP	147.37	156.00
Zone V		
East UP	139.95	158.00
Bihar	139.88	158.00
West Bengal	138.61	158.00
Assam	149.38	167.00

In the new scheme of things, the sugar factories have to offer prices for sugarcane higher than the notional price of Rs 2.75 per maund fixed by the government. The free market price of sugar therefore is bound to be higher than the regulated price. The beneficiary will be the canegrower because he will realise a price significantly above the notional price fixed by the government. It is wrong to conclude that the factories would be making huge profits because they have to strike a balance between the free market price of sugar at which 40 per cent of their produce will be sold and the regulated price at which 60 per cent of their production will be disposed of.

In a statement to the press recently, Mr V. H. Dalmia, president of the west UP branch of the Indian Sugar Mills Association stated that "not a single factory in the western UP region had been able to buy cane at the minimum statutory cane price. Most of the factories were paying a cane price of Rs 15 per quintal (Rs 5.60 per maund) almost double the statutory price, on the entire cane supplies." The cane price of Rs 15 per quintal paid by the factories on their entire supplies of sugar works at Rs 26.44 per quintal (Rs 9.86 per maund) on the 40 per cent of the cane supplies. Thus, the free market sugar prices should be estimated on the basis of this high price of sugarcane paid by the factories.

An unfortunate element of the new scheme is that increasing quantities of sugarcane will still be diverted to the pro-

duction of khandsari and gur which are known as the wasteful methods of obtaining sucrose from sugarcane. Whereas the sugar factories obtain 75 to 80 per cent of the juice from cane, the 'kohlus' extract only 45 to 50 per cent and the power crushers not more than 60 per cent. It is, therefore, in the national interest that the sugar factories should be able to get all the sugar cane that they require. Out of a normal production of 100 million tonnes of sugarcane, the industry does not need more than 35 million tonnes. The rest of the 65 million tonnes can be shared by gur and khandsari producers. In actual practice, what has been happening is that the factories have been starved of sugarcane while the gur and khandsari producers have been able to obtain sugarcane on enhanced prices because they are able to dispose of their produce at high prices. Even after partial decontrol of sugar, this premium on inefficiency will not be removed. The success or failure of partial decontrol will depend on the quantity of sugarcane which the sugar factories are able to obtain in the current season.

An interesting element of the new sugar policy is that the government is no longer averse to a rise in sugar prices in the free market. Hitherto, it has hesitated to put a curb on gur prices while it has exercised rigid price control of sugar.

One of the ways of augmenting the supplies of sugar in this country is to encourage the production of sugar beet. Successful experiments in regard to which have already been made by the Uttar Pradesh Agricultural University. Sugar beet, it is expected, will not supplant sugarcane cultivation but will only supplement it. It has an additional advantage in that its sucrose content is 18 per cent as against 9 to 10 per cent in sugarcane. It will without doubt assist in extending the sugar manufacturing season in Uttar Pradesh by not less than two months. Beet sugar is a five-to-six month crop and allows better utilisation of land than sugarcane. The additional investment needed for the modification of sugar manufacturing units is not considered high.

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Total funds	809.92

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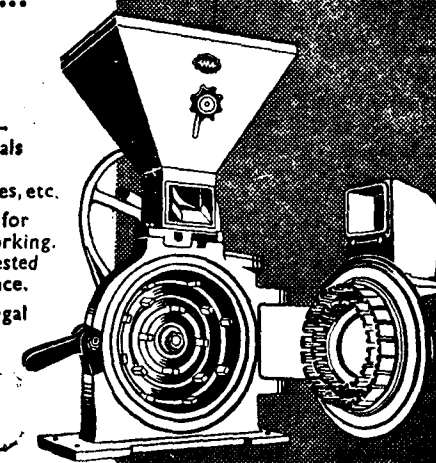
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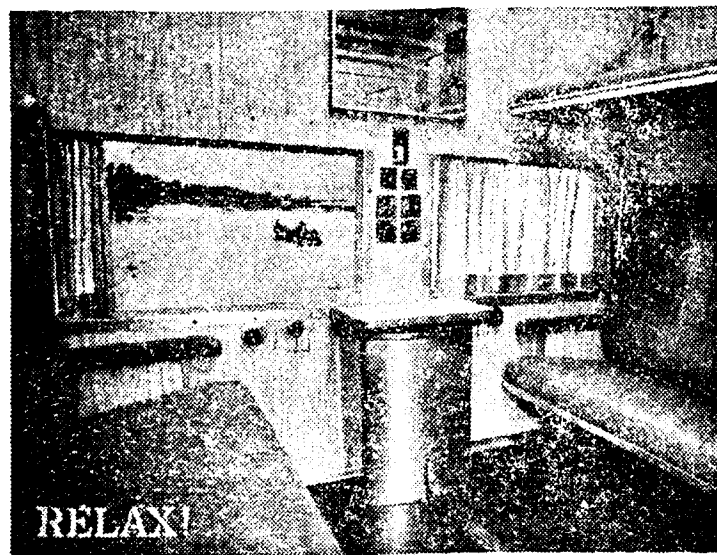
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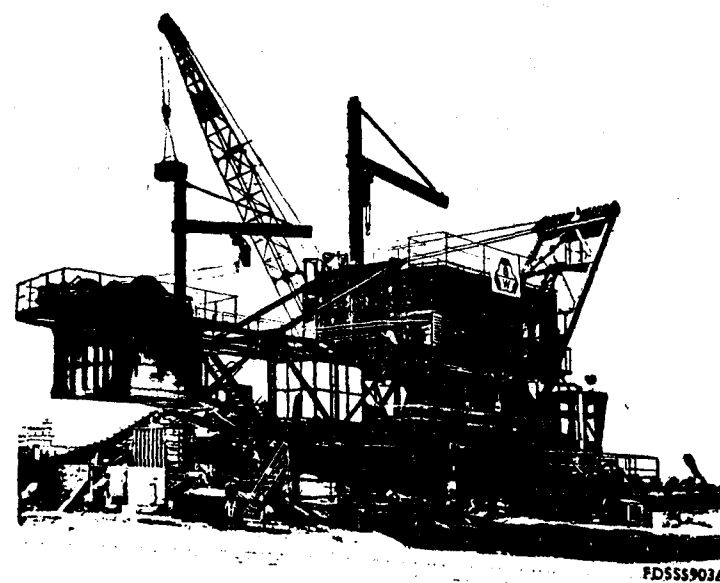
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Southern Structurals Limited is in the picture at Neyveli. It is also putting up the steel structure for M/s. Buckau-Wolf's bucket conveyors at the mine-head. Southern Structurals Limited also specialises in design and fabrication work, radiographic test, Pressed Steel and welded steelwork, apart from wagons for the Indian Railways.



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A PROFILE OF INDUSTRIES**Anxious Days for Machine Tools**

THE SKIPPING of dividend declaration for the last two years in succession by Hindustan Machine Tools (HMT), which till 1964-65 held a pre-eminent position among the public sector undertakings, reflects the difficult times through which our machine tool industry is passing currently. On the one hand, the devaluation of the rupee in June last has pushed up the cost of production. On the other, the recession has reduced demand appreciably. The combined effect of the two factors has been substantial under-utilization of the industry's installed capacity.

At the beginning of the current calendar year we had in the public and the organised private sectors capacity for the production of over Rs 36 crores worth machine tools per annum. Nearly 66 per cent of this capacity was in the public sector, spread over HMT, the heavy machine tools plant of the Heavy Engineering Corporation (HEC), the Praga Tools Limited and the prototype-cum-training centres at Okhla (Delhi) and Howrah. The organised private sector, comprising some 70 units—the prominent among them being Mysore Kirloskar, Cooper Engineering, Bharat Frit Werner Investa Machine Tools, Voltas, Ralliwolf India, and Excell-0 (India) Ltd—accounted for the rest of the capacity. Besides, there were 350 to 400 small-scale units, located mostly in Punjab, Maharashtra, Delhi and West Bengal, which turned out sizable quantities of simple machine tools.

The effective capacity in the public sector alone this year has been increased by four crores of rupees worth machine tools. The effective capacity of HMT is now estimated at Rs 20.5 crores, as against about Rs 18 crores last year. The heavy machine tools plant of the HEC should be currently in a position to work to at least a capacity of two crores of rupees worth machine tools. It went into production in October, 1966, and is expected to produce from its present capacity, when worked fully, machine tools valued at nearly three crores of rupees. Taking into consideration some marginal expansion of the capacity of the organised private sector, we should have at present capacity for nearly Rs 45 crores worth machine tools. But the actual demand this year has perhaps stayed at the last year's level of about Rs 25 crores. The HMT, in fact, has planned for a production of only Rs 15.13 crores this year, as against Rs 17.91 crores last year.

Postponement of Schemes

This large under-utilization of capacity has led to the postponement of many expansion schemes. Although HMT might develop by 1970-71 its present five units—two at Bangalore (Mysore) and one each at Pinjore (Haryana), Kalamassery (Kerala) and Hyderabad (Andhra Pradesh)—to a total capacity of Rs 25 crores worth machine tools, its programme to set up another five factories by then, each with an annual capacity for machine tools valued at Rs 5 crores, has been shelved for the time being. Two other public sector units at Ajmer and Bhavnagar, which are being assisted by Czechoslovakia, should come up by 1970-71 as a good deal of progress has already been made for their establishment. But unless demand picks up next year, any further large-scale expansion of this industry, whether in the public or the organised private sector, may not be feasible. But this should not worry us unduly. If demand picks up, some of the deferred expansion schemes can be implemented fairly quickly.

With the prospect that the outlay on planning may not show much improvement in 1967-68, due to the revenue receipts of both the central and the state governments not coming up to expectations, it will, indeed, be difficult for the machine tool

industry to work to full capacity even next year, unless exports are stepped up to counterbalance at least part of the fall in domestic demand and diversification of the product pattern is pushed through with greater vigour. Although quite energetic efforts have been made to step up exports, the results achieved so far have been far below expectations. Take the performance of HMT itself. Two branch offices have been opened by HMT—one in Frankfurt (West Germany) and the other in New York (USA). It is also maintaining adequate stocks of its products in these two countries to ensure quick deliveries to the prospective buyers. The State Trading Corporation has been acting as the agent of HMT for the sale of machine tools to east Europe. Agents have also been appointed in Australia, New Zealand and the UK. To make our machine tools competitive in the world market, a 10 per cent cash subsidy has been provided. But still, as against the target of one crore of rupees worth of foreign exchange in each of the two years, 1966 and 1967 HMT has been able to export machines worth only Rs 17.87 lakhs in 1965-66 and Rs 30.12 lakhs in 1966-67. Some machines have gone to Switzerland, West Germany and New Zealand, but the bulk of the sales has been to east European countries—the USSR, East Germany, Poland, Hungary, Bulgaria and Czechoslovakia. The expectation that HMT would be able to sell at least 25 to 30 machines a month in the United States, as about 50 per cent of the nearly 2,000 machines imported by the USA belong to the categories produced by HMT, have not materialised. The same is the case with the west Asian and African markets in which the scope for selling HMT's machines was considered good.

Inadequate Incentives

The quality of HMT machines is said to be comparable to international standards. Why then has the export performance been so poor? The government and the politicians who are never tired of decrying the export performance of the private sector ought to bestow some thought on this question. A high level study on the matter should throw up some useful suggestions for stepping up exports. The recent increase in the cash subsidy on exports of machine tools from 10 per cent to 20 per cent suggests that the export incentives provided after devaluation had not been very helpful.

So far as the diversification of the product pattern of the industry is concerned, there apparently is good scope for this. Even during the current recessionary period, imports of machine tools have been substantial—over Rs 30 crores a year. This has prompted not only HMT but also the other major producers to diversify their production. With collaboration from a number of foreign companies, HMT, for instance, has during the past two years extended its product pattern to include such sophisticated machine tools as (i) single and multi-spindle bar and chucking automatics, (ii) "Fay" automatics (iii) "Pilote" copying lathes, (iv) multi-tool lathes, (v) surface grinders, (vi) drum type turrets; (vii) horizontal boring machines; (viii) broaching machines; (ix) gear hobbers; (x) all-electric milling machines; and (xi) gear shapers. It has now a range of 17 families of standard machine tools and a wide range of special purpose machines to meet the diversified needs of the machine tool consumers.

Efforts have been made by HMT to effect improvements in the existing designs. The earlier models of turret and universal lathes have been completely redesigned. Those now in production incorporate the latest improvements and practices in turning techniques. Prototypes of short piece turning machines have been completed and production models have been developed for undertaking regular manufacture next year.

Prototypes of vertical turning machines and heavy duty radial drills are also under manufacture. A heavy duty lathe has been designed and prototype has been built.

With a view to diversifying its production lines further, an agreement has been finalised by HMT, subject to the approval of the Government of India, with Verson Allsteel Press Company, Chicago, USA, for the manufacture of metal forming machines. A new subsidiary—HMT-Verson Ltd—is proposed to be floated for the manufacture of a wide range of mechanical presses, hydraulic presses, transmat presses, impact extrusion presses, press brakes and shears and special purposes presses of the medium and heavy duty types. These products will meet the requirements of the automobile, defence, metal working and other engineering industries.

Printing Machinery

A survey has been conducted by HMT on the requirements of printing machinery in the country. The Government of India has in principle approved of HMT's taking up the manufacture of printing presses. In this connection, HMT has proposed to enter into a tie-up with M/s Schrellpressenfabrik Albert Frankenthal of West Germany with a view to setting up a subsidiary company to take up the manufacture of printing press machinery.

The private sector manufacturers have similarly diversified their production. Kirloskars, for example, have gone into the production of cylindrical grinders, automobile chucking

lathes and copying lathes. With the going into production of the heavy machine tools plant, the product pattern of our machine tool industry has been diversified further. This plant is to produce heavy duty central lathes, radial drilling machines, double column planing machines, horizontal borers, vertical boring and turning mills, plano-milling machines, precision cylindrical and roll grinding machines, etc.

No doubt, the present recession has severely affected the machine tool industry. But by compelling the industry to diversify production and become export-conscious, it has done a good turn also. The diversification of the product pattern of our machine tool industry, it is expected, will help in the near future in substituting imports worth about Rs 14 crores a year. With a view to accelerating the process of diversification, the government has done well in according priority to the industry's import requirements both of balancing equipment and raw materials. But the troubles of the industry will be over only if the demand for machine tools picks up in the near future. The provision of rediscounting facilities by the Industrial Development Bank for the sale of machine tools has not produced much effect because of the insistence on bank guarantees and letters of undertaking before sales are effected. Lending institutions have now been persuaded to modify their terms of financial guarantee to enable a larger number of projects to derive benefit of the scheme of deferred payments for buying new machine tools. Let us hope that this step will help in reviving demand.



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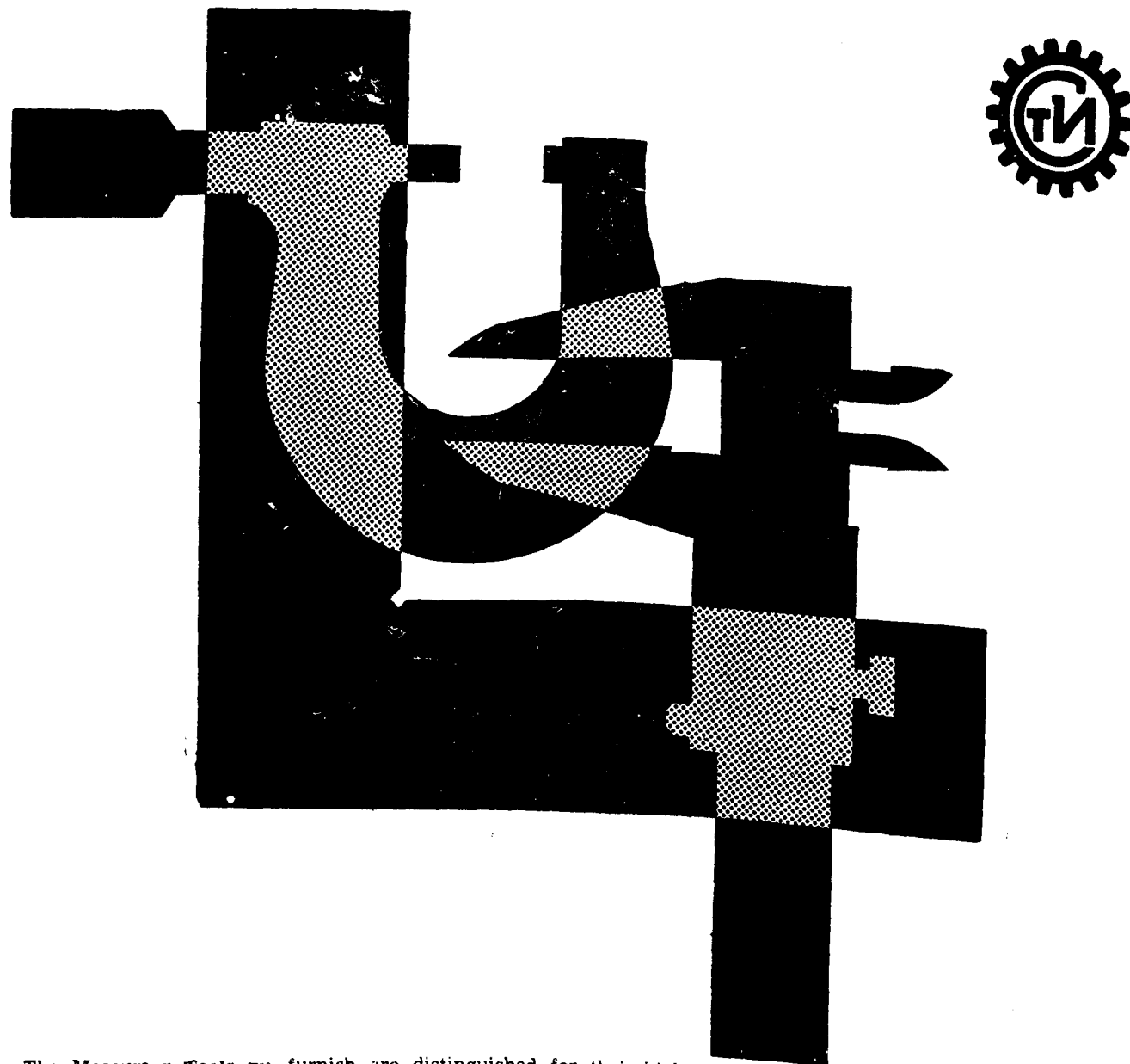
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INTERADS

December 29, 1967

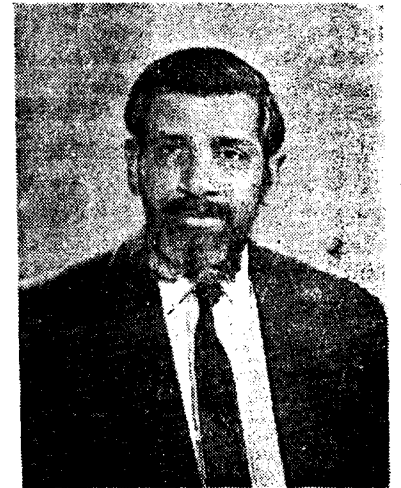
COMPANY MEETING

THE DELHI CLOTH & GENERAL MILLS COMPANY LTD.

Bara Hindu Rao, Delhi

Speech of the Chairman, Dr Bharat Ram

The following is the speech delivered by Dr Bharat Ram, Chairman Board of Directors, The Delhi Cloth & General Mills Company Limited, at the 79th Annual General Meeting held on Thursday the 21st December 1967.



DR. BHARAT RAM

Ladies & Gentlemen:

I have great pleasure in welcoming you to this 79th Annual General Meeting of your Company.

Since we met last year, the country has witnessed a number of significant developments. The Fourth General Elections resulted in a substantial reduction of strength of the Congress Party in Parliament and in some States, and the formation of United Front and other non-Congress Governments in several major States. Apart from the effect of these developments on account of the changed relationships between the Union Government and some State Governments, there has been considerable impact in the economic sphere as a result of the policies, and the implicit or declared objectives of the new power groups. While, on the one hand, one can derive some satisfaction from the fact that the country is functioning in a free democracy, on the other hand, many weaknesses have come to the surface. There are signs of increasing indiscipline at all levels. Instead of achieving our cherished goal of integration, all types of fissiparous tendencies between the States and within the various States are increasing. Sometimes, it is the language issue and sometimes a boundary issue, and sometimes a water issue on which the various States and regions seem to be pulling in different directions. The law and order situation also is causing anxiety in some of the States. Unfortunately, starting right from the political level to the level of ordinary people, indiscipline appears to be gnawing at the roots of democracy and stability. Apart from the fact that we have had various economic problems, the present political situation is further adding to the difficulties. Whatever the form of Government, and more so in a democratic Government, there is need for self-discipline. Government must handle indiscipline at any level with a firm hand if democracy is to survive.

On the economic front, conditions are extremely depressing. We are passing through a peculiar situation of inflation and recession at the same time. While, on the one hand, prices have been rising leading to great hardship to the people, on the other, industry, in many fields, is finding it difficult to sell its products. We are in the midst of a vicious circle where high prices are leading to a lowering of the purchasing power of the people, which, in turn, is leading to recession. Our whole economy is dependent upon agricultural production and prices. Due to two years of drought, prices of food-grains and other agricultural produce, which is the raw material for industry, have been increasing at a fast rate. Fortunately, the Government has now become aware of the emphasis which should be laid on agriculture. And this year, with good rains, agricultural production is likely to be satisfactory. Everybody hopes that this will lead to a revival of the econo-

my. However, we should not become complacent and think that one good monsoon will solve all our economic problems.

The problem of finance, both external and internal, is still very great. With regard to external resources, already there are signs that as much foreign aid as we have been hoping for is not likely to materialise, and we would have to depend more and more on our own exports. Devaluation, which was expected to help in increasing exports, has not had any effect on our exports. In the first year after devaluation, exports were only \$1525 millions as compared to \$1720 millions in the corresponding period of 1965-66. In August 1967 our exports were worth approximately \$120 millions as against \$143 millions in August 1966. In certain cases, the export incentives given before devaluation were not fully met by the increase in the rupee value of exports after devaluation. Such factors have certainly discouraged export efforts.

The gap between our imports and exports, taking into account the aid which we receive from friendly foreign countries, is still large, and the imbalance between imports and exports can only be reduced if we link our imports to exports, except for some of the crucial and strategic imports like food or defence equipment. I am sure that if, together with certain monetary incentives, imports are linked with exports, exports will certainly increase. There are bound to be some short-term problems with this linking, but these would smoothen out over a period of time.

The revival of the capital market is a problem about which we have been talking for the past few years. Rupee financing for new projects is becoming more and more difficult. Many suggestions have been made to the Government from time to time for the revival of the capital market, without any response. With increasing agricultural production, very large amounts will be required for financing the additional produce. I do not know from where this finance will come. Although I am not in favour of deficit financing, as a rule, I think under the present circumstances, to give a boost to the economy a judicious dose of deficit financing will help revival. It is, however, important that the tool of deficit financing is not used for wasteful expenditure. In order to revive the capital market for equity investment, in my humble opinion, the Government should make an effort to bring down the bank rate and the rates of earnings on preference shares and debentures. If preference share rates are as high as 9½ to 10%, how can one expect investment in equity shares!

Coming to your Company's affairs, I am glad to say that after making allowances for the adjustments in the basis for

December 23, 1967

computation of depreciation for the Kota units, the Company's performance has been better than last year. The Textile Industry in the country continues to face acute problems on account of shortage of cotton and other raw materials, increased costs of labour, and inflexible price structure.

The Sugar Industry in Western U.P. continues to be affected adversely by shortage of sugar cane. Largely as a result of Government policy in respect of controls on the sugar industry, sugar cane continues to be diverted to the much less productive Gur and Khandsari industries. Recently, the Government has announced partial de-control on the distribution and price of sugar. The effect of these changes will have to be watched carefully.

The Chemical units and the rayon tyre-cord operations

of the Company have shown satisfactory results. The new Stable Bleaching Powder unit at Delhi has gone into operation and the product has had satisfactory response in the market. You will be pleased to know that the construction of the Company's new fertiliser plant at Kota is progressing satisfactorily. The shipments of equipment have started to arrive and we hope that the installation and starting of the plant will be completed in record time.

In the end, I would like to congratulate all the workers and the staff whose devotion to duty and zealous efforts have enabled us to achieve the good results in spite of so many problems.

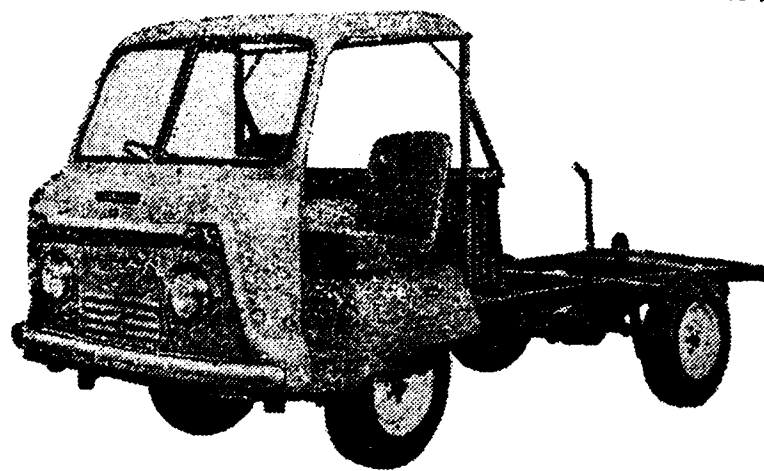
NOTE: This does not purport to be a record of the proceedings of the Annual General Meeting.

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Statistical Outline of Indian Economy

IN THE following pages, salient statistics have been put together to highlight the achievements as well as failures in different sectors of the economy with emphasis on the performance in industry. The statistical details presented here relate to national income, agricultural and industrial production, taxation, external assistance, foreign investments and trade, money supply and prices.

DEMOGRAPHIC DATA

Growth of Population

Year	Population			Growth over previous period	
	In millions	In millions	Percentage change	In millions	Percentage change
1901	...	236.3*			
1911	...	252.1	13.5*		5.7*
1921	...	251.4	-0.7		-0.3
1931	...	279.0	27.6		11.0
1941	...	318.7	39.7		14.2
1951	...	361.1	42.4		13.3
1961	...	439.2	78.1		21.5†
1967**	...	510.2	71.0		16.2

* Excluding Jammu & Kashmir.

† Excludes NEFA and Tuensang districts of Nagaland.

** May-end 1967; Official estimate.

Mortality Rates

Year	Death rate (per thousand population)	Infant mortality rate (per thousand live births)
1939	21.6	156
1941	21.9	158
1944	24.5	169
1947	19.7	146
1950	16.1	133
1955	11.7	103
1960	11.0	86
1961	11.4	83
1962	11.1	80
1963	10.7	76
1964	9.8	...

Age-wise Distribution of Population : 1961

Age group (years)	Population (in millions)			Percentage distribution		
	Males	Females	Total	Males	Females	Total
0-4	36.7	35.8	72.5	16.3	16.0	16.5
5-14	55.0	52.6	107.6	24.4	24.8	24.6
15-24	41.6	39.3	80.9	18.4	18.5	18.5
25-34	33.3	31.3	64.6	14.7	14.7	14.7
35-44	25.1	22.2	47.3	11.1	10.4	10.8
45-54	17.5	15.2	32.7	7.8	7.2	7.5
55-64	10.4	9.5	19.9	4.6	4.5	4.5
65 and above	6.2	6.6	12.8	2.7	3.1	2.9
Total	225.8	212.5	438.3†	100.0	100.0	100.0

† Excluding NEFA, Goa, Daman and Diu.

Population by Religion

Religion	Population (in millions)		Percentage distribution	
	1951	1961	1951	1961
Buddhists	0.2	3.3	0.1	0.7
Christians	3.4	10.7	2.4	2.4
Hindus	303.6	366.5	85.0	83.5
Jains	1.6	2.0	0.4	0.5
Muslims	35.4	46.9	9.9	10.7
Sikhs	6.2	7.8	1.7	1.8
Others	1.8	1.6	0.5	0.4
Total	357.3	438.9	100.0	100.0

Expectation of Life

Year	Male (years)	Female (years)
1881	23.67	25.58
1891	24.59	25.54
1901	23.63	23.96
1911	22.59	23.31
1921	19.42	20.90
1931	26.91	26.56
1941	32.09	31.37
1951	32.45	31.66
1963	48.7	47.4

NATIONAL INCOME

National Income: 1948-49—1966-67

Year	National Income (Rs crores)		Per Capita Income (Rs)		Index Number of National Income (1948-49=100)		Index Number of Per Capita Income (1948-49=100)	
	At Current Prices	At 1948-49 Prices	At Current Prices	At 1948-49 Prices	At Current Prices	At 1948-49 Prices	At Current Prices	At 1948-49 Prices
1948-49	8,650	8,650	249.6	249.6	100.0	100.0	100.0	100.0
1949-50	9,010	8,820	256.0	250.6	104.2	102.0	102.6	100.4
1950-51	9,530	8,500	266.5	247.5	110.2	102.3	106.8	99.2
1951-52	9,970	9,100	274.2	250.3	115.3	105.2	109.9	100.3
1952-53	9,820	9,460	265.4	255.7	113.5	109.4	106.3	102.4
1953-54	10,480	10,030	278.1	266.2	121.2	116.0	111.4	106.7
1954-55	9,610	10,260	250.3	267.8	111.1	118.8	100.3	107.3
1955-56	9,930	10,480	255.0	267.8	115.4	121.4	102.2	107.3
1956-57	11,310	11,000	283.3	275.6	130.8	127.2	113.5	110.4
1957-58	11,390	10,890	279.6	267.3	131.7	125.9	112.0	107.1
1958-59	12,600	11,650	303.0	280.1	145.7	134.7	121.4	112.2
1959-60	12,950	11,860	304.8	279.2	149.7	137.1	122.1	111.9
1960-61	14,140	12,730	325.7	293.2	163.5	147.2	130.5	117.5
1961-62	14,800	13,060	333.6	294.3	171.1	151.0	133.7	117.9
1962-63	15,400	13,310	339.4	293.4	178.0	153.9	136.0	117.5
1963-64	17,210	13,970	370.9	301.1	199.0	161.5	148.6	120.6
1964-65	20,010	15,050	421.5	317.0	231.3	174.0	168.9	127.0
1965-66	20,250	14,490	416.7	298.3	234.0	167.5	166.9	119.5
1966-67	22,900	...	458.9	...	264.8	...	184.0	...

Note: The per capita estimates are based on the rate of growth of population as revealed by the 1941, 1951 and 1961 census figures.

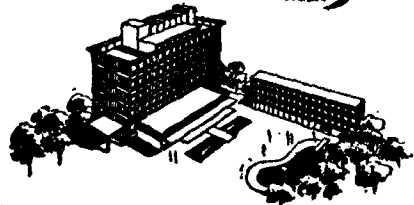
National Income: 1960-61—1966-67

Year	Net National Product				Percentage increase over the previous year in national product (at 1960-61 prices)	
	At Current Prices		At 1960-61 Prices			
	Total (Rs. crores)	Per Capita (Rs.)	Total (Rs. crores)	Per Capita (Rs.)	Total	Per Capita
1960-61	13,453	310.0	13,453	310.0		
1961-62	14,315	322.3	14,037	316.0	4.3	1.9
1962-63	15,179	332.9	14,329	314.2	2.1	(—)0.6
1963-64	17,563	376.1	15,101	323.4	5.4	2.9
1964-65(P)	20,424	427.1	16,219	339.2	7.4	4.9
1965-66(P)	21,064	430.1	15,441	315.3	(—)4.8	(—)7.1
1966-67(Q)	24,157	481.5	15,706	313.1	1.7	(—)0.7

(P) = Preliminary estimate (Q) = Quick estimate

Note: The revised estimates of national product at current prices which have been issued by the Central Statistical Organisation along with the new series (1960-61 prices) are not exactly comparable with earlier estimates.

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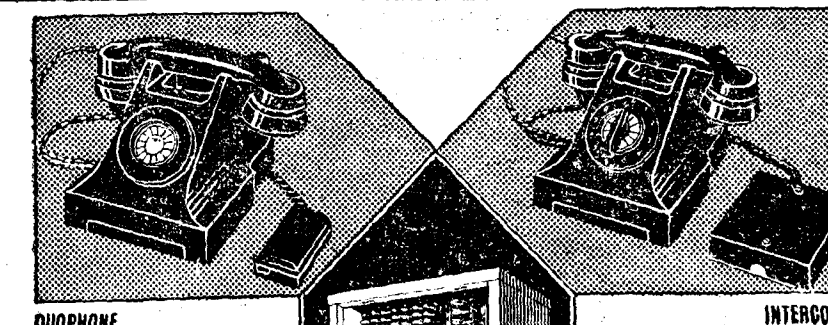
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Comparison of Movement of Net National Product (At Factor Cost) (at current and constant prices)

	1960-61	1961-62	1962-63	1963-64	1964-65*
Net national product (Rs crores)					
At current prices	13453	14315	15179	17563	20424
At 1960-61 prices	13453	14037	14329	15101	16219
Per capita net national product (Rs)					
At current prices	310.0	322.3	332.9	376.1	427.1
At 1960-61 prices	310.0	316.0	314.2	323.4	339.2
Index number of net national product with 1960-61 as base					
At current prices	100.0	106.4	112.8	130.6	151.8
At 1960-61 prices	100.0	104.3	106.5	112.2	120.6
Index number of per capita net national product with 1960-61 as base					
At current prices	100.0	104.0	107.4	121.3	137.8
At 1960-61 prices	100.0	101.9	101.4	104.3	109.4

* Preliminary.

National Product at Current and 1960-61 Prices

	1960-61	1961-62	1962-63	1963-64	1964-65*
(Rs crores)					
At Current Prices					
Net domestic product (at factor cost)	13525	14413	15287	17679	20572
Net factor income from abroad	-72	-98	-108	-116	-143
Net national product (at factor cost)	13453	14315	15179	17563	20424
Allowance for depreciation	736	810	930	991	1100
Gross national product (at factor cost)	14189	15125	16109	18554	21524
Indirect taxes less subsidies	948	1080	1265	1566	1734
Gross national product at market prices	15137	16205	17374	20120	23398
At 1960-61 Prices					
Net domestic product (at factor cost)	13525	14133	14439	15216	16362
Net factor income from abroad	-72	-96	-110	-115	-143
Net national product (at factor cost)	13453	14037	14329	15101	16219
Allowance for depreciation	736	785	881	912	968
Gross national product (at factor cost)	14189	14822	15210	16013	17187

* Preliminary.

Gross and Net Product from Public Sector (At current prices)

	Government administration			Departmental enterprises			Non-departmental enterprises			Total public sector		
	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product	Gross product	Allowance for depreciation	Net product
1960-61	744	...	744	611	64	547	214	52	162	1569	116	1453
1961-62	834	...	834	669	60	609	260	71	189	1763	131	1632
1962-63	936	...	936	748	73	675	353	97	266	2037	160	1877
1963-64	1085	...	1085	839	74	765	427	98	329	2351	172	2179
1964-65	1233	...	1233	891	84	807	505	121	384	2629	205	2024

Share of Public Sector in Generation of Domestic Product (At current prices)

Item	1960-61	1961-62	1962-63	1963-64	1964-65
(Rs crores)					
Net Domestic Product	13525	14413	15287	17679	20572
Public sector	1453	1632	1877	2179	2424
Private sector	12072	12781	13410	15500	18148
Gross Domestic Product	14261	15223	16217	18670	21672
Public sector	1569	1763	2037	2351	2629
Private sector	12692	13460	14180	16319	19043
Percentages					
Net Domestic Product	100.0	100.0	100.0	100.0	100.0
Public sector	10.7	11.3	12.3	12.3	11.8
Private sector	89.3	88.7	87.7	87.7	88.2
Gross Domestic Product	100.0	100.0	100.0	100.0	100.0
Public sector	11.0	11.6	12.6	12.6	12.1
Private sector	89.0	88.4	87.4	87.4	87.9

AGRICULTURE

Index Numbers of Agricultural Production: 1950-51—1966-67 (Agricultural year ended June 1950=100)

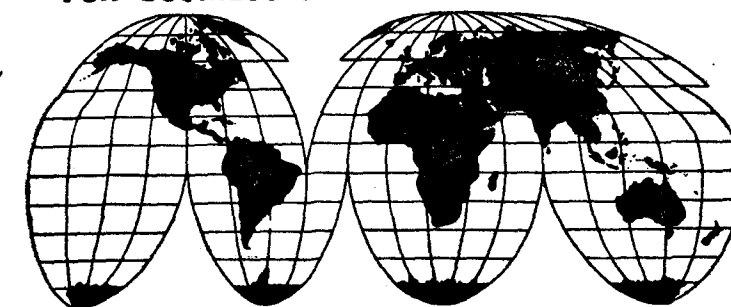
Commodity/Group	Weight	1950-51	1955-56	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Rice	35.3	87.9	114.2	137.7	142.4	132.6	147.0	155.1	121.8	120.9
Wheat	8.5	101.1	131.3	162.8	178.8	159.6	145.9	182.1	154.5	170.8
Jowar	5.0	89.8	96.7	141.1	115.4	140.1	132.2	140.1	108.2	128.6
Bajra	2.7	83.8	108.3	102.9	114.1	123.9	121.3	139.3	114.3	140.8
Maize	2.1	84.4	112.3	146.7	154.3	164.8	163.2	166.6	169.8	178.1
Total Cereals	58.3	90.3	114.9	138.3	143.1	135.9	141.4	153.7	124.2	129.9
Gram	3.7	98.0	138.9	160.4	148.5	137.6	115.5	148.5	108.0	92.8
Total Pulses	8.6	91.7	118.4	129.0	121.5	117.9	102.9	126.3	98.4	88.8
Total Foodgrains	66.9	90.5	115.3	137.1	140.3	133.6	136.5	150.2	120.9	124.6
Groundnuts	5.7	101.4	112.4	142.1	147.5	149.4	156.3	178.3	128.1	135.8
Total Oilseeds	9.9	98.5	108.6	134.0	140.0	142.6	134.5	164.9	125.4	127.3
Cotton	2.8	110.7	153.9	202.1	174.9	199.8	208.6	217.6	183.0	189.5
Jute	1.4	106.3	135.8	125.3	192.7	165.0	184.3	182.4	135.5	162.1
Mesta	0.3	100.0	174.7	168.8	280.8	260.7	283.7	236.8	192.3	181.6
Total Fibres	4.5	108.6	149.7	176.0	187.5	193.0	206.0	207.9	168.8	180.4
Tea	3.3	103.8	107.2	120.9	133.4	130.5	130.4	140.2	137.9	141.1
Coffee	0.2	112.3	196.1	246.4	230.4	237.7	255.5	269.0	281.6	339.5
Rubber	0.1	93.8	146.1	167.0	180.0	209.4	239.0	286.0	328.5	328.5
Total Plantation Crops	3.6	104.0	113.2	129.2	140.1	138.6	140.4	151.4	151.2	157.3
Sugarcane	8.7	113.7	119.8	183.9	173.5	152.5	172.6	200.2	201.3	158.0
Tobacco	1.9	97.3	112.9	114.3	126.2	129.3	136.4	131.0	112.8	132.6
Total Miscellaneous	15.1	110.3	120.1	163.4	156.3	148.2	160.0	178.4	174.3	150.2
Total Non-Foodgrains	33.1	105.9	119.9	152.6	153.9	151.6	156.5	175.4	156.4	148.2
All Commodities	100.3	95.6	116.8	142.2	144.8	139.6	143.1	158.5	132.7	132.4

Note: The indices for 1964-65 and 1965-66 are generally based on partially revised estimates while those for 1966-67 are generally based on final estimates. The indices for these years are, therefore, subject to revision.

(a) Based on provisional estimates.

Source: Ministry of Food and Agriculture.

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Area and Production of Agricultural Commodities (1950-51-1962-63)

Commodity	1950-51 (a)		1955-56		1960-61		1961-62		1962-63	
	Area (Hec- tares)	Produc- tion (Tonnes)	Area (Hec- tares)	Produc- tion (Tonnes)	Area (Hec- tares)	Produc- tion (Tonnes)	Area (Hec- tares)	Produc- tion (Tonnes)	Area (Hec- tares)	Produc- tion (Tonnes)
	1	2	3	4	5	6	7	8	9	10
FOODGRAINS										
Cereals										
1. Rice	30,519	23,542	31,521	27,557	34,128	34,574	34,694	35,663	34,934	31,914
2. Wheat	9,758	6,391	12,367	8,760	12,927	10,997	13,570	12,072	13,657	10,829
3. Jowar	15,513	5,870	17,362	6,726	18,412	9,814	13,249	8,029	18,021	9,621
4. Bajra	9,259	2,835	11,338	3,423	11,469	3,283	11,278	3,645	10,800	3,892
5. Maize	3,262	2,046	3,696	2,602	4,407	4,080	4,507	4,312	4,607	4,573
6. Ragi	2,205	1,544	2,307	1,846	2,515	1,833	2,511	2,030	2,316	1,891
7. Barley	3,181	2,251	3,418	2,816	3,205	2,819	3,312	3,150	3,022	2,423
8. Small millets	5,415	2,278	5,335	2,070	4,955	1,909	4,868	2,050	4,693	1,860
Total cereals	79,113	46,757	87,344	55,805	92,018	69,314	92,989	70,951	92,050	67,008
Pulses										
9. Gram	8,295	3,726	9,779	5,418	9,276	6,250	9,566	5,785	9,177	5,343
10. Other pulses	11,372	4,433	13,437	5,627	14,287	6,454	14,677	5,970	14,782	6,097
Total pulses	20,167	8,159	23,216	11,045	23,563	12,704	24,243	11,755	23,959	11,440
Total foodgrains (cereals and pulses)	99,280	54,916	110,560	66,850	115,581	82,018	117,232	82,706	116,009	78,448
NON-FOODGRAINS										
11. Sugarcane (b)	1,707	5,705	1,847	6,075	2,415	11,141	2,455	10,563	2,280	9,544
12. Oilseeds	10,727	5,158	12,085	5,734	13,770	6,982	14,772	7,284	14,794	7,113
(i) Groundnut (nuts in shell)	4,494	3,481	5,133	3,862	6,463	4,812	6,809	4,994	6,834	4,821
(ii) Rape and mustard	2,071	762	2,556	860	2,883	1,347	3,163	1,346	3,108	1,294
(iii) Sesamum	2,204	445	2,293	467	2,169	318	2,252	372	2,488	464
(iv) Linseed	1,403	367	1,529	420	1,789	398	1,977	463	1,899	433
(v) Castorseed	555	103	574	125	466	107	486	109	435	101
13. Cotton (Lint) (c)	5,832	2,875	8,086	3,949	7,610	5,293	7,978	4,581	7,845	5,303
14. Jute (c)	571	3,309	704	4,232	629	4,134	917	6,358	851	5,449
15. Mesta (c)	—	—	231	1,162	274	1,129	425	1,878	379	1,697
16. Tea	317	279	321	308	331	321	333	354	334	347
17. Coffee	93	19	103	35	120	68	125	46	126	56
18. Rubber	69	16	84	24	130	26	141	27	146	32
19. Tobacco	357	261	410	303	401	307	418	339	416	366

(a) Data regarding foodgrains relate to 1949-50 which was the base year in respect of foodgrains for the first five year Plan. (b) Yield in terms of gur. (c) Production in thousand bales of 180 kilograms each.

(Contd. on page 1311)

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Area and Production of Agricultural Commodities (Contd.) (1963-64-1966-67)

Commodity	1963-64		1964-65		1965-66		1966-67*	
	Area (Hectares)	Production (Tonnes)	Area (Hec- tares)	Production (Tonnes)	Area (Hec- tares)	Production (Tonnes)	Area (Hec- tares)	Production (Tonnes)
	11	12	13	14	15	16	17	18
FOODGRAINS:								
Cereals:								
1. Rice	35,622	36,889	36,364	39,034	35,022	30,614	35,598	30,440
2. Wheat	13,496	9,861	13,460	12,290	12,798	10,720	13,135	11,528
3. Jowar	17,956	9,135	17,938	9,749	17,181	7,492	18,001	8,944
4. Bajra	10,785	3,734	11,726	4,454	11,428	3,598	12,458	4,503
5. Maize	4,584	4,553	4,618	4,658	4,683	4,632	5,061	4,991
6. Ragi	2,400	1,962	2,437	1,898	2,198	1,305	2,374	1,600
7. Barley	2,775	2,037	2,684	2,523	2,551	2,284	2,859	2,449
8. Small millets	4,580	2,017	4,513	1,952	4,331	1,602	4,720	1,671
Total cereals	92,198	70,188	93,741	76,558	90,192	62,247	94,206	66,126
Pulses:								
9. Gram	9,376	4,499	8,896	5,785	7,849	4,442	8,015	3,612
10. Other pulses	14,679	5,556	14,897	6,652	13,601	5,575	14,243	—
Total Pulses	24,055	10,055	23,793	12,437	21,450	10,017	22,258	—
Total foodgrains (cereals and pulses)	116,253	80,243	117,533	88,996	111,642	72,264	116,484	—
NON-FOODGRAINS:								
11. Sugarcane (b)	2,257	10,596	2,562	12,031	2,749	11,830	2,382	—
12. Oilseeds	14,710	7,038	15,110	8,458	14,639	6,097	14,852	6,489
(i) Groundnut (nuts in shell)	6,809	5,215	7,216	5,888	7,171	4,022	7,251	4,485
(ii) Rape and mustard	3,023	903	2,881	1,466	2,891	1,268	2,995	1,246
(iii) Sesamum	2,395	439	2,513	493	2,456	406	2,480	425
(iv) Linseed	2,006	379	2,059	503	1,764	329	1,526	335
(v) Castorseed	477	102	440	108	356	71	412	81
13. Cotton (Lint) (c)	8,160	5,494	8,271	5,664	7,827	4,708	7,834	4,931
14. Jute (c)	868	6,185	838	6,020	756	4,471	798	5,348
15. Mesta (c)	393	1,874	360	1,583	320	1,244	318	1,214
16. Tea	334	346	338	372	342	365	—	—
17. Coffee	129	69	—	61	—	60	—	—
18. Rubber	153	37	155	46	165	51	—	—
19. Tobacco	440	358	394	346	345	274	351	—

Note: (1) Figures relate to the agricultural year ending June. Item 16 refers to the calendar year i.e., figures for 1950-51 relate to 1950 and so on; however, area figures refer to the financial year ending March. Item 18 refers to the financial year ending March. (2) Figures for 1962-63, 1963-64 and 1964-65 are partially revised estimates while those for 1965-66 are final estimates. (3) In the case of jute 1965-66 is partially revised estimate.

(b) Yield in terms of gur. (c) Production in thousand bales of 180 kilograms each.

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Net Availability of Cereals and Pulses in India

Year	Population (million)	Cereals (million tonnes)					Pulses		Per capita net avail- ability (ozs. per day)
		Production		Net imports	Withdrawals (—) from govt. stocks	Net avail- ability	Net avail- ability (million tonnes)		
		Gross	Net						
								Cereals	
1951	363.4	45.74	40.02	4.80	+0.59	44.23	8.03	11.8	2.1
1952	369.6	46.40	40.60	3.93	+0.62	43.91	7.97	11.5	2.1
1953	376.1	51.35	45.37	2.04	—0.48	47.89	8.59	12.3	2.2
1954	382.9	61.08	53.44	0.83	+0.20	54.07	9.72	13.6	2.5
1955	390.2	58.97	51.60	0.60	—0.75	52.95	10.10	13.1	2.5
1956	397.8	57.53	50.34	1.40	—0.60	52.34	10.21	12.7	2.5
1957	405.8	60.20	52.68	3.63	+0.86	55.45	10.61	13.2	2.5
1958	414.3	56.41	49.36	3.22	—0.27	52.85	8.82	12.3	2.1
1959	423.3	65.49	57.30	3.86	+0.49	60.67	11.54	13.8	2.6
1960	432.7	64.88	56.77	5.13	+1.40	60.50	10.32	13.5	2.3
1961	442.7	69.31	60.65	3.49	—0.17	64.31	11.11	14.0	2.4
1962	453.5	70.95	62.08	3.64	—0.36	66.08	10.28	14.1	2.2
1963*	464.3	67.01	58.63	4.55	—0.02	63.20	9.99	13.1	2.1
1964*	475.5	70.19	61.41	6.26	—1.24	68.91	8.79	14.0	1.8
1965*	487.0	76.56	66.99	7.45	+1.06	73.38	10.88	14.6	2.2
1966*	498.9	62.25	54.47	10.34	+0.14	64.67	8.76	12.5	1.7

* Provisional

Source: Ministry of Food and Agriculture.

Consumption of Fertilizers

Year	(Thousand tonnes)			
	Nitrogen (N)	Phosphate (P ₂ O ₅)	Potash (K ₂ O)	Total
1947	4.3	0.9	1.8	7.0
1951	58.7	6.9	7.7	73.3
1955	111.0	12.8	10.2	134.0
1960-61	231.8	53.8	29.6	315.2
1961-62	307.1	63.6	30.4	401.1
1962-63	328.4	91.2	39.9	459.5
1963-64	425.9	120.8	51.1	597.8
1964-65	492.2	148.5	75.2	715.9
1965-66	582.3	134.1	89.6	806.0
1966-67	703.7	283.2	115.0	1101.9

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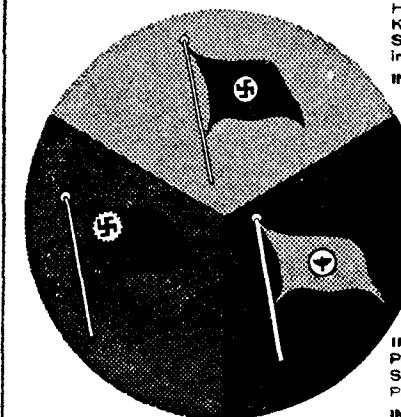
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GENERAL MANAGER

INDUSTRY

Progress of Industrial Development for Major Industries (POSITION AS ON APRIL 1, 1967)

Name of the industry	Unit	Existing capacity as on 1-4-61	Third Plan target	Existing installed capacity & capacity covered by foreign exchange 5(6+7)	Existing installed capacity as on 1-4-67	Additional capacity covered by foreign exchange	Additional capacity not covered by foreign exchange	Total licensed capacity incl. existing capacity 9(5+8)
ENGINEERING INDUSTRIES								
INDUSTRIES LOOKED AFTER BY THE DEPT. OF INDUSTRIAL DEVELOPMENT								
Steel castings	'000 tonnes	38.12	200.00(a)	240.14	170.81	169.33	84.28	424.42
Steel forgings	"	42.90	200.00(b)	179.81	33.29	96.52	112.28	292.09
Grey iron castings	Lakh tonnes	6.40	12.00(c)	12.94	12.40(E)	0.54	0.09	13.03
Malleable/iron casting	'000 tonnes	18.29	100.00	82.26	35.64	46.62	51.80	134.06
Cast iron pipes	"	278.40	800.00	677.14	382.54	294.80	72.00	749.14
Steel pipes & tubes	"	300.38	450.00	830.08	488.63	341.40	220.00	1050.08
Steel wire ropes	"	5.64	40.00	37.44	28.44	9.00	Nil	37.44
Structurals	"	394.65	900.00	599.55	487.55	112.00	154.90	754.45
Cranes	"	9.32	60.00	42.08	25.68	16.40	45.10	87.18
Sugar mill machinery	Rs crores	11.60	16.00	16.90	14.60	2.30	0.54	17.44
Cement machinery	"	1.10	4.50	23.00	23.00	Nil	Nil	23.00
Paper mill machinery	"	3.70	8.50	8.99	6.05	2.94	Nil	8.99
Dairy machinery	Rs crores	1.78	2.50	2.57	2.57	Nil	1.78	4.35
Tungsten carbide	Tonnes	9.60	8.00	304.00	110.00	194.00	4.00	308.00
Machine tools (Excl. furnaces)	Rs crores	8.00	30.00aa	NA	45.00	NA	NA	NA
Road rollers	Nos.	450	800	1,980	1,800	180	120	2,100
Steam boilers	Rs crores	3.70	29.00aa	22.47	10.96	11.51	2.95	25.42
Railway wagons	Nos.	26,000	33,500	33,734	32,734	1,000	1,000	34,734
Passenger cars	'000 nos.	20.20	30.00	30.00	30.00	Nil	Nil	30.00
Commercial vehicles	"	28.00	60.00	66.90	48.00	18.90	Nil	66.90
Jeeps & station wagons	"	5.50	10.00	25.00	12.00	13.00	Nil	25.00
Motor cycles, scooters & mopeds	"	23.00	50.00	75.50	75.50	Nil	Nil	75.50
Ball & roller bearings	Million nos.	1.70	11.00ee	20.49	12.14	8.35	6.13	26.67

(a) Including 83.20 thousand tonnes reserved for public sector.

(b) Incl. 76.70 thousand tonnes reserved for public sector.

(c) Incl. 1.58 lakh tonnes reserved for public sector.

(E) Including 281 lakh tonnes for captive use.

(aa) Including Rs 16 crores reserved for public sector.

(ee) Including two million nos. reserved for public sector.

Progress of Industrial Development for Major Industries (Contd.)
(POSITION AS ON APRIL 1, 1967)

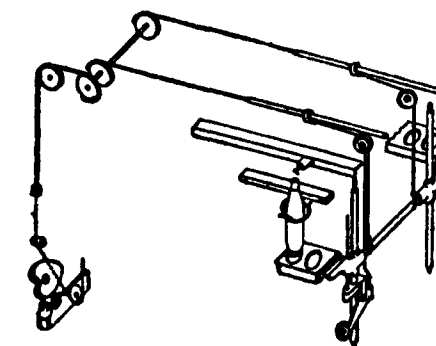
Name of the industry	Unit	Existing capacity as on 1-4-61	Third Plan target	Existing installed capacity & capacity covered by foreign exchange	Existing installed capacity as on 1-4-67	Additional capacity covered by foreign exchange	Additional capacity not covered by foreign exchange	Total licensed capacity incl. existing capacity
1	2	3	4	5 (6+7)	6	7	8	9 (5+8)
ENGINEERING INDUSTRIES (Contd.)								
Power driven pumps	'000 nos.	128.00	184.00	NA	188.43	NA	NA	NA
Diesel engines (Stationary)	" "	47.70	72.00	NA	74.06	NA	NA	NA
Agricultural tractors	" "	Nil	12.00	29.50	11.00	19.50	3.50	33.00
Electric transformers (33 KV & below)	Lakh KV	14.00	40.00	31.72	22.36	9.36	7.01	38.73B
Electric motors (300 HP and below)	Lakh HP	11.30	30.00	31.72	22.36	9.36	7.01	38.73B
Welding electrodes	Million R.Ft.	462.00	1,080.00	1,830.00	1,314.00	516.00	Nil	1,830.00
Air compressors	Nos.	2,300	8,000	7,531	6,991	540	Nil	7,531
Typewriters	'000 nos.	45.00	100.00*	84.00	66.00	18.00	60.40	144.40
Bicycles	Lakh nos.	14.14	22.00	16.55	16.55	Nil	Nil	16.55
Sewing machines	'000 nos.	133.70	700.00	527.50	470.00	57.50	Nil	527.50
Domestic refrigerators	"	13.60	50.00	50.80	36.00	14.80	Nil	50.80
Commercial refrigerators	"	1.61	6.00	1.61	1.61	Nil	Nil	1.61
Room air-conditioners	"	20.05	50.00	38.90	20.05	18.85	Nil	38.90
Water coolers	"	5.33	20.00	5.33	5.33	Nil	Nil	5.33
Abrasives	'000 reams	182.00	400.00	372.00	372.00	Nil	150.00	522.00
Grinding wheels	'000 tonnes	3.13	4.50	6.69	4.59	2.10	0.83	7.52
Clocks	'000 nos.	Nil	200.00	120.00	120.00	Nil	42.00	168.00
Time pieces	"	60.00	1,200.00	1300.00	510.00	790.00	200.00	1500.00
Watches	"	Nil	1,200.00	670.00	360.00	310.00	600.00	1270.00
Electric Cables & Wires								
i) ACSR	'000 tonnes	19.30	55.00 (88.00)	102.83	94.33	8.50	1.80	104.63
ii) VIR & PVC	Million core/yds.	463.20	800.00	1089.90	996.40	93.50	42.00	1131.90
iii) Paper insulated	K.M.	1,414	7,200	9,440	8,845	595	Nil	9,440
iv) Bare copper conductors	'000 tonnes	17.80	18.70	19.00	19.00	Nil	Nil	19.00
v) Winding Wires								
a) Enamelled & copper covered	"	4.59	20.00	19.60	13.66	5.94	0.29	19.80
b) Paper cotton covered	"	2.19	12.00	15.08	9.38	5.70	11.50	16.58
Electric fans	Lakh nos.	17.40	28.00	16.01	15.23	0.78	Nil	16.01
House Service Meters								
a) Single phase	"	3.84	23.00	17.60	12.80	4.80	Nil	17.60
b) Poly phase	"	Nil	3.81	3.70	2.20	1.50	Nil	3.70
Electric Lamps								
i) GIS & others	Million nos.	47.60	90.00	106.44	65.30	41.14	20.00	126.44
ii) Fluorescent tubes	"	1.20	7.00	16.96	4.50	12.46	1.03	17.99
iii) Miniature lamps	"	26.90	55.00	59.60	28.75	30.85	Nil	59.60
Dry batteries	Million nos.	224.50	400.00	536.50	289.50	247.00	50.00	586.50
Storage batteries	'000 nos.	380.90	900.00	855.20	778.40	76.80	Nil	855.20
Radio receivers	"	279.00	900.00	610.55	544.52	66.03	317.00	927.55

(B) Excluding capacity for public sector.

(BB) Including capacity for above 33 KVA transformers & excluding capacity of Heavy Electricals, Bhopal.
* 5800 assessed by the Development Council.

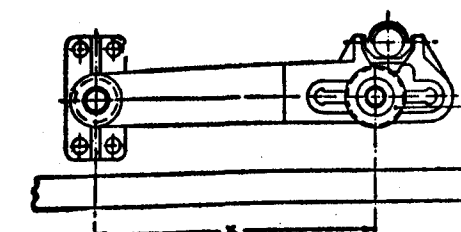
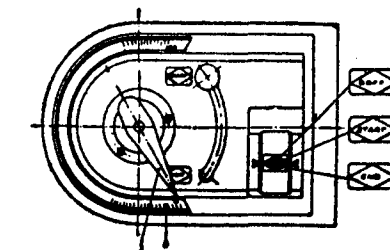
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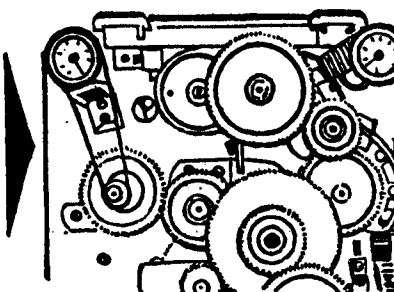
The unique lifting arrangement ensures smooth motion to ring and lappet rails through chain pulleys, lifting tubes and wire cored tapes.

Unlike conventional frame the novel ratchet mechanism requires no change of ratchet wheel. Optimum Bobbin diameter in relation to ring diameter can be obtained through mere adjustment of a regulator.



Wide range of chase length—45 mm. (1.75") to 80 mm. (3.15") available by simple adjustment to obtain suitable package for any winding speed

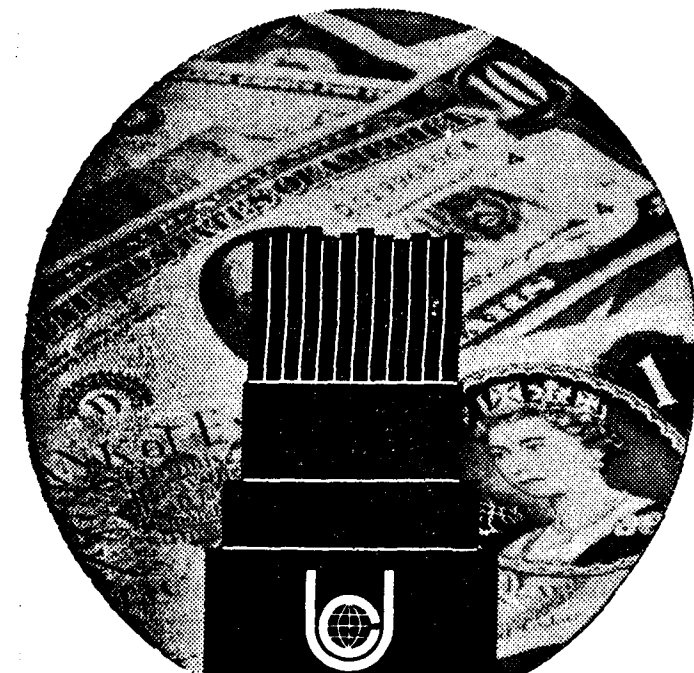
Speed Indicators showing continuously front roller and spindle speed



One draft change wheel for both sides resulting in economy in change gear requirement and higher machine efficiency

The machine is mechanically designed to run at spindle speeds up to 15,000 r.p.m.

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Progress of Industrial Development for Major Industries (Contd)

(POSITION AS ON APRIL 1, 1967)

Name of industry	Unit	Existing capacity as on 1-4-61	Third Plan target	Existing installed capacity & capacity covered by F.E.	Existing installed capacity as on 1-4-67	Additional capacity covered by foreign exchange	Additional capacity not covered by foreign exchange	Total licensed capacity including existing capacity
1	2	3	4	5 (6+7)	6	7	8	9 (5+8)

NON-ENGINEERING INDUSTRIES

INDUSTRIES LOOKED AFTER BY THE DEPT. OF INDUSTRIAL DEVELOPMENT

Calcium carbide	'000 tonnes	23.23	61.00	66.00	66.00	Nil	Nil	66.00
Sodium hydrosulphite and derivatives	"	2.30	12.20	11.36	7.10	4.26	8.00	14.36
Hydrogen peroxide	"	1.50	9.65	3.60	3.00	0.60	Nil	3.60
Potassium chlorate	"	1.50	9.65	6.62	4.82	1.80	Nil	6.62
Sodium bicarbonate	"	12.96	20.32	17.28	17.28	Nil	10.80	28.08
Heavy Chemicals (Primary Organic)								
Phthalic anhydride	'000 tonnes	Nil	15.00	12.30	Nil	12.30	Nil	12.30
Phenol by-products & synthetic	"	Nil	16.00	16.60	Nil	16.60	Nil	16.60
Methanol	"	Nil	30.00	33.00	33.00	Nil	Nil	33.00
Acetic acid	"	3.60	31.00	18.85	11.53	7.32	5.00	28.85
Rubber chemicals	"	Nil	3.00	4.75	2.75	1.98	Nil	4.75
Carbon black	"	Nil	30.00	31.25	31.25	Nil	35.70	66.95

Industrial Explosives

Blasting explosives	"	8.00	20.00 (C) (45.00)	22.50	15.00	7.50	20.00	12.50
ii) Safety fuses	Million coils	5.00	25.00 (45.00)	25.10	13.10	12.00	5.20	30.30
iii) Detonators	Million nos.	Nil	80.00 (216.00)	168.00	Nil	168.00	39.00	207.00
iv) Liquid oxygen explosives	Tonnes	2,000	9,000	2,000	2,000	Nil	Nil	2.00
Paints & varnishes (organised sector)	'000 tonnes	90,000	160,000 (A)	106.00	106.00	Nil	Nil	106.00
Starch	"	148.60	158.20	158.20	151.00	7.20	3.00	161.20
Liquid glucose	"	13.02	15.90	23.25	23.25	Nil	Nil	23.25
Dextrose powder	"	5.70	10.91	13.11	12.61	0.50	Nil	13.11
Automobile tyres	Lakh nos.	16.07	45.00 (51.40)	44.88	32.73	12.15	6.28	51.16
Bicycle tyres	"	157.90	386.00 (250.00 Revised Estimate)	310.36	205.56	104.80	105.30	415.66
Paper & paper board	'000 tonnes	418.00	820.00	921.16	711.20	209.96	Industry has been delicensed.	
Newsprint	"	30.00	150.00	75.00	30.00	45.00	-do-	
Refractories	Lakh tonnes	9.60	20.00	13.18	13.18	Nil	Nil	13.18
Cement	Million tonnes	9.40	15.02	16.56	12.52	3.98	Industry has been delicensed.	
Insulators (HT & LT)	'000 tonnes	14.00	30.00	35.14	26.06	9.08	2.50	37.64

(A) Includes 30 thousand tons for small-scale sector.
(C) Including target of 3,000 tons for liquid oxygen explosives.

Note: 1. Figures in brackets under column 4 indicate revised targets.

Progress of Industrial Development for Major Industries (Contd.)
(POSITION AS ON APRIL 1, 1967)

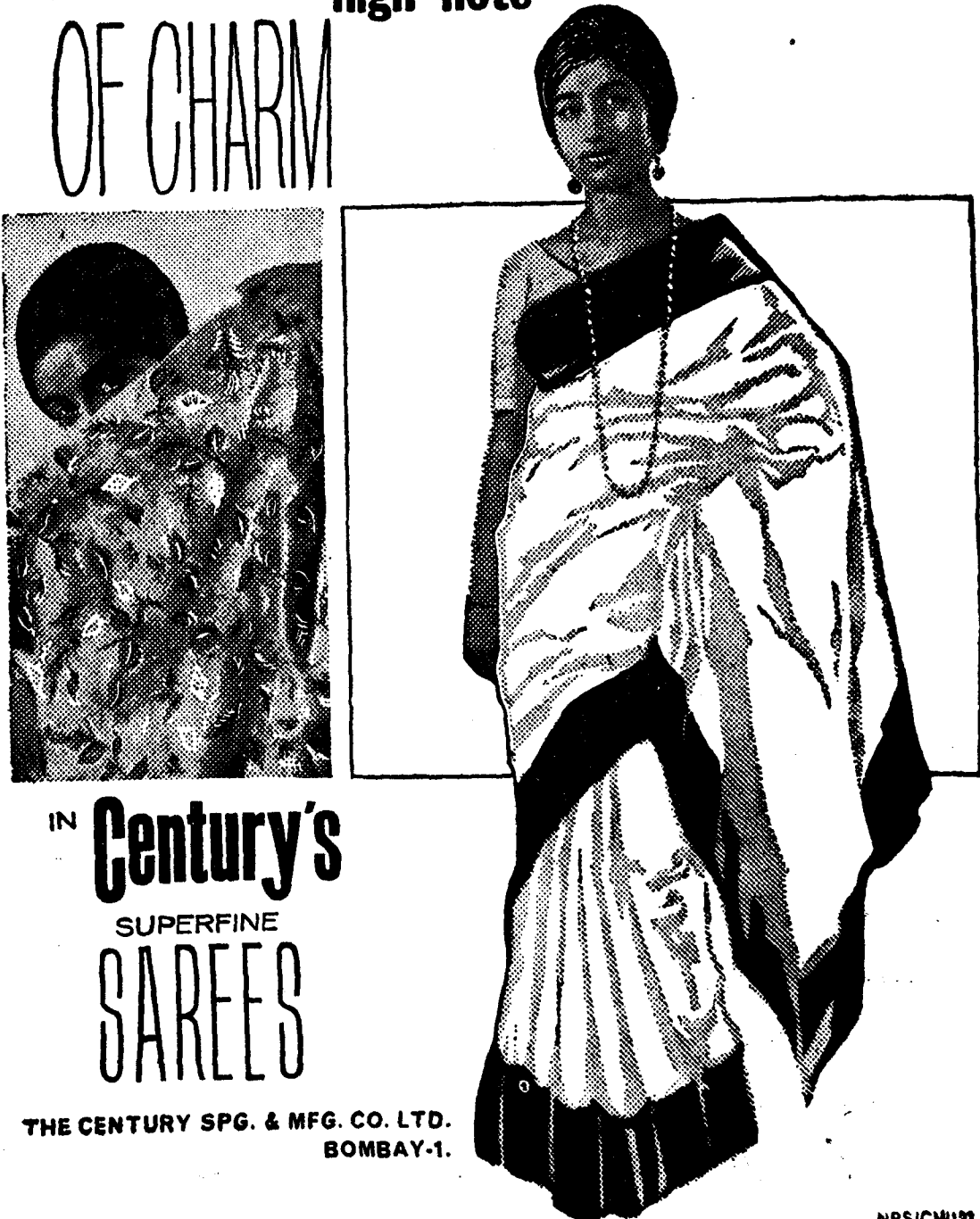
Name of industry	Unit	Existing capacity as on 1-4-61	Third Plan target	Existing installed capacity & capacity covered by F.E. 5(6+7)	Existing installed capacity as on 1-4-67	Additional capacity covered by foreign exchange	Additional capacity not covered by foreign exchange	Total licensed capacity including existing capacity 9(5+8)
1	2	3	4	5	6	7	8	9
NON-ENGINEERING INDUSTRIES (Contd.)								
Glass & Glassware								
a) Glass bottles & vials (excl. penicillin vials)	'000 tonnes	181.46	290.00	282.76	233.46	49.30	61.44	344.20
b) Table & pressed ware	"	74.38	90.00	79.26	77.54	1.72	Nil	79.26
c) Miscellaneous ware	"	7.23	35.00	14.40	14.40	Nil	Nil	14.40
d) Lamp ware	"	43.36	44.00	51.08	51.08	Nil	Nil	51.08
e) Laboratory glass ware	"	6.90	22.00	20.00	12.55	7.45	10.56	30.56
f) Flat Glass								
Sheet glass	"	61.80	125.00	108.40	105.80	2.51	55.53	183.93
Wired & figured and rolled glass	"	—	—	52.78	52.78	Nil	5.85	58.63
Glass shells	"	2.86	5.00	5.19	3.19	2.00	5.27	8.46
Vacuum flask	"	3.48	4.00	3.80	3.72	0.08	Nil	3.80
Glass mineral wool & allied products	"	6.70	—	33.40	14.76	18.64	17.34	50.74
Glass fibre & products thereof	"	Nil	—	0.68	Nil	0.68	2.70	3.38
Industrial Gases								
Oxygen gas	Million Cu. Metres	23.60	43.80	71.51	53.80	17.74	Nil	71.54
Acetylene gas	"	4.30	7.10	13.19	10.70	2.49	Nil	13.19
Carbon dioxide	'000 tonnes	13.00	21.20	20.37	19.37	1.00	6.30	26.67
Nitrous oxide	Million litres	100.00	109.00	300.00	300.00	Nil	Nil	300.00
Cellulose films	Million lbs	81.00	12.00	12.00	12.00	Nil	4.00	16.00
Rayon-grade pulps	'000 tonnes	Nil	100.00	242.00	60.60	181.40	Industry has been delicensed	
i) Bamboo based	"	Nil	—	214.00	54.00	100.00	Industry has been delicensed	
ii) Cotton linter based	"	Nil	—	28.00	6.60	21.40	" " "	
iii) Paper grade pulp	"	Nil	—	22.50	Nil	22.50	" " "	
Matches	Million gross box of 50 sticks	NA	54.36	29.77	29.77(a)	Nil	Nil	29.7
Plywood	Million sq. meters	13.06	15.66	29.90	29.48	0.42	Industry has been delicensed.	
Cardboard	'000 tonnes	9.75	27.00 to 35.00	34.50	30.75	3.75	Industry has been delicensed.	
Chipboard	"	6.00	150.00	128.38	39.40	88.98	-do-	
Vegetable oils								
Solvent extraction of oil cakes/rice bran (in terms of oil cakes & rice bran)	Lakh tonnes	6.77	23.50	20.36	17.82	2.54	-do-	
Cotton seed oil (in terms of seeds)	"	2.00	8.00	7.32	7.12	0.20	Nil	7.32
Biscuits (organised sector)	"	31.044	30,528	36,150	36,150	Nil	Nil	36,150
Confectionery (organised sector)	"	52,572	51,840	40,188	40,188	Nil	Nil	40,181

(a) For six mechanised units only.

* Glass and glassware industry (item 33 of the I schedule of Industries Act has been delicensed except holloware which includes bottles & penicillin vials).

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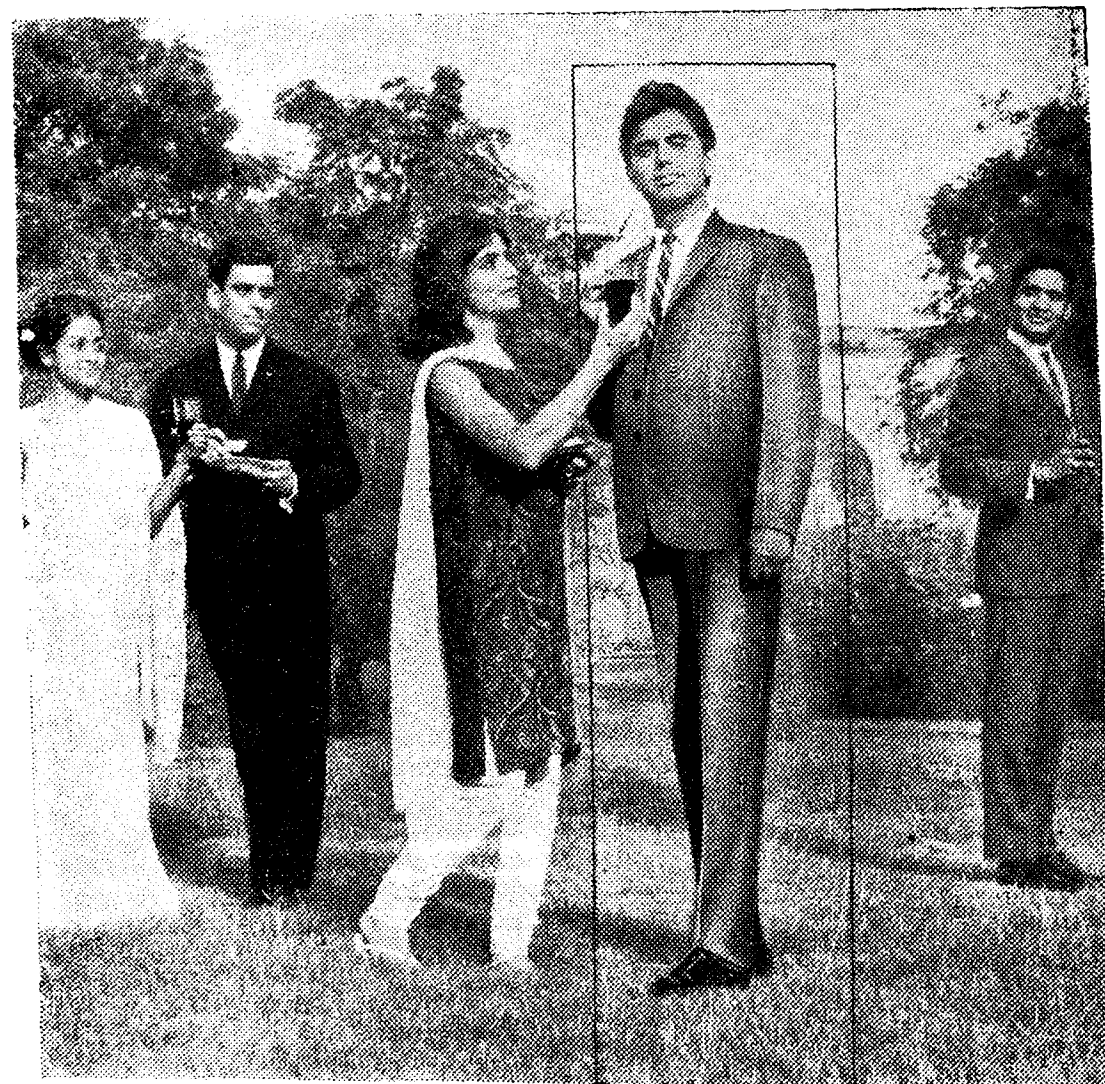


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Progress of Industrial Development for Major Industries (Contd)
(POSITION AS ON APRIL, 1967)

S. No.	Name of the Industry	Unit	Existing capacity as on April 1, 1961	Third Plan target	Existing installed capacity & capacity covered by Foreign Exchange	Existing installed capacity as on April 1 1967	Additional capacity covered by Foreign Exchange	Additional capacity not covered by Foreign Exchange	Total capacity including existing capacity	
1			2	3	4	5(6+7)	6	7	8	9(5+8)
INDUSTRIES LOOKED AFTER BY THE MINISTRY OF PETROLEUM & CHEMICALS										
	Nitrogenous fertilizers	'000 tons (in terms of Nitrogen)	238.36	1,000.00	1,015.10	586.10	429.00	1,159.00	2,174.10	
	Phosphatic fertilizers	'000 tons (in terms of P2O5)	52.44	500.00	517.05	243.35	273.70	194.00	711.05	
	Sulphuric Acid	'000 tonnes	536.00	1,750.00	1,710.85	1,328.14	382.71	1,744.98	1,755.83	
	Soda Ash	"	273.00	700.00	656.80	362.80	294.00	60.00	716.80	
	Caustic Soda	"	126.00	406.40	540.62	276.03	264.59	134.00	674.62	
	Synthetic Rubber	"	Nil	50.00	30.00	30.00	Nil	Nil	30.00	
Pharmaceutical Drugs and Pesticides :										
	Penicillin	M.M.U.	50.00	120.00	265.00	125.00	140.00	Nil	265.00	
	Streptomycin	Tonnes	Nil	150.00	200.00	115.00	85.00	Nil	200.00	
	Tetracyclin	"	10.00	50.00	144.50	24.50	120.00	Nil	144.50	
	Sulpha drugs	"	366	1,000	1,251	556	695	Nil	1,251	
	P.A.S.	"	148	400	380	380	Nil	Nil	380	
	Anti-dysentery drugs	"	77.90	75.00	77.90	77.90	Nil	Nil	77.90	
	I.N.H.	"	33.10	100.00	146.40	71.40	75.00	Nil	146.40	
	Photo Chemicals	"	Nil	76.40	76.40	Nil	76.40	Nil	76.40	
	B.H.C.	"	4,000	15,000	8,450	7,700	750	32,300	40,750	
	D.D.T.	"	2,800	2,800	2,800	2,800	Nil	4,400	7,200	
	Dyestuffs :	"	6,356	11,364	12,976	8,651	4,325	715	13,691	
	Acid Direct	"	1,457	3,000	4,059	1,865	2,194	305	4,364	
	Basic Acids	"	53	909	1,085	1,387	698	Nil	1,085	
	Naphthole	"	1,069	1,273	1,273	1,273	Nil	Nil	1,273	
	Fast Colour Bases	"	763	1,273	1,273	964	309	Nil	1,273	
	Sulphur Black	"	1,836	2,273	2,290	2,290	Nil	Nil	2,290	
	Other Sulphur Dyes	"	Nil	227	227	227	Nil	Nil	227	
	Vats	"	182	1,227	1,040	740	300	410	1,450	
	Organic Pigments	"	696	1,182	1,729	905	824	Nil	1,729	
	Plastic	"	19,262	85,000	131,402	48,080	83,322	61,420	192,822	
	P.F. Moulding Powder	"	3,000	6,700	4,559	4,550	Nil	3,600	8,150	
	U.F. Moulding Powder	"	1,062	4,450	1,062	1,062	Nil	3,100	4,162	
	P.V.C. Resins & Composition	"	3,600	13,400	55,600	15,600	40,000	32,000	87,600	
	Polystyrene (incl. Styrene alloys)	"	5,400	13,400	21,900	5,400	16,500	10,000	31,900	
	Polyolefines (Polyethylene high density, low density & Poly-peopylene)	"	6,200	26,800	37,500	17,500	20,000	Nil	37,500	
	Cellulose Acetate	"	Nil	6,700	6,450	Nil	6,450	6,900	13,350	
	Polyesters	"	Nil	1,340	600	600	Nil	2,820	3,420	
	Polyvinyl Acetate	"	Nil	4,450	2,400	2,400	Nil	3,000	5,400	
	Others	"	Nil	7,760	1,340	968	372	Nil	1,340	
	Soap (Organised Sector)	'000 tons	242.74	255.00	237.38	236.66	0.72	Nil	237.38	
	Synthetic Detergents	"	7.20	20.00	22.70	18.80	3.90	Nil	22.70	
	Power & Industrial Alcohol	Million litres	181.60	327.00	—	298.00	298.00	Industry has been delicensed.		

*Provisional figures.

Progress of Industrial Development for Major Industries (Contd.)
(POSITION AS ON APRIL 1, 1967)

Name of the industry	Unit	Existing capacity as on April, 1 1961	Third Plan Target	Existing installed capacity & capacity covered by Foreign Exchange	Existing installed capacity as on April 1, 1967	Addl. capacity covered by Foreign Exchange	Additional capacity not covered by Foreign Exchange	Total licensed capacity including existing capacity
1	2	3	4	5 (6+7)	6	7	8	9 (5+8)
INDUSTRIES LOOKED AFTER BY THE DEPTT. OF MINES & METALS:								
Aluminium	'000 tonnes	18.20	87.50 (110.00)	156.70	113.00	43.70	126.30	283.00 (a)
Copper	"	8.90	22.0 (39.40)	16.50	9.96	6.54	—	16.50 (a)
Lead	"	6.00	8.50 (11.00)	11.00	6.90	5.00	Nil	11.00
Zinc	"	Nil	15.00 (30.00)	38.00	38.00	Nil	Nil	38.00
INDUSTRIES LOOKED AFTER BY THE DEPTT. OF IRON & STEEL:								
Alloy Steel	'000 tons	Nil	200.00 (415.00)	319.40	112.40	207.00	534.80	854.20
Pig Iron	'00,000 tons	0.30	15.00 (20.00)	9.50	0.80	8.70	11.88	21.38
Ferro-silicon	'000 tons	7.00	40.00 (50.00)	34.20	27.20	7.00	5.40	39.60
Ferro-Chrome	"	Nil	20.00 (35.00)	20.00	Nil	20.00	Nil	20.00
Ferro-Manganese	"	157.80	220.00	194.80	194.80	Nil	70.60	265.40
Ferro-molybdenum	Tons	Nil	1,000	Nil	Nil	Nil	100	100
Ferro-Venadium	"	Nil	500	Nil	Nil	Nil	50	50
Steel Wire	'000 tons	123.18	400.00 (500.00)	275.51	205.36	70.15	13.20	288.71
Tin plates	'000 tons	70.00	350.00	210.00	140.00	70.00	90.00	300.00
INDUSTRIES LOOKED AFTER BY THE MINISTRY OF COMMERCE/PETROLEUM & CHEM.								
I. Rayon	Million kg.	47.00	99.00	94.00	75.00	19.00	4.00	98.00
a) Filament	"	25.00	57.00	50.00	37.00	13.00	2.00	52.00
i) Viscose	"	23.00	40.00	38.00	35.00	3.00	2.00	40.00
ii) Acetate	"	2.00	12.00	12.00	2.00	10.00	—	12.00
iii) Cupramonium	"	Nil	5.00	Nil	Nil	Nil	Nil	Nil
b) Tyre cord	"	Nil	9.00	18.00	12.00	6.00	2.00	20.00
c) Staple Fibre	"	22.00	33.00	26.00	26.00	Nil	Nil	26.00
i) Viscose	"	22.00	30.00	26.00	26.00	Nil	Nil	26.00
ii) Acetate	"	Nil	3.00	Nil	Nil	Nil	Nil	Nil
II. Synthetic Fibre:	"	Nil	6.00	20.94	4.40	16.54	50.50	71.44
a) Filament	"	Nil	5.00	11.74	2.40	9.34	8.20	19.94
i) Nylon	"	Nil	5.00	11.74	2.40	9.34	8.20	19.94
b) Staple Fibre:	"	Nil	1.00	6.50	2.00	4.50	34.80	41.30
i) Nylon	"	Nil	—	Nil	Nil	Nil	1.80	1.80
ii) Polyester	"	Nil	—	4.00	2.00	2.00	11.50	15.50
iii) Acrylic	"	Nil	—	2.50	Nil	2.50	11.50	14.00
iv) Polyvinyl alcohol	"	Nil	—	Nil	Nil	Nil	10.00	10.00
c) Tyre Cord:	"	Nil	—	2.70	Nil	2.70	7.50	10.20
i) Nylon	"	Nil	—	2.70	Nil	2.70	7.50	10.20

(a) Excluding Public Sector.

*Provisional figures.

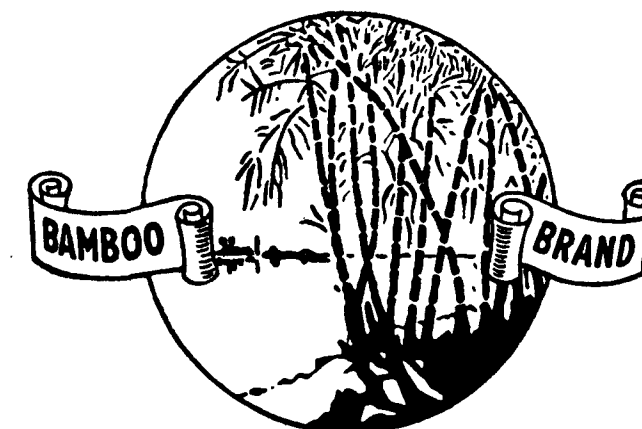
**Excluding 150,000 tons of small scale sector and 86,740 tons sanctioned under Iron & Steel Control Order.

(N) Excluding capacity set up in the integrated steel works both in the public and private sector and including capacity approved but not licensed.

Note: Figures given in brackets under column 5 indicate revised targets.

(Concluded)

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Production Statistics—Important Industries
(1957-1962)

S. No.	Industry	Unit	1957	1958	1959	1960	1961	1962
I. Mining and Quarrying:								
1.	Coal	'000 tonnes	44,196	46,068	47,820	52,620	56,100	61,548
2.	Iron ore	"	4,692	5,808	7,992	10,680	12,276	13,368
II. Food Manufacturing Industries:								
3.	Wheat flour	'000 tonnes	738	830	976	995	1,001	1,202
4.	Sugar (figures from 1957 to 1962 are for the year November-October)	"	2,040	2,040	1,950	2,473	3,029	2,716
5.	Vanaspati	"	306	300	322	338	339	369
6.	Tea processing	million kgs.	305	324	324	321	354	348
7.	Coffee curing	'000 tonnes	41.5	44.6	45.6	51.5	65.7	47.5
8.	Salt	"	3,684	4,203	3,178	3,436	3,481	3,886
III. Tobacco Industries:								
9.	Cigarettes	Million nos.	28,892	29,840	32,166	36,971	39,466	41,124
IV. Manufactures of Textiles:								
10.	Cotton yarn	Million kgs.	807	764	781	788	862	860
11.	Cotton cloth:							
i)	Mill sector	Million metres	4,862	4,505	4,504	4,616	4,701	4,560
ii)	Decentralised sector	"	1,812	1,968	2,076	2,016	2,376	2,412
12.	Man-made fibre (fabrics produced on powerloom & handloom)	Million metres	420	396	492	544	570	600
13.	Rayon: i) Viscose yarn	'000 tonnes	9.6	13.4	15.1	19.2	21.5	26.2
	ii) Staple fibre	"	8.1	14.1	20.5	21.8	26.0	32.4
	iii) Acetate yarn	"	1.6	1.8	1.4	1.9	2.0	1.4
14.	Jute manufactures:	"	1,046	1,079	1,069	1,108	997	1,231
15. Woollen manufactures:								
i)	Woollen/worsted fabrics	'000 metres	14,760	17,712	13,920	13,956	13,200	18,288
ii)	Woollen/worsted yarn	'000 kgs.	12,624	13,224	13,368	12,696	14,640	18,012

PRODUCTION STATISTICS — IMPORTANT INDUSTRIES
(1963-1967)

S. No.	Industry	Unit	1963	1964	1965	1966	Jan. — June 1966	June 1967
I. Mining and Quarrying:								
1.	Coal	'000 tonnes	66,924	63,996	69,456	70,536	35,471	36,425
2.	Iron ore	"	14,928	14,904	16,800	19,776	10,268	9,570
II. Food Manufacturing Industries:								
3.	Wheat flour	'000 tonnes	1,418	1,570	1,604	1,490	760	641
4.	Sugar (figures from 1963 to 1966 are for the year November-October)	"	2,153	2,626	3,260	3,515	2,643†	1,453†
5.	Vanaspati	"	384	359	426	358	183	195
6.	Tea processing	million kgs.	346	373	366	366	114	113
7.	Coffee curing	'000 tonnes	58.4	67.2	60.6	69.0	58.6	58.9
8.	Salt	"	4,544	4,646	4,715	4,522	3,815	3,844
III. Tobacco Industries:								
9.	Cigarettes	Million nos.	40,062	46,196	54,134	58,513	29,226	27,502
IV. Manufactures of Textiles:								
10.	Cotton yarn	Million kgs.	893	965	939	901	433	429
11.	Cotton cloth:							
i)	Mill sector	Million metres	4,423	4,654	4,586	4,239	2,070	1,955
ii)	Decentralised sector	"	2,880	3,072	3,048	3,096	1,498	1,501
12.	Man-made fibre (fabrics produced on powerloom & handloom)	Million metres	648	833	866	860	441	443
13.	Rayon: i) Viscose yarn	'000 tonnes	31.3	35.4	34.6	33.2	17.1	17.3
	ii) Staple fibre	"	32.2	36.8	37.2	42.4	18.8	26.1
	iii) Acetate yarn	"	2.0	1.8	2.0	1.6	0.8	0.9
14.	Jute manufactures:	"	1,324	1,272	1,330	1,120	566	598
15. Woollen manufactures:								
i)	Woollen/worsted fabrics	'000 metres	20,400	11,718	9,864	9,389	3,572	3,732††
ii)	Woollen/worsted yarn	'000 kgs.	22,728	20,904	18,132	16,596	7,865	8,216††

Production Statistics—Important Industries (Contd.)
(1957-1962)

S. No.	Industry	Unit	1957	1958	1959	1960	1961	1962
V. Footwear & other wearing apparel:								
16.	Footwear of leather:							
i)	Western type	'000 pairs	4,370	4,277	4,139	5,419	6,224	6,515
ii)	Indigenous type	"	3,040	3,287	4,103	3,778	4,408	5,286
VI. Manufacture of Wood & Cork:								
17.	Plywood	'000 sq. metres	8,832	8,124	9,167	9,120	9,036	9,780
i)	Tea-chest	"	2,939	3,504	5,028	6,024	6,312	7,452
ii)	Commercial	"	—	—	—	—	—	—
VII. Paper and Paper Board:								
18.	Newsprint	'000 tonnes	—	—	—	—	—	—
VIII. Leather & Fur Products:								
19.	Tanned hides	'000 metres	2,422	2,745	3,118	3,486	3,491	3,828
20.	Leather cloth	"	3,343	3,880	4,956	5,846	7,010	6,659
IX. Rubber Products:								
21.	Footwear (rubber)	Million pairs	37.0	36.7	39.2	44.6	45.1	49.8
22.	Tyres	'000 nos.	990	1,006	1,139	1,362	1,562	1,710
i)	Automobiles	"	7,152	8,259	9,511	10,830	11,346	11,940
ii)	Bicycles	"	—	—	—	—	—	—
23.	Tubes	"	936	947	1,124	1,281	1,484	1,643
i)	Automobile	"	7,028	7,854	9,950	12,676	12,848	11,562
ii)	Bicycles	"	—	—	—	—	—	—
X. Chemical Products:								
24.	Sulphuric acid	'000 tonnes	199	230	297	354	422	469
25.	Caustic soda	"	43	58	70	98	120	127
26.	Soda ash	"	93	291	95	145	177	223
27.	Chlorine liquid	"	15.9	20.4	24.8	31.7	33.9	37.9
28.	Bleaching powder	"	5.4	6.6	5.2	5.9	7.1	6.7
29.	Bichromates	"	3.7	3.5	4.4	5.0	5.2	7.0
30.	Superphosphates ('P2O5 content)	"	24.0	28.2	41.9	53.0	62.0	74.6
31.	Ammonium sulphate ('N' content)	"	77.2	78.1	76.9	76.8	79.1	83.6

PRODUCTION STATISTICS—IMPORTANT INDUSTRIES—(Contd.)
(1963-1967)

S. No.	Industry	Unit	1963	1964	1965	1966	Jan. — June 1966	June 1967
V. Footwear & other wearing apparel:								
16.	Footwear of leather:							
i)	Western type	'000 pairs	8,288	7,792	9,040	10,120	4,796	5,168
ii)	Indigenous type	"	5,185	5,962	6,908	6,740	3,486	3,753
VI. Manufacture of Wood & Cork:								
17.	Plywood	'000 sq. metres	10,404	9,744	10,272	9,528	5,147	5,044
i)	Tea-chest	"	9,804	10,620	12,480	12,432	6,467	6,920
ii)	Commercial	"	—	—	3,075	2,983	1,367	1,408
VII. Paper and Paper Board:								
18.	Newsprint	'000 tonnes	—	—	—	—	—	—
VIII. Leather & Fur Products:								
19.	Tanned hides	'000 metres	4,432	4,206	4,309	4,219	2,118	2,117
20.	Leather cloth	"	6,895	8,990	9,197	11,898	5,328	5,450
IX. Rubber Products:								
21.	Footwear (rubber)	Million pairs	46.6	47.1	53.0	52.2	25.3	27.0
22.	Tyres	'000 nos.	1,926	2,090	2,354	2,351	1,041	1,197
i)	Automobiles	"	14,186	16,156	18,122	19,639	8,921	11,004
ii)	Bicycles	"	—	—	—	—	—	—
23.	Tubes	"	2,029	2,208	2,265	2,208	964	1,374
i)	Automobile	"	13,343	15,193	17,923	20,449	9,305	10,297
ii)	Bicycles	"	—	—	—	—	—	—
X. Chemical Products:								
24.	Sulphuric acid	'000 tonnes	568	680	678	675	320	329
25.	Caustic soda	"	152	184	215	231	110	116
26.	Soda ash	"	267	282	322	350	174	172
27.	Chlorine liquid	"	44.2	49.4	51.0	63.0	27.9	36.6
28.	Bleaching powder	"	7.0	7.9	7.4	10.8	4.1	5.1
29.	Bichromates	"	6.9	7.0	6.9	6.9	3.6	3.1
30.	Superphosphates ('P2O5 content)	"	96.7	118.2	113.9	118.5	55.5	60.4
31.	Ammonium sulphate ('N' content)	"	88.5	85.6	88.0	86.4	38.9	42.8

Production Statistics—Important Industries (Contd.)

(1957—1962)

S. No.	Industry	Unit	1957	1958	1959	1960	1961	1962
32.	Alum. (ammonia)	"	5.2	4.8	5.0	4.5	4.8	4.1
33.	Copper sulphate	"	1.9	2.1	3.1	3.8	4.3	3.9
34.	Glycerine (refined)	"	2.7	3.9	4.9	5.8	6.1	7.5
35.	Glue	"	1.3	1.2	1.9	1.9	1.9	2.2
36.	Soap	'000 tonnes	113	125	132	143	149	152
37.	Matches (A)	Billion sticks	—	—	—	289	281	264
38.	Paints	'000 tonnes	43	49	55	52	59	55
39.	Power alcohol	million litres	46	40	36	49	54	50
40.	Indl. alcohol (rectified spirits)	"	26	28	36	41	51	61
41.	Welding gases							
	i) Oxygen gas*	Million cubic metres	11.5	13.5	16.8	21.0	24.2	18.3
	ii) Acetylene gas	"	1.8	2.1	2.4	2.5	2.9	3.3
42.	Liver extracts :							
	i) Injection	Million C.C.	28.1	35.0	36.9	40.9	45.4	43.9
	ii) Oral	Tonnes	112	138	131	161	155	167
XI. Manufactures of petroleum products :								
43.	Petroleum products	'000 tonnes	4,448	4,772	5,152	5,747	6,090	6,584
XII. Manufacture of non-metallic mineral products :								
44.	Refractories	'000 tonnes	373	442	507	551	627	671
45.	Insulators							
	i) H. T.	Tonnes	—	—	—	2,334	2,353	4,104
	ii) L. T.	"	—	—	—	3,916	5,392	5,570
46.	Cement	'000 tonnes	5,691	6,166	6,936	7,844	8,245	8,587
47.	Asbestos cement sheets	"	161	189	184	211	213	234
48.	Grinding wheels	Tonnes	1,476	1,242	1,220	1,952	2,050	2,269
49.	Coated abrasives	'000 reams	92	110	104	132	149	186
XIII. Basic metal industries :								
50.	Pig iron**	'000 tonnes	1,818	2,035	3,079	4,175	4,988	5,796

PRODUCTION STATISTICS—IMPORTANT INDUSTRIES (Contd.)

(1963—1967)

S. No.	Industry	Unit	1963	1964	1965	1966	Jan. — June 1966	June 1967
32.	Alum. (ammonia)	"	3.7	1.9	1.9	1.7	1.0	0.5
33.	Copper sulphate	"	3.7	4.8	3.3	2.4	1.3	1.6
34.	Glycerine (refined)	"	7.2	7.5	7.7	7.4	3.9	3.9
35.	Glue	"	1.9	2.2	2.5	2.6	1.3	1.3
36.	Soap	'000 tonnes	164	158	164	170	84	87
37.	Matches (A)	Billion sticks	248	252	266	270	131	136
38.	Paints	'000 tonnes	74	72	71	68	32	38
39.	Power alcohol	million litres	25	1.4	0.8	2.4	2.0	0.3
40.	Indl. alcohol (rectified spirits)	"	114	161	185	189	94	86
41.	Welding gases							
	i) Oxygen gas*	Million cubic metres	21.5	25.7	28.6	31.7	15.1	17.4
	ii) Acetylene gas	"	3.9	4.5	5.2	4.5	2.1	2.2
42.	Liver extracts :							
	i) Injection	Million C.C.	42.3	38.1	40.0	45.5	21.7	22.6
	ii) Oral	Tonnes	173	179	173	192	91	104
XI. Manufactures of petroleum products :								
43.	Petroleum products	'000 tonnes	7,650	8,429	8,984	11,114	5,277	6,487
XII. Manufacture of non-metallic mineral products :								
44.	Refractories	'000 tonnes	654	688	688	722	356	372
45.	Insulators							
	i) H. T.	Tonnes	4,250	6,527	10,070	10,394	5,618	5,473
	ii) L. T.	"	4,351	3,406	4,172	3,280	1,899	1,746
46.	Cement	'000 tonnes	9,355	9,690	10,575	11,053	5,411	5,701
47.	Asbestos cement sheets	"	308	366	421	294	149	118
48.	Grinding wheels	Tonnes	2,791	3,262	4,027	4,475	2,047	2,384
49.	Coated abrasives	'000 reams	181	172	178	174	84	102
XIII. Basic metal industries :								
50.	Pig iron**	'000 tonnes	6,604	6,593	6,952	7,044	3,553	3,480

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Production Statistics—Important Industries (Contd.)

(1957—1962)

S. No.	Industry	Unit	1957	1958	1959	1960	1961	1962
51.	Finished steel	'000 tonnes	1,368	1,320	1,765	2,222	2,798	3,564
52.	Aluminium	Tonnes	7,909	8,312	17,526	18,413	18,382	35,212
53.	Copper	"	7,973	7,966	7,765	9,016	8,746	9,781
54.	Lead	"	3,225	3,387	3,957	3,780	3,664	2,849
XIV. Manufacture of Metal Products:								
55.	Screws —							
	i) Wood	Million nos.	1,173	1,033	1,314	1,434	1,500	1,477
	ii) Machine	"	202	264	256	237	381	425
56.	Razor blades	"	337	356	432	565	770	625
57.	Hurricane lanterns	'000 nos.	4,345	3,382	4,560	5,196	5,540	5,674
58.	Oil pressure lamps	"	93	78	83	133	145	135
59.	Crown corks	Million nos.	377	471	599	769	873	698
60.	Thermos flasks	'000 nos.	648	864	1,483	1,512	1,541	1,542
XV. Manufacture of Machinery Except Electricals:								
61.	Diesel engines :							
	i) Stationary type	'000 nos.	16.6	25.8	30.3	42.2	44.5	42.6
	ii) Vehicular type	"	3.3	4.3	8.7	10.6	9.8	8.4
62.	Cotton textile machinery	Rs lakhs	NA	NA	NA	1,040	1,148	1,398
63.	Machine tools (incl. portable tools and accessories)	"	251	376	477	669	852	1,182
		'000 nos.	64	78	85	104	127	130
64.	Power driven pumps	"	1,577	2,126	1,699	2,699	3,216	3,906
65.	Ball bearings	"	167	205	253	297	317	343
66.	Sewing machines	"	15.4	15.8	21.4	23.5	31.1	36.3
67.	Typewriters	"	2,258	1,535	1,196	1,536	2,736	3,785
68.	Twist drills	"	162	200	284	419	467	643
69.	Sugar mill machinery	Rs lakhs	58	71	82	121	175	161
70.	Tea processing machinery	"	58	71	82	121	175	161

PRODUCTION STATISTICS—IMPORTANT INDUSTRIES (Contd.)

(1963—1967)

S. No.	Industry	Unit	1963	1964	1965	1966	Jan. — June 1966	June 1967
51.	Finished steel	'000 tonnes	4,258	4,342	4,519	4,472	2,292	2,154
								(estimated)
52.	Aluminium	Tonnes	55,144	55,054	59,513	63,432	28,288	43,561
53.	Copper	"	9,587	9,455	9,360	9,362	4,488	4,115
54.	Lead	"	3,536	3,624	2,384	2,543	1,189	1,281
XIV. Manufacture of Metal Products:								
55.	Screws —							
	i) Wood	Million nos.	1,414	1,546	1,789	1,700	862	818
	ii) Machine	"	421	502	469	589	289	331
56.	Razor blades	"	841	892	931	906	425	419
57.	Hurricane lanterns	'000 nos.	5,250	5,303	5,636	5,140	2,579	2,764
58.	Oil pressure lamps	"	120	124	116	64	33	41
59.	Crown corks	Million nos.	770	890	1,012	1,142	632	756
60.	Thermos flasks	'000 nos.	1,954	1,910	2,034	2,693	1,386	1,656
XV. Manufacture of Machinery Except Electricals:								
61.	Diesel engines :							
	i) Stationary type	'000 nos.	55.5	70.1	87.9	107.0	52.2	58.6
	ii) Vehicular type	"	9.0	8.2	8.7	7.0	3.6	2.0
62.	Cotton textile machinery	Rs lakhs	1,852	2,142	2,402	1,793	872	814
63.	Machine tools (incl. portable tools and accessories)	"	1,799	2,374	2,850	3,395	1,724	1,290
		'000 nos.	161	174	226	294	145	171
64.	Power driven pumps	"	4,954	5,885	8,250	9,199	4,490	4,856
65.	Ball bearings	"	346	255	422	411	225	189
66.	Sewing machines	"	42.4	44.0	41.1	41.5	20.2	25.9
67.	Typewriters	"	4,680	6,738	8,140	7,630	3,547	3,632
68.	Twist drills	"	574	807	794	859	351	459
69.	Sugar mill machinery	Rs lakhs	162	85	120	115	53	42
70.	Tea processing machinery	"	162	85	120	115	53	42

Production Statistics—Important Industries (Contd)
(1957—1962)

S. No.	Industry	Unit	1957	1958	1959	1960	1961	1962
XVI. Manufacture of electrical machinery:								
71.	Power transformer	'000 KVA	1,219	1,127	1,016	1,281	1,796	2,307
72.	Electric motors	'000 H.P.	470	623	575	696	829	936
73.	Dry batteries	Million nos.	167	168	187	208	214	239
74.	Storage batteries	'000 nos.	325	356	442	507	521	566
75.	Electric lamps :							
	i) GLS & others	Million nos.	32	30	34	40	45	55
	ii) Fluorescent lamps :	'000 nos.	1,019	979	1,108	1,527	1,895	3,175
76.	Electric fans	"	525	636	726	1,012	1,073	1,129
77.	Radio receivers	"	191	198	214	268	326	343
78.	House service meters	"	331	348	376	480	633	878
79.	Domestic refrigerators	Nos.	948	2,916	3,960	11,388	9,720	13,020
80.	Room air-conditioners	"	6,983	10,778	8,868	10,716	12,468	13,452
81.	Conduit pipes	'000 running metres	3,402	3,238	3,883	4,248	2,622	3,265
82.	Cables and wires							
	i) Bare copper conductors	Tonnes	8,688	7,608	6,732	9,948	7,632	4,944
	ii) ACSR	'000 tonnes	15.6	14.6	14.4	23.0	22.4	28.7
	iii) Winding wires	Tonnes	1,032	2,111	2,881	4,212	5,664	6,804
	iv) VIR & PVC	Million metres	95	118	152	209	210	276
XVII. Transport equipment:								
83.	Automobiles	Nos.	31,932	26,796	36,468	52,116	54,312	57,744
84.	Motor cycles	Nos.	1,824	2,653	3,240	4,716	9,084	9,552
85.	Scooters	"	6,528	4,236	3,948	13,020	15,336	14,316
86.	Three-wheelers	"	852	683	1,476	1,492	1,272	1,428
87.	Bicycles (complete)	'000 nos.	791	913	991	1,050	1,049	1,116
XVIII. Electricity generated:								
88.	Electricity generated	Million KWH	10,835	12,245	14,556	16,433	19,111	21,473

PRODUCTION STATISTICS—IMPORTANT INDUSTRIES (Contd)
(1963—1967)

S. No.	Industry	Unit	1963	1964	1965	1966	Jan. — June 1966	June 1967
XVI. Manufacture of electrical machinery:								
71.	Power transformer	'000 KVA	2,629	3,312	4,319	4,794	2,363	2,642
72.	Electric motors	'000 H.P.	1,188	1,314	1,702	1,985	951	1,055
73.	Dry batteries	Million nos.	276	287	301	328	146	177
74.	Storage batteries	'000 nos.	691	767	745	720	341	388
75.	Electric lamps :							
	i) GLS & others	Million nos.	67	67	67	74	34	39
	ii) Fluorescent lamps :	'000 nos.	3,638	3,439	4,178	4,060	2,062	2,786
76.	Electric fans	"	1,139	1,085	1,448	1,292	627	723
77.	Radio receivers	"	419	475	584	713	320	397
78.	House service meters	"	1,194	1,331	1,101	1,046	529	461
79.	Domestic refrigerators	Nos.	21,192	30,000	30,912	38,124	16,842	19,392
80.	Room air-conditioners	"	10,476	10,296	11,376	17,928	8,791	10,502
81.	Conduit pipes	'000 running metres	3,096	2,993	5,430	7,338	4,091	2,835
82.	Cables and wires							
	i) Bare copper conductors	Tonnes	4,392	5,736	3,768	2,160	1,105	486
	ii) ACSR	'000 tonnes	32.9	46.5	42.1	48.5	22.6	32.6
	iii) Winding wires	Tonnes	7,932	8,052	9,588	9,636	3,963	7,151
	iv) VIR & PVC	Million metres	321	338	396	379	175	189
XVII. Transport equipment:								
83.	Automobiles	Nos.	52,296	67,140	72,588	72,396	35,204	37,050
84.	Motor cycles	Nos.	9,456	13,860	21,360	24,624	11,143	10,997
85.	Scooters	"	15,420	20,040	20,244	20,652	8,237	13,157
86.	Three-wheelers	"	1,704	2,496	1,884	1,188	430	1,442
87.	Bicycles (complete)	'000 nos.	1,166	1,380	1,548	1,670	816	905
XVIII. Electricity generated:								
88.	Electricity generated	Million KWH	24,791	28,528	31,378	34,148	16,392	18,292

† Relates to Jan.-June period.

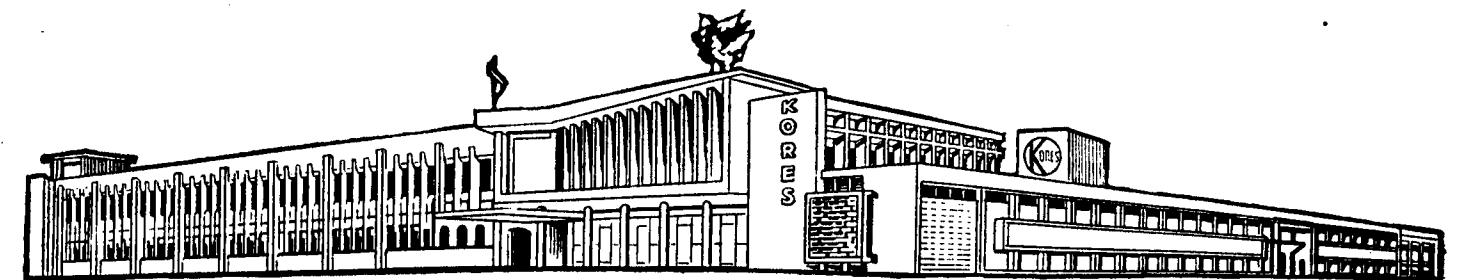
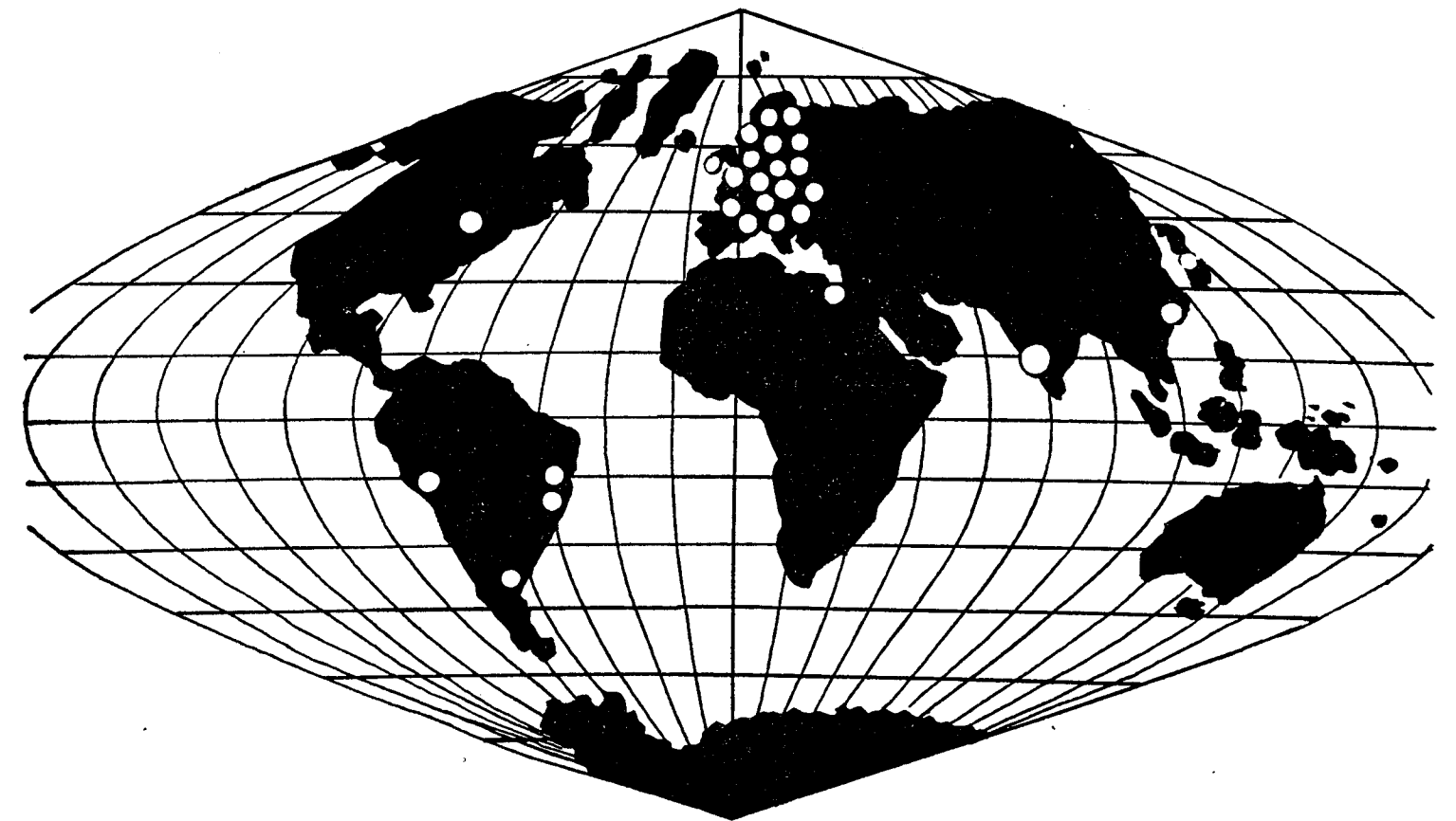
†† Estimates.

(A) Data for 1957 to 1959 period are not given because the figures are not comparable with the figures given from 1960.

* From 1962 onwards production figures of oxygen exclude the quantity used by steel factories. Relate only to the quantity used for welding and cutting.

** From 1962 production figures are inclusive of direct castings.

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TAXATION

Trends in Income Assessed and Tax Collections

1950-51—1963-64

					(Rs crores)				
Year	National Income Assessments (At current prices) (in thousands)				Income assessed	Tax assessed	Tax collection		
1950-51	...	...	...	9530	472	575	155	173	
1955-56	...	...	...	9980	528	785	182	168	
1956-57	...	...	...	11310	530	936	217	203	
1957-58	...	...	...	11390	673	1011	222	220	
1958-59	...	...	...	12600	840	1174	254	236	
1959-60	...	...	...	12940	891	1192	230	235	
1960-61	...	...	...	14140	952	1275	243	278	
1961-62	...	...	...	14800	1073	1575	338	322	
1962-63	...	...	...	15400	1104	1612	323	407	
1963-64	...	...	...	17210	1178	1560	282	533	

Income Tax Assessments by Types of Holders

1950-51—1963-64

Category	(Rs crores)							
	1950-51	1951-52	1955-56	1956-57	1960-61	1961-62	1962-63	1963-64
Individuals								
No. of assesseees (in '000s)	395.0	547.5	454.7	499.6	828.3	940.2	961.8	1036.5
Income	342.3	475.5	500.5	551.8	777.8	884.6	923.1	959.2
Tax*	63.7	80.4	79.4	87.6	98.1	112.6	118.4	115.8
Hindu undivided families								
No. of assesseees (in '000s)	52.4	65.8	39.6	39.5	70.4	73.2	73.4	71.5
Income	64.4	80.3	62.3	63.4	88.7	96.8	95.1	89.7
Tax*	14.3	16.1	11.0	11.0	12.0	15.2	14.1	12.8
Unregistered firms and other associations of persons								
No. of assesseees (in '000s)	16.5	23.3	23.1	23.5	27.7	29.6	28.5	25.9
Income	22.0	27.2	34.0	32.7	32.0	39.3	35.3	34.9
Tax*	7.1	7.5	9.0	7.9	6.2	8.7	7.3	7.6
Registered firms								
No. of assesseees (in '000s)	—	—	—	6.6	15.4	17.7	30.4	33.7
Income	—	—	—	51.9	127.5	148.7	197.4	205.0
Tax*	—	—	—	1.6	4.1	4.9	7.8	9.3
Companies								
No. of assesseees (in '000s)	8.5	10.8	10.3	10.8	10.0	11.5	12.0	10.3
Income	145.9	200.0	188.1	235.9	247.8	405.1	361.2	271.5
Tax*	70.0	91.9	82.5	108.5	122.0	195.9	175.1	136.1
Others								
No. of assesseees (in '000s)	—	—	—	—	0.4	0.4	0.03	0.02
Income	—	—	—	—	1.1	1.0	0.1	0.1
Tax*	—	—	—	—	0.7	0.6	0.1	0.1
Total								
No. of assesseees (in '000s)	472.4	647.4	527.7	579.9	952.2	1072.6	1104.2	1178.0
Income	574.7	782.9	784.9	935.7	1274.9	1575.4	1612.2	1560.3
Tax*	155.0	195.9	181.9	216.6	243.2	338.0	322.6	281.8

* Includes income tax and super tax for 1950-51 and 1951-52 and income tax, super tax and surcharge for 1955-56 to 1963-64.

Distribution of Income of Individuals by Grades of Income Before Tax

(Rs crores)

	Grades of income (Rs)									Total
	Below 5,000	5,001- 10,000	10,001- 15,000	15,001- 25,000	25,001- 50,000	50,001- 1 lakh	1 lakh to 1.5 lakhs	1.5 lakh to 2 lakhs	Above 2 lakhs	
1950-51 Assessments										
Assessee (in '000s)	212.0	107.9	33.6	22.4	13.1	4.1	0.9	0.4	0.5	395.0
Per cent	53.7	27.3	8.5	5.7	3.3	1.1	0.2	0.1	0.1	100.0
Income										
Amount	72.7	74.4	40.7	42.7	44.2	28.2	11.3	6.9	21.3	342.4
Per cent	21.3	21.7	11.9	12.5	12.9	8.2	3.3	2.0	6.2	100.0
Tax*										
Amount	1.9	3.9	3.8	6.4	—	22.7†	6.2	4.1	14.8	63.7
Per cent	3.0	6.1	5.9	10.0	—	35.6†	9.7	6.5	23.2	100.0
1951-52 Assessments										
Assessee (in '000s)	256.6	187.2	49.8	29.9	17.0	5.1	1.0	0.4	0.6	547.5
Per cent	46.9	34.2	9.1	5.4	3.1	0.9	0.2	0.1	0.1	100.0
Income										
Amount	94.3	128.8	59.9	56.7	57.4	34.0	12.3	6.6	25.6	475.5
Per cent	19.8	27.1	12.6	11.9	12.1	7.1	2.6	1.4	5.4	100.0
Tax*										
Amount	2.4	6.3	5.2	7.8	11.3	8.0	3.2	1.7	7.1	53.0
Per cent	4.5	11.8	9.8	14.8	21.3	15.1	6.1	3.2	13.4	100.0
1955-56 Assessments										
Assessee (in '000s)	120.1	206.1	61.4	37.6	21.6	5.9	1.1	0.4	0.7	454.7
Per cent	26.4	45.3	13.5	8.3	4.8	1.3	0.2	0.1	0.1	100.0
Income										
Amount	50.6	144.2	74.2	71.5	72.7	39.5	13.1	6.7	28.1	500.5
Per cent	10.1	28.8	14.8	14.3	14.5	7.9	2.6	1.4	5.6	100.0
Tax*										
Amount	1.0	5.0	4.6	7.4	15.9	15.3	6.8	4.0	19.5	79.4
Per cent	1.3	6.2	5.8	9.3	20.0	19.3	9.6	5.0	24.5	100.0

DISTRIBUTION OF INCOME OF INDIVIDUALS BY GRADES OF INCOME BEFORE TAX—(Contd.)

	Grades of income (Rs.)										Total
	Below 3,000	3,001- 7,500	7,501- 15,000	15,001- 20,000	20,001- 25,000	25,001- 50,000	50,001- 70,000	70,001- 1 lakh	1 lakh- 5 lakhs	Over 5 lakhs	
1960-61 Assessments											
Assessee (in '000s)	14.1	517.7	192.8	40.1	21.3	32.1	5.4	2.8	2.1	0.07	828.3
Per cent	1.7	62.5	23.3	4.8	2.6	3.9	0.7	0.3	0.2	—	100.0
Income											
Amount	2.3	256.1	199.9	69.2	47.5	108.6	31.3	22.8	33.5	6.9	777.8
Per cent	0.3	32.9	25.7	8.9	6.1	14.0	4.0	2.9	4.3	0.9	100.0
Tax*											
Amount	0.1	3.8	9.8	6.1	5.8	24.5	11.4	10.4	20.5	5.6	98.1
Per cent	0.1	3.9	10.0	6.2	5.9	25.0	11.6	10.6	20.9	5.8	100.0
1961-62 Assessments											
Assessee (in '000s)	26.3	579.8	214.4	45.5	24.5	37.6	6.3	3.3	2.6	0.08	940.2
Per cent	2.8	61.7	22.8	4.8	2.6	4.0	0.7	0.3	0.3	—	100.0
Income											
Amount	3.4	286.5	222.1	78.5	54.7	127.4	36.7	26.9	41.3	7.2	884.6
Per cent	0.4	32.4	25.1	8.9	6.2	14.4	4.1	3.0	4.7	0.8	100.0
Tax*											
Amount	0.1	4.2	11.0	6.8	6.8	28.3	13.3	12.1	24.7	5.3	112.6
Per cent	0.1	3.8	9.8	6.0	6.0	25.2	11.8	10.7	21.9	4.7	100.0
1962-63 Assessments											
Assessee (in '000s)	10.5	589.0	236.3	49.3	25.8	39.0	6.4	3.2	2.3	0.08	961.8
Per cent	1.1	61.2	24.6	5.1	2.7	4.1	0.7	0.3	0.2	—	100.0
Income											
Amount	1.7	292.9	245.0	84.9	57.5	131.5	37.4	26.6	38.3	7.3	923.1
Per cent	0.2	31.7	26.5	9.2	6.2	14.2	4.1	2.9	4.2	0.8	100.0

(Contd. on page 1337)

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Branches : Bombay, Calcutta, Madras.

Paid-up Capital : Rs. 8.35 crores.

Reserves : Rs. 7.98 crores.

**Assistance sanc-
tioned upto 30-6-67 :** Rs. 292.49 crores.

**Assistance dis-
bursed :** Rs. 239.34 crores.

**Total assistance
outstanding on
30-6-67 :** Rs. 173.69 crores.

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rupee currency;
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India;
- * Granting of loans in foreign currency;
- * Guaranteeing loans raised from foreign Banks or
Financial Institutions in foreign currency;
- * Underwriting of equity, preference or debenture
issues;
- * Subscribing to equity or preference capital.

Detailed terms and conditions of IFC loans and other
literature about its working are available on request
from its Head Office at New Delhi and its Branch Offices.

C. D. KHANNA
GENERAL MANAGER

N. D. NANGIA
CHAIRMAN

davp 67/309

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THE VYSYA BANK LIMITED

Established: 1930

Regd. Office: VYSYA BANK BLDG.,
Avenue Road, Bangalore-2.

Authorised Capital	Rs.	20,00,000
Paid up Capital	Rs.	12,00,000
Reserve Fund	Rs.	5,85,000
Deposits as on 27-10-67	Rs.	5,08,31,000
TOTAL RESOURCES as on 27-10-67	Rs.	5,92,49,000

INTEREST allowed on
FIXED DEPOSITS upto 7.75% p.a.

INTEREST allowed on
CUMULATIVE DEPOSITS 7.81% p.a.

INTEREST allowed on
SPL. SAVINGS DEPOSITS 5% p.a.
on daily balances.

Yadalam S. Gopalakrishna Setty **J. Suryanarayana Chetty,**
President. General Manager.

Distribution of Income of Individuals by Grades of Income Before Tax (Contd.)

(Rs crores)

	Grades of income (Rs)										
	Below 3,000	3,991- 7,500	7,501- 15,000	15,001- 20,000	20,001- 25,000	25,001- 50,000	50,001- 70,000	70,001- 1 lakh	1 lakh- 5 lakhs	Over 5 lakhs	Total
(1962-63 contd.)											
Tax*											
Amount	0.1	4.6	12.5	7.6	7.5	30.2	13.8	12.5	23.8	5.8	118.4
Per cent	0.1	3.9	10.5	6.4	6.3	25.5	11.7	10.6	20.1	4.9	100.0
1963-64											
Assessee (in '000s)	3.3	663.7	246.8	49.3	25.2	36.7	5.9	3.0	2.2	0.09	1036.5
Per cent	0.4	64.0	23.8	4.8	2.4	3.5	0.6	0.3	0.2	—	100.0
Income											
Amount	0.4	333.5	256.3	85.0	56.3	123.9	34.3	24.6	36.1	8.7	959.2
Per cent	...	34.8	26.7	9.9	5.9	12.9	3.6	2.5	3.8	0.9	100.0
Tax*											
Amount	0.1	5.2	13.0	7.8	7.6	28.8	12.9	11.6	22.8	6.1	115.8
Per cent	0.1	4.5	11.2	6.7	6.5	24.9	11.2	10.0	19.6	5.3	100.0

* Includes income tax and super tax for 1950-51 and 1951-52 and income tax, super tax and surcharge for 1955-56 to 1963-64.

† Relates to the income range Rs 25,001 to Rs 1,00,000.

Source: Reserve Bank of India.

Distribution of Income Assessed According to Source of Income (1950-51—1963-64)

(Rs crores)

Source of Income	1950-51	1951-52	1955-56	1956-57	1960-61	1961-62	1962-63	1963-64
Salaries								
No. of assesseees (in '000s)	210.1	280.3	235.3	244.6	393.1	468.9	473.2	520.0
Income	125.1	178.4	206.5	207.4	291.1	339.3	352.7	377.3
Tax*	12.6	15.2	22.1	22.8	29.7	33.4	33.8	32.2
Interest on securities								
No. of assesseees (in '000s)	44.8	50.7	24.3	28.8	29.5	30.1	27.2	25.3
Income	10.2	14.5	10.2	13.6	12.5	19.7	16.2	6.7
Tax*	3.5	5.1	4.5	6.4	7.0	12.9	7.0	2.3
Property income								
No. of assesseees (in '000s)	135.9	167.4	144.1	157.0	228.1	250.3	254.8	261.4
Income	22.2	30.2	29.7	33.8	37.3	42.7	42.8	42.3
Tax*	4.8	6.1	6.1	7.1	7.1	8.6	7.6	7.1
Income from business and professions								
No. of assesseees (in '000s)	252.8	366.9	283.6	324.6	514.4	553.0	528.1	541.6
Income	337.7	455.9	452.1	574.7	733.9	928.7	889.5	920.8
Tax*	105.1	132.6	138.0	173.7	203.2	320.6	203.3	174.1
Dividend income								
No. of assesseees (in '000s)	94.6	118.5	61.8	70.4	101.1	116.8	120.8	113.5
Income	35.5	52.3	46.0	55.2	63.8	86.1	87.3	61.8
Tax*	13.9	20.5	19.3	24.6	30.5	45.7	35.2	22.4
Income from capital gains								
No. of assesseees (in '000s)	0.2	0.3	...	...	1.3	2.4	3.2	4.1
Income	4.0	5.8	...	...	3.6	6.3	8.5	5.7
Tax*	1.1	1.5	...	...	0.2	1.4	2.1	1.3
Other sources								
No. of assesseees (in '000s)	98.3	147.8	98.2	110.6	203.2	232.5	292.5	318.0
Income	42.6	66.9	49.9	60.9	148.4	176.0	234.8	259.9
Tax*	16.8	34.1	17.4	21.5	39.8	49.5	52.7	59.1
Total								
No. of assesseees (in '000s)	936.7	11,53.9	947.2	936.0	14,70.6	16,54.0	17,00.4	17,83.9
Income	577.3	804.0	794.3	945.6	12,90.7	15,98.8	16,31.6	15,74.6
Tax*	157.8	215.1	207.5	256.1	318.2	472.0	341.8	298.5

* Includes income tax and super tax for 1950-51 to 1956-57 and income tax, super tax and surcharge for 1960-61 to 1963-64.

EXTERNAL ASSISTANCE

External Assistance : Authorised*

(Rs million)

Source of Assistance	Authorisation			
	First Plan	Second Plan	Third Plan	Total
A. Loans	2,268.9†	12,864.8	23,552.8	38,686.5
Austria	...	...	84.9	84.9
Belgium	...	...	114.2	114.2
Britain	...	1,226.6	2,419.7	3,646.3
Canada	...	157.1	309.7	466.8
Czechoslovakia	...	231.0	400.0	631.0
Denmark	...	...	10.3	10.3
Federal Republic of Germany	...	1,392.8	3,081.2	4,474.0
France	...	...	571.3	571.3
Italy	...	...	813.2	813.2
Japan	...	268.1	1,380.8	1,648.9
Netherlands	...	...	219.0	219.0
Poland	...	143.0	270.0	413.0
Sweden	...	...	22.1	22.1
Switzerland	...	65.4	179.7	245.1
USSR	647.4	3,190.7	1,005.0	4,843.1
United States of America:				
Wheat Loan (1951)	903.1	...	...	903.1
Exim Loan	...	1,026.3	924.3	1,950.6
DLF Loans	...	1,940.5	485.6	2,426.1
TCA Loans dollar portion only	146.3	275.9	...	422.2
Orissa Iron Ore Project	...	87.5	...	87.5
AID Loan	...	...	6,793.3	6,793.3
US Banks Loan	...	59.0	199.8	258.8
Yugoslavia	...	190.5	23.8	214.3
IBRD:				
(i) Public	320.1	1,615.8	738.1	2,674.0
(ii) Private	252.0	794.6	757.5	1,754.1
IDA	...	...	2,785.5	2,785.5
B. Grants	1,379.6	1,254.7	1,378.7	4,013.0
C. Other Assistance	169.2	11,307.3	4,506.3	15,982.8
PL 480 Imports	...	11,130.0	4,506.3	15,836.3
PL 665 Imports	169.2	149.5	...	318.7
Third Country Currency Assistance	...	27.8	...	27.8
Grand Total (A+B+C)	3,817.7	25,426.8	29,437.8	58,682.3

Note: (1) This statement excludes: (i) Suppliers' credit other than those forming a part of Consortium Aid. (ii) Rockefeller Foundation. (iii) Assistance under Titles II & III of PL 480. (iv) Technical assistance in the form of experts, trainees etc. (v) Ad hoc grants in the form of equipment and supplies where the value is not known.
 (2) In the case of PL 480 the amount 'authorised' represents the value of commodities imported.
 † Includes amounts authorised prior to first Plan period.
 * The rupee equivalents have been shown at pre-devaluation rates.

Source: Ministry of Finance.

THE ORIENTAL FIRE & GENERAL INSURANCE CO., LTD.

(Subsidiary to Life Insurance Corporation of India)

REGISTERED OFFICE:

'Oriental Buildings', Mahatma Gandhi Road,
Fort, BOMBAY-1.

TRANSACTING: FIRE, MARINE, MOTOR AND ALL OTHER CLASSES
OF GENERAL INSURANCE BUSINESS.

External Assistance : Utilised*

(Rs million)

Source of Assistance	Utilisation				Balance available for Fourth Plan
	First Plan	Second Plan	Third Plan	Total	
A. Loans	1,264.2†	7,299.5	19,093.3	27,657.0	11,029.5
Austria	...	...	47.0	47.0	37.9
Belgium	...	...	48.9	48.9	65.3
Britain	...	1,218.5	1,704.2	2,922.7	723.6
Canada	...	157.1	115.4	272.5	191.3
Czechoslovakia	...	...	126.1	126.1	504.9
Denmark	...	...	6.0	6.0	4.3
Federal Republic of Germany	...	1,250.8	2,197.3	3,448.1	1,025.9
France	...	...	209.8	209.8	361.5
Italy	...	...	116.5	116.5	696.7
Japan	...	160.1	882.2	1,042.3	606.6
Netherlands	...	...	95.1	95.1	123.9
Poland	...	...	113.4	113.4	299.6
Sweden	...	...	...	...	22.1
Switzerland	...	...	60.4	60.4	184.7
USSR	...	748.5	2,072.3	2,820.8	2,022.3
United States of America:					
Wheat Loan (1951)	903.1	...	...	903.1	...
Exim Loan	...	309.4	1,313.2	1,622.6	328.0
DLF Loans	...	768.7	1,473.6	2,242.3	183.6
TCA Loans dollar portion only	22.9	399.3	...	422.2	...
Orissa Iron Ore Project	...	0.2	84.3	84.5	3.0
AID Loan	...	...	4,981.3	4,981.3	1,812.0
US Banks Loan	...	59.0	109.3	168.3	90.5
Yugoslavia	...	...	97.1	97.1	117.2
IBRD:					
(i) Public	289.7	1,395.6	756.0	2,441.3	432.7
(ii) Private	48.5	832.3	477.6	1,358.4	395.7
IDA	...	...	2,006.3	2,006.3	779.2
B. Grants	701.8	1,606.4	1,071.5	3,379.7	633.3
C. Other Assistance	50.7	5,448.1	8,532.2	14,031.0	1,951.8
PL 480 Imports	...	5,155.0	3,529.5	13,634.5	1,951.8*
PL 665 Imports	50.7	269.0	...	319.7	...
Third Country Currency Assistance	...	25.1	2.7	27.8	...
Grand Total (A+B+C)	2,016.7	14,354.0	28,697.0	45,067.7	13,614.6

Note: (1) This statement excludes: (i) Suppliers' credit other than those forming a part of Consortium Aid. (ii) Rockefeller Foundation. (iii) Assistance under Titles II & III of PL 480. (iv) Technical assistance in the form of experts, trainees etc. (v) Ad hoc grants in the form of equipment and supplies where the value is not known.
 (2) The term 'utilised' represents the value of rupee deposits made against the commodities imported.
 † Includes amounts utilised prior to first Plan period.
 * The rupees equivalents have been shown at pre-devaluation rates.

Source: Ministry of Finance.

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THE NATIONAL ELECTRICAL INDUSTRIES LIMITED

Industrial Estate, Lalbaug, BOMBAY 12-DD

THE CRESCENT IRON & STEEL CORPORATION LTD.,

Industrial Estate, Lalbaug, BOMBAY 12-DD

THE WANDLESIDE NATIONAL CONDUCTORS LIMITED

Industrial Estate, Lalbaug, BOMBAY 12-DD

THE BOMBAY SILK MILLS LIMITED

Industrial Estate, Lalbaug, BOMBAY 12-DD

External Assistance: Source-wise
(BALANCE AVAILABLE AS ON JANUARY 1, 1967)

(Rs crores)

Source and type of assistance	Authorisation from 1-4-66 to 31-12-66		Utilisation from 1-4-66 to 31-12-66		Balance available as on 1-1-1967	
	Rupees	\$ million	Rupees	\$ million	Rupees	\$ million
Australia Grants					9.45	12.60
Austria Loans	3.53	4.70	2.40	3.42	6.93	9.23
Belgium Loans			0.02	0.03	10.28	13.68
Britain Loans	57.68	99.38	63.06	87.21	123.15	164.12
Britain Grants			0.06	0.08	0.79	1.05
Britain Total	57.68	99.38	63.12	87.29	123.94	165.17
Canada Loans	5.81	8.48	7.53	10.95	28.72	38.33
Canada Grants			7.77	12.71	55.66	74.21
Canada Total	5.81	8.48	15.30	23.66	84.44	112.54
Czechoslovakia Loans			8.50	11.98	70.55	94.04
Denmark Loans			1.23	1.91	1.42	1.89
Federal Republic of Germany Grants			48.32	68.19	110.38	147.12
Federal Republic of Germany Total					0.06	0.08
France Loans			48.32	68.19	110.44	147.20
Hungary Loans			2.03	2.70	54.97	73.08
Italy Loans	25.00	33.32			25.00	33.32
Japan Loans	33.75	45.00	0.19	0.40	134.94	179.91
Netherlands Loans	0.90	1.89	21.67	33.45	103.19	139.81
New Zealand Grants			4.38	6.30	16.20	21.59
Poland Loans					0.68	0.90
Sweden Loans	3.48	4.64	0.52	0.80	46.59	62.10
Sweden Grants			0.85	1.13	6.10	8.12
Sweden Total	3.48	4.64			1.69	2.25
Switzerland Loans			0.85	1.13	7.80	10.37
USSR Loans	250.00	333.25	4.53	6.88	21.34	28.45
USA Loans	323.80	348.10	24.46	35.96	550.79	721.91
USA Grants	1.94	2.59	139.62	209.28	483.09	643.97
USA Total	325.74	350.69	164.08	245.24	1033.88	1365.88
Yugoslavia Loans	60.00	80.00	376.59	572.85	899.74	1199.37
IBRD Loans	22.50	30.00	4.41	7.49	72.83	97.10
IDA Loans	229.52	305.95	17.56	25.13	134.18	178.86
UN Special Fund Grants			80.89	116.14	264.17	352.92
Ford Foundation Grants	1.98	2.65			10.09	13.99
Totals Loans	1041.47	1328.71	432.17	629.38	2265.48	3008.85
Totals Grants	3.92	5.23	11.72	17.97	90.19	120.25
PL Assistance	282.40	497.49	233.08	358.39	411.74	548.98
Grand Total	1327.79	1831.43	676.97	1005.74	2767.41	3678.08

Source: Economic Survey: 1966-67.

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Countrywise Foreign Collaborations in Indian Industries

(JANUARY 1957—SEPTEMBER 1967)

Country	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967 Jan.-Sept.
UK	17	34	52	120	126	79	70	105	60	44	41
USA	6	4	10	61	77	57	67	78	48	42	28
West Germany	2	6	13	58	67	42	46	62	44	41	18
Japan	1	3	8	39	30	24	32	35	26	18	20
Switzerland		2	1	13	19	19	19	19	18	10	6
France	2	1	2	9	16	14	16	11	12	11	7
Italy	4	4	4	9	13	11	6	8	7	3	6
East Germany			1	5	4	5	10	24	6	3	2
Holland	1			6	10	7	4	5	2	3	3
Sweden	1		1	13		6	1	6	3	5	8
Denmark			2	6	4	2	3	9	1	1	1
Czechoslovakia				6	5	1	5	4	3	3	1
Austria			1	3	5	4	2	5	1	2	1
Belgium			2	4	2	4	3	5		3	1
Poland				1	6		3	4	2	2	
Canada				1	3	6		3	1	2	2
Hungary				1	2	2		3	1	4	
Yugoslavia					1	1	3	2	1	3	1
Finland				2	1	1					
Panama		2	1								
Pakistan		2									
Others	47	44	52	23	12	13	6	9	6	3	3
Total	81	103	150	380	403	298	298	403	242	203	154

FOREIGN TRADE

India's Foreign Trade

(1965-66—1967-68)

(\$ Million)

	1965-66			1966-67			1967-68		
	Imports	Exports	Deficit	Imports	Exports	Deficit	Imports	Exports	Deficit
April	190.5	119.7	70.8	230.3	131.7	98.5	226.3	123.1	103.3
May	225.8	129.6	96.2	317.2	136.6	180.7	254.7	107.9	146.8
June	305.0	143.0	161.8	157.1	99.9	57.3	218.1	128.7	89.4
July	250.6	130.0	120.6	190.3	102.3	88.1	226.1	136.1	90.0
August	240.1	141.8	98.3	188.3	142.9	45.3	200.8	118.9	81.9
September	259.9	143.9	111.1	254.1	129.9	124.1			
October	201.7	140.1	60.1	204.4	149.2	55.2			
November	277.7	156.9	120.8	191.0	119.9	71.3			
December	241.8	152.1	89.1	215.2	139.3	75.9			
January	199.4	138.2	61.1	195.2	138.0	57.2			
February	198.3	127.9	70.4	204.4	118.8	85.7			
March	362.0	163.5	198.5	312.8	153.5	159.3			
(April-March)	2,952.8	1,692.6	1,260.3	2,660.3	1,652.0	1,098.6			
Total (April-August)	1,212.0	664.4	547.7	1,083.2	613.4	469.9	1,126.0	614.7	511.4

FOREIGN INVESTMENTS

Outstanding Foreign Business Investments in India

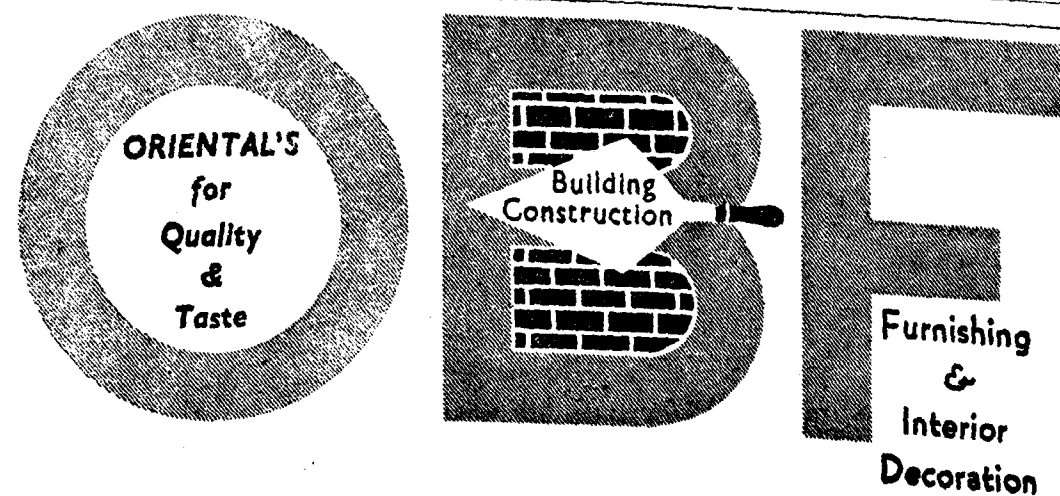
(Rs crores)

	June 1948	End 1955	End 1960	End 1961	End 1962	End of March		
						1963	1964	1965
Plantations	52.2	87.2	29.0	102.4	111.6	111.3	115.6	121.1
Mining	11.5	9.3	12.7	12.4	13.0	15.9	13.8	12.1
Petroleum	22.3	104.0	149.2	152.5	154.0	165.7	162.4	177.8
Manufacturing	70.7	129.1	246.0	295.0	324.4	354.6	406.9	458.6
Foods, beverages, etc.	10.1	29.0	34.0	36.1	39.5	33.9	34.8	35.7
Textile products	28.0	21.3	22.1	21.4	20.8	29.0	32.3	34.4
Transport equipment	1.0	3.6	7.9	13.0	15.5	17.8	33.0	42.1
Machinery and machine tools	1.2	5.0	10.1	14.0	23.8	25.5	32.3	38.7
Metals and metal products	8.0	11.1	32.6	95.1	91.6	97.6	98.3	104.2
Electrical goods and machinery	4.8	14.6	18.5	14.8	16.9	19.8	24.7	30.4
Chemicals and allied products	8.0	20.3	34.5	54.1	65.0	67.9	78.6	93.3
Miscellaneous	9.6	23.7	36.3	46.5	52.2	63.1	74.9	79.8
Services	107.9	112.8	127.8	117.5	129.3	139.4	155.5	166.2
Trading	43.0	26.8	29.4	29.3	31.0	32.4	31.5	33.5
Construction, utilities & transport	31.5	42.7	52.8	56.5	60.9	67.7	74.6	72.0
Financial	15.7	17.4	20.2	12.4	17.8	19.8	28.7	38.6
Miscellaneous	17.7	25.9	25.4	19.3	19.6	19.5	20.7	22.1
Total	264.6	442.4	634.7	679.8	733.3	786.9	856.2	935.8

Foreign Business Investments in India
(TYPE-WISE: 1955-1965)

(Rs crores)

	Outstanding					
	Dec. 1955	Dec. 1961	Dec. 1962	March 1963	March 1964	March 1965
Direct Investments	386.5	527.2	565.4	548.3	571.7	613.3
(a) Branches	243.1	270.3	290.9	270.8	266.1	262.6
(b) Subsidiaries	119.4	206.9	222.5	224.0	239.9	267.2
(c) Other controlled	24.0	50.0	52.0	53.5	65.7	77.5
Portfolio Investments	55.9	152.6	167.9	238.6	284.5	322.5
(a) Portfolio equity holdings by non-residents in Indian joint stock companies	39.2	44.3	47.4	49.3	53.0	54.7
(b) Creditor capital from private sources abroad invested in Indian joint stock companies	14.0	9.0	10.5	73.2	84.8	100.1
(c) Creditor capital from official sources in Indian joint stock companies	2.7	99.3	110.0	116.1	146.7	167.7
Total	442.4	679.8	733.3	786.9	856.2	935.8



ORIENTAL BUILDING & FURNISHING CO. PVT. LTD.
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Grams : DECORATION
Oriental

Outstanding Foreign Business Investments
(COUNTRY-WISE AND INDUSTRY-WISE)

(Rs crores)

	1955			1960			1964			1965		
	Direct	Port- folio	Total	Direct	Portfolio	Total	Direct	Port- folio	Total	Direct	Port- folio	Total
Canada	...	...	...	...	...	...	8.7	0.1	8.8	10.2	0.3	10.5
Manufacturing	...	...	...	...	...	...	8.7	0.1	8.8	10.2	0.3	10.5
Germany (West)	0.6	1.8	2.4	3.0	3.4	6.4	6.4	15.4	21.8	9.3	15.2	24.5
Manufacturing	0.6	1.8	2.4	3.2	3.3	6.5	5.8	13.2	19.0	8.8	11.7	20.5
Services	...	...	...	-0.2	0.1	-0.1	0.6	2.2	2.8	0.5	3.5	4.0
France	...	...	...	...	...	...	0.3	16.5	16.8	0.2	19.5	19.7
Manufacturing	...	...	...	...	...	...	0.3	8.4	8.7	0.2	8.7	8.9
Mining	...	...	...	...	...	...	...	2.2	2.2	...	2.8	2.8
Services	...	...	...	...	...	...	...	5.9	5.9	...	8.0	8.0
Italy	...	...	...	...	...	...	2.2	8.2	10.4	2.3	11.9	14.2
Manufacturing	...	...	...	...	...	...	2.2	4.4	6.6	2.3	5.5	7.8
Services	...	...	...	...	...	...	...	0.1	0.1	...	0.1	0.1
Petroleum	...	...	...	...	...	...	...	0.5	0.5	...	5.3	5.3
Mining	...	...	...	...	...	...	...	3.2	3.2	...	1.0	1.0
Japan	...	...	...	...	...	...	1.3	10.9	12.2	1.3	12.3	13.6
Manufacturing	...	...	...	...	...	...	1.3	3.8	5.1	1.3	3.6	4.9
Services	...	...	...	...	...	...	...	6.5	6.5	...	6.2	6.2
Petroleum	...	...	...	...	...	...	...	0.6	0.6	...	2.5	2.5
Sweden	...	...	...	...	...	...	7.8	0.2	8.0	7.9	0.2	8.1
Manufacturing	...	...	...	...	...	...	6.5	0.1	6.6	6.6	0.1	6.7
Services	...	...	...	...	...	...	1.3	0.1	1.4	1.3	0.1	1.4
Switzerland	...	...	...	...	...	...	4.2	1.5	5.7	6.1	1.8	7.9
Manufacturing	2.1	1.5	3.6	4.4	1.7	6.1	11.8	2.1	13.9	13.3	2.4	15.7
Services	2.1	...	2.1	1.8	...	1.8	1.5	1.0	2.5	1.3	0.9	2.2
Mining	...	...	...	...	...	...	...	0.2	0.2	...	0.2	0.2
UK	230.8	35.1	365.9	399.8	32.5	432.3	439.6	62.4	502.0	462.6	66.7	529.3
Plantations	80.8	5.4	86.2	94.4	3.7	98.1	112.5	2.7	115.2	118.0	2.7	120.7
Mining	7.8	1.2	9.0	11.4	1.1	12.5	4.7	2.6	7.3	4.5	2.7	7.2
Petroleum	79.0	0.1	79.1	101.9	0.1	102.0	97.2	14.4	111.6	102.2	14.4	116.6
Manufacturing	83.9	15.1	99.0	110.8	15.8	126.6	151.5	26.6	178.1	160.9	30.2	191.1
Services	79.3	13.2	92.5	81.3	11.8	93.1	73.7	16.1	89.8	77.0	16.7	93.7
USA	36.7	2.9	39.6	68.5	4.5	73.0	82.3	72.3	154.6	93.1	100.1	193.2
Plantations	...	0.1	0.1	...	0.1	0.1	...	0.1	0.1	...	0.1	0.1
Mining	...	0.1	0.1	...	0.1	0.1	...	...	...	...	...	...
Petroleum	24.7	0.1	24.8	47.1	0.1	47.2	45.8	1.8	47.6	44.7	7.6	52.3
Manufacturing	9.6	1.2	10.8	19.1	2.7	21.8	33.3	58.9	92.2	45.0	78.0	123.0
Services	2.4	1.5	3.9	2.3	1.5	3.8	3.2	11.5	14.7	3.4	14.4	17.8
Other Countries	14.3	14.5	28.8	18.4	96.9	115.2	9.8	95.2	105.0	11.8	92.8	104.6
Plantations	...	0.9	0.9	...	0.8	0.8	...	0.3	0.3	...	0.3	0.3
Mining	...	0.2	0.2	...	0.2	0.2	...	0.9	0.9	...	0.9	0.9
Petroleum	...	0.1	0.1	...	0.1	0.1	...	2.1	2.1	...	1.1	1.1
Manufacturing	4.5	8.7	13.2	9.8	75.2	85.0	7.5	62.4	69.9	9.9	59.6	69.5
Services	9.8	4.6	14.4	8.6	20.6	29.2	2.3	29.5	31.8	1.9	30.9	32.8
All Countries	386.5	55.9	442.4	495.7	138.9	634.7	571.7	284.5	856.2	613.3	322.5	935.8
Plantations	80.8	6.4	87.2	94.4	4.6	99.0	112.5	3.1	115.6	118.0	3.1	121.1
Mining	7.8	1.5	9.3	11.4	1.3	12.7	4.7	9.1	13.8	4.5	7.6	12.1
Petroleum	103.6	0.4	104.0	149.0	0.2	149.2	143.0	19.4	162.4	146.9	30.9	177.8
Manufacturing	100.7	28.4	129.1	147.2	98.8	246.0	223.9	180.0	408.9	258.5	200.1	458.6
Services	93.6	19.2	112.8	93.7	34.1	127.8	82.6	72.9	155.5	85.4	80.8	166.2

Source: Reserve Bank of India.

Profits of Foreign Controlled Companies (1956-65)

(Rs crores)

	Plantations	Mining	Petroleum	Mfg.	Services	Total
1956						
Earned	10.7	1.2	16.6	12.4	5.6	46.4
Distributed	9.0	1.1	6.9	6.8	3.6	27.3
Retained	1.7	0.1	9.7	5.6	2.0	19.2
1957						
Earned	5.3	1.9	12.5	10.7	4.6	35.1
Distributed	6.8	0.5	7.1	6.9	4.3	25.6
Retained	-1.5	1.4	5.4	3.8	0.3	9.5
1958						
Earned	4.9	1.2	11.0	12.9	4.5	34.5
Distributed	6.3	1.1	5.4	7.8	4.8	25.4
Retained	-1.4	0.1	5.6	5.1	-0.3	9.1
1959						
Earned	5.7	1.2	10.8	16.1	4.0	37.9
Distributed	4.8	0.1	4.5	9.0	4.8	23.3
Retained	0.9	1.1	6.3	7.1	-0.8	14.8
1960						
Earned	6.7	1.4	10.0	17.8	4.6	40.8
Distributed	6.4	0.6	3.9	11.5	4.1	26.5
Retained	0.3	0.8	6.1	6.3	0.5	14.1
1961						
Earned	6.7	1.0	8.0	22.2	6.4	44.3
Distributed	5.3	0.1	5.9	13.4	3.8	28.5
Retained	1.4	0.9	2.1	8.8	2.6	15.8
1962						
Earned	7.3	0.8	8.4	18.9	3.6	39.0
Distributed	5.6	0.1	8.0	12.7	4.8	31.2
Retained	1.7	0.7	0.4	6.2	-1.2	7.8
1963-64						
Earned	4.3	0.3	8.3	20.1	4.5	37.5
Distributed	6.8	0.3	8.6	11.0	3.4	30.1
Retained	-2.5	...	-0.3	9.1	1.1	7.4
1964-65						
Earned	6.2	0.3	15.5	26.8	5.4	54.2
Distributed	6.0	0.5	6.7	14.2	5.7	33.1
Retained	0.2	-0.2	8.8	12.6	-0.3	21.1

Source: Reserve Bank of India.

Foreign Collaboration Cases Approved During 1951-65, Industry-wise

Type	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Total
Food manufacturing industries										4	5		6	2		17
Textiles	2	6	5	4	5	15	4	9	17	7	7	6	3	5	4	104
Artificial fibres				1	1		1			2		6		2		13
Wood and cork (except furniture)	1								1	1	2	2	2	1	1	11
Paper and paper products				2			1	1	2	7	3	3	8	10	2	42
Basic industrial chemicals					1	4		1		14	7	18	6	10	16	77
including fertilizers					1						1					2
Vegetable and animal oils and fats																
Miscellaneous chemical products	12	3	6	13	10	3	14	1	19	34	50	29	39	31	32	296
Glass and glass products	2	1		1	2	3	2	2	2	4	8	5	5	2	1	40
Pottery, china and earthenware				10						1				6	1	18
Cement			1	2		1	1		3	3	5	3				25
Iron and steel		2	1	3		3	1		2	3	8	14	6	13	1	57
Non-ferrous metals													6	2	1	22
Metal products	3	2	4	3	5	3	3	5	2	20	17	16	28	2	4	147
Machinery (except electrical)	9	4	5	8	20	23	15	32	59	58	33	84	25	70	54	499
Rail-road equipment		1	1		2				1	5	10	17	4	2	1	46
Motor vehicles and ancillaries	4	2	2	3	10	6	6	8	13	26	18	38	21	29	14	200
Electrical machinery	5	5	3	4	7	7	15	16	6	43	90	70	46	37	25	379
Bicycles	1		1	1		3	2	2	1	2	3	3				20
Miscellaneous industries	2	2	10	7	10	8	9	16	34	68	82	39	47	27	40	401
Electric light and power			1							17	3		1			24
Electricity, gas and steam										2	2	10	6	1		21
Coal														2		3
Stone quarrying minerals	6				1	1		1		4	1	4	8	1		27
Petroleum and natural gas										2		1	2			5
Miscellaneous	5	4	8	8	3	11	3	10	23	7	21	22	24	15	7	171
Total	52	32	50	71	78	93	79	104	208	328	392	380	288	289	223	2687

MONEY SUPPLY

Money Supply With the Public

(Rs. crores)

Last Friday	Money Supply	Total Currency with Public	Deposit Money with the Public	Total	Net Demand Deposits of Banks**	Other Deposits with Reserve Bank†	Total Variations in Money Supply
1951-52	1,848.18	1,285.51	562.67	544.85	17.82	--160.03	
1955-56	2,216.95	1,571.01	645.94	636.90	9.04	+262.16	
1960-61	2,868.61	2,098.05	770.56	757.10	13.46	+199.16	
1961-62	3,045.82	2,201.16	844.66	827.43	17.23	+177.21	
1962-63	3,309.97	2,379.47	930.51	907.98	22.53	+264.15	
1963-64	3,752.12	2,605.56	1,146.56	1,114.66	31.90	+442.15	
1964-65	4,080.28	2,769.05	1,311.23	1,289.52	21.70	+328.16	
1965-66	4,529.39	3,034.28	1,495.10	1,478.38	16.72	+449.11	
1966-67	4,949.97	3,197.22	1,752.75	1,711.34	41.41	+420.58	
1966 September	4,459.44	2,865.45	1,594.00	1,566.63	27.32	-65.06	
1967 September	4,853.39	3,070.41	1,782.97	1,763.66	19.32	+8.52	

† Excluding balances held on IMF Account No. I and some extraordinary items.

** Relating to net demand deposits of scheduled and non-scheduled banks and to net demand liabilities of state Co-operative Banks. Prior to November 1960 the net demand liabilities of scheduled banks have been adjusted for inter-bank demand deposits and thus include inter-bank demand deposits and non-deposits "other" liabilities.

Source: Reserve Bank of India.

PRICES

Index Numbers of Wholesale Prices

(BASE: 1952-53=100)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	October 1966	1967
Food Articles									
Cereals	104	102	106	116	139	148	174	170	220
Pulses	93	92	105	115	165	162	197	198	321
Edible oils	150	157	151	151	200	234	304	294	287
Sugar & Gur	133	120	145	169	188	158	193	193	440
Total	120.0	120.1	126.1	136.8	159.9	168.8	199.8	199.4	259.4
Liquor & Tobacco	109.9	100.3	100.9	119.6	131.2	136.6	130.3	129.3	134.0
Fuel, Power, Light and Lubricants	120.0	122.1	124.4	139.4	144.9	150.1	161.1	171.0	193.4
Industrial Raw Materials									
Fibres	152	138	129	133	143	165	192	185.4	175.1
Oilseeds	150	156	151	154	200	240	300	291.7	283.6
Total	145.4	142.6	136.5	139.5	162.7	189.1	228.6	222.4	215.6
Manufactures									
Total	123.9	126.6	128.8	131.1	127.3	149.2	163.0	162.2	165.7
Intermediate products	130.6	138.8	139.5	139.6	152.4	172.3	204.5	203.1	211.5
Finished Products									
Total	122.8	124.6	127.0	129.7	134.8	145.4	156.1	155.5	158.2
Textiles	126	126	126	128	132	144	153	151	152
Chemicals	104	111	115	118	121	128	144	150	149
All commodities	124.2	125.1	127.9	135.3	152.7	165.2	191.0	189.9	220.8

Consumer Price Index Numbers for Working Class
(Base: August 1939=100)

	Maharashtra		Delhi	Bengal	UP	Maha-	Madhya	Madras	Punjab	All
	Bombay	Bombay	Delhi†	Calcutta	Kanpur	rashtra	Pradesh	Madras	Ludhiana†	India†
	1934=100							1936=100		
1960	401	420	158	397	476	512	165	467	167	171
1961	412	431	167	406	486	495	163	478	172	173
1962*	423	444	172	423	511	502	198	484	182	179
1963*	424	448	176	442	524	522	207	488	190	185
1964*	492	516	196	477	645	651	242	548	211	210
1965*	537	558	212	504	709	721	247	613	226	230
1966*	605	636	248	570	738	751	298	655	263	255
1966* January	575	604	232**	517	722	699	261	639	231	239
February	579	608	232	537	708	710	266	630	231	240
March	588	617	235	557	699	720	270	626	233	240
April	596	626	239	553	699	715	282	629	241	242
May	596	626	244	569	718	736	282	640	251	250
June	600	630	252	577	729	752	296	652	256	255
July	613	644	254	577	751	762	322	659	277	259
August	622	653	254	577	755	778	317	662	271	262
September	617	648	254	585	754	773	314	663	274	264
October	622	653	255	593	764	783	316	671	290	265
November	626	657	259	596	773	788	322	686	297	268
December	630	662	260	604	783	793	322	693	307	272
1967* January	638	670	264	593	837	788	322	692	317	272
February	643	675	267	585	845	783	322	692	328	273
March	647	679	270	593	863	788	340	685	330	276
April	651	684	272	608	847	788	349	680	321	279
May	669	702	274	612	870	814	361	685	313	284
June	676	710	279	620	900	846	361	696	318	291
July	681	715	286	632	919	856	361	703	326	294
August	N.A.	719	292	636	933	851	358	697	326	297
September	N.A.	702	297	...	938	...	...	694	...	295
October	...	...	299	...	...	...	...	709	...	...

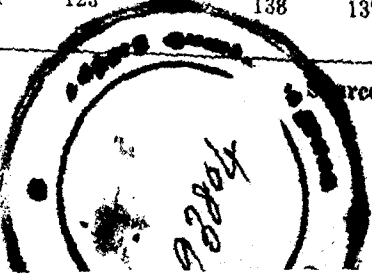
* Provisional. † Base 1944=100. ** Based on the revised series from January 1966 onwards.

Consumer Price Index Numbers for Urban Non-Manual Employees
(Base: 1960=100)

Centre	1960-61* 1961-62 1962-63 1963-64 1964-65 1965-66 1966-67							1967					
								January	February	March	April	May	June
All-India	100	104	108	113	124	132	148	149	150	151	152	154	158
Bombay	99	103	107	114	125	132	142	143	143	144	146	149	153
Delhi-New Delhi	100	105	111	116	125	131	142	144	146	148	150	149	150
Calcutta	98	102	107	112	118	126	139	141	142	144	144	145	148
Madras	103	106	111	116	125	133	147	154	153	152	151	152	154
Hyderabad-													
Secunderabad	101	104	107	111	122	133	147	148	148	149	150	152	156
Bangalore	102	106	111	115	124	133	145	148	149	150	150	151	154
Lucknow	100	102	105	110	125	132	146	150	153	156	154	155	159
Ahmedabad	100	103	105	112	125	131	146	153	154	154	157	160	164
Jaipur	101	105	108	115	126	133	150	153	155	155	157	159	163
Patna	99	102	106	111	124	139	160	167	171	168	170	174	181
Srinagar	105	105	111	120	128	134	143	151	153	153	155	158	160
Trivandrum	103	105	110	115	122	131	146	153	151	149	149	152	157
Cuttack-Bhubaneswar	100	107	113	122	135	142	154	156	155	156	158	159	161
Bhopal	102	109	111	115	128	133	144	146	148	150	158	160	172
Chandigarh	101	105	108	114	124	129	143	146	150	152	152	152	153
Shillong	101	103	107	114	121	123	138	137	139	143	147	149	...

* Relates to the period January to March 1961. Source: Central Statistical Organisation.

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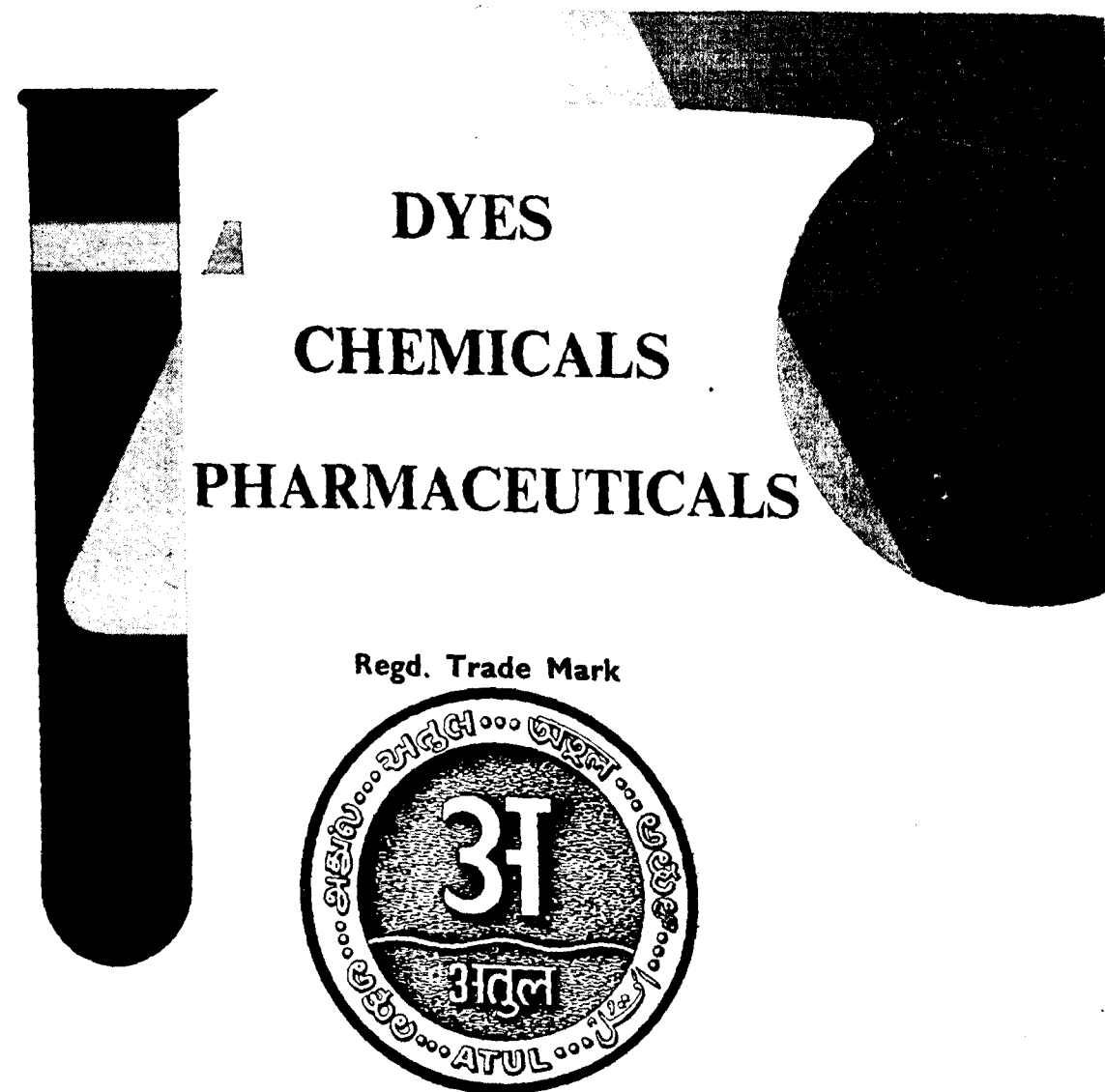


each step opens wider horizons

We started with textiles. Today our range includes textiles, jute, dyes, chemicals, plywood and glass. Tomorrow it will be wider. Both wider and better.

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