Globalisation and Uneven Development

This paper is an attempt to understand the dynamics of globalisation and its impact on the masses. I suggest that globalisation is neocolonialism, a more sinister and vicious form of colonialism. Just as capitalism, it is also driven by the logic of capital, namely to expand itself and it cannot do it without the exploitation of labour. Improvements in the technologies in production, transport and communications has made it possible for the capitalists, especially the large monopoly capitalists to reorganize their production. The capitalist forces have done this by a new international division of labour wherein they concentrate the knowledge intensive activities in the imperialist/developed countries and shift the labour intensive activities into former colonies which are now designated cost efficient location or countries thanks to their miserable living conditions. I argue this process is not promoting development of the underdeveloped countries, but the worsening of their standard of living. Thus the underdevelopment of certain regions of the world is the a important factor making globalisation possible as well as an effect of it.

I

Capitalism is driven by the need to make profit and accumulate wealth. However, surplus value and accumulation of wealth did not originate with capitalism, but what was incidental in feudalism became the central motor driving capitalism. The feudal society was driven by the need to maintain the feudal hierarchy and privileges arising from it, and accumulation was a by-product. The situation changed slowly and steadily during the two hundred year period of mercantilism. The essential difference between mercantilism and capitalism is in the method of surplus extraction. In primitive accumulation under mercantilism surplus extraction was done in the process of exchange. The handicraftsman when he transformed the raw materials into commodity put the surplus values into it but was not aware of it. The merchant takes it away in exchanges and later exchanges the commodity in a far away place for some other commodity and it is in this second exchange that the surplus value comes into existence. Feudal values determined the life of the handicraftsman, and as such he was happy with whatever he could get out of his exchange with the merchant. The shrewd merchant is able to see that the surplus value is hidden in the commodity and it was put into it at the point of production. He also learns that if production can be controlled then surplus can be augmented greatly. In order to do that he gathers a large number of handicraftsmen into a factory and starts production under his direct supervision. The factory is not just a gathering of large number of handicraftsmen doing the same work. In the factory the merchant who is now also the factory owner reorganises production. He introduces division of labour, each person is given a task or an aspect of making the commodity and not the whole work. He pays his worker what is required to bring him back to work the next day. Slowly and steadily the capitalist reorganises production in order to increase the absolute and relative surplus values. Here is the major difference between mercantilism and capitalism: under capitalism the surplus value is extracted in the production process and it is mainly by reducing the necessary labour time required to produce a product. Thus the slow and steady quantitative changes in the process of accumulation that took place within feudalism during the 200 years of mercantile period in Western Europe brought about qualitative change in society itself, namely the feudal economic basic structure along with its cultural superstructure was overthrown and capitalism emerged.

Once the qualitative change took place in the surplus generation and accumulation, the logic of the society, that is the way the society is organised, itself underwent change. In the drive to accumulate, the capitalists individually and collectively do two important things. One, they try to increase relative surplus value by improving technology, two they try to reduce the turnover time by improving the technologies in transport and communication. Improvement in these technologies has made it possible to reorganise production in many ways. Thanks to the advancement in the technologies of transport and communication now it is possible to get production done in any part of the world and transport it to any place where it is ultimately consumed. Parts of a product are produced in different units spread all over the world and these, namely the intermediate products are brought together or assembled in one place and then the finished products emerge. The critical observer can see the surplus is generated at the point of the production of the intermediate product. But since a product like car is produced from intermediate products brought from may be a 50 different places surplus is generated in those 50 centres by workers who worked in those 50 centres. Each of the firms in those 50 centres in turn may have subcontracted various works to a number of subcontractors many of which may in the informal sector. Ultimately, then the surplus value arises from so many places. Advanced capitalism has been able to shift the surplus creation through globalising production to mainly the underdeveloped areas and where wages of the workers are very low. The workers in the developed countries, since they are higher up in the value chain are able to get better pay. Besides a large number of them are bribed into believing that capitalism is good for them through certain social security measures such as unemployment benefits, high state pensions etc.

From the outset the above method of accumulation of surplus value seems very similar to surplus

accumulation during the mercantilist period especially during the period of proto-industrialisation when the putting out system prevailed in many European countries. It is very similar in the sense, many MNCs buy large amount of the commodities that goes into the ultimate product as intermediate goods. The surplus values are embodied in them just as they were in the products of handicraftsman during the mercantilist phase of accumulation. But there are very many differences between the putting out system and the system of outsourcing. Let us enumerate them here for better understanding.

Under the handicrafts system the knowledge or technology of production was free and was embedded in the community and in the person and the tools of the handicraftsmen. He worked on his own rhythm without any coercion by any outside force. Each handicraftsman through tradition learned his trade from his ancestors and carried on the activity making further improvements in it from his experience. In other words the creation of technology was initiated at the workshop by the person holding the tools. The type of the activity in each area was determined by the economic and cultural development of the area and production was autonomous and was not generally affected by the changes in demand conditions.

Under globalisation the technology or knowledge itself is the most important item of production, it is no more in the head of the producer. It is developed in centres especially devoted to it. The production of technology is the most important activity of the developed countries. The producer who undertakes production under subcontract has to follow the conditions and parameters set by the principal who supplies the designs and also decides the type of raw materials that may be used. The modern small-scale producer enjoys no autonomy, as he is networked into the global capitalist chain and is an integral part of it. He is the ultimate sufferer of any change in the market, i.e. fall in demand due to a change in fashion or for any other reason. The burden arising from it, namely overaccumulation of goods is passed on to his shoulders. An example will help to clarify the above point. A car sold by the company, ABC Ltd. motors is assembled by a contractor. The contractor in turn gets all the parts produced under the system of outsourcing. ABC motors asks the assembler to assemble the car only after he receives the order from the ultimate buyer. Immediately the assembler asks the supplier of parts to supply the parts. The supplier has to be ready with the intermediate products to supply them immediately. This method, known as Just in Time and was developed by the Toyota Corporation of Japan. We can see here, how the burden of a fall in demand is shifted onto the worker. As and when there is a fall in demand, the finished cars will not get accumulated with the ABC motors. However over accumulation is possible with the producer of the intermediate products. In time, the intermediate goods producer would reduce the output of his firm and some workers in his firm would be fired which is easily done as the intermediate products are produced in the informal sector where the worker enjoys no protection as often that worker is a contract or casual employee. Thus we can see here how the crisis of overaccumulation is transmitted to the subcontractor and then finally on to the contract worker in a neocolonial country.

Hence the system of outsourcing not only reduces the cost of production but also is able to solve partially one of the consequences the inherent contradiction of capitalism, namely the inability to find market for its products and the consequent over accumulation. Thus the globalised production and outsourcing is not just production being expanded on a global scale but a qualitative change in the operation in surplus extraction and accumulation. Under the system of globalisation surplus value embodied in an intermediate product produced by a Chinese producer would be realised in the US where that intermediate product is integrated into a car or airplane. In the above system of production, production and realisation are so far apart in time and space the connection is not apparent but the effect of it is all too evident. Wealth is getting accumulated socially and geographically, that is, in few hands and in few centres where knowledge is produced while the workers who create these values through outsourcing live in misery and poverty and face an uncertain future. Globalisation of production is thus also an effort to solve an important internal contradiction by shifting it geographically.

It is partly this search for an internal solution, partly the search for relative surplus value, partly the effort to reduce the turnover time to the twinkle of the eye and partly lack of organised resistance against imperialist exploitation that globalisation has come into existence. It did not break out into the world scene in the 1970s. But on the contrary it has already been there in the logic of capital, it has to globalise in order to survive. In 1858 Marx wrote in a letter to Engels, “The particular task of bourgeois society is the establishment of the world market, at least in outline, and of production based upon the world market” (Marx, Karl and Engels, F. 1945, p.104).

In one sense globalisation is a sign of the dynamism of capitalism, namely, its ability of adjust itself and continue its process of accumulation. It is also a sign of its weakness in the sense it is not able to overcome its internal contradiction, it has only been able to shift the burden on to the people of the neocolonies. The net result, the suffering of the world people have increased. They may rise in protest and therefore the success of globalisation very much depends upon the cooperation of the ruling elite of the neocolonies to suppress the people’s movements and avoid the possibility of developing a revolutionary class consciousness among the people, by spreading religious fundamentalism or racial/caste/religious divisions among the people. This is done through compromising with the feudal forces and allowing religions

and their values to survive and promoting a religion of its own, namely, consumerism which may be considered a postmodern religion and sponsoring non-governmental organization (NGOs) to mitigate the sufferings of the people.

Globalisation is Neocolonialism

At the end of the nineteenth century and the beginning of the twentieth century, the accumulation of wealth and an one of its important consequence the concentration of capital greatly accelerated. More and more capital was concentrated in the hands of big enterprises. Monopoly organisations rapidly developed to gain control over various major manufacturing sectors and formed the basis of all economic life.

One of the factors contributing to the centralisation of capital was the formation of joint stock companies. The joint stock company can assemble capital from many small shareholders. Through a major joint-stock company ("mother company"), which the financial capitalist controls, stocks of other joint-stock companies are purchased. Once their stocks under control, they become "son companies." These "son companies" use the same method to control more "grandson companies." In this way, a relatively small amount of capital can control and manipulate capital many times the amount of the original capital. The national economy and most of the wealth created by the labouring people are thus under the control of few financial oligopolists. In 1968, eighteen financial groups in the United States controlled capital assets worth 678.4 million dollars. Of these, the Morgan and Rockefeller groups were the two biggest monopoly financial organisations. They had the most economic power and their influence covered the whole capitalist world (George C. Wang p. 163).

Until the emergence of monopoly capital, commodity export dominated. The imperialist countries exported finished products, which their industries produced and the export of capital played a negligible role. The strongest motive that Lenin advances for the export of capital is the desire to gain control of sources of raw materials, or at least to prevent others from gaining monopoly control of them. To bring these sources of primary products into use requires investment. This search for sources of raw materials in the world and for the finished products led to the conquest of the parts of the world not yet appropriated. Thus by the end of the 19th century the globe was fully partitioned. No more land was left to be occupied.

As a consequence of the concentration and centralisation of capital and the resultant organisational changes the picture of the world capitalism under imperialism is a world system of production with a few consolidated organised economic powers on the one hand and a periphery of underdeveloped countries with a semi agrarian or agrarian system on the other.

The most important consequence of the rise of monopoly we noted was the export of capital and capitalist relations to those countries that were still in the pre-capitalist stage. The capital from the industrial countries managed to spread themselves all over the world through their subsidiaries, collaborations etc. There was intense rivalry between the leading imperialist nations for the market which resulted in two world wars. The US, which was a relatively late industrialiser, did not take the course of making colonies for their expansion but perfected the expansionism through the export of capital. The experience of the US was very helpful for other countries. Hence after the Second World War other imperialist countries found the method of expansion perfected by the US a better strategy for accumulation of wealth. Besides these internal changes within capitalism, there were also external factors that made the colonial system unviable. The most important of these was the growing strength of the nationalist movements in the colonies for independence. The increasing tensions between the imperialist powers for markets that were leading to wars and the fact that the Bolshevik revolution in Russia after the First World War was inspiring revolutionary movements in other nations also hastened the transformation of the classical type of colonialism into neocolonialism. Thus monopoly capitalism began a new life without the colonies. This new stage in the career of monopoly capitalism is referred to as neocolonialism to indicate it is a continuation of the exploitation of the world peoples which actually started with late mercantilism in a more sinister and vicious fashion.

Most of the newly independent countries adopted a modernisation program designed by the imperialist countries. The theoretical framework for the modernisation program was broadly presented by W.W. Rostow, a US government official who served President Lyndon B. Johnson between 1963-69 as special assistant for national security affairs. The thrust of Rostow's argument was that the backward countries were backward because the domestic investments in the backward countries are low as the savings in these countries are low. Since the incomes of the backward countries are already very low there is no possibility for these countries to increase the savings and thus investments. The solution that Rostow's theory (and its various offshoots) offers is very simple, foreign capital can do the trick. This short cut method to industrialisation was christened modernisation. Under the modernisation plan the governments of the neocolonial countries with the help of foreign capital would undertake investments in economic and social infrastructures and in some capital goods industries in which neither the domestic bourgeoisie nor the foreign capital were interested. They would invest in more profitable activities. The infrastructure developed by these governments helped the further expansion of the MNCs in these countries and to a limited extent the growth

of the domestic bourgeoisie. Naturally, neither could these countries catch up with the developed countries nor could they solve their internal problems of poverty and misery that the colonial rule had gifted to the majority of the peoples of these countries, as the modernisation program was not intended for it, but for the establishment of the neocolonial system on a world scale.

In the phase of imperialism without colonies the main tool of domination and exploitation are the MNCs. Their operations have integrated the world more than ever in history. Now the imperialist countries are not looking towards the direct control of the world as they have found the direct control an inefficient method of extracting surplus for further accumulation. The neocolonial system is much more hegemonic than the colonial system of exploitation. Under neocolonialism, domination is done through a new global division of labour that the MNCs have been able to achieve through their strategy of global production. We shall examine these aspects in our next two sections.

Post Seventies

During the last decades of the 19th century the internal dynamism of capitalism led to its transformation from being competitive to monopoly capitalism. This period also saw the transformation of knowledge itself into a commodity, bought and sold like any other commodity. This conversion of science itself into capital was one of the biggest innovations.

The systematic use of science to convert labour power into capital led to a scientific-technical revolution during the last two decades of the 19th century. This movement is also referred to as scientific management and is an important aspect of the new stage of capitalist development under monopoly capital which made it possible. The separation of hand and brain is the single most decisive step of capitalist mode of production. It was inherent from the beginning, but developed greatly under capitalist management i.e. under monopoly capitalism. During the early phase of capitalism the difference between labour and labour power was disregarded. Labour was bought completed and embodied in the product. This was the earlier form of subcontracting or the “putting-out” system. This made beyond the capital much of the potential of labour power. But once the factory was established it became possible to control the labour process and increase the productivity. They applied the Babbage principle, i.e. the break up of the activity into its simplest elements. The capitalist mode creates working people suitable to its need.

Taylor advanced the Babbage principle and suggested how to take control of the labour process. He formulated it in three principles. Firstly, the labour process should be dissociated from the skill of the workers. It should not depend on the abilities of the worker but entirely upon the practice of management. Secondly, separated brainwork should be put on the planning and laying out department. And the third, is the use of this monopoly over knowledge to control each step of the labour process and its mode of execution. Workers, as they lose control of instruments of production also lose control over their own labour and its performance. Taylorism is possible only when large-scale production is already there. That is why Taylorism could emerge only after concentration of production in larger corporate units took place in the latter part of the 19th and early 20th centuries. The pivot of all modern management is to control the core work through the control over decision to be made in the course of work.

As monopoly capitalism advanced the principles of scientific management was applied to administration also. Whatever was learned about the functioning of the factory was applied to the management. The management actually imitates the factory in its functioning. The function is exercised by organisation of workers under the control of managers, assistant managers, supervisors etc. Together this is called administration. It is conducted as a labour process similar to the process of production. There is progressive elimination of thought from the office worker, which is achieved, first by reducing mental labour to a repetitive performance of a small set of functions. The work is still done by the brain but the brain is equal to the hand of the worker as it grasps and releases a data again and again. The next step is the elimination of the thought process completely or as much as possible, i.e. the increase of clerical categories in which nothing but manual labour is performed. The whole idea of scientific management is to take the thinking process away from the worker. In his mental make-up he should resemble an ox.

The introduction of scientific management and the scientific-technical revolution took place more or less at the same time. Thanks to advances mainly in four fields of science and technology the old epoch of industry gave way to the new. These four fields were electricity, steel, coal-petroleum, and internal combustion engine. The new technologies were highly motivated as they were planned and achieved by specialists. Earlier technology arose as and when people tried to solve a problem or tried to overcome a difficult situation. In other words it necessarily involved the social process of production and was spontaneous in character.

This itself, that is, making production of science and technology into a separate specialised activity, was part of the separation of mental work from manual work. A necessary consequence of this is the separation of conception and execution. And a necessary upshot of the above is that the labour process is now divided between separate sites and separate bodies of workers. In one location, the physical processes of production are executed while in another are concentrated the design, planning, calculation, and record

keeping. The physical processes or production are now carried out more or less blindly, not only by the workers who perform them, but often by lower ranks of supervisory employees as well. The production units operate like a hand, watched, corrected, and controlled by a distant brain.

Modern industry is dynamic. It is constantly in the look out for new technology and therefore the technical basis of the modern industry is revolutionary. Thanks to the introduction of new machinery, new chemical process and many other new methods it has not only brought changes in the technical basis of production but also in the functions of the labourer. A necessary consequence of this is that it brings about radical changes in the labour process itself and in the division of labour within the society. To suit the new requirement of the modern industry it ceaselessly moves capital and workers from one branch of production to another.

Before capitalism economic activity was individualistic, small-scale, scattered and unproductive. The hallmark of the market and the factory is the division of labour. Thanks to the advancement in scientific management the division of labour is highly advanced now. Since the new firms are horizontally flexible even when spread over many countries the structure is highly adaptable to control. The adoption of scientific management has given modern industry this flexibility for the scientific management system is nothing but extreme division of labour and the absolute control over the labour process.

What emerges from the above discussion is that two tendencies inherent in capitalism from the beginning but came to the forefront when capitalism transformed itself into monopoly capitalism are the conversion of knowledge into a commodity and its monopolisation and the extreme division of labour. The constant effort to reduce the cost of production has been driving the capitalist to take these tendencies to extremely high level. The above two tendencies are also the two defining features of globalisation, the latest phase of capitalism. It is leading to shaping and reshaping the global space. We shall elaborate on this point below.

Earlier we have seen that the export of capital is the most important characteristics of monopoly capital or the imperialist stage of capitalism. Advances in scientific management and improvement in transport and communications made it possible to reorganise the production in new and radical ways. These changes have made it possible for the capitalist system on the one hand to increase productivity of labour and on the other hand reduce the turnover time in two different ways. Through the creation of new intermediate products, and getting them produced outside the firm, it became possible to reduce the turnover time of the fixed capital and increase profits. Improvement in transport and communication was able to annihilate space with time to a great extent. The combined effect of all these changes along with capital's constant search for a solution to the crisis of overaccumulation resulted in the restructuring of the capitalist system. Since the end of 19th and early 20th century multinational corporations (MNCs) have been the main vehicles of capital export. They have increased in both number and size and thus have taken on much greater importance in the world-economy. Hence a brief discussion of their emergence and transformations in their operations is of order here.

According to Hymer, the development of business enterprises can be viewed one, as a process of centralising and perfecting the process of capital accumulation, two, the historical development of the MNCs, should be understood not just as a further expansion of the same capitalist classes and institutions that had existed in the nineteenth century, but rather as their transformation into a new world economic order, dominated by the MNCs and not yet controlled by it (Hymer Stephen,1972).

Chandelier identified three stages in the development of corporate capitalism. The first stage is the Marshallian firm. It operates at the factory level. It is a single function industry tightly controlled by one or few men. The second stage arose in the US in the end of the 19th century. These were large national corporations that arose as a result of the merger movements, and had highly elaborate administrative structures to manage many disparate units. The third stage is the development of multidivisional corporations. It got a momentum after the 2nd World War (Alfred D. Chandlier and Fritz Reddich, 1961, p.10).

Singer was the first to manufacture and mass market its product bearing the same name across the world when it built its first overseas factory in Glasgow in 1867. It was during the inter-war period that multinational corporations started entering in manufacturing. The major region of expansion was Latin America where 200 firms from the US and Europe had set up plants as subsidiaries by 1940 (Banerjee-Guha, 97, p.35).

The 1970s saw a major shift in the structure in the world economy. It was also a period of transition towards a new phase of internationalisation of production and labour. A major force in materialising the above changes was the MNCs. The seventies saw the emergence of a truly global system with the MNCs at its centre. As a natural consequence, the universe of the MNCs in the nineties became highly concentrated. The largest 100 corporations (ranked by the size of their foreign assets) had about 3.2 trillion in global assets in 1990 of which nearly one-third was outside their own home countries.

In the early nineties 25 largest multinational corporations of the world by sales were found to dominate in textiles, chemicals, computers and electronics, food, beverages, apparel, automobile and transport, mining, petroleum, pharmaceuticals, industrial and farm equipment, machinery and building

materials and last but not the least, soaps and cosmetics. In 1990, the USA topped the list having 40 per cent of the world's biggest 25 companies, followed by Japan. Japan accounted for the maximum number of corporations with the highest sales. By then, according to Banerjee-Guha 'the world looked more like an industrial village for the MNCS'(Ibid.97, p.35).

Over the last three centuries, the main source of wealth, has switched from natural assets (notably land and relatively unskilled labour), through tangible created assets (notably buildings, machinery and equipment, and finance), to intangible created assets (notably knowledge and information of all kinds), which may be embodied in human beings, in organisations, or in physical assets. It has been estimated by Dunning that, whereas in the 1950s, 80 per cent of the value added in US manufacturing industry represented primary processed foodstuffs, materials, or mineral products, and 20 per cent knowledge, by 1995, these proportions had changed to 30 and 70 per cent respectively (Dunning, 2000 p.8-9).

During the early stages of capitalist development knowledge or science does not cost the capitalist anything. He simply exploited the accumulated knowledge of the humanity. But as capitalism has advanced the capitalist has been systematically organising and harnessing science, by paying for scientific education, research, laboratories, etc, out of the huge surplus social product which either belongs to him or which the capitalist class as a whole controls in the form of tax revenues. Knowledge, which was relatively free-floating, is slowly and steadily integrated into production and market. Earlier knowledge was embodied in the machinery. That is when one bought machinery, the knowledge came along with it. Later knowledge was separated from the machinery and came to have its own independent existence. Today it is embodied in patents and copyrights.

Dunning reports that between 1975 and 1995, expenditure on all kinds of research and development in the OECD economies raised three times the rate of output in manufacturing industry. Over the same period, while the number of patents registered in the USA increased from 76,800 to 113,600, i.e. by 48 percent, those in the more knowledge-intensive sectors rose from 16,827 to 47,533, i.e. by 182 per cent (US Patent and Trademark Office, 1997). The proportion of the age group 15-24 engaged in higher education increased from 35 per cent in 1980 to 56 percent in 1993. Finally, capital spending on information technology, which in 1961 was only one-third of that on production technology, now, exceeds it. Throughout economic activity, created intangible assets are replacing natural or created tangible assets as the main source of wealth augmentation in industrial societies. Inter alia, this is demonstrated by the rising contribution of services, relative to goods, in the gross national output (GNP) of most countries (Dunning, 2000 p.9).

Knowledge consists of two components, namely stock and flow. The stock is the result of the past intra-firm investment in R & D. To this is added new information flowing out of continuing R & D, expenditure. Knowledge can become out of date and useless for the firm as other rival firms catch up. Therefore the knowledge must be constantly renewed by investing in knowledge-creating activities.

The production of knowledge is not placeless. The big firms of the world generate a high percentage of their worldwide patents in their home-countries, and these are quite consistent with the overall profiles of export specialisation of the home country's economy. This is because even large firms partake of wider institutional contexts and systems of externalities which enable them to generate new commercialisable knowledge (systems of innovation), and these are highly specific to particular countries and regions.

Table: 1: *Major source countries of technologies in the world, 2000* *US$*

	1997		1977-2000		1997		2000	
	R &D Expenditure		US Patents Taken		Technology fees received		FDI outflows	
	Billion (ppp$)	% of total	'000 $	% of total	Billion $	% of total	Billion $	% of total
USA	212.8	40.8	1337	57	33.8	42.2	139.3	12.1
Japan	90.1	17.3	429.4	18	6.9	8.6	32.9	2.9
Germany	42.0	8.0	173.8	7	11.9	14.9	48.6	4.2
France	28.1	5.4	68.2	3	2.2	2.7	172.5	15.0
UK	22.6	4.3	67.4	3	5.8	7.2	249.8	21.7
Italy	12.1	2.3	29.0	1	1.6	2.0	12.1	1.1
Canada	11.4	2.2	48.4	2	1.3	1.6	44.0	3.8
Netherlands	7.5	1.4	22.0	1	6.2	7.7	73.1	6.4
Sweden	7.1	1.4	22.9	1	0.4	0.5	39.5	3.4
Switzerland	4.8	0.9	31.0	1	2.8	3.5	39.5	3.4
Subtotal 10	438.5	84.0	2229.1	94	72.9	91.0	851.3	74.0
World	522	100.0	2364.9	100	80.1	100.0	1149.9	100.0

Source: Kumar Nagesh (2003)p. 210.

In table 1 is presented a few indicators of technological activity for the ten largest sources of technologies in the world. There are 'input' indicators as well 'output' indicators of technology. While R&D expenditure is the most important input indicator, patents obtained by inventors are the most significant output indicator. In the table is also given patents obtained by inventors from different countries at the US Patents and Trademarks Office over a twenty three-year period (1977-2000). For the purpose of international comparisons patents obtained in US is considered a surrogate for technological output, as inventors from all over the world like to register in the US. It is true this may be biased in favour of the developed countries as the costs of getting patents is prohibitive for inventors from developing countries. Besides a large number of technological activities in the developing countries are of adaptive in nature. The actual receipt of royalties and technological fees is another indicator of technological activity. The above receipts also indicate the amount of disembodied technology exported and therefore can be a measure of importance of a nation as a supplier of technology. The FDI outflows are summarised in the final column. FDI outflows reflect the strength of the created assets of the concerned countries' enterprises with ownership of technology being one of the most important sources of the firm's created assets.

The bulk of all technological activity in the world is concentrated in just ten countries is clear from the above table (Table 1). Further, the top ten countries account for 84 percent of global resources spent on R&D activity annually: they control 94 per cent of the technological output in terms of patents taken out in the US, and receive 91 per cent of global cross-border royalties and technological fees. One interesting point to note here is that the concentration in terms of technological output is even more uneven than for technological inputs. The fact that they have control over nearly 74 percent of global FDI outflows is a further reflection of their control over technology.

Table: 2: *Trends in ownership of US Patents, 1977-96: Patents granted during the period, and percentage*

Country	**1977-82**	**%**	**1983-9**	**%**	**1990-6**	**%**
US	244,507	62.1	556,267	58.0	429,052	55.5
Japan	43,977	11.2	147,441	15.4	160,167	20.7
Germany	34,237	8.7	84,545	8.8	51,6625	6.7
United Kingdom	15,002	3.8	33,753	3.5	19,043	2.5
France	12,551	3.2	30,959	3.2	21,790	2.8
Canada	7,223	1.8	18,089	1.9	16,305	2.1
Switzerland	7,581	1.9	16,564	1.7	8,910	1.2
Italy	4,757	1.2	12,311	1.3	5,870	0.8
Sweden	5,035	1.3	11,455	1.2	5,870	0.8
Netherlands	3,955	1.0	10,072	1.0	6,817	0.9
Share top 10	378,825	96.2	921,456	96.0	729,352	94.4
Share top 3	322,721	82.0	788,253	82.2	640,844	82.9
Total	393,629	100.0	959,368	100.0	772,927	100.0

Source: Nagesh Kumar (1998, p.15).

The data summarised in table 2 shows the pattern of ownership of US patents over the 1977-96 period. The data shows over the period the share of the US inventors have gone down but the over all share of the top ten countries have not declined much. Over the years Japan has improved its share steadily reaching nearly 21 per cent in the 1990s. The share of the top ten countries in total patents has declined slightly from 96.2 per cent during the 1977-82 period to 96.0 during 1983-9 and to 94.4 per cent during the 1990-6 period, suggesting a slight decline in the overall concentration. However, there is an opposing tendency. Among the top three innovating countries -- the US, Japan and Germany -- with their combined share rising from 82 per cent in the first period to 83 per cent in the latest period. The trends in terms of receipts of royalty and technological fees reveal more changes.

Table: 3: *Trade in IPR-sensitive services and royalties and license fees* *US$*

		1990 ($billions)			**1990 ($billions)**		**1996 ($billions)**
Country	**Service**	**Receipts**	**Payments**	**Balance**	**Receipts**	**Payments**	**Balance**
EU12	IT	0.6	1.4	-0.8	6.6	6.7	-0.1
	RLF	8.8	13.6	-4.8	13.9	20.4	-6.5
USA	IT	n.a	n.a	n.a	n.a	n.a	n.a
	RLF	16.6	3.1	13.5	27.3	6.7	20.6
Japan	IT	n.a	n.a	n.a	1.1	2.2	-1.1
	RLF	2.9[b]	6.1[b]	-3.2[b]	6.1	9.0	-2.9
Canada[a,d]	IT	n.a	n.a	n.a	n.a	n.a	n.a
	RLF	854	855	-1	1266	993	273[a]
Australia[a]	IT	n.a	n.a	n.a	151	179	-28
	RLF	162	827	-665	229	992	-763
Mexico[a]	IT	n.a	n.a	n.a	n.a	n.a	n.a
	RLF	73	380	-307	111	328	-217
Brazil[a]	IT	n.a	n.a	n.a	39	229	-190
	RLF	12	70	-58	29	482	-453
South Korea[a]	IT	3	50	-47	5	69	-64
	RLF	37	136	-99	168	2214	-2046
MIT[a]	IT	n.a	n.a	n.a	n.a	n.a	n.a
	RLF	0	170	-170	23	653	-630
India[a]	IT	n.a	n.a	n.a	n.a	n.a	n.a
	RLF	1	72	-71	1[c]	82[c]	-81[c]

EU12 = the first 12 members of the European Union.
MIT = combined figures for Malaysia, Indonesia, and Thailand.
IT = computer and information services.
RLF = royalties and license fees.
n.a. = not available.
[a] = Millions of dollars.
[b] =1991.
[c]= 1995.
[d] =Data for technology balance of payments.
Data for 1996 are deflated by US wholesale price index (1990 = l00).
Source: Maskus Keith E.(2000, table 3.7).

Table 3 shows that the United States remains by far the largest global net supplier of technology, trade secrets, and IPRs for which royalties are paid. Japan as a net importer of both computer services and intellectual property has also seen a marked rise in transactions requiring license fees. During this period there has been remarkable increase in technology imports by Brazil, the Southeast Asian economies, and especially South Korea. South Korea's outward payments rose fifteen-fold in this six-year period, resulting in net outward payments for RLF of over $2 billion by 1996. Comparatively, India's gross RLF payments grew only marginally.

From the data presented in tables 1 to 3, it is clear that the USA, Japan, and Germany are the most innovative countries in the world. Very little patent activity is associated with the developing countries. As far as the development of technology is concerned a process of triadisation, or concentration in three centers is taking place. The majority of less developed and poorer countries of Africa, Latin America and Asia have no significant role to play in science and technology. If we look into disaggregated data i.e. industry wise (not given here) we find that the most innovative industries, such as computers, instruments, and pharmaceuticals also tend to be the most R&D intensive.

Therefore there is no doubt that the international technology markets continue to be dominated by a

handful of industrialised countries. Equally significant is the fact that the technological activities within these countries are also known to be highly concentrated in a smaller set of bigger corporations that dominate different branches of industries. For example, about 81 per cent of all Swiss national R&D expenditure in 1983 was by four companies -- Ciba-Geigy, Hoffman-La Roche, Brown Boveri Corporation and Sandoz; Philips, Shell, Akzo, and Unilever accounted for 69 per cent of Dutch R&D expenditure; Siemens, Bayer, Hoechst, Daimler, and VW accounted for 22 per cent of German R&D expenditure; GM, IBM, AT&T, Ford and United Technologies accounted for 12 per cent of all the US, R&D expenditure; and so on (Table 4).

Table: 4: *Trends in the Ownership of US Patents Held by Organisations/Corporations, 1977-96*

Number of patents granted during the period			
Category	**1977-83**	**1983-9**	**1990-6**
Patents owned by organisations	303,096	453,836	631,815
Patents owned by top 165 organisations	117,189	175,981	333,380
Patents owned by the remaining 130,431 organisations	185,907	377,855	389,535
Patents owned by top 50 corporations	76,345	113,838	158,999
Share of top ;50 in patents by 165 organisations, %	65.15	64.68	68.45
Share of top 50 in all organisational patents, %	35.19	35.08	35.57

Source: Kumar, Nagesh (1998, p.30)

As we already noted corporate ownership of patents granted in US is an indicator of the concentration in technology generation. The distribution of ownership of US patents is given in table 4. It shows there has been a rise in the concentration of patents in the top corporations in the recent period. In fact there has been frantic effort to capture technology by the corporations. It is suggested that mergers between Ciba-Geigy and Sandoz, Glaxo with Wellcome, Pharmacia and Upjohn, among others have been inspired by the need to strengthen capabilities in biotechnology related research, while the takeover of Lotus by IBM, of Word Perfect by Correl Ventura, of Intuit by Microsoft among others, have been inspired by the need to strengthen competencies in their information-communication technologies.

The concentration of technology in the hands of MNCs is further intensified by the fact that very often they have prior access to technologies generated by public funded institutions like the universities and small firms that conduct research through contracts. Besides, the MNCs have undertaken strategic alliances that enable them to exploit synergies in competencies of unrelated corporations, cross license technologies and patents, and joint R&D activities. What this implies is that the larger corporations based in developed countries have command over much larger amount of technology than shown by their share of ownership of patents.

It is the global pattern of technology generation that shapes the patterns of international technology transfers and directs investment flows and the resultant global spatial configuration. We have found the technology generation activity to be highly concentrated in a handful of advanced industrialised countries with the US, Germany and Japan accounting for over four fifths of the patents granted by the US Patents office. Except Taiwan and South Korea, there does not seem to be much prospects for any developing country emerging as a serious contender in technology generation in the near future. In fact the technological effort in developing countries as a group in terms of global R&D expenditures has declined and the technology gap between them and industrialised countries has widened over time.

To summarise, the modern MNCs are essentially exporters of knowledge-based assets (KBAs) including technology, engineering, management, marketing, and financial services. No doubt huge human capital is required for generating these KBAs. MNCs also license the rights to use devices that protect the value of their KBAs, including patents, trademarks, trade secrets, and copyrights. Local subsidiaries pay for these services with royalties, license fees, shared outputs, and profit repatriations. However, the preferred route to export KBAs is to transfer it to subsidiaries rather than arms length exchange through the markets. That is why international trade in manufactured goods looks less and less like the trade of economic models

in which unrelated buyers and sellers interact freely with one another (on reasonably competitive markets) to establish the volume in traded goods. It is increasingly managed by multinational corporations as part of their systems of international production and distribution. Particularly this is so, in technology-intensive products. The pricing, volume, and direction of this trade are not necessarily related to the laws of the markets. By, by passing the markets the firm internalises production. In other words firms are becoming more and more vertically integrated.

The innovation of a new technology often modifies the division of labour and creates a new set of intermediate products. Thus division of labour is the main dynamic factor governing internalisation of production or the vertical integration of the firm. As the various products are complementary, the producers must synchronize their investments to get all the plants on stream at the same time. It is difficult to achieve this by using price incentives, since prices for intermediate products that have not yet been produced do not exist. It is administratively simpler to use centralised planning, which normally involves starting up all stages of production under common ownership. This may take various forms like networking, subcontracting and so on.

A network can be defined as a number of distinguishable economic activities engaged in a significant amount of interaction with each other. The theory of value chains and value systems are very helpful to understand this. According to this theory, economic activity is considered as the combination of a variety of constituting factors, such as inputs, raw materials, labour, capital and other factors of production, into an output or a product. Outputs can be the inputs of other (upstream) economic activities or value chains; inputs can be the outputs of other (downstream) economic activities. Each economic activity has a complex set of interlinkages with other economic activities. This is the network, or, the value system. If the network goes beyond national borders, one may speak of an international production system.

An advanced type of networking is the industrial condominium. An industrial condominium is formed when the assembler organises the facilities of key suppliers around its plant. The assembler defines which parts/modules will be produced, selects the suppliers, and specifies that they must build dedicated plants. In the new condominium concept, all the supplier facilities are planned by the assembler as part of the plant development strategy. This is very different from market driven (locational) advantages for the supplier or policy driven i.e. state aid for location at given sites) proximity.

The industrial condominium concept was first developed in Japan. In new plants in emerging markets, many basic vehicle production activities are transferred to the suppliers. The above development, sometimes also referred to as modular production has three main aims: to reduce costs, to increase the efficiency of low-scale assembly, and to minimise the assemblers' investment requirements in new plants.

Subcontracting or outsourcing is still another strategy adopted by the MNCs to take advantage of the division of labour and resulting intermediary product. Outsourcing does not involve acquiring property rights over a supplier by a contracting firm. Activities traditionally carried out inside firms are outsourced utilising the most efficient specialised firms in world markets. Early efforts involved production of products in Asia. Today, outsourcing includes the telephone switch (call centres), customer service over the phone, bookkeeping, advertising, internal -- administrative computer services (e.g. salary systems, storage control, computer programming and systems development). Industrial design firms in Italy offer service to manufacturers throughout the world. When a Korean manufacturer recently introduced a new line of trucks, the design had been carried out by British design engineers (Orjan Solvell and Julian Birkinshaw. 2000, p.85).

A World Bank study for the year 1995 showed that at least 30 percent or $8000 billion in manufactures trade annually in components. Another important finding of this study is that trade in components and parts have been growing at a considerably faster pace than that for other (finished) products (Yeats, 1997).

The location of an intermediate stage depends upon the relative pulls of the raw material location and of the centre of final demand. If the input loses weight during processing at the intermediate stage, then other things being equal, it will be cheaper to transport the output than the input, and so production will be attracted to the raw material source. If on the other hand, the input becomes more fragile and perishable in the course of production, then it becomes cheaper to transport the input than the output, and so production will be attracted to the centre of demand. If the two factors exactly balance one another then a location anywhere along a straight line between the raw material source and the centre of demand will be efficient.

The whole idea behind the vertical MNCs is to exploit factor price differences in the world economy. They would locate skilled-labour-intensive phases of operation in a skilled-labour-abundant country and unskilled-labour-intensive or resource-intensive phases in suitable locations. A typical MNC today produces knowledge-intensive services and perhaps skilled-labour-intensive intermediate inputs at home. Then the firm supplies services of the knowledge assets and ships the intermediates to a low wage country for assembly, taking back a large portion of the final output. The semiconductors industry of the US is a very good example of a vertical MNC. Blueprints and key components such as chips are designed and produced in the parent plants in the U.S. Then the chips are shipped to the testing and assembly facilities of

subsidiaries in Southeast Asia, where the finished products are assembled by cheap unskilled-labour. Finally the finished products are shipped back to sales destinations in the, U.S. and elsewhere. Internalisation of production reduces transaction costs and internalises non-monetary externalities.

The MNCs have evolved an administrative system suited to the new structure of the firm. The administration is divided into three levels. Level three is the lowest level where it is concerned about the day-to-day operations of the firm. At level two managers, manage the level three managers. At level one there is goal determination and planning. In a Marshallain firm all these are situated at one point. The MNCs have created a hierarchy of decision-making. They tend to create a world in its own image by creating a division of labour between countries that corresponds to the division of labour between various levels of the corporate hierarchy.

The dominant activity of the large business enterprises is product development and marketing. They have evolved a multidivisional structure. Corporations have been decentralised with several divisions, each concerned with one product line and organised with its own head office. General office is at the highest level. This type of organisational structure has great flexibility. The enterprise can enter new market by creating a new division. Can also create competing product lines in the same industry and bring about an illusion of competition.

Since the late 1960s, the MNCs has been reorganising themselves with the aim of exploiting cheap labour to produce goods for re-export to the home country or to third markets (including not only other countries but also other plants in the corporation). This strategy has led to the creation of integrated hierarchical production organisations, which cut across national boundaries and is often called the 'internationalisation of production' or more generally 'globalisation.'

The most important requirement for achieving this type of integration is a highly developed communication and transport system. That is why this type of structure could not have been thought of before. But the breakthroughs in transport and communication achieved during the seventies namely the cheap global telephony as well as cheap and fast mode of transport through containers enabled the MNCs to reorganise themselves. Breakthroughs in these two areas have made it possible to 'annihilate space with time within the twinkling of an eye.'

The capital cannot renew itself without appropriating surplus labour of the society as surplus value is nothing but commodified living labour. In their constant search for surplus labour of the society, the capitalists of the world have been moving towards the deepest form of globalisation. The shallowest form of globalisation -- is where an economic entity in one country engages in arm's length trade in a single product with another economic entity in one other country as happened during the early mercantile period. At the beginning of this stage of globalisation the geography of the world was more or less natural. The deepest form of globalisation -- and it is here we can most easily distinguish globalisation from other forms of internationalisation -- is where an economic entity transacts with a large number of other economic entities throughout the world; where it does so across a network of value-added chains; where these exchanges are highly coordinated to serve the world-wide interests of the globalising entity; and where they consist of a multitude of different kinds of transactions. At this stage capital has taken hold of global space and has allocated it in such way it will aid accumulation.

Thus, a typical modern MNC is a global firm that will own or control subsidiaries, and engage in value-added business alliances and networks in each continent and in each major country. It will source its inputs of manpower, capital, raw materials and intermediate products from wherever it is best to do so, and it will sell its goods and services in each of the main markets of the world. Giant corporations are nothing new, for example there was the East India Company, The Hudson Bay, and the Royal Africa etc. They were large in size but small in brain like dinosaurs. Today's MNCs are the opposite. They have an enlarged brain at the general office. They are like an octopus, with a single 'brain' located within the company headquarters that concentrates on the strategic resources: top management, planning, and technological expertise. The 'brain' distributes impulses to the 'tentacles' (that is, the subsidiaries) scattered across host countries.

Thus globalisation implies an increasing degree of interdependence and integration of economic activities across countries. There has been some evidence to suggest that globalisation is in fact associated primarily with the 'Triad' (i.e., then US, European Union and Japan) countries. That is, the brain of the world is located in these countries. The historical conditions for the development of capitalism were created by the spatial division of labour. It was pointed out by Marx that the foundation of capitalism is the original division of labour between town and country (Marx, *Capital*, Vol. I, p.333). The above division was inherited by early capitalism and not originated by it. Only when the agricultural peasant was freed from the land the final separation between the country and town was complete. Then it went on to become the foundation for the further division of labour.

In the earlier stages of capitalist development (that is the mercantilist stage and even later) endowments of nature was the main factor causing international division of labour. With the development of the productive forces under capitalism, the logic behind geographic location retreats more and more from such natural considerations. Now there is a totally different situation from the days of early capitalism when

the majority of raw materials were the direct products of agriculture or mining. With the general increase in the productive forces, raw materials are the product of an ever-increasing number of labour processes. As a result today the physical geography has gone into the background while the socially produced spatial dimension of geography has grown in importance with the inexorable progress of capitalist development. An architect converts abstract space into representations of space on his drawing table. Later he builds the space and thus creates the concrete space. The concrete space he creates has a plan. Today the large corporations of the world have taken control of the global abstract space. Sitting on the 150th floor of their office in New York or Washington an MNC can view the global space and they can allocate them for their various activities.

The example of the production of American icon *Barbie* doll well illustrates the above point. Tracing the doll's production path shows us, how the global space is divided and integrated by few people sitting at the headquarters of the firm. *Barbie* is made from plastic injected into moulds at two factories in south China adjacent to Hong Kong, two in Indonesia and one in Malaysia. *Barbie* has never been made in the USA. Initially the production was in Japan, but rising costs of production saw the production being shifted to other areas of Asia. At one time the producer, Mattel, had *Barbie* factories in Taiwan, Hong Kong and the Philippines. After a strike two factories in Philippines were closed in 1988, which resulted in the loss of jobs to 4000. The plastic used for making *Barbie* is made form ethylene, refined from Saudi-Arabian oil, which is converted into pellets by a firm in Taiwan. The nylon of *Barbie* comes from Japan. Her cardboard packaging is made in the United States. The Hong Kong office manages manufacturing and packaging. It is at the Mattel Corporation's 'commodity management centre' in El Segundo, California, where information about the prices and wages is processed to make decisions about the best location to buy the plastic resins, the cloth, the paper and other materials and to bring them together at a final point of assembly.

Earlier Japan and Taiwan were the leading toy makers of the world. As they diversified their economies and went into more capital-intensive production they became suppliers of plastics which otherwise used to come from the USA and Western Europe. Production was shifted to lower-wage sites, particularly to China where most of the world's *Barbie* dolls are manufactured. Making *Barbie* is extremely labour intensive, as it involves the operation of plastic moulds, sewing clothing and painting the details on the dolls. A typical *Barbie* requires 15 separate paint stations. Machines cannot perform these tasks. Thus, the two *Barbie* plants in China employ about 11,000 workers, mainly unmarried women between 18 and 23 from poor regions of interior China brought to work at the factories for two to five years.

The Chinese firms and workers obtain only about 35 cents out of the US$2 export value placed on each *Barbie* when she leaves Hong Kong. The retail price of *Barbie* in the USA is around US$15. In 2001 *Barbie* accounted for US$1.5 billion in sales for Mattel. She is sold in 150 countries at the rate of three dolls per second. Over 40 per cent of the dolls are sold in Europe and Japan (Knox, 2003 p.329-30).

The top executives MNCs sitting in their head offices are able to identify global spaces of various qualities and allocate these spaces according to the overall logic of accumulation of capital. Using the enormous political, economic and military power at its disposal it is possible for the imperialist powers to transform the global spaces suitable to the accumulation of capital. This is the meaning of production of space for the imperialist powers. During the mercantilist and imperialist phase of capitalist expansion the imperialist countries conquered the concrete spaces, and now under the neocolonial phase of imperialism they have taken possession of global abstract space and manage it centrally.

II

The Expansion of the Global workforce

An important aspect of globalisation has been the expansion of the global workforce. Table 5 gives the growth of the workforce during the period between 1970 to 2000.

Table 5:*Growth of the World Workforce*

Region	1970 (million workers)	1985 (million workers)	2000 (million workers)	Annual Growth rate 1985-2000
OECD*	307.0	372.4	401.3	0.5
United States	84.9	122.1	141.1	1.0
Japan	51.5	59.6	64.3	0.5
Germany	35.5	38.9	37.2	-0.3
United Kingdom	25.3	28.2	29.1	0.2
France	21.4	23.9	25.8	0.5

Italy	20.9	23.5	24.2	0.2
Spain	13.0	14.0	15.7	0.8
Canada	8.5	12.7	14.6	0.9
Australia	5.6	7.4	8.9	1.3
Sweden	3.9	4.4	4.6	0.3
Developing regions*	1,119.9	1,595.8	2,137.7	2.1
China	428.3	617.9	761.2	1.4
India	223.9	293.2	383.2	1.8
Indonesia	45.6	63.4	87.7	2.2
Brazil	31.5	49.6	67.8	2.1
Pakistan	19.3	29.8	45.2	2.8
Thailand	17.9	26.7	34.5	1.7
Mexico	14.5	26.1	40.6	3.0
Turkey	16.1	21.4	28.8	2.0
Philippines	13.7	19.9	28.6	2.4
South Korea	11.4	16.8	22.3	1.9
USSR	117.2	143.3	155.0	0.5
World*	1,596.8	2,163.6	2,752.5	1.6

* =Totals include some countries not listed in table.

Sources: For OECD nations except Germany: OECD, Department of Economics and Statistics, *Labour Force Statistics, 1967-1987*; US Bureau of labour Statistics; the World Bank, *World Development Report,* 1987. For developing nations and Germany; International Labour office, *Economically Active Population, 1950-2025;* the World Bank, *World Development Report*, 1987 (cited in Ronaldo 2003, p.9).

Table 5 shows that the global proletariat nearly doubled in number between 1970 and 2000 to reach 2.75 billion workers. But most important fact that table 9.1 reveals is the particular nature of the expansion. Between 1970 and 2000 labour force in the developed countries (OECD) expanded by one-third while that of the developing regions the labour force nearly doubled. It is clear, work is expanding and so are the working classes. In 1995 the World Bank calculated that 99 percent of the workers projected to join the workforce in the next three decades would be in the low-and middle-income countries. In the same study World Bank says by the end of the century less than 10 percent of the world's workers would not be fully integrated into the global capitalist economy. (World Bank: *Workers in an Integrating World*, 1995 p.7 cited in Ronaldo, 2003, p.66). Then, globalisation which I have argued is a postmodern expression of capitalist accumulation is expanding by brining more and more people into its vortex. At every stage of capitalist accumulation it has been so.

For the corporations labour is a global resource and they may go anywhere in the world to look for the labour they want. Highly skilled labour will be imported from anywhere in the world. Workers driven by lack of opportunity in their own places, war and famine are willing to seek work across the globe. But that opportunity comes only for a few. The majority is bound to their place of birth. The states of the neocolonies offer these workers as educated, pliable and compliant social capital to the international capitalists. The critical observer can see here a parallel in the West African tribal chieftains offering his tribes as slaves to the traders during the mercantile period. At that time the burden of disciplining and motivating the slaves was left to the slave owner. In this advanced stage of accumulation that task is performed by the ever-compliant neocolonial states for the multinational capital. One of the ways of doing it is through the flexiblisation or informalisation of labour.

The workforce being integrated into the global capitalist economy is a flexibilised one. The justification for greater flexibility or informality is that security of employment is counterproductive to the creation of more work. A permanent job also means a number of privileges such as guaranteed wage index-

linked to the price of basic necessities, paid holidays, bonuses and contributions to the provident fund and so on. All these are aspects of the effort to build a social-democratic welfare state, as was the case in many western European countries. Now under the unadulterated capitalist development strategy such benefits to the working class is hindrance to the accumulation of capital. Accordingly it should be possible to hire and fire the employees according to the needs of the moment.

According to the OECD the flexibility of labour takes five main forms:

1. External numerical flexibility – number of employees adjusted in accordance with employers' needs.
2. Externalisation – part of the firms' work is put out through subcontracting.
3. Internal numerical flexibility – working hours and their 'delivery'; adjusted according to employer's needs.
4. Functional flexibility – worker's jobs modified according to employer's needs.
5. Wages flexibility – labour's reward according to productivity and market conditions (cited in Ronaldo, 2003, p.72).

One needs to add only the spatial or geographical flexibility to the above flexibilities to get a comprehensive picture of the model worker of the 21st century. Flexibility of labour may take various forms depending on the particularities of a nation. The global drive towards flexibility is leading to small workforces in each unit, fewer rules in the workplaces, wages being tied to the business cycles and weaker unions.

Flexibility of labour finds its most concrete shape in the informal sector. Informal sector is one, where work is done on wage labour or works on one's own account to generate income but is not regulated by any explicit (written or oral) contract establishing mutual rights and obligations. The worker in such sector cannot insist on fair labour standards, enjoys no protection, and in most cases is not registered in official records. This definition includes the huge army of those who work in the street or in their own homes, industrial workers employed in small-scale enterprises like diamond ateliers, power loom workshops and other manufacturing establishments with low capital intensity and widely fluctuating production capacity. Agricultural sector is excluded from this sector.

In this vast area covered by the informal sector the urban informal sector (the petty-bourgeois self-employed sector) has a significant role in globalisation. It is this sector that according to Castells and Portes 'simultaneously encompasses flexibility and exploitation, productivity and abuse, aggressive entrepreneurs and defenseless workers, libertarianism and greediness' (cited in Ronaldo, 2003,p.113). This unregulated economy is an integral part of the neocolonies is clear from table 6.

The informal economy is functionally integrated into the formal economy and through the networks of the market into the global production chains. The MNCs outsource specific production and service tasks to local subcontractors who undertake production in the petty small-scale sector. The local subcontractor employs contract or casual labour. In the exchange process between the MNCs and the subcontractors there is transfer of value through the mechanism of unequal exchange. The returns to the small-scale (the informal sector) producers are less than the minimum wages. The minimum wage or the value of labour is based on the cost of reproduction of labour power. The burden of reproducing labour power for the society is on the subsistence sector that co-exists with the informal sector. Thus one can see that the informalisation is a critical component of capitalist globalisation. Its main function is to undermine organised labour and facilitate the global capitalist accumulation.

Table 6 shows the share of informal sector in total GDP and in non-agricultural GDP in comparison with its share in labour force, for various countries in different regions. From the table it is clear, the informal sector is the most important sector in most of the neocolonial countries.

Table 6: *Informal Sector as a Share of Non Agricultural and Total Employment and as a Share of Non Agricultural and Total GDP In Various Developing Countries.*

Countries (years)	% non agricultural employment	% non agricultural GDP	% total employment	% total GDP
Tunisia (1995)	48.7	22.9	37.8	20.3
Morocco(1986)		30.7		24.9
North Africa		26.8		22.6
Benin (1993)	92.8	42.7	41.0	27.3
Burkina Faso (1992)	77.0	36.2	8.6	24.5
Burundi (1996)		43.7		25.7
Chad (1993)	74.2	44.7	11.5	31.0
Ghana (1988)		58.3		31.4

Kenya (1999)	71.6	25.0	28.8	18.4
Mali (1989)	78.6	41.7	13.3	23.0
Mauritania (1989)	75.3	14.4		10.2
Mozambique (1994)	73.5	44.8	7.6	38.9
Niger (1995)		58.5	27.2	37.6
Senegal (1991)	76.0	40.9		33.0
Tanzania (1991)		43.1	19.6	21.5
South Africa (1995)	18.9	7.2	16.6	6.9
Zambia (1998)	58.3	20.2		14.7
Sub-Saharan Africa*	77.4	39.6	19.7	25.9
Philippines (1995)	66.9	32.5	34.3	25.4
Indonesia (1998)**	77.9	31.4 (36.7)	42.9	25.2 (28.6)
Thailand (1994)	51.4		22.7	
Korea (1995)		16.9		15.9
India (1990-91)	73.7	48.1	34.4	32.4
Asia *	67.5	37.3	33.6	27.7
Mexico (1998)	28.5	13.4		12.7

Source: Jacques Charmes, 2000.

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