CHAPTER 2

TECHNOLOGY AND LABOUR PROCESS IN LDCs: A PERSPECTIVE

In this chapter, we delineate the concept of labour process and its changes. We would show there upon, the necessity of distinguishing, analytically the labour process changes in LDCs as distinct from capitalist economies. Further, our endeavour is to contend that the distinct labour process set up in LDCs provide scope and possibilities for alternative development formations in LDCs focusing on fishing industry in Kerala as a case study.

The foundation of labour process analysis was laid by Marx (Marx, 1978). The organic nature of production is that it involves a labour process. At an abstract level, labour process may be defined as an interaction between human beings and Nature on the realm of production. Labour is a process in which both man and Nature participate and man on his accord, starts, regulates, and controls the material reactions between himself and Nature. He opposes himself to Nature as one of her own forces, setting in motion arms and legs, head and hands, the natural forces of his body, in order to appropriate Natures productions in a form adapted to his own wants (Marx, 1978).

At the production level, there are three elements in the labour process. These are:

1. the personal or purposeful activity of man, i.e; labour or work it-self.
2. the subject of that work, and
3. the instruments of labour.
Collectively these basic elements are called as the means of production and the process which results in the production of some use-value is defined as the labour process (Miles, 1987).

In the labour process, the labour and the consequent production of use value has a subjective link. This emerges, when the labour transforms the object of labour in a pre-determined way, using the instruments of labour. The end product resulting from the labour process thus possesses attributes which had in the imagination of the labourer. In short, the end product manifests the involvement of the entire spirits and aspirations of the labourer.

"At the end of every labour - process, we get a result that already existed in the imagination of the labourer at its commencement. He not only effects a change of form in the material on which he works, but he also realises a purpose of his own that gives the law to his modus operandi, and to which he must subordinate his will. And this subordination is no mere momentary act" (Marx, 1978).

Labour process, considered at the level of man - Nature interaction is an independent and organic act. Also, it is a universal phenomenon. It is the everlasting Nature - imposed condition of human existence or rather is common to every such phase (Marx, 1978). In other words, labour process involves a universal material realm. We cannot strip off the material content of the labour process. The material content of the production process will have a social form, for the content cannot exist without its form. This form bears the imprints of the mode of production within which the given labour process has evolved. In short,
the labour process in existence at a particular stage of history bears the imprints of that historical stage and its mode of production. Thus we see an organic link between the labour process and the mode of production in the form of mutual interaction between them. To give a proper focus to the analysis of economic issues, a good methodology would be to give consideration to the dialectical relationship between labour process and mode of production.

Labour Process under Pre-Capitalist Modes of Productions.

Mode of production reflects the outcome of interaction of productive forces and relations of production. The former represents the material content and the latter the social form of development of the productive forces which is inseparably bound to the content. The nature and the level of development of productive forces determine economic relations among people, particularly the type of ownership of the means of production. The relations of production can promote or thwart rapid development and cause in certain situations, partial deterioration of productive forces. It is the dialectical relations between forces of production and relations of production that cause class cleavages and subsequent transformation into new progressive modes of production (Volkov, 1985)

The pre-capitalist mode of production was generally characterised by:

1. use of simple tools and techniques,
2. use of co-operative labour,
3. subsistence rather than surplus making motive of production,
4. lower productivity and
5. more or less collective ownership and sharing.
Under such material and social relations the labour process was such that the work remained under the control of real producers. Traditional knowledge was embodied as skill among workers in their respective crafts. The work organisations under pre-capitalist mode involved the distribution of tasks, crafts or specialities of production throughout the society. It was not a systematic subdivision of the work into limited operations to call it as division of labour (Braverman, 1979). It is, to use Marx's terminology, the social division of labour. In this labour process men or women may habitually be connected with the making of certain products, but they do not as a rule divide up the separate operations involved in the making of each product. In other words, the labour process was such that no labourer was separated from the works involved in the production and all had accessibility to any work activity since all were familiar with the activities involved in the work even though some of them may do an activity regularly. More precisely, social division of labour was division of work into occupations and not breaking up of the work activity into detailed operations. It may be noted that this sort of labour process prevailed even at the beginning of industrial capitalism.

Labour Process under Capitalist Relations:

Labour process under capitalism is a unified process of creating use value and expansion of value (Nikitin, 1983). Under capitalist production labour process is directed towards the production of surplus value.

The capitalists purchase labour power for a wage and combine it with tools and raw materials and so on to produce commodities. In this process, surplus labour, embodied in the value of those commodities produced in excess of value of
workers' labour power expended in production, is generated. This labour surplus is realised by the capitalists by selling commodities on the market. Thus

"The process of production, considered on the one hand as the unity of the labour process and the process of creating value, is production of commodities; considered on the other hand as the unity of the labour process and the process of producing surplus value, it is the capitalist process of production, or capitalist production of commodities" (Marx, 1978).

Appropriation of surplus value occur at two distinct phases of evolution of capitalist development at a formal and real subordination of labour to capital. The formal subordination of labour process to capital does not affect the form of production in the beginning. But the individual workers are brought together for co-operative production to enhance the productive potentiality which is realised by the capitalists through the exchange relations in the market. During this epoch, polarisation of capital occurs through the appropriation of absolute surplus value. Prolonging the working day and organising production through simple co-operation, the size of the surplus value can be increased. This epoch forms the general ground work of the capitalist system, and the starting point for the second phase of real subsumption of labour.

Commodity production, circulation and exchange play an integral part in the production and appropriation of surplus value. Market is served by a number of different producers with commodities for sale. Competition forces producers to cajole to purchase commodities from one unit of production rather than from another. This induces each one to produce commodity for a price which is lower
than other producers. This requires the producer to reduce the socially necessary labour time embodied in the commodity. The capitalist himself surrenders to these immanent law of capitalist production by revolutionising out and out the technical process of labour. In the course of this development, the formal subsumption is replaced by real subsumption of labour to capital.

The success of the capitalists to checkmate labour at this epoch gave them newer dreams. Why not control the work process too? After all labour is facile. Its animation is uncertain. For the capitalists this was disquieting and undesirable. The increasing concern in this line snowballed into an important goal in capitalist scheme of things - the idea of wresting control of labour process. This urge emanates from the nature of labour power. Labour power is a commodity and the implied contract separates the labour from the labour power. Under the capitalist relations, the labourer loses his interest in labour power. However, what the capitalists buy is a potential to labour. In the apparently free contract entered into between the capitalist and the labourer, there is no express contract to ensure the full realisation of the potential labour, i.e., labour power.

"What he buys is infinite in potential but in its realisation it is limited by the subjective state of the workers, by their previous history, by the general social conditions under which they work as well as the particular condition of enterprise and by the technical setting of their labour" (Braverman, 1979) (Emphasis as in original).

It is in the interest of the capitalist to extract maximum labour out of it. Moreover, the reconstitution of labour process enable the capitalist to stymie any
work resistance by the labourers. Thus the inherent contradiction between the dominant classes assumed newer dimensions. Capitalist development has reflected in its progressive epochs the conflicting relation in newer planes. The mutually contradictory interests of the dominant groups in the production process have made the labour process a 'contested terrain'. The inherent 'contested terrain' between the capitalists and the working class in the course of capitalist accumulation is portrayed by Edwards (Edwards, 1979). Edwards focused on the strategies and mechanisms which the capitalists have increasingly resorted to towards the resistance the labourers have formidably put against the capitalist attempts of controlling the labour process. Even though, Edwards have analysed these changes in the U.S.A's context, it was a fair description of changes under the capitalist system as a whole. His narration of history of about one and a half century of efforts and counter efforts of the two opposing classes shows the nature of the fight as continuous and inconclusive one. This has brought tremendous changes in the organisation and technological spheres.

An analysis of the labour process changes shows that the main mechanism the capitalist used to secure their goals to augment profit and capture work control was technology. Technology enters into capitalist scheme mainly at two levels. First, as an instrument to revolutionise capitalist production in order to maximise the difference between value of labour and value created by labour to augment profit conditions. Second, to embark technology in the work process in such a way as to embed work control mechanisms to establish capitalist control. The basic impulse of the capitalists to make epochs in technology thus stems from negative premises. Under capitalist relations technological progress is grounded upon a narrow, sectarian and lopsided perspective. However, the capitalists
succeed in camouflaging their undesirable and negative approach towards technology through citing the magnificent efficiency and productivity of the technology in creating the social product 4.

It is this negative connotation of capitalist technology that induced Braverman, while analysing capitalists attempts of control of labour process to remark,

"that the problem can be fruitfully attacked only by way of concrete and historically specific analysis of technology and machinery on the one side and social relations on the other and of the manner in which these two come together in existing societies" (Braverman, 1979).

At a general level, the implication is that any study on issues of development must bring in its centre stage capitalist designs on the one hand and its fructifying technological upheavals on the other. Even though Braverman had in his mind a matured capitalist economy in this regard such a focus is essentially inevitable in analysing development issues in LDCs. The pertinent questions are:

1. what are the characteristics of technology evolving in LDCs and under what type of social relations?

2. is there the existence of any organic relation in the formation and growth between the two? The socio-economic conditions spectacularly differ in developed and less developed economies. Leaving aside the details of the dynamics of segregation of the world economy into developed and less developed parts, it would be sufficient for our purpose to emphasise the Centre-Periphery relation that emerged in the history of capitalist development process.
Under this relation, the development perspective of LDCs will be greatly influenced by capitalist paradigms! Also, the structure and pattern of development efforts would be modelled after capitalist relations and through this capitalist contradictions and labour process changes are entrenched into LDCs. However, while the transition into different progressive modes of production occurred in developed capitalist economies linearly and gradually without causing disruptions in the organic relations and substance of such development, the change in LDCs occurred in a way that the latter economies were transformed into mere appendages to meet the needs and requirements of capitalist countries. They were destined to subserve the interest of the domineering capitalists and the latter in turn to obstruct or support a transition to higher forms suited to their interests.

Considering technology as the lever to clinche the capitalist designs, what ramifications it are created in the LDCs under this historic relation? Also, what are its implications on the labour process in LDCs?

The intrusion of technology in LDCs under the Centre-Periphery relation occur mainly through technology transfers. The transmission of technology into LDCs mainly take place through the economic tie up emanating both from the activities of metropolis capitalist on the one hand and the domestic subservient capitalist on the other. While such technology transmissions assure easy profits for the capitalists, the benefits which LDCs generally accrue are nothing but large scale distortions and disequilibrium s in its socio-economic milieu. A fatal distortion which creates far ranging impulses in the economy of LDCs is the intensification of the dual character of the economy. The vertical integration of capitalist technology into a particular sector creates a wedge in the form of a
modern sector pushing back the original form of the sector as a traditional one incapable of any development prospects'. In that process, forces are released or formed which link the two separated parts in such a way that the modern one is poised for a perpetual growth at the cost of deterioration of the other. Also, in that process the benefits are appropriated by a few through marginalising and depriving a majority who linked organically with that sector. This in turn, causes further imbalances and distortions at other levels in the economy.

The effect of capitalist technology upon the labour process in LDCs also warrants close focus. The labour process changes in capitalist countries had occurred linearly in the realm of contested relation between the capitalist and the working class. However, in LDCs such a pattern need not be replicated since there are structural distinctions in the contested relation between them. While the conflicting relation forms and persists in capitalist countries through the capitalist law of value, in LDCs, it is brewed from the interweaving of capitalist sector and traditional or pre-capitalist sector.

In other words, in LDCs, it is a conflict between two modes of production unlike the conflict of opposing classes under capitalism. The interaction or articulation of modes of production turns into one of relations of contradiction and class struggle.

"If anything, 'articulation' specifies the nature of the contradiction. As Rey himself puts it, the idea is of the 'articulation of two modes of production, one of which establishes its domination over the other ... not as a static given, but as a process that is to say a combat between the two modes of production, with the
confrontations and alliances which such a combat implies: confrontations and alliances essentially between the classes which these modes of production define” (Carter, 1978).

Apart from the structural differences at the modes of production level, the form of the contested relation is also different in capitalist economies and the third world. In the former, the basic issue of contest is about sharing of economic surplus. The capitalist system is increasingly accommodative of such demands since capitalism itself undergoes transformations which would enable them to find required resources elsewhere.

In the capitalist development process Marx has indicated three principal aspects of capitalist production (Marx, 1978).

1. The concentration of means of production into a few hands, making production more socialised.

2. The organisation of labour itself as social labour, by co-operation, division of labour etc.

3. The creation of world market.

Further, Hilferding hinted at the development of capitalism as organised capitalism in which the forces of market cease to play a free role. He had distinguished four main features of such an economy first its basis in technological progress; second, the use of new opportunities in an organised way through cartels and trusts, third, the internationalisation of capitalist industry and fourth, the
replacement of free competition with scientific methods of planning (Bottomore and Goode, 1983).

The hints given by Marx and Hilferding about the course of development of capitalism had materialised as monopoly or state capitalism. Irrespective of the particular form, this transformation has succeeded in strengthening and intensifying the structure which the capitalist development had evolved in relation to LDCs. This development has facilitated in keeping LDCs effectively under subjugation. In a regime of international trade and investment dominated by such capitalist development, enabled the capitalist economies draining away of resources from the LDCs as debt payments, transfer pricing, technology costs etc. While such transfers had gone a long way in protecting the interests of all section in the capitalist economy (in spite of conflicting relation among them), the same process had resulted in perpetual deprivation of the people of LDCs, particularly those on the fringes of the economy.

Under these different structural set up, it is unlikely that the unilinear changes as occurred in capitalist countries could take place in LDCs. Our concern then would be in locating the likely directions and patterns of changes. Whether the interaction between these modes would culminate in subsumption of pre-capitalist mode by the capitalist mode as suggested by the articulation theory implying positivity of the pre-capitalist mode in the articulation process.

It may be noted that there are writers who emphasise on the activity of the non-capitalist mode. O’ Laughlin writes “..... any general theory of imperialism can only be a theory of capitalism but any historical understanding of imperialism
requires conceptualization of the dynamic of non-capitalist modes of production as well" (Banerjee, 1985).

Considering non-capitalist mode of production as active in the dynamic process of articulation with the capitalist mode of production, we would say that the articulation process manifests dissolution and/or conservation of forces depending up on the degree of resilience each mode carries. Marx himself believed in the struggle between modes of production and pointed out that the outcome depends on their structures and specificities (Banerjee, 1985).

"People make their own history, but they do not make just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly found, given and transmitted from the past" (Marx, 1852). Contested relation under different modes of production will cause changes in labour process in unexpected directions. This is because first the new capitalist mode of production could not release forces whose impulses are capable of changing the entire sector since such forces are designed, regulated and controlled by alien capitalists. Second, capitalist intrusion makes only a partial and incomplete transformation of sectors making economic progress permanently retarded in the lagged ones. However, these incomplete transformations are incapable of wrecking the internal solidity and consistency of the evolved mode of production. More than that the increased deprivation and marginalisation of people along with the retardation of capitalist development induce them to strengthen their production structure at a competitive level. While the inner strength and consistency of an evolved mode of production provide stable development forces, the footing of this traditional mode at a competitive level
with that of the new capitalist mode also induce them to receive and appropriate new forces of development that are consistent and conducive to the evolved mode. These peculiarities at the existence of multiple modes of production make the labour process changes in unbound and unknown directions compared to that of labour process changes in capitalist economies. It has been pointed out that in the absence of a winning mode the outcome of the articulation process depends on the specific factors involved in the concrete combination of modes of production in any particular society.

The labour process changes in traditional fisheries in Kerala give us indications of changes on these lines. A deprived and marginalised primary producers due to the capitalist intrusion, after their initial sufferings, began to draw inner strength particularly at production level. In this endeavour they also appropriated beneficiary aspects of capitalist changes. These interactions of the native and the alien modes of production have provided power and strength to retrieve the labour process control of the traditional fishermen. The following chapters attempt to discuss these changes.
Notes

1. Miomir Jasksic views that the theory of modes of production provide good basis for analysing issues of developing countries (Banerjee, 1985).

2. Real subordination of labour to capital implies the dominance of machinery in the labour process, incessant transformation of the labour process, and the imposition of strict factory discipline thus making the workers a 'living appendage' of the lifeless machine. Further, it is not the worker who employs the means of production but the machine employ the worker (Bottommore, 1985).

3. The capitalist development has brought into existence different control mechanisms like personal control, heirarchical control, technical control, and bureaucratic control consistent with the newer forms of capitalist development and the emerging forms of inherent class antagonism. The origin, form structure and the mechanisms of these controls are detailed in Chapter 2,7 and 8 by Edwards (Edwards, 1979).

4. Capitalism is described in glowing terms for its productive powers. The bourgeoisie, during its rule of scarce one hundred years, has created more massive and more colossal productive powers than have all preceding generations together (Communist Manifesto, S.I). However given the negative impulses from which technology is emerging, the concepts of productivity and efficiency have to be put in social scrutiny. Issues like whose productivity and efficiency and who are the ultimate beneficiaries must be addressed in the whole social context.
5. The nature and determinants of capitalist technology and its inappropriateness in LDCs are discussed in Chapters 1 and 2 of Technology and Underdevelopment (Stewart, 1997).

6. Dual character is not dualism per se. Dualism implies two economic sectors, one advanced and other backward. However, both sectors operate independently of one another. They are in effect two separate economies. Dual character implies that the capitalist sector and the traditional sector (two modes of production) generate process of relations between them (Harod Wolpe, 1985).

7. Such relation/integration between capitalist sector and pre-capitalist sector has been termed in Marxian terminology as 'articulation of modes of production'. It was widely believed that in the articulation process the pre-capitalist mode of production would be subsumed ultimately by capitalist mode of production.

8. The unilinear changes in labour process in the realm of conflictory relation between capitalists and working class was analysed in the context of U.S. economy by Richard Edwards (Edwards, 1979). The different phases emerged in the capitalist technology and organisation of production in their attempts of control of labour process by capitalists entails changes exclusively in the capitalist mode of production culminating such changes as unilinear.

9. Articulation implies the combined presence of different capitalist and non-capitalist modes of production.

10. Major theories of development neglect the primacy of the original modes of production, in favour of universal stages, visualising former ones as passive.

11. There are three models which depict the likely changes of articulation process in the context of capitalist development. One possibility is that the various
modes of production simultaneously exist but principally independent of one another. The second model is that various modes of production in a society are interrelated under the dominance of one of these modes of production (probably capitalists). The third model holds that the modes of production are interacting in such a way that there will be no dominant mode of production (Wilber and Jameson, 1992).

12. Marx also spoke about the internal consistency and solidity of pre-capitalist modes of productions in Asian countries such as India and China.

13. Marx had postulated a struggle between the expansive urges of capitalist modern of production and conserving forces of pre-capitalist modes of production, i.e., struggle between diametrically opposed economic systems (Banerjee, 1985).
References


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