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ON THE NEED FOR PROVIDING EMPLOYMENT GUARANTEE

I

Unemployment, a perennial problem of the Indian economy, has become sharply accentuated in the recent years. This is especially true of rural unemployment: between 1993-4 and 1999-00 (two NSS Quinquennial survey years) rural employment grew at the annual rate of 0.58 percent, which was far below the rate of growth of rural population. Some of course take comfort from the fact that the rural work participation rate declined during this period, which, they contend, would have kept down the unemployment rate. But a decline in work participation rate always accompanies an increase in unemployment owing to the "discouraged worker effect": people drop out of the work-force when there are not enough jobs going. There is no escape from the conclusion therefore that the employment scenario has worsened quite dramatically of late; and this is confirmed by a host of micro-level studies.

A number of factors have contributed to this. The most obvious is the decline in the rate of growth of agriculture in the decade of the nineties, and especially of foodgrains which are highly labour-intensive. The nineties are the first decade since independence over which the per capita foodgrains output declined in absolute terms. Obviously, unemployment must have worsened on this score. Likewise, even within the foodgrains sector there has been a certain decline in labour coefficient per unit output on account of mechanization. *But over and above all these, there has been an additional factor of paramount importance, and this is the sharp cut-back in government expenditure in the countryside.*

Notwithstanding the decline in per capita foodgrains output the government has been saddled with massive foodgrain stocks which had built up to 63 million tonnes by the beginning of July, 2002 (against the "norm" of 24.3 m. tonnes for that date), but which came down subsequently because of drought relief, and also because of the fact that the NDA government chose to dump foodgrain stocks on the international market at throwaway prices (which reportedly were even lower than what is charged to the BPL population within the country)! What this suggests is a drastic squeeze in the purchasing power of the rural poor, in addition to what the drop in foodgrain growth-rate would have warranted. And this squeeze was because of the cut-back in government expenditure.

The curtailment in rural development expenditure for example has been phenomenal: while such expenditure as a proportion of GDP amounted to over 13 percent on average during the eighth plan period, i.e. during the latter half of the eighties, it has now dropped to around 5 percent. With a deflation of this order it is not surprising that rural employment has been badly hit.

There is a pervasive belief that since much of the rural development expenditure "leaks" out into the pockets of contractors, middlemen and the rural rich instead of going to the intended beneficiaries, its curtailment should make no difference to the rural poor. But this belief is erroneous. Even when the expenditure intended to put purchasing power in the hands of the rural poor gets into the pockets of the rural rich, the latter in turn spend what they get in various ways, generating employment through the "multiplier effect". True, the employment generated would be lower than what it might have been if the expenditure had

gone into the hands of the rural poor; nonetheless when the rural rich spend some part of their incomes which has come to them from government expenditure in the countryside, this generates income and employment for the rural poor. But if the government expenditure does not occur at all, or occurs in other avenues such as say defence expenditure which generate heavy demand for imports and hence limited domestic multiplier effects, then the rural poor lose employment. This is precisely what has happened. The government's overall expenditure has declined relative to the GDP, and within it the share of expenditure streams with limited domestic multiplier effects has increased. Both these phenomena underlie the curtailment of rural development expenditure whose effect on employment has been quite disastrous.

II

Such deflation is invariably associated with the pursuit of neo-liberal policies. The tax-GDP ratio necessarily goes down when a neo-liberal regime is substituted for a *dirigiste* one: import duties are cut as part of trade liberalization and since excise duties cannot be raised when import duties are being cut (otherwise the economy would be pushed into a gratuitous de-industrialization), the government's ability to mobilize resources through indirect taxation goes down; likewise taxation of foreign capital has to be curtailed to provide incentives for foreign investment and since a certain degree of *inter se* parity has to be maintained between the taxation of foreign visavis domestic capitalists, and between the taxation of corporate visavis personal incomes, the ability to raise revenue through direct taxation also gets curtailed. In sum, the tax-GDP ratio goes down, as has happened in India: *if the same ratio of central government tax revenue to GDP were to obtain today as obtained in 1990-91, then the central government would be getting about Rs.30,000 crores of additional revenue per annum at today's GDP.*

In addition, a neo-liberal economy has an irrational aversion to fiscal deficits, irrational because such deficits are sought to be curtailed even in the midst of massive unsold foodgrain stocks and unutilized capacity, and that too even when these reserves are held by the government itself[1]! The reason for this aversion lies in the following. Once the economy becomes open to globalized financial flows, the fear of sudden capital flight and hence the need to retain the so-called "investors' confidence" makes governments bow to the caprices of international finance capital; since such capital is always averse to State activism in matters of employment and demand stimulation, it dislikes fiscal deficits and the government must obey. With reduced tax-GDP ratios and restrictions on fiscal deficits, deflation becomes inevitable.

The worsening rural employment scenario therefore is the other side of the "neo-liberal" coin. It is a reflection in particular of the hegemony of international finance that a globalized economy necessarily ushers in, a fact that has to be kept in mind when discussing the Employment Guarantee Act.

III

It is a reflection of the seriousness of the unemployment problem that the proposal of employment guarantee made an appearance first in the Congress party's election manifesto and subsequently in the National Common Minimum Programme. This seriousness has been underestimated not only by the NDA government that went into the elections with the slogan of "India Shining", but by virtually the entire intelligentsia, media and even the economics profession in the country. This is because the accentuation of the rural unemployment

[1] For an elaboration of this argument see Patnaik (2003).

problem has accompanied an increase in poverty that has remained systematically unrecognized[2]. A reference was made above to the piling up of foodgrain stocks until July 2002. This pile up, out of a declining per capita foodgrain output, implies a reduction in foodgrain availability that is so drastic that *the current level of per capita foodgrain availability for the country as a whole is about the same as what prevailed on the eve of the Second World War*.

At the beginning of the twentieth century the per capita foodgrain availability in the country was around 200 kg. per annum. The last half-century of colonial rule was so disastrous for the people that by the time of independence it had declined to around 150 kg. per annum. With all the effort made after independence it went up to about 180 kg. per annum by the end of the 1980s. In the nineties, especially during the latter half of the decade, it has declined sharply: in 2000-01 it had reached 151 kg.; it went up to 158 kg. in 2001-02 and remained at 157 kg. in 2002-03 (the latest year for which data are available), the average for the triennium coming to about 155 kg. If this is the national average then the situation in the countryside, especially among the rural poor, can be well imagined.

This fall, as mentioned earlier, is far greater than the decline in per capita output; it is a result of the fall in purchasing power in the hands of the rural poor which has been associated with declining employment opportunities. Hunger in rural India today is unprecedented since independence; rural poverty consequently has reached extremely high levels. It is paradoxical that at this very time the media, official spokesmen and even a section of the economics profession should be celebrating a decline in rural poverty. But this decline has no basis in facts.

Two points have to be noted in this context. First, the consumer expenditure data collected by the 55th round of the NSS are "contaminated" and hence cannot be relied upon. This is accepted by all and there have been several efforts to make adjustments to the estimates thrown up by these data to arrive at a more reliable figure. While the adjustments made by the World Bank economists show a decline in rural poverty nonetheless, independent researchers dispute this and find no evidence of any decline. *Secondly, however, this entire estimation procedure for poverty is flawed.* Poverty in India is defined in terms of a calorie norm. In the original poverty estimates a correspondence was established between this norm and a certain level of expenditure. Since then, even though calorie intake data are directly available, the method of estimation of poverty has relied upon bringing forward that benchmark expenditure level by using a consumer price index. This is a roundabout method which lacks legitimacy. If we take the calorie intake information directly then it turns out that *as much as 75 percent of the rural population in the country fell below the poverty line of 2400 calories per day in 1999-00,* which shows a considerable increase over the 1973-74 level (56 percent). The unemployment picture in other words is in complete conformity with the poverty story provided we read this latter story correctly; rural India has been witnessing a worsening of both in the period of neo-liberal reforms. (There is a view that reduced foodgrain intake in rural India, and indeed in the country as a whole, is because of a voluntary shift in dietary habits owing to economic betterment; this is completely baseless since all over the world economic betterment has always led to greater absorption of foodgrains, taking both direct and indirect absorption, i.e. via processed and animal food, together).

IV

[2] The argument which follows and the figures given in this section are all taken from Utsa Patnaik's Safdar Hashmi Memorial Lecture, which is reprinted in U.Patnaik (2004).

Against this backdrop of growing and acute rural distress, the need for an Employment Guarantee Act cannot be overemphasized. Such an Act, welcome as it is under all circumstances, should be particularly welcome in the present context. And yet this proposal has aroused intense opposition from the moment it was mooted. Since the most common argument against it has centred around an alleged shortage of resources, let us look at the resource issue a little closely.

This issue has been much discussed, but almost the entire discussion has been exclusively concerned with the question of financial resources. While financial resources can be a useful starting point, sooner or later we have to investigate the availability of real resources for such a scheme. This is so for two reasons: first, the assumption that raising the requisite amount of financial resources automatically releases the real resources needed for a Scheme is not always justified. This is particularly true in the present case, where, for instance, there would (and should) be a substantial additional demand for foodgrains arising from the implementation of the Scheme, while the real resources released through, say, taxes levied to finance the Scheme, are unlikely to consist of foodgrains. Such a mismatch can have serious inflationary implications. Secondly, *if an economic system is demand- and not supply-constrained, then the magnitude of financial resources needed for financing such an Employment Guarantee Scheme would itself depend upon what instruments are used to raise these financial resources*. In such a case in other words it is not as if a fixed sum has to be raised using this or that instrument; but the amount itself would vary depending on the instrument used. This is because if the government is to ensure that a certain amount of additional employment is to be generated in the economy, then, since taxation entails the release of resources and hence the creation of unemployment elsewhere, which government borrowing does not, the requisite effort by the government would have to be much larger if the programme is tax-financed. A tax-financed employment scheme in other words would require much larger government expenditure, and hence revenue, for creating a certain amount of additional employment than a borrowing-financed scheme, when unutilized resources are available in the economy (and when taxation *does* release resources elsewhere, i.e. does not fall entirely on savings).

Let us, to start with, assume that there would be enough unutilized capacity and unsold foodgrain stocks available in the economy to meet the demands of such a scheme (the validity of this assumption will be examined later). Production in any sector requires, as current inputs, materials and labour. The wages given to labour in turn are spent partly on food and partly on non-food consumption goods. The employment projects under this scheme then would be generating current demand for material inputs, for foodgrains and for non-food (mainly industrial) consumption goods. These sectors, for meeting this additional demand, would need to produce more, and hence would generate, in turn, current demand for *their* material inputs and for more labour, and hence for more foodgrains and non-food consumption goods, and so on. Let us assume that in all sectors directly or indirectly catering to the commodity requirements of the employment projects, the ratio of material inputs to value added is 1:2, the ratio of profits to value added is 1:5, and that all wages (amounting to four-fifths of value added) are consumed, half on foodgrains (where stock-decumulation by the FCI meets additional demand) and half on non-food items (where production has to increase). This means that the total value of output in each of these sectors has the following components: materials 5/15, profits 2/15, foodgrains 4/15, and non-food consumption goods 4/15. On the employment projects themselves of course there would be no profit component, but let us treat the matter as if the profit component exists but is taken by the government, i.e.

the funds it has to provide are lower by that amount. But subject to this, let us assume that the same ratios obtain on the employment projects themselves[3].

Now the exact number of labour-days per annum which needs to be generated under this scheme is not known. But a preliminary rough estimate can be arrived at as follows. Of the 20 crore households in the country, about 14 crore would be rural households. Let us say about 6 crore rural households would be in need of assured employment for 100 days and let us assume that each of them has to be provided with full 100 days of employment. This would mean 600 crore labour days, which, at Rs.60 per day, would generate a wage bill of Rs.36000 crore per annum. *Not all this wage bill however needs to be provided on employment projects*; some of it would be automatically generated as the multiplier effect of the employment schemes. Bearing in mind the fact that on the foodgrain component of expenditure there would be no multiplier effects, since output has already been produced and demand is met simply through stock decumulation, and likewise on the profit component (since we assume the marginal propensity to consume out of profits to be zero), let us estimate the value of this multiplier.

Suppose Re.1 is spent on an employment project. This directly generates Rs. 8/15 of wage-bill. But it indirectly brings forth production worth Rs.9/15 (excluding from Re.1 the profit and foodgrain component), which in turn brings forth 9/15.9/15 worth of production in the feeder activities, and so on. Since each of these activities has 8/15 of its output value constituted by the wage bill, it follows that Re.1 spent on an employment scheme would give rise a total wage-bill of [8/15 {1+ 9/15 +$(9/15)^2$ + $(9/15)^3$+…}], which comes to Rs.4/3. *It follows then that to generate a wage-bill of Rs.36000 crores, the required employment projects should cost Rs.27000 cr. But since 2/15ths of this consist of profits which come back to the government, i.e. the resources for which need not be found, the actual expenditure which the government has to incur is only Rs.23400 cr*[4].

In working out the value of the multiplier we have assumed no effects of taxes. In a demand-constrained system if the idea is to maximize employment per unit of government expenditure then raising tax revenue to finance this expenditure is likely to be counterproductive. There is however only one kind of taxation which in no way lowers the value of the multiplier effects of government expenditure, namely, taxation which impinges entirely on savings and hence has the effect merely of transferring savings from private hands to the government. Since such taxation has the additional beneficial effect of keeping wealth inequalities in check, apart from keeping down government debt to an equivalent extent, there is every reason for garnering through additional taxation at least the additional profits that would be generated as a consequence of the employment scheme (the bulk of which is likely to accrue to the private sector). The amount according to the above calculations comes to Rs.5400 crores (Rs.36000 cr. wage-bill *times* profit-wage ratio of ¼ *less* the fictitious "profits" of Rs.3600 cr. on the employment schemes). This taxation does not have to be directly levied on those who actually get the additional profits. If it is levied on the capitalists in any way, that still keeps the total magnitude of profits unchanged in the economy despite the introduction of the employment scheme. (Of course I am not suggesting that the total profits *should* remain unchanged and not be reduced in the economy through taxation. They

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[3] Even though the exercise for determining the resource needs of an EGS has been carried out here by making such assumptions and also by taking specific parameter values, the outcome would not change much if we took other values (within limits of reasonable plausibility).

4. It is interesting to note that a whole range of estimates making very different assumptions from one another converge on roughly this order of magnitude. Thus C.P.Chandrasekhar and Jayati Ghosh (2004) put the figure at about Rs.36000 cr. (in addition to what is being spent already). Jairam Ramesh of the National Advisory Council put the figure at between Rs.30,000 and Rs.32000 cr.(at a Convention in Delhi). The Planning Commission reportedly estimates the required amount to be Rs.25000 cr.

should be, but that is a separate matter having nothing to with the employment scheme as such).

Of the total resource need of Rs.23400 cr., if Rs.5400 is raised through taxation of the capitalists (which would still leave them exactly as well off collectively as they were before the introduction of the scheme, since it would take away only the *additional profits*), then the remainder, Rs.18000 cr., should be raised by borrowing, since this is exactly the amount that would accrue to the FCI on account of its decumulation of foodgrain stocks. The government can borrow this amount from the banking system; but since it would accrue to the FCI, which itself is a part of the government, the net indebtedness of the government would not have increased at all. *In short the employment scheme can be financed entirely in a manner which does not impinge on any group's current economic position. This is because of the assumption of a demand-constrained system.*

V

The question arises: how valid is this assumption? There is at present substantial unutilized capacity in a host of industrial sectors, with the exception of steel. And in steel there is a world-wide shortage arising from heavy demand from the People's Republic of China. It is unlikely that the state of unutilized capacity in sectors other than steel would disappear; indeed Indian industry has been afflicted by unutilized capacity for several years now. And even in steel, with China taking steps to "cool down" her "overheated" economy, the current tightness in the market is unlikely to last long. Besides, in many of these sectors, even if there were no actual unutilized capacity, the generation of demand would call forth *additional capacity creation* fairly easily and fairly soon (the government would have to be alert to this possibility and instruct nationalized banks to provide the requisite credit), a proposition which had been advanced by P.C.Mahalanobis in the context of his famous four-sector model developed for the Second Plan. The Mahalanobis assumption, if I may call it so, has much substance in it, provided the government creates the right environment for its realization.

That leaves foodgrains, where approximately 18 million tonnes (equivalent roughly to Rs.18000 crores) would be required to be held by the FCI and decumulated when the need arose. These would have to be excess stocks, i.e. over and above the "normal" stock-holding. Until July 2002 the country systematically had substantial excess stocks; the magnitude as on July 1, 2002 being 37.6 million (63 million tonnes of actual stocks compared to 24.3 million tonnes of "normal" stocks). Since then the stocks have come down for reasons we have already discussed. But stocks are building up again, the excess stocks as on July 1, 2004, amounting to 6 million tonnes; this figure is likely to climb steeply in November-December. A figure of 18 million tonnes of excess stocks therefore is unlikely to pose any problems: indeed for the entire decade 1992-2002 the economy was systematically saddled with excess stocks. What is needed however is that the government must not dismantle the machinery of procurement and public distribution it has built up over the years in a misguided burst of neo-liberalism.

Indeed from the point of view of managing the foodgrain economy, an employment guarantee scheme is positively beneficial. Since the FCI's abnormal stock-holding pushes up interest costs, and hence food subsidies, providing an excuse for demands for dismantling the entire procurement and distribution system, the utilization of these stocks in employment schemes would actually ease fiscal pressures on account of reduced food subsidies. It would also tone up the efficacy of the public procurement-cum-distribution programme by preventing its getting clogged with excess stocks on account of reduced purchasing power in the hands of the rural poor (a fall-out, as we have seen, of the neo-liberal *penchant* for

deflation through cuts in government expenditure). The reduced food subsidy bill on this score would perhaps suffice to pay the interest costs on government borrowing for the employment guarantee scheme; but even if there is some shortfall, the amounts involved would be small. Since banks are flush with funds the government may in fact arrange to borrow from them at low rates of interest for the employment guarantee programme. It could even print money to finance the programme in which case the question of interest payment would cease to matter.

VI

Of course, a question may be raised here. While there is no difference in the net indebtedness position of the government between the two situations, one where 18 million tonnes of excess stocks are held by the government and the other where these 18 million tonnes are used for employment generation, there *would* be a difference if in the first case these 18 million would otherwise have been *sold* by the FCI, say in the international market (and the NDA government, we have seen, had mindlessly chosen to dump foodgrains in the international market). Let us therefore move over to the very opposite assumption, one that is most unfavourable for the EGS argument) and assume that *the entire borrowing of Rs.18000 crores for the EGS constitutes an addition to the government's net indebtedness and that interest on it is also paid through fresh borrowing.*

It is easy to work out in this case what difference such a course would make to the profile of government debt relative to GDP over time. If we assume that every year Rs.18000 crores are borrowed in real terms (i.e. at base prices) for the EGS (together with the entire interest payment on account of such borrowing), that the real rate of interest on this loan is 3 percent and the real growth rate of the GDP is 6 percent (which is roughly what it has been, i.e. we are ignoring any possible growth-enhancing effects of the EGS), then it turns out that the ratio of this additional debt to GDP would reach a peak in 24 years' time, and that *at this peak the additional debt would be only 6.3 percent of the GDP*, which is hardly a matter for concern[5]. So, even if the expenditure covering the entire food component for the programme (together with its spin-off demands) is financed *every year* through an increase in the net indebtedness of the government, the additional debt burden it would impose would still be small, relative to GDP, even at its peak. One can of course use numbers which are different from what I have used here. But the orders of magnitude worked out here and the qualitative conclusions derived from them would remain unchanged.

To sum up the overall argument, once we take account of multiplier effects, then, given the fact that the Indian economy is nowhere near being supply-constrained, financing an employment guarantee programme need not impinge on the pre-existing level of well-being of any particular class. If a minuscule sum of Rs.5400 cr. is taxed from capitalists (who as a class would have got this exact amount as additional profits), and Rs.18000 cr. is

[5] The calculation can be made as follows: let us denote the (constant) real annual expenditure on this Scheme by E with subscripts referring to periods. Let us assume for simplicity that debt is always incurred at the beginning of the period for expenditure during the period. At the end of t-periods, the accumulated debt, including debt incurred for interest payment, would be $E_1 (1+r)^t + E_2 (1+r)^{t-1} + \ldots E_t(1+r)$. Since all the Es are equal, the sum of these terms, which denotes the cumulative debt, is $E(1+r)\{(1+r)^t - 1\} / r$. If Y denotes base real GDP then debt at the end of period t divided by GDP at the end of period t (i.e. during period t+1) is simply $[E(1+r)\{(1+r)^t - 1\} / r] /Y(1+g)^t$ where g is the growth rate. This term is a function of t; it increases up to a certain time and then declines monotonically. Its maximum is reached where its derivative with respect to t becomes zero. Taking r =.03, g =.06, this maximum is reached when t = 23.94 = 24 (approx.). Taking E/Y to be .0072 which we get as the ratio of Rs.18000 cr. to Rs.2500,000 cr. (the current GDP approximately), the peak value of the ratio of cumulated debt to GDP is .063.

borrowed (and a low or zero interest rate on such loans can always be arranged institutionally), then we can provide the requisite employment guarantee.

VII

. It follows that a shortage of resources cannot be cited as a constraint on the EGA. Nor can "leakages", or the fact of "corruption" or "money going down the drain", can be cited as arguments against it. After all, nobody can deny that there is corruption, not just in our country but all over the world, in defence purchases, but this has never been an argument for curtailing defence expenditure. So, "leakages" and "corruption" are general problems which cannot constitute an argument only in this specific case. Of course they have to be curtailed, and any EGA must incorporate provisions for doing so, by way for instance of entrusting the task to *panchayats* rather than contractors, by involving the *gram sabhas*, and by insisting that the right to information must on no account be abridged. But they cannot constitute *alibis* for circumventing the need to provide employment guarantee.

A number of valuable suggestions and ideas have been put forward by women's organizations (about employment guarantee for one person per household being inherently discriminatory against women), by peasant organizations (about minimum support and procurement prices having to be raised as a result of the tendency towards wage increase that an EGS would impart), and by other activists (about the need to expand the PDS to keep inflationary pressures, arising from profiteering by private traders, in check). These have to be carefully looked at and incorporated into the Act in appropriate ways.

VIII

The real obstacle to an EGA then lies neither in any scarcity of resources, nor in the fact that a reasonable and practicable piece of legislation cannot be conceived; it lies in the fact that such an Act would run contrary to the entire direction of neo-liberal reforms, and hence would be opposed by all those social classes and groups which stand behind neo-liberalism, and above all by international finance capital. Specific measures of taxation for financing such a scheme would be opposed, even when the amounts to be raised would hardly pinch, and any attempt to increase the fiscal deficit would also be opposed, even when, far from having any adverse consequences, it would be beneficial in a demand-constrained economy, *because finance capital does not like State activism in matters of employment generation (which explains the current world-wide tendency towards deflation and the assault on Keynesian demand management)*. It strives for only that kind of State activism which promotes its own narrow interests, such as through privatization at throwaway prices of State assets which it can gleefully purchase, through the throwing open of mineral resources over which it can then have monopoly control, and through creating conditions for its unrestricted flow everywhere in quest of speculative gains.

Of course the UPA is so committed to an Employment Guarantee Act that this opposition from finance capital can not take the form of scuttling such an Act altogether. It might take three other, not necessarily mutually exclusive, forms. The first is to keep the scheme restricted, to the 150 districts where it would be initially introduced, without any time-limit for universalizing it, or to have "targeting" rather than a universal programme[6]. The second is to press for its being financed by the World Bank or the ADB or foreign

[6] Targeting only BPL households as the beneficiaries of an EGS gives the impression of being “reasonable”. But given the extreme underestimation of poverty, which was discussed earlier, such targeting is tantamount to scuttling the scheme. What is more, it makes the provision of employment an act of charity rather than the fulfilment of a right.

lenders in return for further concessions for foreign capital; the catch here is that after a little while such funding would dry up and the EGS would be progressively wound up, even while the concessions to foreign capital would continue to remain in place. The third is to try and off-load a part of the financing of such a scheme to the State governments, which are already very hard-pressed for funds, in which case either they would have to approach the ADB and such like for funding the programme, or they would renege on their obligations, making it possible for the Central government to cite their lack of enthusiasm as a reason for the abandonment or attenuation of the scheme. (A variation of this subterfuge would be to suggest that for financing such a scheme some other specific segment of workers, employees or peasants must make a sacrifice, in which case this group would rise in protest and this fact would provide the excuse for abandoning or attenuating the scheme).

It is imperative therefore that such a scheme should be universally operational within a specified time- horizon; it should be fully funded by the Centre; it should avoid tokenism (such as very low wages in the name of enlarging the number of beneficiaries) or targeting; and that it should not occasion conflicts with other workers, employees or peasants. All those who are concerned with the plight of the rural poor should insist on these features of the scheme even as they insist on the introduction of the scheme itself.

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TECHNOLOGY AND EMPLOYMENT IN AN OPEN UNDERDEVELOPED ECONOMY

Nicholas Kaldor, the Cambridge economist, had used the term "stylized facts" to refer to certain factual generalizations which can be made in any particular context, and which are broadly correct if we ignore the minutiae. Let me accordingly begin with certain "stylized facts" about our current context. First, China and India have been witnessing rates of growth of GDP, as conventionally defined, which are much higher than what prevail either in the first world or in the rest of the third world. Secondly, this high growth phase in both these economies has been associated with "opening up" to international trade. Thirdly, in both these economies there has been, precisely during this period, a remarkable increase in income inequalities. And fourthly, in the case of both countries, the rate of employment growth has been much lower in absolute terms in this phase of high output growth than was the case when the rate of output growth was lower. In the case of China this is partly explained by the fact that in the pre-"reform" period she avoided having any open unemployment, in keeping with the prevailing practice in socialist economies; so, comparisons between pre and post-reform China in this respect are beset with conceptual difficulties. Nonetheless, what is still striking about post-reform China is that extraordinarily high rates of output growth sustained over a long period of time have still not led to the exhaustion of her labour reserves, or even to any noticeable tightening of the labour market. The absence of any significant impact of growth on employment therefore appears to be a phenomenon common to both these economies.

Normally, each of these "stylized facts" is seen separately, as being dissociated from the others. Indeed it is this separation which underlies such ideas as "the trickle down effect", "liberalization with a human face", and "we-need-still-higher-growth-rates-to-overcome-unemployment". I propose to argue instead that these "stylized facts" are inter-related, that they are causally interlinked, *and therefore constitute one integrated totality*. I shall present this argument analytically, that is, in terms of certain inherent tendencies of an open underdeveloped economy with vast labour reserves. I shall first focus on a *capitalist* underdeveloped economy; the possible implications of the difference between *socialist* and *capitalist* third world economies will be taken up subsequently.

I

Technological progress, in the sense of the introduction of new processes and new products, occurs initially in the metropolitan capitalist countries and is then transmitted to the third world. Since the tastes and preferences of the third world "elite" are strongly influenced by those in the metropolis, new products get adopted fairly soon in the third world economies, once the barriers to their entry into such economies are removed. New products necessarily come with new processes; but even when new processes are introduced for the production of some existing products, the outcome of a new process is rarely identical with the pre-existing product, because of which the distinction between new processes and new products is, to an extent, arbitrary. But even if we can think of a *pure* process innovation, it too typically gets introduced first in the metropolitan capitalist countries; if the third world

countries are open to international trade and are not insulated from foreign competition, then the new process soon makes an appearance in the third world economies as well. *Thus technological progress, no matter of what sort, occurring in the metropolis, makes its way to open third world economies after a fairly short time lag.*

Technological progress in the metropolis, however, takes the form predominantly of an increase in labour productivity, whether at a given capital-output ratio as claimed by neo-classical growth theory or at a rising capital-output ratio as suggested by Marx. The fact of its being transmitted rapidly to the third world entails a correspondingly rapid increase in labour productivity within the "modern sector" of open third world economies.

There is also an additional factor at work. The so-called "modern sector" which experiences rates of labour productivity growth comparable to the metropolis, also increases over time its relative weight within the third world economies, if the share of the "elite" in total income increases. To be sure, even if this share remains constant, traditional technology keeps getting replaced over time, i.e. the "modern" sector's weight increases over time, but this process gets a boost if the share of "elite" income in total increases.

All this has two important implications. First, once an underdeveloped economy has undertaken "trade liberalization", it ceases to have any control over the rate of labour productivity growth within its frontiers. The rate of growth of labour productivity appears, for all practical purposes, as an exogenously-determined variable in open underdeveloped economies. Secondly, the rate of growth of labour productivity is likely to be higher after the "opening up" of such economies than before, for the simple reason that a *dirigiste* economy takes steps to defend employment in traditional activities, by putting curbs on technological and structural change, while the rolling back of *dirigisme*, which is what "opening up" entails, makes any such defence of employment impossible. The rate of growth of labour productivity therefore increases noticeably after trade liberalization.

Now let us see what happens to the growth rates of GDP in these economies. The GDP being identically equal to the sum of three components, namely, private expenditure on consumption and investment, government expenditure, and the current account surplus on balance of payments[7], the determinants of its growth can be analyzed by looking at how these expenditure items behave. Let us assume to start with that income distribution within the economy is given, and that the consumption-GDP ratio, the tax-GDP ratio, and the import-GDP ratio remain constant over time in the open underdeveloped economy (they may be different from what they were during the *dirigiste* phase, but that does not concern us here) and that the government is constrained to maintain the ratio of its fiscal deficit to GDP at a low and constant level, in keeping with the caprices of globalized finance. Since the magnitude of private investment is itself determined by the growth of GDP, it follows that the *independent variable* which determines the growth rate of GDP is the growth rate of exports[8].

Now, suppose there were only two economies in the world, the "metropolis" and the "third world". Then the rate of growth of exports from the latter would depend essentially upon the rate of growth of demand from the former. And if the commodities produced by the two were distinct, then the third world's export growth would depend upon the growth rate of the metropolis' demand *for those particular commodities* which are produced by it, and this demand would not be particularly responsive to the prices of these commodities. In fact

[7] Since we are talking about the GDP, the current account surplus should exclude net factor payments from abroad.

[8] The fact that in a situation where investment is determined by the growth of income itself, we have the operation of what Hicks (1950) had called the "super multiplier" (Lange (1964) had called it the "compound multiplier") and that the overall rate of growth is determined by the rate of growth of the exogenous stimulus (exports in this case) was emphasized by Kaldor (1979).

however there is an activity overlap between the two worlds, so that relative competitiveness does matter for the third world's export growth.

There are however strict limits to the diffusion of activities from the metropolis: even if at any point of time there is an activity overlap, (the *particular* activities where there is an overlap may keep shifting over time as technological change occurs but an old "overlap fringe" will be replaced by a new "overlap" fringe), the activities open to the third world are always limited.

Within the "overlap fringe" the market share of the third world will depend upon its competitiveness, a possible measure of which is the relative dollar wage per efficiency unit of labour. But since the "fringe" itself is limited, for any given rate of growth of world trade, the third world's share in total world trade will flatten out beyond a point even as its relative dollar wage per efficiency unit of labour keeps declining. It follows then that the rate of growth of exports from the third world would be the same as the rate of growth of world trade for any *given* relative dollar wage per efficiency unit of labour. If the latter keeps declining, it would exceed the rate of growth of world trade by a small margin transitionally, but will eventually approximate the rate of growth of world trade. Thus, for any given configuration of real wage and labour productivity in the metropolis and the third world, and any given rate of growth of world trade, there is a certain rate of growth of its exports, and hence a certain rate of GDP growth.

So far we have talked of the third world as if it consisted of a single entity. In fact it consists of several economies which compete fiercely against one another for capturing the metropolis' market. While such competition will tend to equalize the relative dollar wage per efficiency unit of labour across these economies (the mechanism for such equalization would be exchange rate depreciations in the less competitive economies, accompanied by non-compensation of workers for real wage loss), differences will persist in practice, allowing some third world economies to do better than the others. But the fact of some countries thus stealing a march over other similarly-placed countries can arise only if the latter are acquiescent in accommodating the exports from the former. Thus the rate of growth of exports from an open underdeveloped economy depends upon the rate of growth of world trade and the extent to which its exports are accommodated by others, over neither of which it has any control.

It follows then that even the rate of GDP growth in an open underdeveloped economy is largely determined by factors upon which it has little control, and hence can be taken as being exogenously-determined. This does not mean that the country can do nothing to boost its growth rate, but the degree to which its efforts bear fruit is dependent on factors outside its control.

The rate of growth of labour demand is merely the difference between the rate of growth of GDP and the rate of growth of labour productivity. If at any given level of income distribution both these elements are determined by factors over which the country itself has little control, then the rate of growth of labour demand too becomes an exogenously-determined variable. If the rate of growth of labour demand so determined falls short of the rate of growth of the work-force, then the unemployment rate in the economy will increase; and in the opposite case, it will decline. But the basic point is this: *in an open underdeveloped economy, the unemployment situation evolves spontaneously; it is outside any control by the State*. This fact has important implications.

II

If the exogenously-determined rate of growth of labour demand (for any particular income distribution) equals or falls short of the rate of growth of the work force, then the labour reserves in the economy, instead of getting depleted, grow at least at the same rate as the

work-force; or putting it differently, the ratio of the reserve army of labour to the active army does not fall. The real wages therefore remain more or less pegged to the subsistence level, defined not as a biologically-determined level but as the level that prevails by convention. Notwithstanding the high rate of GDP growth and the high rate of growth of labour productivity, the bulk of the working population in such a case remains tied to the subsistence level. The working population gets squeezed in two ways: through declining job opportunities and through stagnant real wages at the subsistence level.

We thus have a peculiar "trap" here. If the exogenously determined rate of growth of labour demand (at the base income distribution) exceeds a certain threshold level (given by the rate of growth of the work-force), then the reserve army shrinks relative to the active army and real wages increase, improving the condition of the workers through both these avenues. If on the other hand this exogenously-determined rate of growth of labour demand falls below the threshold rate, then the relative size of the reserve army increases and real wages remain tied to the subsistence level. The working population loses on both counts and the relative magnitude of absolute poverty increases over time.

Now, it may be thought that if real wages remain constant while labour productivity keeps increasing, then the unit labour cost of the economy would be falling, which, by making it more competitive internationally, would raise its rate of growth of exports and hence its rate of GDP growth. This would raise the rate of growth of labour demand in this economy and thereby get it out of the "trap" mentioned earlier.

But this argument is untenable. If other open underdeveloped economies are similarly placed, then the unit labour costs in all of them would be declining similarly over time. The question of any one of them stealing a march over the others and experiencing a higher rate of growth of exports at the expense of the others does not therefore arise. As for declining unit labour costs in all of them leading to a higher rate of growth of exports for all of them at the expense of producers in the metropolis, we have already seen that the effect of declining relative dollar wage per efficiency unit of labour is a limited one.

The "trap" is thus a real trap; its effectiveness arises precisely because it applies to *every* open underdeveloped economy with labour reserves. No single third world economy can hope to get out of it as long as others are stuck in it, since competition from the others will always pull it down. The only hope for each of them is if all of them experience such high rates of growth of labour demand that their labour reserves begin to get depleted. But the rate of growth of the world economy does not permit this.

The fact that it does not is not a mere accident. The period of liberalization is marked by the hegemony of international finance capital, which alters the nature of the capitalist State, prevents the adoption of Keynesian demand management policies in every capitalist economy, except the leading one, and imposes policies of deflation of expenditure, especially of State expenditure, everywhere. It thereby also lowers the rate of growth of the world economy. Keynes in his *General Theory* had asked for the "euthanasia of the rentier" as a means of ensuring high levels of activity and employment under capitalism. But the rise to hegemony of international finance capital, as a result of the immanent tendencies of capitalism itself, has brought about the "euthanasia of Keynesianism", because of which the levels of activity, employment and growth in the capitalist world have come down compared to the period of the so-called "Golden Age of capitalism" when Keynesian policies were in vogue. The possibility of the depletion of third world labour reserves under the "neo-liberal" regime therefore is non-existent in this context; on the other hand however it is only this context which imposes the "neo-liberal" regime on the third world. *Thus the very conditions that force an "opening up" of third world economies also prevent a using up of their labour reserves.*

III

If real wages remain unchanged while labour productivity increases over time, then the surplus produced per worker within the third world economy keeps increasing, and so does the surplus as a proportion of GDP. If State expenditure as a proportion of GDP does not increase (in fact neo-liberal regimes bring about a *reduction* in State expenditure as a proportion of GDP in deference to the caprices of finance capital), then there must either be an increase in the GDP of the share of capitalists' consumption, private investment and net foreign lending taken together, or a realization crisis. Such a crisis, even if we ignore its second-order effects, must entail a reduction in capacity utilization *and a further fall in the rate of growth of labour demand* (both of which will only be compounded by the second-order effects causing a downswing).

Now, net lending abroad, though sizeable in the case of China, cannot be considered a significant avenue for the absorption of the surplus. And even though the Indian economy has been a demand-constrained system with very low rates of growth of labour demand, the fact that the GDP growth rates, as conventionally measured, have been quite high, suggests the absence of any acute realization crisis. (The absence of a realization problem is even more true of China). This raises the familiar question asked by Baran and Sweezy (1966): how has the increasing surplus been realized? In China's case the answer may lie partly in the high rates of investment and these have been possible because her economy is not capitalist. But this answer cannot hold for the Indian economy. Not only has the investment ratio refused stubbornly to register any increase, but it has even declined relative to what it was on the eve of liberalization. Besides, increasing investment as a means of absorbing a rising share of surplus in output is an altogether unrealistic proposition under capitalism, even though this had been the scenario visualized by the Russain economist Tugan-Baranovsky[9].

He had claimed, in conformity with the views of J.B.Say and David Ricardo that capitalism could never be afflicted by any generalized over-production, since all surplus in the hands of the capitalists in excess of what they consumed was invested. To the argument that such investment would only worsen the problem in the next period, since there would be an even larger amount of surplus, not just in absolute terms but even relative to GDP, seeking investment, Tugan's answer was that this too would be invested. This view, which amounted to postulating "production for production's sake", stretched to an extreme limit, where it became a caricature, of a genuine insight into capitalism, namely that this system is not concerned with consumption as such. But, this lack of concern *for consumption as such* should not be confused with a lack of concern on the part of capitalists with *demand prospects altogether* in deciding on their investment plans. Tugan however perpetrated this confusion, like what Ricardo had done earlier.

In arguing that the introduction of machinery, though harmful for employment in the short-run, gave rise to a higher employment profile in the long run, Ricardo had assumed that, with real wages fixed at the subsistence level, the increase in labour productivity caused by the introduction of machinery would raise the share of profits and *hence the share of savings and investment in the economy's output*. This, under unchanged technology (if we considered only a one-shot introduction of machinery), would raise the growth rate of output and hence the growth rate of employment[10]. The time-profile of employment with machinery, would eventually therefore overtake the time-profile of employment without machinery. The fallacy of his argument, as with Tugan, lay in the assumption that all unconsumed surplus value was automatically invested without any concern for prospective demand.

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[9] For a discussion of Tugan-Baranovsky's views see Luxemburg (1963) and Kalecki (1971).
[10] See Ricardo (1951), and Hicks (1967).

What has prevented a realization crisis of a serious magnitude in open underdeveloped economies like India is the increase, not so much in the direct consumption of the capitalists, but in the consumption of a whole mass of persons, which includes those engaged in the business of circulation of commodities and of transactions involving finance; those engaged in providing personal services to the capitalists, skilled workers and to other persons in the service sector; those engaged in providing "professional" services to these groups; the various "hangers on" of capitalists, of MNCs and of other representatives of metropolitan capital, and a whole new army of speculators, fixers, wheeler-dealers, middlemen and "parasites". These groups constitute the modern version of Struve's "third persons"[11] and of Adam Smith's "unproductive labourers". Their economic weight increases tremendously with the shift from *dirigisme* to a "neo-liberal" regime.

While their incomes relative to GDP increase greatly, their numbers, relative to the work-force, do not increase correspondingly, or indeed to any significant extent. This is to be expected, for if their relative numbers did increase, then labour reserves in the economy would actually start getting depleted, giving rise to an increase in the wage rate which would prevent a rise in the share of surplus and hence a rise in the army of such "third persons". *Thus, if their relative numbers did increase significantly, then this fact itself would have negated the very basis of their existence.* It follows that they constitute a segment of the population which is on average higher paid than the working class, or even the older sections of employees within the service sector itself. This clearly means that income distribution gets worsened in an underdeveloped economy pursuing "neo-liberal" policies: personal income distribution gets worsened because of the emergence of this class of highly-paid "parasites", and class distribution of income gets worsened when we look at surplus inclusive of these incomes.

The cause of the increase in income inequality, no matter how we define it, lies, however, not in the emergence of this class *per se*, but in the fact of an acceleration in the growth rate of labour productivity in the context of stagnant subsistence wages. This not only increases inequality *in the transition from dirigisme to neo-liberalism*, but it continues to raise inequality *during the tenure of the neo-liberal regime itself.*

The increase in inequality, in the distribution of both personal and class incomes, which we have so far considered to be the *consequence* of the increase in the relative size of the labour reserves which the "opening up" of an underdeveloped economy entails, becomes in turn an additional *cause* of this increase in labour reserves itself. This is because the increase in the rate of growth of labour productivity gets an additional boost owing to the rise in income inequalities, since the "elite" consumption demand is much more influenced by what prevails in the metropolis than the demand of other sections of the population.

The really puzzling question however is this: why does the income of the mass of "third persons" whose consumption provides the way out of a realization crisis, rise at all? After all, the macroeconomic consequences of such a rise cannot constitute the reason for its occurrence; then why does it occur so conveniently, precisely at the time when the system otherwise is threatened with the prospects of a realization crisis? This question can be asked of the Baran-Sweezy argument as well in the context of advanced economies, where the answer is difficult. In the context of third world economies by contrast the answer is more simple, namely the "opening up" to world trade and financial movements also brings in its train an "opening up" to practices, systems and structures prevailing in the metropolis. And since metropolitan economies have over the years come to be characterized by a large and increasing category of "parasitic" incomes, emulation of these structures by the "opened up"

[11] For a discussion of Struve's views see Luxemburg (1963).

third world economies replicates in a fairly short time the same phenomenon within their own frontiers.

The argument presented so far should be contrasted with two other arguments to underscore its specificity. The first is the Samuelson-Stolper theorem of conventional trade theory (Samuelson 1970), which states that "opening up" for trade should *increase the share of wages* in an economy whose comparative advantage lies in the labour-intensive good. According to this theory the share of wages should be *increasing* in underdeveloped economies after they have "opened up" to international trade flows, *which is the exact opposite of what is being argued here and which flies in the face of reality*. The reason for this difference lies in the obvious fact that we have avoided making such palpably untenable assumptions as full employment, an aggregate production function, and trade being governed by "comparative advantage".

The second argument is the one advanced by W.Arthur Lewis (1954), who also emphasized that the development of the third world hinged crucially on the using up of its labour reserves which could only occur if the third world protected herself from international trade and ushered in her own agricultural and industrial revolutions by using the State as an instrument. The difference between the Lewis position and what is argued above lies in our explicit recognition of the fact that imitative technological change, introduced as a consequence of "opening up", is a development-retarding factor.

IV

There is a long tradition in radical economics which argues that it is not the pace of technological change and of productivity growth *per se* that impinges adversely on the living conditions of the people but the social formation within which such change occurs. Let us examine this view.

When we talked of the rate of growth of labour demand above, that referred to the demand for labour-time, not to the number of *labourers.* If we have a socialist economy with a work-sharing, product-sharing ethic, then the same number of labour hours can be distributed among a larger number of labourers, indeed among all the members of the work-force, in which case unemployment as we know it, would cease to exist. Each worker would have a larger number of labour hours to pursue his or her creative interests, free from the drudgery of work. Such freedom moreover would not entail any material deprivation, since the total output, including what otherwise accrues to the class of "third persons" and "parasites", would now be distributed among the entire work-force on some appropriate principle of equity.

An example will clarify the matter. Suppose to start with 1000 units of output are produced by 100 workers, each of whom works for 10 hours during the unit period and obtains a wage-rate of 8 units during this period; the remaining 200 units of the product are used for investment and looking after those not in the work-force. Now, if in the next unit period, both output and labour productivity increase by 10 percent (both being determined from "outside") and the work-force by 5 percent. In this new situation in a socialist economy each worker would work for 9.5 hours and obtain 8.4 units of the product (or to be precise 9+11/21 hours and 8+8/21 units respectively), which means a 5 percent increase in income and a 5 percent reduction in work for each worker. There would still be full employment and 20 percent of output would still be kept aside for investment and social expenditure.

We can express this formally as follows. If the growth rate of output is denoted by q, of productivity by b, of the work-force by n, of the hours of work by h, and of the wage rate by w, then, assuming that the proportion set aside for investment and welfare expenditure remains unchanged (and taking continuous time) we have the following two identities:

$h = q - b - n$ … (1) ; and $w = q - n$ … (2).

The very fact of the right-hand side of (1) being negative which is a "problem" in capitalist countries can become an asset in socialist countries since in lieu of unemployment there can be greater leisure. Even so as (2) shows, the wage rate can increase at the same rate as per capita output.

The real issue however is whether an immediate end to unemployment and underemployment, such as is implicit in the "work-sharing, product-sharing ethic" is practicable, especially in an "open" underdeveloped socialist economy. In general, the more the time taken to overcome unemployment and underemployment, the greater is the danger that the contradiction between the employed and the unemployed will get ossified: if the rate of growth of labour productivity is high relative to the growth rate of output, and the size of the labour reserve and the rate of growth of the work-force are large, then even with the persistence of subsistence wages it would take a long time for the labour reserves to get used up and during this period pressure would mount for an increase in the wage rate among the employed, especially since productivity growth happens to be quite high.

The problem gets compounded in an "open" underdeveloped socialist economy, since its very "openness" to trade flows creates pressures for a similar "openness" to capital flows, which, if successful, would compromise the autonomy of the socialist State and jeopardize the existence of the system by exacerbating fissures within it. (This is in addition to the fact that "openness" makes the economy vulnerable to "international demonstration effects", and more crucially to pressures from outside to subvert socialist values). It is instructive that the only successful examples of using up labour reserves till date are the Soviet Union and the Eastern European countries which were not "open" and which controlled the rate of technological change and hence the rate of growth of labour productivity.

In the case of capitalist underdeveloped countries, the problem of course is far more serious since there is no question of a "work-sharing, product-sharing ethic"). Here "openness" necessarily produces a dualistic structure not just with growing *income* inequalities, but with absolute worsening of the conditions of the vast labouring mass accompanying growing affluence on the part of a small stratum consisting of the local agents of the MNCs, the speculators, the capitalists and their "hangers on". Since the bourgeoisie which had earlier embarked upon a process of relatively autonomous development has itself given up this path and is pursuing "neo-liberalism" instead, the idea of a "closed" capitalist system with a controlled pace of technological change has little relevance in today's context. *The process of extricating the economy from this dualism therefore has to be a part of an alternative trajectory of development which leads towards socialism.*

But since any regime that puts in place this alternative trajectory cannot hope to realize a "work-sharing, product-sharing ethic" in the immediate future, unrestricted technological change will have to be eschewed if the prospects of a recreation of dualism which undermines this alternative trajectory are to be avoided. It follows that restrictions on the rate of technological change would have to be enforced and these in turn require not autarky, of course, but a degree of control over trade, and complete control over financial flows.

There is a view, not just among bourgeois liberals but even in sections of the Left, that any such restrictions on free commerce and capital flows necessarily entail curbs on the democratic rights of the people. This view is unfounded. There are, no doubt, many authoritarian regimes which keep their countries hermetically sealed from the outside world; but at the same time there are numerous regimes pursuing "neo-liberal" policies which attenuate democracy in order to facilitate this pursuit. Indeed one can argue that "neo-

liberalism" *necessarily* entails an attenuation of democracy in a way that relatively closed *dirigiste* regimes do not: nobody in India can possibly argue for instance that Nehruvian India, which saw the apogee of *dirigisme,* entailed an attenuation of democracy compared to the India of the "neo-liberal" 1990s. And in any case to talk of democratic rights of the people being ensured by a regime that produces dualism leading to the growth of affluence at one pole and absolute poverty at the other is sheer travesty of the truth. Democracy under all circumstances requires for its protection the struggle of the people, and such struggles are best carried on when the people are economically empowered, which constitutes, besides, a hallmark of democracy itself.

V

Let me summarize the argument. The "opening up" of an underdeveloped economy to trade and capital flows implies that the pace of technological and structural change within the economy gets linked to what prevails in the advanced capitalist world. This implies an increase in the rate of growth of labour productivity compared to what prevailed under *dirigisme.* At the same time the rate of GDP growth becomes dependent upon the rate of growth of exports, which, unless the underdeveloped countries eat into each other's market share, gets linked to the rate of growth of world trade, which is essentially outside the country's control. If the rate of growth of labour demand, which is the result of these two phenomena, falls short of the rate of growth of the work force, then the ratio of labour reserve to work-force increases, which means a constancy of the wage rate of workers at the subsistence level and increase in absolute poverty for a larger section of the work force. At the same time the rise in surplus per worker has the effect of sustaining a larger income share for a group of "parasites" and "hangers on" of the MNCs, of international finance and of domestic capitalists. Their demand pattern, influenced by the life-styles prevailing in the metropolis, has the effect of increasing the pace of technological change still further, thus creating a vicious circle. (The demand for FDI in retail trade is an obvious example of the manner of its working).

In a socialist economy technological change need not result in unemployment; indeed under a "work-sharing-product-sharing ethic" it can benefit the workers through both greater leisure and higher incomes. But an "open" socialist economy may find it difficult to introduce such an "ethic". When it comes to an "open" capitalist underdeveloped economy, it certainly has little prospect of escaping the fate outlined above. Any alternative trajectory of development in such an economy must therefore involve a transition towards socialism, with control over the pace of technological change, brought about through trade and capital controls.

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