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Contemporary Form and Dynamic
of the
International Division of Labour

**A thesis submitted in partial fulfilment
of the requirements of
the Degree of Doctor of Philosophy**

University of Waikato

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Abstract

With increasing global capitalist structures there is a need to advance understanding of the structure and dynamic of the contemporary international division of labour. This can be approached through a critical enquiry: first to define and identify key aspects of the nature and dynamic of the international division of labour out of existing discourses and second to develop and modify the conceptualisation by the Régulation Approach theorist, Lipietz of a 'third' international division of labour in the light of contemporary developments since the early 1990s.

Lipietz' third international division of labour supposes a co-existence of diverse national models of development in an international trading space where diversity arises from the different pathways states take to re-regulate the crisis form of the Fordist capital-labour relation. In contrast, the critique of the third international division of labour developed here argues for converging counter-tendencies, particularly among advanced capitalist states towards a Toyotist technological paradigm - a term used to encompass both the form of the new international best practice production system and the corresponding segmented form of national labour markets. These counter-tendencies are driven by a neo-liberalised international mode of regulation constraining states towards neo-liberal competition states. The mode of neo-liberal labour market regulation in turn flexibilises labour markets. Neo-liberal labour market regulations permissive of labour market flexibility re-segment existing labour market segments established in the Fordist capital-labour relation. This re-segmentation broadens and deepens existing labour market segments and incorporates both involvement and flexibility in the labour relation and flexibility in the wage relation by treating different labour market segments in different ways. This ability to re-segment labour market segments enables multinationals to reproduce the technological paradigm of economies of scale and scope in international production systems. This capital-labour relation is termed the 'inconsistent hybrid' because it succeeds in reproducing production relations of worker involvement in the labour process with externalised wage relations within the same social formation.

The central argument of the thesis is that at the national level, among developed nation states at least, there is a converging tendency towards national models of production in which the inconsistent hybrid capital-labour relation is dominant. More exactly, each national trajectory increasingly reflects different sides of the same tendency which could be termed Toyotism. Lipietz' third international division of labour is thus identified as less profound and closing towards functionally equivalent versions of the inconsistent hybrid.

Keywords: international division of labour, globalisation, Régulation Approach, neo-liberalisation, competition states, labour market segmentation

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In a perfect world we'd all sing in tune
But this is reality so give me some room
So join the struggle while you may
The revolution is just a t-shirt away
While we're waiting for the Great Leap Forwards

Billy Bragg

1988

songwriter, singer and activist

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Part One

Chapter One

Introduction

Purpose and nature of the study

This thesis examines the form, and the dynamics, of the contemporary international division of labour. The contemporary context is the current historical conjuncture of national capitalist states that is not well understood, but which for some, in attempting to give meaning to this conjuncture, use the term 'globalisation'¹. Whilst there is no generally accepted definition as to what globalisation is, there is a sense in the term of a conjunction of three interconnected historical processes: of new production and consumption possibilities based on a new technological framework using micro-electronics; of widespread political shifts among established capitalist states away from neo-corporatism towards neo-liberalism; and of an increased internationalisation of economic activity, part of which is an increase in the number of capitalist states engaging in such activity. The over-riding questions of this thesis therefore are: What are implications of this historical conjuncture for the form of the international division of labour? What drives these changed forms (if any)?

¹ See for instance Tickell and Peck, 2003

The theoretical framework chosen to examine this question is the Régulation Approach. This approach understands capitalism to be inherently dynamic and unstable, and explains historical eras of economic growth and social stability to be the consequence of political processes which stabilise the social relations necessary for economic growth to materialise. In this sense of economic stability, the Régulation Approach is explicitly presented as an alternative to the dominant perspective of general equilibrium offered by the mainstream economics discourse to explain periods of economic stability (Aglietta, 1979, p. 13). Within the Régulation Approach, the work of a significant theorist, Alain Lipietz, is identified. Lipietz focused upon technology-wage relations in contemporary times (Lipietz, 1986; 1987; 1988; 1992; 1995; 1996; 1997). In the 1997 work in particular, Lipietz proposes the possibility of a new growth regime that is international in scale arising from the crisis of Fordism. This new growth regime is hypothesised as a co-existence of diverse national models of development. The form of this co-existence is a hierarchy of core and peripheral states each of which had re-constructed capital-labour relations in different ways in response to the possibilities the new information and technology (ICT) platform offered for developing a new production paradigm to succeed the previously dominant Fordist production paradigm. This form comprises an international configuration of different technological paradigms² within divergent national models of development of industrialised developed capitalist states. These different technological paradigms develop out of different political approaches to incorporating the emerging ICT technologies to resolve the supply-side crisis of

² Technological paradigm is used here to encompass the technical and social relations of production as used by Marx, or equivalently, following Lipietz, as encompassing production systems and the associated labour market structures. Lipietz alternates technological paradigm with the term model of production, as is also done in this thesis.

the Fordist technological paradigm. In effect, within each industrialised developed capitalist state, different post-Fordist technological paradigms were being constructed but each model was capable of making the same commodities. The de-facto third international division of labour reflected the privileged pathways in capital-labour relations from Fordist capital-labour relations and is an international division between a Kalmarian trajectory of industrialised developed states where highly-waged, highly-skilled workers who act with responsible autonomy in the workplace is dominant³ and a neo-Taylorist trajectory of industrialised developed states where lowly-waged, lowly-skilled workers whose work is heavily prescribed and controlled by management dominates.

Thus within the theoretical framework developed by Lipietz were the components to examine the overriding query of this thesis concerning the forms and dynamics of the contemporary international division of labour.

The particular empirical problem initially posed in using this theoretical framework of Lipietz could be answered by enquiring into the forms of technology-wage relations developing in New Zealand in this historical conjuncture. For a long period after World War Two, New Zealand, with other established states experienced a long boom of economic prosperity and political and social stability which was followed by a period of economic crisis, political change, and continued economic and social instability. In New Zealand's case, full crisis symptoms of low economic growth, increasing unemployment,

³ The term Kalmarism is based on the socio-technical experiments in work organisation in the Volvo plant in Kalmar and refers to forms of work organisation with high worker involvement and autonomy within a political context where such involvement is negotiated between peak groups at a regional or national level. For example, Sweden in the 1980s.

widening balance of payments deficits and high inflation appeared in the late 1970s. There was a dramatic political shift in 1984 when the Labour Party, elected on a social democratic political platform, rapidly engaged in a project of neo-liberal economic reform. The social and economic costs of such political reforms were high – increased unemployment, increased part-time and insecure employment, poverty for a wide group, and inconsequential economic growth. Increased market regulation of economic activity and subsequent reduced government regulation of market activity were expected to lead to gains in economic efficiency which would lead to improved social outcomes. In 1998, at the commencement of this thesis, some twenty years after the political change, some, but comparatively low, economic growth was beginning to occur, but there was little growth in wages and employment security and little evidence of reduction in poverty.

In this context, the hypothesis formed was that technology-wage relations in New Zealand would in this political environment, to use Lipietz' term, tend towards neo-Taylorism. That is, the ICT platform had, as a consequence of the introduction of flexible labour market policies, been used to deepen Taylorist control within industry and so had attracted capital that sought international competitive advantage utilising a de-skilled, flexible-waged, highly-prescribed capital-labour relation. Explanations for low growth in wages, increased income insecurity and poverty could therefore be sought in the model of production predominantly adopted in New Zealand as a consequence of the political turn towards the market regulation of labour. The mode of enquiry envisaged with this problem in mind would be largely empirical with as large a scale of a survey as

possible to map the forms of technology-wage relations present in New Zealand in contemporary times and test this thesis.

The methodological turn in the evolution of this thesis

The key publication by Lipietz that originally inspired this project was published in 1997 and was based on an interpretation of international economic and political trends from the 1980s to early 1990s, during which time the social democratic countries of Western Europe and Japan appeared to be performing better than the Anglo-American, neo-liberal political regimes. This evidence seemed supportive of his argument for co-existence of diverse national models of development in a core-peripheral hierarchy. In the late 1990s as this thesis unfolded, it became apparent that counter trends towards convergence in international patterns were occurring. The economies of Anglo-American, neo-liberal style of political regimes, including New Zealand, seemed to be performing comparatively better than the social democratic states of Western Europe and Japan. Neo-liberalism thus appeared to be more robust than Lipietz and other Régulationists writing at the time had expected, and wished. More importantly for this thesis, the reality of these outcomes undermined the theoretical framework which supported the proposed research project. Rather than ignore this reality, the project of the thesis changed to examining the theoretical framework to see how it could accommodate the change in the forms of national models of capitalist development and what the implications this accommodation would imply for the form and dynamic of the international division of labour. The over-riding questions of this thesis remained. What are the implications of this historical conjuncture for the forms of the international division of labour? What drives these changed forms (if any)? However, rather than an empirical examination of the forms of technology-wage relations forming in New Zealand, in order to better understand this conjuncture, a

discursive examination of explanations of the international division of labour formed the nature of the enquiry. From this form of enquiry it was expected that a novel theoretical framework could be developed to incorporate ongoing changes in the form and dynamic of the international division of labour.

The methodological approach to this examination is one of critique. By critique is meant an understanding of phenomena developed as a dialectical process of examination of the understanding different discourses have to offer to the phenomenon that is the object of enquiry. This is one method offered by Marx in order to understand the complexity of phenomena. Subsequently, Marx developed a method of enquiry that was deployed more directly to phenomena. In this method Marx abstracted aspects of the phenomenon into the realm of thought in order to identify its separate elements. The method then returns from this abstract level to the understanding of the complexity of the phenomena that is the 'concrete' (Marx, 1973; Sayer, 1979).

This methodological approach can be seen in the mode of presentation of this thesis which is presented in two parts. In Part One is presented a critical examination of the meanings the discourses of mainstream economics, orthodox Marxist economics, and the Régulation Approach give to the international division of labour. The purpose of the critique in Part One was to better understand Lipietz' hypothesis of a third international division of labour. A dialectic therefore took place in the mode of enquiry of Part One in which, through the examination of mainstream economics and orthodox Marxist theoretical discourses in relation to the Régulation Approach, Lipietz' published

work on the international division of labour could be unpackaged. Whilst the mode of presentation of Part One ends with a theorisation that is a re-statement, this is important for two reasons. First, it is contrary to the dominant perspective of mainstream economics and explicitly points to severe weaknesses in this discourse. Secondly, its re-statement of how to understand the forms of the international division of labour and the dynamics that underpin changes in these phenomena lays the framework for Part Two of the thesis. In Part Two of the thesis, aspects of the phenomena of the third international division of labour are abstracted, critiqued in the light of the contemporary context, then reinserted as an enhanced understanding of the phenomenon of the contemporary international division of labour.

In Part One, the critique of what comprises the international division of labour identifies two complementary aspects. One is a division according to geo-political space of workers specialising in particular commodities or in particular parts of a labour process and international trade in such commodities. Two, and possibly three, international divisions of labour can be identified according to this component. The first international division of labour is one of states and their workers specialising in industrial commodities trading with states in which commodity production is specialised in the primary sector. The second international division of labour is one of worker specialisation in different parts of an integrated, internationalised labour process, and international trade in the components of this internationally integrated production process. It is thus an intra-sectoral specialisation of labour by geo-political space, rather than an inter-sectoral specialisation as in the first international division of labour. The third

international division of labour is one of worker specialisation by geo-political space in different industrial commodities. It is an inter-sectoral specialisation as with the first international division of labour, but it is inter-national specialisation of commodity production within the same broad industrial (or primary) sector where the same commodities could be made using different production processes.

The other aspect to the international division of labour is that of a hierarchy in terms of economic development. At the top of the hierarchy are the few well-developed capitalist states in Western Europe, North America, Japan and Australasia. At the bottom of the hierarchy are most of the states of the world which are undeveloped by comparison. Within these two extremes are a number of states which can be identified as developing into successful capitalist states. These include some states in Central and South America, the Asian Tigers of South-East Asia and more recently China and India (or parts thereof). A number of criteria are used to rank states in this hierarchy. One is the basic World Development Indicators as used by the World Bank. These basic indicators include economic indicators such as GNP per capita and structure of commodity production, and social indicators such as life expectancy at birth and percentage of adult literacy. Well-developed nations rank highly in terms of GNP per capita and in the proportion of commodity production in the manufacturing and services sector and in adult literacy and rank lowly in terms of life expectancy. The opposite is the case with undeveloped states where GNP per capita is low, agriculture predominates in commodity production, and life expectancy and adult literacy is low. The basic indicators of developing states rank variably somewhere in the middle range of GNP per capita, increased commoditisation of the

manufacturing sector, increasing life expectancy and adult literacy rates (World Bank, 2004).

The dynamic behind the forms of the international division of labour so described is a historical process of uneven capitalist development among nation states. Political and economic agency between states in this uneven development becomes part of the capitalist development process itself within each nation state. There is no teleology here. Some states do develop, but others do not. Some states develop and rise in the hierarchy then fall. Lipietz' earlier work best captures these historical processes (Lipietz, 1987). The articulation between economic agents in different states is one of exchange based on comparative cost, as the mainstream economic discourse emphasises. However, the source of differences in comparative costs is not well understood by the mainstream economics discourse as its theoretical framework is a-historical and pre-supposes a universe of fully-commodified economic agents acting outside of the social and political environment in which economic agency is formed. The Marxist discourse, in contrast, explicitly recognises an historical process of the development of formal subordination of labour to capital out of existing social relations followed by the real subordination of labour. The Marxist underdevelopment theorists have an incorrect interpretation of the cause of the hierarchy in the international division in which a periphery of undeveloped states is structured to be undeveloped to serve the growth needs of core, well-developed capitalist states. Such dependency and underdevelopment exists, but it ignores the historical reality of successful capitalist development of some states within the periphery. Lipietz, in his correction of underdevelopment theorists, acknowledges the autonomous

development of capitalist relations in nation states on the periphery in which, as part of the development process, exchange between agents in the developing states and core states lead to the historical forms of the international division of labour.

The method of abstraction in Part Two begins with Lipietz's basic insights into the form and dynamic of historical forms of the international division of labour, but critiques his hypothesis of an emerging third international division of labour as a structure evolving from contemporary developments in national capitalist models of development. It is out of this critique that the thesis emerges.

The thesis that emerges is that there is a contemporary counter-tendency to Lipietz' third international division of labour. In the revised map of the third international division of labour, Lipietz' distinction between the Kalmarian trajectory and the neo-Taylorist trajectory closes and is less profound, tending rather towards functionally equivalent national variations of international production systems. That is, there is a tendency towards international convergence in national models of development in which both highly-skilled, highly-waged highly involved workers and the lowly-waged, lowly-skilled, highly controlled workers co-exist in national labour market segments. This is an 'inconsistent hybrid' capital-labour relation which structurally fits with the growing tendency towards international production systems. The major actors in international commodity production and exchange are MNEs who strategically seek to achieve economies of scale and scope made possible by articulating new technologies with Toyotist production techniques on a global basis as a response to the

heightened uncertainty of international competition. Toyotism is a term that is used to encompass both the form of the new best practice in international production systems and the corresponding segmented form of national labour markets (the inconsistent hybrid).

In this map, the second international division of labour continues as new social formations, particularly China, are drawn into further internationalisation of the Fordist mass production paradigm. Additionally, within this second international division there is a counter-tendency toward 're-nationalisation', or reduced international specialisation according to low skill/low-wage factors by re-incorporating the new industrial proletariat in core Toyotist states. In a parallel way, some of the NICs (for example, Korea and Taiwan) also move towards Toyotism.

The significance of this revised map for labour in advanced capitalist countries is that, at the international level, the Toyotist technological paradigm outperforms the Kalmarian technological paradigm. Thus, instead of a hierarchy of labour markets between states from workers in the neo-corporatist states of Western Europe who enjoy high wages and high income security producing high value-added goods to workers in the United Kingdom, United States and New Zealand 'enjoying' low wages and low income security, the tendency is for this hierarchy to exist within all such states. Further, because workers are involved in functionally equivalent national variations of Toyotism competing for productive capital in international production systems, there is a tendency for a deepening and widening of this hierarchy within states as wage and income inequality

increases and income insecurity increases through impoverishment and reduction of core workers. In contrast to Lipietz' map therefore, there is less of a tendency towards a win-win co-existence for labour in different locations, and rather more of a tendency towards lose-lose competition in the revised map.

The bounds of the thesis

It is usual in an introduction to clearly state the boundaries within which the study of concern is contained. However, the delineation of such boundaries in this study is difficult. The methodological turn taken in this thesis necessarily involves the examination of different discourses and of history, thus the boundaries are open. 'Holes' in the analysis are therefore inevitable. All one can do in defence is acknowledge that this thesis is an incomplete project, and always will be, given the constraints on time, resources and imagination.

Structure of the thesis

As already indicated, this thesis is presented in two parts:

- (a) Part One (Chapters Two to Five) critically examines the discourses of mainstream economics, Marxist economics and the Régulation Approach respectively in order to understand the complexity in the meaning of, and the dynamics informing the international division of labour.

Chapter Two examines the understanding the dominant discourse of mainstream economics has of the international division of labour. This discourse provides some basic insights into geo-political specialisation of labour arising from the international exchange commodities. Aside from these insights, the inability of this discourse to acknowledge a reality of uneven capitalist development limits its usefulness to understand the dynamic of the international division of labour.

Chapter Three examines the views on the form and dynamic of the international division of labour held by Marx and the dependency and underdevelopment theorists who followed Marx. In Marx's work is an explicit critique of mainstream economics for its failure to examine the social relations beneath the surface of exchange. Following Marx, the development of the capitalist mode of production can be understood through the development of capitalist relations of production and is thus a potential framework to understand the form and dynamic of the international division of labour. Silences in the Marxian analysis of the international division of labour are identified, particularly the historic processes through which peripheral states may successfully industrialise and develop.

Chapter Four introduces the Régulation Approach and the international perspective of this approach through the work of Lipietz. The Régulation Approach is presented as both a critique of the

technological determinism of orthodox Marxism, and as a critique of mainstream economics.

Chapter Five synthesises the critique of Chapters One to Three into an understanding of the form and dynamic in the international division of labour. Lipietz's basic insights into these phenomena are accepted but questions of his conceptual framework are raised, particularly: (i) his insistence upon the autonomy of nation states as capitalism expands as the dominant mode of production across the globe and (ii) his rejection of the 'inconsistent hybrid' as a contemporary form of the capital-labour relation. These questions serve as an introduction to Part Two. Central to understanding both these aspects of critique is the ascendancy of the neo-liberal project at both the international and national level.

- (b) Part Two (Chapters Six to Nine) critically examines two aspects of the conceptual framework that Lipietz uses to theorise the contemporary form and dynamic of the international division of labour.

Chapter Six critiques Lipietz' hypothesis of a co-existence of different national models of development. Lipietz, in his conceptualisation of a third international division of labour, is in effect proposing a divergence in national modes of regulation as nation states autonomously seek to construct new national models of development out of the crisis of Fordism. In contrast, the critique developed in this thesis poses a counter-tendency

of convergence in national modes of regulation towards neo-liberal modes of regulation, particularly in the modes of regulation of advanced capitalist states.

Chapter Seven critiques Lipietz' post-Fordist trajectories in capital-labour relations. Out of this critique it is argued that the priority of national competitiveness in a neo-liberal international mode of regulation encourages the neo-liberalisation of Toyotist production relations. In this technological paradigm, multinational firms seek to obtain competitive advantage in international production systems oriented towards achieving economies in both scale and scope. Neo-liberalised employment relations which flexibilise labour markets facilitate capital's capacity to 're-segment' already existing labour segmented labour market structures. This re-segmentation broadens and deepens existing labour market segments so as to incorporate both involvement and flexibility in the labour relation and flexibility in the wage relation by treating different labour market segments in different ways. This ability to re-segment national labour market segments enables multinationals to reproduce the technological paradigm of economies of scale and scope in international production systems. This capital-labour relation is termed the inconsistent hybrid because it succeeds in reproducing production relations of worker involvement in the labour process with externalised wage relations within the same national formation.

In Chapter Eight the revised map of the third international division of labour is presented. This revised map sees this distinction between the highly-waged, highly-skilled, highly involved workers (or Kalmarian) trajectory and the lowly-waged, lowly-skilled, highly controlled workers (or neo-Taylorist) trajectory as less profound. Rather, each trajectory reflects different sides of the same tendency which could be termed Toyotism. That is, at the national level among developed nation states at least there is a converging tendency towards national models of production in which the inconsistent hybrid capital-labour relation is dominant. In this capital-labour relation high-skill, high-wage highly involved workers and low-wage, low-skill, highly controlled workers co-exist but in labour market segments. This inconsistent hybrid capital-labour relation has its sources in the production relations of Fordism which segmented labour markets. With neo-liberal labour market regulation existing labour market structures are re-segmented which as an institutional form structurally fits with MNEs engaged in international production systems. The distinctions between post-Fordist national models of development, from which the third international division is identified, thus closes towards a one-best-way of Toyotism and in such closure, the third international division of labour becomes less apparent as a regularity across the international space of industrialised, developed capitalist states.

Chapter Two

Insights the Mainstream Economics Discourse Offers to the Meaning and Dynamics of the International Division of Labour

Introduction

This Chapter examines the understanding the dominant discourse, mainstream economics, has of the international division of labour. Despite its dominance, the argument advanced is that despite the intuitive appeal of this discourse in its claim to show how the international division of labour can be understood and constructed, it has severe weaknesses in its application to historical time. The discourse is static and methodologically reducing societal dynamics to a purely economic dynamic. As such, it is a discourse that is poorly suited to the analysis of possible contemporary dynamics within the international division of labour.

The deduction of specialisation of labour

The term international division of labour does not appear directly within the discourse of mainstream economics, but has to be read from the conceptual framework within which the discourse understands capitalist economics to work. Underpinning this reading is a conceptual view that the scale of economic

analysis, whether individual, sector, national or international is unimportant. As any Economics textbook claims in their introductory chapters, the discourse concerns itself with the fundamental issue that societies have limited resources relative to their needs, and so are faced with decisions as to how to allocate these resources. Beginning with this premise of scarcity, the discourse then develops a scientific approach in advancing the claim that an optimal allocation of resources is possible; that is, that an allocation of resources that best meets societies needs is possible. Such an optimal allocation of resources is achieved through the coordination of the decisions of individuals by a system of prices and markets.

The scientific approach the discourse takes is to reduce the matrix that makes up society to the individuals within society. Society presents such individuals as fully-formed humans endowed with a well-ordered set of preferences of needs and a given set of resources, including within this set a given set of productive technologies. How these individual preferences are formed is outside of the theoretical framework and is left unexplained. Any change in preferences is treated as an exogenous change. The same treatment is accorded to resources and technology. Society somehow initially allocates the resources and technology held within society into bundles of property rights held by individuals, or society merely presents technology and individuals with innate resources. The individuals so placed, the discourse then demonstrates with the axiom of rationality that free and open exchange between individuals leads to an allocation of resources that is optimal for society as a whole.

A fundamental conclusion this theoretical framework deduces is that such exchange on these terms leads to gains from trade. From the axiom of individual rationality in a (reduced) world of scarcity, it is deduced that individuals will specialise in the production of those things in which they have the lowest opportunity cost – that is specialise in producing commodities in which they have to give up the least amount of resources, and achieve production efficiency. However, specialisation removes the capability of individuals to independently meet all their other needs. All such needs are met through exchange with other individuals similarly specialised in production. The gains from trade that ensue is the increased productivity that results from specialisation. When rationally exchanged, this leads to a greater consumption by all than before universal specialisation. The welfare of all, in terms of maximum possible consumption, is achieved because individual wants are met subject to, but utilising in the most productive manner, the resource constraints the whole society faces.

The division of labour appears as a corollary to the argument that exchange leads to gains from trade since it is individuals, as rational decision-makers, who specialise in the production of things which incur the least opportunity cost to each individual and so achieve production efficiency overall. The benefits arising out of exchange only arise through a division of labour in production into areas of specialisation where each individual is more productive relative to their next best choice.

This gains from trade argument is fundamental to the rationale within the mainstream economics discourse for the dominance of a market system of

resource co-ordination over any other social system of co-ordination. As stated above, the logic of gains from trade is applied at the micro-level of individuals where rational decisions on exchange lead to individuals being as best off as possible relative to the constraints of their own resources. The logic of gains from trade is also applied to the macro-level of international trade. A view of an international division of labour arises out of this logic, whereby labour within a country specialises in the production of commodities which overall incurs the least opportunity cost, or in the jargon of the discourse, comparative advantage. That is, there is a functional relationship between individuals in different geographic spaces based on geographic specialisation in production according to least opportunity cost. This functional relationship is read as an international division of labour.

The principle of comparative advantage

The principle of comparative advantage was developed by the classical economist Ricardo (1973) as a normative argument for free trade as opposed to mercantilists who believed national wealth could be increased through restricting imports. Ricardo put the case that if a nation's resources were relatively more productive in the production of a commodity than another nation, gains could be made if that country specialised in the production of that commodity, exported the surplus over domestic consumption and imported other commodities from nations specialising according to the same logic.

This principle is illustrated in Tables 1.1 and 1.2 below. Portugal is 20 percent more efficient than England in producing cloth and six times more efficient than England in producing wine. Portugal can produce both cloth and wine using fewer resources than England, thus has an absolute advantage in the production of both goods. If the cost of resources were the same in both countries, both cloth and wine would be cheaper in Portugal than in England thus no trade would occur in these commodities between these two nation states. In the absence of trade, if England wished to produce one more barrel of wine, sufficient labour to make 10 yards of cloth has to be freed. Conversely, to produce one more yard of cloth in England, one tenth of labour from wine production has to be freed. Similarly, if in the absence of trade, Portugal wishes to produce one more barrel of wine, sufficient labour to make two yards of cloth has to be freed. Conversely to make one more yard of cloth enough labour to make two barrels of wine needs to be freed. In England fewer resources have to be transferred to make more cloth than in Portugal, but in Portugal fewer resources have to be transferred to make more wine than in England. Ricardo's argument was that even if a country whose productivity lagged behind that of its trading partners in all or almost all industries, it would export those commodities in which its productivity disadvantage was the smallest. In the example Ricardo used, Portugal exchanges wine for cloth from Britain because Portugal is relatively efficient in the production of wine. Thus, using this historical example, in order for gains from trade to occur at the international level, an international division of labour occurs whereby labour in England specialises in the production of cloth and labour in Portugal specialises in the production of wine (Ricardo, 1973). In standard terminology, a country will always find a range of commodities in which it has a

comparative advantage even if there are no commodities in which it has an absolute advantage.

Table 1.1

Alternative outputs due to productivity differences

		Outputs from one week of labour	
Country		England	Portugal
product			
Cloth (yards)		10	12
Wine (barrels)		1	6

Table 1.2

Gains from trade in spite of lagging productivity

Country		England	Portugal	total
Product				
Cloth (millions of yards)		+20	-12	+8
Wine (millions of barrels)		-2	+6	+4

Suppose that in Portugal a million weeks of labour was transferred out of the textile industry and into winemaking. According to the productivity data in Table 1.2, cloth output in Portugal would fall by 12 million yards while its wine output would rise by 6 million barrels. If at the same time, two million weeks of labour in England was transferred out of winemaking and into cloth-making, two million barrels of wine production would be lost but cloth production would be increased by 20 million yards. The transfer of resources in the two countries increases the production of both commodities. With an exchange between the two countries more than an exchange of a fixed bundle of commodities has occurred. Also involved is a change in the production arrangements, with some of England's wine production taken over by the more efficient producers of Portuguese wine and with some of Portugal's cloth production taken over by English producers who are less inefficient at producing cloth than English producers of wine.

Sources of comparative advantage

Ricardo was primarily motivated to put the case for free trade, thus the source of comparative advantage was not his concern. However, the sources of comparative advantage in his England-Portugal example is interpreted by many modern writers as due to technological differences causing differences in labour productivity (Leamer, 1984). Thus, whenever the term 'Ricardian comparative advantage' is used, it is inferring that technological differences are the source of that comparative advantage.

Ricardo was a classical economist and developed his normative argument for free trade using a theoretical framework of labour value. Following the marginal utility revolution within the discipline of economics that led to the separation of mainstream economics from political economy, the principle of comparative advantage was reformulated in a general equilibrium context to again put the case for gains from trade and to explain the patterns of trade observed.

The Swedish economist, Heckscher is credited with first proposing that with identical, constant returns to scale technology, different factor endowments were necessary and sufficient conditions for the emergence of trade (Leamer, op. cit.). With these conditions, countries export commodities that are intensive in the use of the relatively abundant factor. Another Swedish economist, Ohlin, (1933) who was trained in the formal structure of Walrasian general equilibrium theory, is credited with first placing the 'factor proportions' approach in an explicit general equilibrium framework. In this framework, countries (Ohlin used the term

regions) are defined by the set of 'factor endowments' that each possesses. These factors are perfectly mobile within each region, but totally immobile between regions. Given production functions and preferences, each region, were it to exist in isolation, would constitute a single closed market with relative prices, outputs and resource allocation determined à la Walras. Factor prices would be determined, along with everything else, with demand equal to supply for each commodity in each region.

If free trade is introduced between the regions, the new equilibrium condition is that demand must equal the supply of each commodity not in each region separately, but for all regions combined. Without borrowing and lending between the regions, income must still equal expenditure, thus the value of imports must equal the value of exports. The pattern of trade is explained by those regions in which some factors are particularly abundant having correspondingly cheap factor prices in the absence of trade. With commodities differing in the extent to which they require different factors as inputs, regions will have relatively low prices for commodities that are intensive in the use of their abundant factors. This leads to the proposition that regions export those commodities that require their abundant factors relatively more intensively.

Storper and Samuelson (1941) and Samuelson (1948; 1949) further formalised this Heckscher-Ohlin (H-O) model into a general equilibrium framework by linking the commodity composition of trade and wages. Assuming two commodities, X and Y, and two factors, capital (K) and labour (L), each commodity is produced with variable proportions, depending on relative factor

prices and constant returns to scale. Each factor is perfectly homogeneous and 'malleable' and perfectly mobile between the two sectors. Earlier models assumed K and L were in fixed supply and a 'strong-factor intensity' placed on the technology so that the capital-labour ratio in one commodity is higher at any factor-price than in the other commodity. With these assumptions and in the presence of the Walrasian auctioneer, the Stolper-Samuelson theorem is established: a rise in the relative price of either commodity will raise the real reward of the factor used relatively more intensively in its production, measured in terms of either commodity.

Before trade, each region has identical technology and preferences. Capital and labour are perfectly immobile between the regions. The only difference between them is in their endowments of capital and labour with one region (in a two region case) having a higher ratio of capital to labour than the other. In isolation, the labour-intensive commodity will be more expensive in the capital-abundant region as compared with the labour-abundant region. With the opening of international trade, a world equilibrium price for each commodity will be established that is lower than the pre-trade price of the labour-intensive commodity in the capital-abundant region but higher than the pre-trade price of the labour-intensive commodity in the labour-abundant region. The same logic applies to the international price of the capital-intensive commodity. With the help of the Walrasian auctioneer, both regions in free-trade equilibrium will consume the same ratio of the two commodities, but the relative price movements allows each region to develop an exportable surplus of the commodity that has the relatively abundant factor. Samuelson (op. cit.) in this context represented the H-

O theorem: the capital-abundant region exports the capital-intensive commodity and the labour-abundant region exports the labour-intensive commodity under free trade. Furthermore, the establishment of a common world price ratio must imply that each region has the same factor-price ratios, the same capital-labour ratios for each commodity and the same factor rewards in terms of either commodity. This is the factor price equalisation theorem: commodity price equalisation implies factor price equalisation, so long as neither region specialises completely. Thus, if the assumptions of the model hold, free trade for instance between New Zealand and Australia will equalise New Zealand and Australian wages for equivalent labour and will equalise rents for a standardised unit of land even if the factors of production cannot move across the Tasman Sea. Much of the general equilibrium, international trade literature from the 1950s and 1970s was devoted to extending the basic 2x2 Samuelson model, and finding empirical support for 'factor endowment' sources of comparative advantage.

While the factor proportion models assume factor mobility between states or regions, the argument that countries export commodities that are relatively intensive in the factor (s) with which it is well endowed suggests that each country exports the services of the abundant commodity and imports the services of the scarce factors that are embodied in the bundle of traded commodities. It thus follows that commodity trade and international factor movements are substitutes for each other. Thus despite the assumption of labour and capital immobility between regions, the outcomes are the same as if capital and labour were internationally mobile.

In this generation of the literature, technological differences as a source of comparative advantage (Ricardian comparative advantage) are ignored. Analytically, suggesting technological differences as a source of comparative advantage is suggesting that there is something preventing a region from imitating the productive techniques of the other region. This runs counter to the assumption in the model that knowledge is free. Also, in the general equilibrium, international trade economics distinguishes between differences in knowledge and differences in factor prices as the cause of differences in factor intensities in production. Knowledge is referred to as technology, which is assumed to be freely available. The adaptation of knowledge to local factor prices is referred to as the choice of technique (Leamer, 1984, p. 36). Analytically within general equilibrium economics, allowing factors to be combined in various proportions to produce the same level of output and free information allows agents to choose the least-costly technique for a given technology. Thus, it would seem more likely that people in India would choose a more labour-intensive technique because of low wages in India than that they are unaware of a more-capital intensive technique in Germany. In this way, differences in technology can be satisfactorily explained away.

The factor proportions model of international trade is used to argue the case for gains from trade from, and to explain the pattern of trade in, different commodities between nations or regions. The international division of labour that is read out of this theory follows this geographic specialisation in production. Further, such an international division of labour, since it leads to gains from trade, adds to overall welfare, and hence is a desirable division.

An evaluation of the sources of comparative advantage

These conclusions of a functional and desirable international division of labour are a tempting explanation and rationale for some historical regularities. For instance, India and China can be argued to have a comparative advantage in products using labour-intensive production techniques because labour in these countries is cheap and plentiful for such types of production. By implication, the cost of capital is high, because of its relative scarcity. In contrast, the US can be argued to have a comparative advantage in products using capital-intensive production techniques, because capital in the US is cheap and abundant. By implication, wage rates in the US are high, because of labour's relative scarcity. New Zealand on the other hand can be argued to have an abundance of a mild, year-round climate (which is cheap?) giving it a comparative advantage in the production of products which use such a factor of production intensively in pastoral farming. The welfare of all, according to this logic, can be achieved through each country specialising in, and trading in, those commodities in which they have a comparative advantage, even though wages per capita in each nation differ.

Caution has to be applied to such explanation and rationale however. It must be recognised that the factor proportions model is a particular kind of model. Firstly, it is a model deducing aggregate consequences from the (assumed) rational behaviour of individuals outside of the concrete reality which constitutes such individuals. As such, the model has no links to any historical reality as it exists,

have existed, or could exist. Thus, such questions as 'Why does India have an abundance of labour?', or, conversely 'Why does the US have an abundance of capital?' do not arise. Such realities are assumed to already have an existence outside of historical time, which is clearly not true. Secondly, it is a model in which 'living' labour is initially 'produced' as a commodity and which then disappears as an inanimate, homogeneous, variable input into a production process. To assume that individuals have no existence outside of their commodity or leisure moments is an abstraction devoid of any connection to the societies in which labour exists as humans, thus such an assumption is clearly not true. Also, the assumption that living labour unproblematically adheres itself somehow as homogeneous labour in a production process, is divorced from the reality of how such a labour process has historically developed: thus this is also not true. Thirdly, it is a model of a general equilibrium- a time-less end-point of existence. Aside from knowing when this end-point occurs, other than it is in the long-run, it is also an end-point in the model only, and is not and cannot be an end point of historical reality, because it has no connection to historical reality. Thus to say that people in India have to suffer low wages now, because it is in low wages that Indian production has its comparative advantage, serves only the functionality of the model and not the functionality of the reality of existence.

Relatedly, the discourse engages in a sleight of hand when the disciplining forces of competition are conflated with the concept of equilibrium. The internal logic of the model uses the forces of competition to generate a movement towards a new equilibrium from an already existing equilibrium generated disturbances by from some exogenous source. Thus dis-equilibrium is viewed as a short-run

phenomenon, eliminated in the long-run as markets clear. However, once at equilibrium, there can be no competition as competition is inconsistent with the stasis of equilibrium. To then translate the results of a long-run equilibrium (where there is no competition) back into real chronological time where competition continually exists is thus a sleight of hand. On the one hand, events in real chronological time can be interpreted as if they were equilibrium results (which only exist in the model). On the other hand, events in real chronological time can, at the same time be interpreted as representing a dis-equilibrium which, with the passage of time, will lead to equilibrium in the long-run (which only exist in the model). Either way, what is presented is an ideology that market competition is a force that leads to social stability and what is hidden is that competition is a force continually creating dis-equilibrium. The consequence of this is the promotion of the benefits arising to labour out of an international division of labour and a minimisation of the costs of adjustment to the sector of specialisation as short-term and of little consequence.

Caution therefore has to be applied in the interpretation of the conclusions of the theoretical mainstream economics model to actual historical reality. The position taken in this thesis is that the assumptions of the theoretical model are so far divorced from historical reality as to make its conclusions highly questionable. This position also applies to the policy recommendations which flow from adherence to this model. For the policy conclusion of blind adherence to this model leads to is one of free trade, that is international mobility of capital and commodities (other than labour) unrestricted by state and institutional

impediments leads to gains from trade. Aside from questioning the reality that such impediments will always exist in some or other form, the international division of labour that results and its beneficial outcomes exist only in the general equilibrium of the model and cannot be read as leading to such outcomes in the reality of historical time. As a set of ideas, however, they also serve a political purpose for the ideology of neo-liberalism – the promotion of the rights of individuals, and of minimal state and institutional impediments to the realisation of those rights.

Historical developments as sources creating comparative advantage

The confounding of historical time with the time to long-run equilibrium in the mainstream economics discourse on the international division of labour increases as attempts by those within the discourse to incorporate concrete historical developments into the theoretical framework of general equilibrium occur. Such attempts fail because they lead to the recognition that political and social factors are critical to the understanding of any international division of labour, yet the discourse cannot incorporate such factors into its theoretical framework without undermining the theoretical framework itself. There are two concrete developments in the international division of labour that create this contradiction. First is the historical development of two-way trade in similar commodities, much of it conducted between similar advanced capitalist economies. The second is the successful industrialisation of parts of the third world in which comparative advantages have been created undermining the historical comparative advantages held by advanced capitalist states. How the discourse attempts to incorporate such

historical development into its theoretical framework is discussed in the next section.

The common feature of the factor proportion models is that they maintain that the international division of labour is based on differences between countries, either in technology or in factor endowments. Trade is based on comparative advantage and it compensates for national deficiencies in these factors. The argument of gains from trade and the international division of labour that arise from this understanding is derived from the view that comparative advantage enables countries to specialise and to reallocate resources among different activities. The result is that countries import and export different commodities and it is this dissimilarity that explains the international division of labour.

A feature of modern capitalism, however, is a growing proportion of two-way trade in similar commodities, much of it conducted between advanced capitalist countries whose factor endowments have become increasingly similar. To explain this phenomenon, a second generation of trade models have been developed by relaxing the first generation model's assumptions of constant returns to scale and perfect competition in commodity markets. The second generation of international trade models thus allow for economies of scale and monopolistic competition to argue that gains from trade can occur with these conditions even if both technology and resource endowments are identical between countries and to explain two-way trade in similar commodities (Krugman, 1980; Helpman, 1981; 1987).

The returns from scale argument begins with the proposition that large market size before trade may enable an industry to achieve economies of scale. Thus when trade occurs, even if the nations engaged in trade have identical technology, the larger market that trade creates gives the industry that already has economies of scale a further cost advantage as expanded production can be achieved at lower unit costs. Such trade based on scale economies is argued to be unambiguously beneficial to nations involved in trade. As the production of the commodity produced under economies of scale becomes increasingly concentrated in one country, the industry size in that country expands and production costs decline. On the other hand, there is no increase in production costs for other industries that are not subject to scale economies. Thus with a given amount of resources, more of each commodity can be produced after trade than before.

Monopolistic competition is a market structure, in which there are many firms, and entry into the industry is easy and unrestricted, ensuring that economic profits will be competed away and are zero in the long run. In these aspects, the market structure is similar to perfect competition. But unlike perfect competition, consumers do not view the commodity produced by various firms as perfect substitutes. Rather, the commodity produced by each firm is differentiated in some way – such as the service associated with it, packaging and brand name – from those produced by other firms in the industry. Such firms can operate under increasing returns to scale. It can then be argued that expansion of the market through trade has two beneficial effects for consumers. Expansion of the market produces a larger number of firms producing a wider range of varieties of the (differentiated) product; and because each firm would produce a larger output at a

lower average cost than before trade, each variety would be available at a lower price.

The pattern of trade that emerges from monopolistically competitive free trade is therefore intra-industry trade. It is argued that intra-industry trade introduces an additional gain from international trade. Because trade creates a larger market, a country can reduce the number of varieties it produces, thereby lowering production costs of each variety (economies of scale effect), and at the same time increase the number of varieties available to consumers (through imports). There is a gain from lower prices and a gain from a wider choice. This benefit accrues to all and no redistribution effects occur.

The contemporary view within the mainstream economics discourse thus treats separately two components of international trade. First inter-industry trade is the exchange between countries of totally different commodities, such as trading textiles and shoes for aircraft and computers or the exchange of primary materials for manufactured products. Much of this trade is between nations with widely different factor endowments such as the less developed nations and the industrial countries, and is explained by the first generation, factor endowment models. The international division of labour is thus explained as being determined by the specialisation that occurs as a result of the comparative advantage factor endowments confer. Labour markets operate in an international environment of mainstream perfect competition thus wage rates across industries and across countries will tend to converge and there will be full employment.

Second, intra-industry trade refers to two-way trade in similar commodities, such as the exchange of automotive products. Most of this trade is conducted among the industrialised countries whose factor endowments have become increasingly similar. The features of the producing firms involved in intra-industry trade are that they tend to be oligopolies or monopolistically competitive, mainly with differentiated products, and economies of scale in production and distribution play an important part in their behaviour.

Under these circumstances, it is argued that factor endowments determine whether a country will be a net exporter or net importer within broad commodity classes, but the advantages of long production runs lead each country to produce only a limited range of products within each class. The result is that countries with similar capital-labour ratios will still have an incentive to specialise in producing different commodities within each industry and to engage in trade.

The gains from such trade are not confined to the reallocation of resources according to comparative advantage. They include the rationalisation across industries to take advantage of economies of scale, greater competition among large firms across national boundaries and a larger product variety available to consumers. The international division of labour from this source of international trade is thus determined by the specialisation that occurs as a result of industrial structure. Labour markets continue to operate in an international environment of mainstream perfect competition thus wage rates across industries and across countries in these models will tend to converge and there will be full employment.

Whilst persuasive as a characterisation of development in the international division of labour in the historical era, particularly after the Second World War, the introduction of a rationale of industrial structure and monopolistic competition as determining this regularity, it raises further questions. This period after the Second World War was a period of considerable state and extra-state involvement in the social and economic spheres, yet the relationship between such involvement and forms of industrial structures and forms of competition are not explained. Thus the question of what political, social and technological developments led to such industrial and competitive forms (given that the prior norms were thought to be those of perfect competition) is not asked. While the discourse recognises sources of change within the political or social realm, it either cannot incorporate such sources within their explanatory model or can only incorporate them in a manner consistent with its individualistic, rational-behaviour, equilibrium axioms.

The discourse also, in this step-wise approach towards adding to knowledge of the international division of labour, structures the capitalist nations of the world into two relational groups. In one relation, between the advanced capitalist states the international division of labour is predominantly intra-sectoral, whereas in the other group, between the advanced capitalist states and the third world, the international division of labour is inter-sectoral. Aside from the historical reductionism in such an approach, the approach fails to acknowledge the possibility of economic and political change in the third world as well.

Thus, whilst there is an acknowledgement within this second generation literature of a reality of an historically changed pattern in the international division of

labour that is intra-sectoral rather than inter-sectoral, the explanation afforded this pattern and the gains from trade that occur is treated similarly to the earlier, first generation, factor proportion models. This method is to treat some assumed changes exogenous to the model, in this case returns to scale in production and monopolistic competition rather than perfect competition and then generate outside of historical time the long-run equilibrium conditions internal to the model. The long-run predictions of the model are then applied to events in past or present chronological time as if in such a time the long-run of the model had arrived. But this is confounding since there is no connection between historical time and the time of the model.

The coherence of the discourse worsens in third generation international trade models which represent a return to a Ricardian explanation of international trade: that technological differences and a skilled labour force is a source of comparative advantage as an explanation for changed national specialisations in production that have been apparent since the 1970s.

Despite the dominance of the factor proportions model in the mainstream economics discourse, empirical tests to date have failed to verify it. In large part, the debate over the validity of the model was generated by Leontief (1954; 1956) who, by using newly available input-output tables, was able to deconstruct USA exports and imports into their labour and capital components and so was able test the predictability of the factor proportions model. The USA at the time of Leontief's study was by far the most capital abundant country in the world, yet Leontief's findings were that a representative bundle of USA exports embodied

more labour and less capital than a representative bundle of imports into the USA. This result was contrary to the predictions of factor-proportion model that predicts a factor abundant country will export capital-intensive commodities. Much of the debate generated by this result focused on the quality augmentation of the factors of capital and labour. In a general way, in the course of this debate, data has been redrawn to argue that the USA exports commodities that are more skill intensive, as well as technology intensive, than those it imports. Since new commodities made with innovative technologies are less capital-intensive than commodities with mature technologies suitable for mass production, they show up as labour-intensive on a simple capital-labour scale. However, although these results are closer to theoretical expectations, none show that USA exports have a capital-intensive lead over imports. Thus, given the strong evidence against the factor-endowment model, there was a reason to return to Ricardo's idea that trade is driven more by differences in technology than by differences in resources.

New perspectives within the mainstream economics discourse on technological innovation as a source of economic growth has also informed a return to the Ricardian idea of trade driven by differences in technology. Harrod (1939) and Domar (1946) informed traditional mainstream views of economic growth in their mathematical models of economic growth. Influenced by the experience of the Great Depression of the 1930s, both addressed the problem of how an economy could grow continuously without plunging into recurrent recessions. Each assumed that economic growth depended critically on increasing the stock of capital to keep pace with the growth of the labour force and technological improvements that increased output per hour. Assuming a closed economy, hence

one that could not borrow from abroad, each argued that the capital needed to complement a growing and more productive workforce has to be raised from saving. If growth were to proceed along an equilibrium path, the rate of saving, which determined the net supply of capital, had to be in balance with the growth rate in the demand for capital. Too much saving led to too rapid economic growth, disappointing business firms' expectations and leading to capital investment reductions that plunged the economy into recession. In contrast, too little saving led to stifled economic growth. The economy appeared to be balanced on a knife-edge, and it was far from clear that stable growth trajectories could be sustained.

Solow (1956) presented a solution to this dilemma by introducing another Ricardian idea, that of diminishing returns to capital. Solow argued that when capital investment occurred at a rate too high to maintain balance with steady-state demand, the ratio of capital to labour would rise, diminishing returns would reduce the yield on investments, and firms would respond by curbing their investment to the required steady-state rate. If too little investment occurred, the rate of return on investment would rise, inducing a correction. In this way, long-run steady-state growth could be sustained, if the complications assumed away in Solow's mathematical model did not intrude. Solow's contribution led to a large literature of mathematical growth model building.

Solow (1957) in another article tested the widely held view within the mainstream discourse that productivity growth that permits rising standards of living occurs mainly through the accumulation of capital, which lets each worker cooperate with a larger and larger stock of capital as time proceeds. He gathered data on

year-to-year changes in aggregate output per hour of labour input in the USA over the period 1909-49. Using the mathematical techniques of neoclassical production theory, he found a way to deconstruct the growth of output per labour hour into two distinct components, one associated with increased capital use per hour of labour and the other with the residual shift unexplained by increases in capital intensity. His findings were that only 12.5 percent, later corrected to 19 percent, of the long-run change in labour productivity could be attributed to increased capital intensity. The remaining productivity growth was impounded in Solow's shift function, which Solow named 'technical change'. Solow's technical change was a residual component not explicable by measured increases in capital intensity. This residue could be due to a number of causes, but it was recognised that improvements to technology must have played a major role (Denison, 1967; 1979).

This conclusion is at odds with the conventional mainstream economics assumption that technical change is exogenous to the economic system – like manna raining down from heaven to permit economic growth. By the time of Solow's 1957 article, empirical evidence questioned this basic assumption. Data published by the US National Science foundation on US industrial research and development expenditures showed that such expenditures were a significant component of GNP (Scherer, 1982). It could be expected that these resource commitments were made with the belief that technological changes would follow. Supporting this view of intentional innovation within firms, Schmookler (1966) using the number of patent applications as an index of inventive activity, argued that the rate and direction of industrial inventive activities were significantly

influenced by market forces, in particular by the ebb and flow of market demand. From these empirical findings Schmookler also argued that differences in the ease of making inventions in one field of technology, compared to another field, mattered mainly in determining the industry from which inventions originated. Thus firms specialising in industries with rich technological opportunities such as electronics and machine-building produced inventions in response to the demands of quite different industries, to which they sold products embodying their inventions.

A series of studies complemented Schmookler's findings and arguments by showing across diverse industries and within individual firms that the growth rate of output per labour hour was significantly associated with the intensity of spending on research and development (Griliches, 1995). Another challenge facing mainstream growth model-builders was the evidence that over several centuries of recorded economic history, the rate of economic growth appeared to be rising over time, not falling (Kaldor, 1961). This long-run result was clearly inconsistent with the expectation that hypothesis of diminishing returns would prevail as more and more capital was used with given stocks of labour.

Developments in human capital theory have also been used to incorporate technical change as endogenous to the economic system (Becker, 1964). Human capital theory uses the mainstream axiom of rational, individual optimising behaviour to explain differences individuals have in capabilities for productive work. Used as a parallel with the neoclassical conception of physical capital as

providing a stream of productive services over time, human capital is designated as the flow of productive services that can be provided by a worker. Human capital theory then is concerned with the extent to which human capital is accumulated, through education, training and work experience, and how it is used and rewarded (Fine, 2000).

In the Schooling Model, for example, (Friedman and Kuznets, 1954; Mincer, 1974; 1981), workers are assumed to acquire the skill level that maximises the present value of lifetime earnings. Education and training is thus treated as a stream of costs of provision to be set against the stream of benefits which accrue, discounted according to the individual's rate of discount or rate of time preference. This model therefore provides the micro-economic foundations for growth theorists to add a human capital variable (that is the augmentation of basic human skills through education and training) to economy-wide output equations (Schultz, 1964). Subsequently, Lucas (1988) developed an influential new model of economic growth based on the assumption that human capital, unlike physical capital, might be augmented with constant rather than diminishing returns so permitting economic growth to continue indefinitely.

A more dramatic leap was attempted in two papers by Romer (1986; 1990) in which the paradoxes posed by Solow's assumption that technical change was essentially exogenous were addressed. The mainstream interpretation of technical change as exogenous was that science discoveries resulted from academic research or government laboratories that lay outside of the economic realm. If technical change rested on scientific discoveries, the peculiar properties of

knowledge as a public commodity came to the fore. Knowledge is close to being a pure public commodity. That is, it is something whose use by one person does not preclude its use by others (non-rivalry) and whose use by other parties is difficult to prevent (non-excludability). Commodities that contain such properties will not be provided by a private market even if demand exists, hence an argument for public provision.

To escape the problems of having such a public commodity as an input in aggregate production functions, Romer postulated that technological progress in industry requires concerted, profit-oriented activity that yields two distinct components. First, specific designs embodied in products that can be patented and produced thus excluding rival firms from the same activity. Second, the knowledge of those designs that is essentially a public commodity. To create new designs, ordinary labour and capital do not suffice; human capital must be devoted to the task. The human capital is made more productive by interacting, or learning by doing, with the stock of knowledge. The more knowledge there is, the more productive research and development (R&D) efforts using human capital are. The new products based on those efforts are ordinary economic commodities. But the design knowledge produced as a by-product of the effort spill over into the general pool of knowledge where it can be used by an indefinite number of other firms in the creation of new products. Each of these products is different from all others, and each therefore can be produced by multiplying ordinary capital and labour indefinitely in constant proportions without running into diminishing returns. Meanwhile, the pool of nonexcludable design knowledge grows making further R&D efforts (using excludable human capital) more productive and hence

facilitating the creation of still more products. The more human capital an economy therefore possesses, the more productivity enhancing new products the economy can develop and the more the design knowledge stock is enhanced, permitting sustained economic growth in a virtuous spiral.

To the extent that spillovers occur because firms conducting R&D cannot exclude others from using the resulting increments to the knowledge pool, there exists the possibility of incentive failures since users do not pay for the public commodities whose production requires appreciable resource investments. Under the standard assumption of pure and perfect competition among sellers, revenues from the sale of commodities are just sufficient to cover the incremental cost of producing those commodities, so costs sunk in creating ancillary public commodities will not be recovered. The assumption of perfect competition is thus incompatible with the assumption by Romer and others that economic growth depends on massive industrial knowledge spillovers.

One way out of this dilemma is to have government conduct knowledge-generating research itself or to subsidise its conduct in private enterprises. Another way, elected by Romer, was that this could be achieved by the market. Romer assumed that product design activities are conducted under conditions of monopolistic competition, that is, where firms possess sufficient monopoly power in pricing their new products to recover not only direct production costs, but also the costs sunk in developing these products and generating knowledge spillovers. Patent, copyright, and trademark protection may bolster the innovator's monopoly position. This monopoly power is not unbounded however; it is constrained by the

emergence of rivals offering technologically differentiated substitutes and leapfrogging to still better products (Schumpeter's 'creative destruction').

New theories of growth thus scrap the assumption of perfect competition between firms in order to formulate long-term increases in productivity growth and to conform with evidence on the competitive conditions under which most real-world industries actually operate. These new theories of growth concur with second-generation international trade models in that in the larger markets created by international trade firms can develop more differentiated new capital commodities and materials while still covering the fixed costs of R&D, and their development of any given product can be carried further into the stage of diminishing marginal R&D returns (Cohen and Klepper, 1996). More R&D means more knowledge spillovers, which enhance the fertility of further R&D. International trade is claimed to have several important additional effects in this context. First, when markets are open internationally, firms located in relatively small nations need not be constrained by the limited opportunities within their home markets. If they can reasonably view the world as their market, and if they have sufficient human capital, they can undertake R&D projects of great scope and wide diversity. Second, competing on a world scale facilitates tapping worldwide knowledge pools that may encompass more opportunities than local pools (Grossman and Helpman, 1991).

Third generation international trade models thus present a Ricardian explanation of the international division of labour: that technological differences and a skilled labour force is a source of comparative advantage. Unlike the earlier Ricardian

explanation of international trade, third generation models have endogenised the source of technological differences as the spillovers or externalities generated from human capital employed in firms that have economies of scale.

Evaluation of contemporary developments as sources creating comparative advantage

Again, whilst on the surface these third-generation developments in understanding the international division are persuasive, some questions also arise. First it has to be recognised that despite the appeal of these models to particular aspects of the social and political spheres which traditionally in the discourse are treated as exogenous, once endogenised such factors again enter the timeless realm of the model and are subjected to the rational calculus of the model out of which a long-run equilibrium is generated. The equilibrium results of the timeless model are then, again, applied to actual historical conditions as if these conditions were in long-run equilibrium. Thus nothing much has changed. Curiously, the complexity of these models opens up the possibility of multiple long-run equilibrium solutions. Multiple equilibria are treated as a problem within the discourse as outcomes are then indeterminate. However, the discourse fails to recognise that such problems may in fact represent the range of economic outcomes within the true chronological time of disequilibrium.

Second, whilst this generation of the discourse acknowledges forces within the social and political realm as important in the international division of labour, such forces are assumed to behave according to the rational economic calculus of the

theoretical framework. No possibility is allowed for the situation that such factors may behave according to different rationale than assumed.

Lastly, in contrast to the earlier generation models, third generation models explicitly open up the possibility of states creating comparative advantage that give such states a permanent advantage over states on other growth trajectories. Thus the long held axiom within the discourse of an international division of labour functional to the needs of a global market and of mutual benefit to all is undermined. Instead, some states, through largely unknown processes, raise human capital capabilities and associated technological growth and become states on high-wage, high-technology, high-growth paths. Other states which choose some other combination of human capital become destined for some inferior path of development. In contrast to the ideology of free trade, where all mutually benefit, a reality of winner and loser states is presented as characteristic of the contemporary international division of labour.

Conclusion

The themes on the international division of labour generated out of the mainstream economics discourse have on first examination an intuitive appeal: this appeal perhaps explains the dominance of this discourse. The picture of an international division of labour that arises out of this discourse is one of labour distributed across states according to their specialisation in the production of different commodities. Such specialisation arises out of the rationale for trade or exchange. There are two such rationales. One is that for various reasons (the

uneven distribution of resources across the earth's resources, the relative abundance of resources, and the presence of economies of scale) some states have an absolute advantage in the production of certain commodities. That is, some commodities can be produced at a lower absolute average cost (or equivalently use fewer resources per commodity) in some states than in others. In a system coordinated by prices and market competition, to the degree that there is demand for such commodities, people will buy those goods that are cheapest (that is, those goods that have the lowest absolute cost). The consequence of this system, if exchange can occur between states, is a distribution of production according to what can be produced at the lowest absolute cost and trade in the surpluses above domestic consumption that is generated. Intuitively, the mutual gains from trade that occur on the basis of production according to lowest absolute cost per commodity are twofold – more is produced from existing resources than before specialisation, and more is consumed than before specialisation. Hence, the geographic distribution of labour according to specialisation in the production of commodities that have the lowest absolute costs is a beneficial distribution.

The discourse goes further than a rationale for a benign international division of labour based on lowest absolute cost. An international division of labour based on specialisation in commodity production which incurs lowest absolute cost, suggests that high productivity nations will not trade with low productivity nations because the former will, as high productivity nations, have lower absolute costs, and agents thus will therefore have no incentive to trade between the two nations. The argument of comparative advantage suggests gains from trade will occur even if a state has absolute cost advantages over another state. The rationale

for trade based on comparative advantage, and hence an international division of labour based on specialisation in production, is based on a fundamental deduction within the discourse, that of opportunity cost. Assuming as axiomatic that individual behaviour is explained as a rational search for maximum self-interest, such behaviour will direct individuals to compare the utility of a decision with the utility of the next best decision. This is the concept of opportunity cost. When extended to the realm of production, and assuming all resources are in use, then to produce more of a commodity requires the sacrifice of production elsewhere so as to free up resources. The production given up to extend production elsewhere is the opportunity cost. Thus, according to this thinking, what is important in determining specialisation in production between states, and the international division of labour that so accrues, are the relative opportunity costs of producing different commodities. The corollary of this is that the standard of living of people in all states, even poor, low-productivity states, rises as a consequence of a greater abundance of goods that are produced and consumed through trade.

Despite the intuitive insights the mainstream economics discourse offers to the meaning of the international division of labour, such intuitions on closer examination have few connections to the reality of historical time, and so are of limited use in examining the dynamics of the international division of labour.

The methodology of the mainstream economics discourse is to view the realm of the economic as autonomous in relation to the social and political spheres in which the economy exists. Further, this economic realm is assumed to be fully formed as a realm of commodified production – one of prior, well-defined private

property rights, of individuals with prior well-formed preferences, of well-known production technologies, and of a fully commodified labour force who have no independent means of subsistence other than through the sale of their labour power. The economies of states are thus viewed as being identical in terms of the structure of market co-ordination but having differences in terms of their resource endowments. The explanation of the international division of labour is based upon how these identical structures of market co-ordination work through the given diversity in resource endowments. Left silent is the historical reality of uneven development. Historically, that set of states that can be considered to be market economies has differed over time and a key difference of recent times has been the industrialisation under market forms of co-ordination by states in South East Asia. Thus a key insight into the contemporary international division of labour involves an understanding of how factor endowments are created. This insight cannot be provided by the mainstream economics discourse because it assumes such endowments already exist and are the consequence of developments in the autonomous social and economic realms.

Relatedly, a question which follows from the recognition of a historical reality of uneven development concerns the changes to existing distributions of international divisions of labour when a new state enters an existing configuration of states engaged in international trade. The comparative static methodology of the mainstream economics discourse prevents any analysis of, perhaps even recognition of, the processes of structural change that must occur when existing configurations are disturbed in this manner. The discourse can even be accused of operating a methodological sleight of hand in its presentation of economic

dynamics by conflating the passage of chronological or historical time with movement towards long-term equilibrium. It needs to be recalled that the methodology of the discourse is to take what it considers to be the appropriate snapshot of reality and then deduce from this snapshot, in a model that exists outside of historical time, a movement to a new long-run equilibrium. The equilibrium results are then presented back as a reflection of historical events. But equilibrium exists only within the mathematical confines of the model; in historical time the process of disequilibrium about which the discourse has nothing to say, has to be lived. Whether there is any tendency towards economic equilibrium in historical time can never be proved because in historical time it is not possible to analytically separate the economic from the political and social.

This sleight of hand also exposes the ideological stance of the discourse. For in the discourse, the gains from trade arising from an international division of labour are presented in an economic sphere, outside of the political and social spheres. The state is then introduced into the analysis as an agent pursuing ambiguously autonomous projects of its own, the result of which are interventions to free trade, such as tariffs and quotas which interfere with the operation of markets. State intervention in trade thus disturbs the equilibrium. The implication is that state intervention is not in the interests of those producers involved in the international division of labour. But this begs the question. These results are derived from a model outside of historical time, in which the state is assumed to be some agent operating autonomously elsewhere. If the reality of historical time is that the economic, political and social spheres are intertwined, then it cannot be unambiguously claimed that state intervention in international trade is bad. To

continue to claim so is to support a **political ideology of individual freedom and a minimal state involvement in the individual affairs.**

The limitations of the **methodology** and of the ideological leanings of the **mainstream economics discourse** are severely exposed when attention turns to **understanding the processes by which technology and technological change add to productivity and to changes in productivity.** The discourse has traditionally treated the arena of commodity production as a black box and the sources of technology as emanating out of the autonomous social spheres about which it deliberately has nothing to say. The historical realities of economic crises and the slowing of productivity increases across advanced capitalist states from the late 1970s, the emergent ICT platform, and successful industrialisation in East Asia has forced the discourse to re-evaluate this traditional approach. However, this re-evaluation is constrained by methodological limitations of the discourse. Two limitations can be discussed here. The first is acknowledgement, of what is obvious in the reality of production, that the skill of the worker in the production process has an impact on the productivity of the whole production process. However, the incorporation of such information into the discourse is constrained by its rationalist logic. The social processes by which skilled workers are created are reduced to the logic of human capital theory so as to fit the discourse. Whilst the hypothesis that self-interest is a variable in the social creation of workers of different skills cannot be rejected, to reduce a complex social process to this alone is too far removed from the reality which is known.

Secondly, having created workers of differing skills on its own terms within its discourse, mainstream economics still has difficulty in recognising the possibility of commodity production as a social process, and, even where it is acknowledged, incorporating such social processes into its methodology. For, while the theoretical developments into the commodification of knowledge is a useful improvement to the idea that technology appears as manna from heaven, concepts such as 'interaction' and 'learning by doing' are social relationships not amenable to the rational calculus of a production function. Such concepts are therefore reduced to the term positive externalities Externalities the meaning of spillover effects to third parties from individual exchange, but do not reveal much about how such externalities affect productivity change.

The recognition of such effects as positive externalities also creates an ambiguity in the ideology of the discourse. For on the one hand, the concept of positive externalities calls for agents within the 'social realm' to act so that such externalities can exist or be enhanced. Yet on the other hand, such intervention is deemed to be inefficient compared to the conclusions of the market model. Thus the question of the involvement of the political and social realm in the production of technology and in technological change is raised but left open.

The relevance of the discussion on technology and technological change to the international division of labour is its connection to the historical reality that absolute and/or comparative advantage is created, not just presented as a given. An understanding of the process of technology in commodified production and of technological change is thus one of the keys to an understanding of contemporary

trends in the international division of labour. The mainstream economics discourse however, whilst providing some useful insights into the commodification of knowledge, can only go so far into the realm of the political and social spheres where such insights suggest the source of technology lie.

Insofar as it is the dominant discourse, the meaning this discourse gives to the idea of the international division of labour is important. However, it is concluded that despite its insights, the weaknesses of the discourse as an economic discourse and not a political economic discourse limits its usefulness in a deep understanding of the dynamics behind the contemporary international division of labour.

Chapter Three

Insights the Marxist Discourse offers to the Meaning and Dynamics of the International Division of Labour

Introduction

This chapter continues to examine the meaning and dynamics of the international division of labour by exploring the Marxist discourse. Here it is argued that the Marxist discourse adds an historical dimension to the international division of labour. A consistent theme within this historicity is that the international division of labour exists so as to serve the expansionary logic of and the contradictions within, those capitalist states which were early to industrialise. Within the discourse the views on the structure of this international division of labour of classical Marxists differ from those of Marx. Marx forecast that:

The country that is more developed industrially only shows, to the less developed, the image of its own future' and that the less developed states 'suffer not only from the development of capitalist production, but also from the incompleteness of that development (Marx, 1976, p. 91).

Marx was, however, not referring to any particular standard of development in the sense of increased welfare but rather to a discussion of the laws of capitalist production and the spread of the capitalist mode of production. In contrast, the underdevelopment theorists who followed Marx considered that crisis tendencies within the advanced capitalist states led to an international division of labour which maintained a structure of underdevelopment of peripheral states.

This perspective that the global spread of the capitalist relations of production is not necessarily progressive to peoples within states peripheral to early industrialising states does address some of Marx's silences on the form and dynamic in the international division of labour. There are silences in this critique also as industrial development across the globe is still perceived as driven by the needs of the early industrialised states. As such the possibility of autonomous capitalist development in the periphery is not recognised by the discourse.

Nevertheless, the historical perspective taken by the Marxist discourse represents an improvement over that of mainstream economics. In this discourse, capitalist development occurs in real historical time, not in the a-historical time of the models of mainstream economics. Also, technology and technological change is internal and integral to the Marxist discourse, not treated as something exogenous or clumsily incorporated to meet the needs of the model as in mainstream economics.

Marx and the international division of labour

Marx, despite clear intentions in the *General Introduction to the Grundrisse* (1973), died before he wrote explicitly on the international division of labour. Whilst the term occasionally appears in his published work, what he means by the term is difficult to ascertain as there are significant silences when the term is used. This section develops Marx's conception of the division of labour to clarify what

he meant by the international division of labour. Out of this, some of Marx's silences on the international division of labour are identified.

Marx took a materialist view of history and from this view was critical of the analytical approach taken by classical economists at the time to explain the wealth being generated out of the industrial revolution in England. The fullest expression of Marx's materialist view appears in the Preface to *A Contribution to the Critique of Political Economy*:

In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation on which arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life. It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness. At a certain stage of development, the material productive forces of society come into conflict with the existing relations of production, or - this merely expresses the same thing in legal terms - with the property relations within the framework of which they have operated hereto. From forms of development of the productive forces these relations turn into fetters. The changes in the economic foundation lead sooner or later to the

transformation of the whole immense superstructure. (Marx, 1975, pp. 425-26).

Marx's claim is thus that the fundamental basis of any society is the material environment which people have to come to terms with if they are to survive. Production, the process by which labour, technical knowledge and the natural environment are combined in order to satisfy human wants is therefore the key to understanding any society. But production is no mere technical relationship. The development of the forces of production also implies some form of social organisation of production or relations of production. Whereas the forces of production take the form of technical relationships, the relations of production take the form of class relationships (where class is defined with respect to control or lack of control over the means of production). Thus there are always dominant and subordinate classes, with the power and interests of the dominant class being supported and justified by a superstructure of a legal, political and ideological system. Neither the forces nor the relations of production can be understood independently of each other and taken together they constitute a mode of production. Marx is also saying that the social structure is never static, the relationship between the forces and relations of production lead to contradictions or internal conflicting interests. As soon as these contradictions are resolved in one way they reappear in other forms, giving rise to class conflict and always resulting in social change.

It was the growing wealth of England that led Marx to believe that a new mode of production had arisen out of the contradictions the industrial revolution placed on

feudal relations of production. Marx set out to analyse this mode of production and the results of this analysis appear principally in *Capital Vol. 1*. Marx began from this historical reality of increased wealth in England with the belief that such wealth presented itself as an immense accumulation of commodities. He then analysed commodity production in the abstract, then, on the basis of this abstraction, returned to a concrete analysis of the historical process of industrialisation in England. The division of labour arises in both Marx's abstract analysis and in his concrete analysis. From the abstract analysis of the commodity form Marx argues that the source of wealth in commodity production rests itself on the commodification of labour. Labour creates more exchange value than it receives in wages and it is this surplus value in the hands of the owners of the means of production (the bourgeoisie, or capitalist class) which is the source of wealth in commodity production.

Marx, as a historical materialist, develops two themes in the historical process of the commodification of labour. First, Marx distinguishes between formal and real subordination of labour as a commodity (Marx, 1976). By formal subordination, Marx is referring to the social processes through which the ability of people to sustain themselves through independent production is removed so that such people have no choice other than to formally (or legally) submit to commodity production through the sale of their labour power to obtain the means, a money wage, to subsist. Under formal subordination, surplus-value can only be increased in an absolute sense by reduced wages or by increasing the length of the working day. Real subordination, in contrast, refers to relations of production where surplus value is increased in a relative sense by increasing the productivity per

unit of working time of formally subordinated workers. Marx argues that the development of the relations of real subordination is imposed upon capitalists due to the logic of capital accumulation and competition forcing capitalists to continually increase the rate at which surplus-value is obtained. Marx argues that early capitalism had a technological base that was virtually indistinguishable from the economic structure it was replacing (Marx, 1976, p. 439). The emergence of the social relations of formal subordination is the historical process through which workers were subsumed under capital in a formal or legal sense. But workers were not strictly technically dispossessed since they still had a large degree of actual control over the labour process by virtue of the fact that the instruments of production depended for their use on their skill and strength. Formally subordinated workers continue to use the instruments of labour. The real subordination of labour began with the industrial revolution and lay in the creation by capital of a technical base adequate to it. This technical base consisted essentially in the introduction of the machine proper in place of the tool. Now workers did not use tools; machines used workers. The accumulation of surplus value was now not restricted by the wage or the length of the working day, but by the machine. Workers were now dispossessed of any independent means of subsistence both legally and technically (Marx, 1976, pp. 645-6).

Consistent with his materialist view of history, Marx develops a second theme in these social processes of formal subordination and from formal subordination to real subordination. This theme is that the material conditions of the present are inherited in part from the past. Thus, the technical conditions of production, particularly those of artisans and craft-workers, during formal subordination were

in part inherited from social forms of production already in existence. The technical conditions of production in the process of formal subordination to real subordination similarly were inherited in part from the social process of formal subordination. It is through this process of evolution in the social conditions of production from formal to real subordination that Marx identifies a change in the technical division of labour.

Marx returns to a concrete analysis of the historical development from formal to real subordination over three chapters in *Capital 1* and it is over these chapters that the technical division of labour appears. In Chapter 13, he describes the early capitalist process of co-operation whereby capitalists draw together a large number of workers who previously worked for themselves but are now in the employment of the capitalist for a wage. Such workers retain their existing skills and continue to use them unchanged in the labour process. The division of labour is thus unchanged from the previous era of artisans, craft workers, and peasants. Despite this division of labour, cooperation increases the surplus value by the collective use of infrastructure, the social contact and the saving of time between connected acts on the same object and as such reduces the social cost of the commodities so made. Cooperation also socialises the capitalist into the role of despot, as 'the powerful will of a being outside them' (p. 450) since it is the capitalist's money which is at risk and, since the workers are now no longer owners of the product of their labour, it is necessary to control the antagonism that inevitably arises.

The process of real subordination and consequent technical division of labour begins with the development of the social relations of real subordination. In Chapters 13 and 14, Marx traces the development of manufacture out of cooperation, and then traces the development of large-scale industry out of forms of manufacturing. Marx begins Chapter 14 by stating ‘That form of co-operation which is based on the division of labour assumes its classical shape in manufacture’ (p. 455). To Marx, manufacturing originates from two beginnings: either a capitalist gathers together in the one workshop workers belonging to a variety of independent handicrafts ‘through whose hands a given article must pass on its way to completion’, or a capitalist ‘simultaneously employs in one workshop a number of craftsmen who all do the same work...each mak[ing] the entire commodity’ (p. 456). From these origins, the skilled worker appeared as ‘the process of production into its particular phases here coincides with the decomposition of a handicraft into its different partial phases’ (p. 456). Marx is thus describing here the division of labour as real subordination proceeds from handicraft, where the craftsperson is engaged in the total process of manufacture on a cooperative basis, to each craftsperson being engaged in a component part of the manufacturing process, each component of which however becomes a separate handicraft within a collective labour process. There is a hierarchy within this division of labour within manufacturing based upon the labour-time necessary for the production of commodities to which corresponds a scale of wages. This division of labour also exposes ‘certain simple manipulations which every man is capable of doing’ (p. 470), which by now being separated as component parts of the manufacturing process creates a class of unskilled labourers.

In a lengthy Chapter 15, Marx describes how in England the process of real subordination is completed in large-scale industry. Here Marx traces the evolution of a product of manufacture, the machine-factory, from a process to make tools for specialised workers, to a process to make machines which incorporated both the tool and the operations previously performed by specialised workers. As such, machines begin to 'abolish the role of the handicraftsman as the regulating principle of social reproduction' (p. 491). The impact on workers of the full incorporation of machinery into the factory is chillingly described by Marx, as women and children are incorporated into the labour process, the working day is lengthened and labour-power is intensified. The division of labour which re-appears in the factory Marx differentiates as the (few) skilled workers of engineers and mechanics who maintain the machines and 'stand outside the realm of the factory workers' (p. 545), and a division within the factory workers themselves between those who are employed on the machines and those 'who merely attend them' (ibid.), feeding the machines with the materials to be worked up.

Whilst Marx is defining the division of labour as a changing form rising out of the historical process of movement from formal subordination to real subordination as capitalism as a mode of production develops, the international division of labour appears in his analysis as a form of, and as a consequence of, the enormous production and cheapening of commodities that rises out of this process. To Marx, once established, the capacity of large-scale industry knows no bounds other than those imposed by the availability of raw materials and the extent of sales outlets. In a process reminiscent of his concrete example of industrialisation in England,

Marx argues that 'by ruining handicraft production of finished articles in other countries, machinery forcibly converts them into fields for the production of its raw material' (p. 579). Thus 'a new and international division of labour springs up, one suited to the requirements of the main industrial countries, and it converts one part of the globe into a chiefly agricultural field of production for supplying the other part, which remains a pre-eminently industrial field' (pp. 579-80). This new division of labour which Marx envisions is one between agriculture (which itself was being converted into large-scale industry) and industry, is international and is one of inter-dependence between the exchange of agricultural or industrial commodities in which each country specialises.

Whilst Marx envisioned the 'first' international division of labour appearing as one technical division of labour in different commodities in different countries, his prediction was (particularly on the political level) that the societies in those countries engaged in agricultural specialisation would, with the passage of time, fully develop commodification across all sectors of production. As quoted in the introduction to this Chapter, Marx believed an 'underdeveloped' country could see in 'developed' countries mirrors of themselves. Echoing the consequences of the productivity of large-scale industry in early industrialised countries and the 'first' international division of labour, Marx in the *The Communist Manifesto* predicted (rather accurately!) that:

The bourgeoisie, by the rapid improvement of all instruments of production, by the immensely facilitated means of communication, draws all, even the most barbarian, nations into civilisation. The cheap prices of

its commodities are the heavy artillery with which it batters down all Chinese walls, with which it forces the barbarians' intensely obstinate hatred of foreigners to capitulate. It compels all nations, on pain of extinction, to adopt the bourgeois mode of production; it compels them to introduce what it calls civilisation into their midst, i.e. to become bourgeois themselves. In one word, it creates a world after its own image (Marx, 2001, p. 14).

Here Marx is again predicting nation states adopting the capitalist mode of production on the model of already existing 'bourgeois states' but is also adding that such nations have no choice other than to go down this path. The superior productivity of the bourgeoisie and the cheap commodities that result are offered as the reason for this compulsion for all nation states to adopt the capitalist mode of production. The process by which this choice is enforced is suggested as one both externally imposed (nations drawn in) but also one of internal social change (adopting the bourgeois mode of production). There is thus a telling historical order here of some states being early in their adoption of the capitalist mode of production then, through the superior productivity of commodity production in industry, leading other nations into commodity production with the latter ending as mirror images of the early industrialising nations.

However, there are two significant silences in this account of the process of the 'globalisation' of the capitalist mode of production. The first silence concerns the historical development of industrialisation in countries other than the 'main' early developing capitalist countries. As an historical materialist, Marx must have

believed that such countries would develop out of the material circumstances and social relations they faced, yet there is a certain teleology in his account of such development in his suggestion that such countries would follow a development path similar to that of England. The second silence concerns the relations between workers of different nations when (or if) such industrial development occurred in the late developing countries. To the question, How does the technical division of labour within large-scale industry expand across the globe? there is little to find in Marx's writings. These silences were addressed to some extent by Marxist thinkers after Marx's death.

An unequal international division of labour?

Imperialism

The question early Marxist writers posed was: What is the significance of the political climate of imperialism of the great European powers in relation to how capitalism would evolve into socialism? (Howard and King, 1989). Such thought was very Euro-centric where the great industrial powers were viewed as the centre and the domains where these powers were attempting political domination as the periphery. Early Marxist thought was concerned with the interests of the centre in relation to the periphery, that is, what interest did the centre have with the periphery? Consistent with the Marxist interpretation of the dominance of the base or economic over the political and ideological apparatuses of the superstructure, the political imperative for imperialism by the centre was held by Marxist thinkers (with the possible exception of Lenin) to be sourced in the development of

productive forces. The dominant theme by writers who followed Marx argued that nations of the centre faced a continual realisation crisis, thus needing colonies as a source of markets. As argued first by Kautsky and latterly by Luxemburg (1951), workers in central economies received in wages less than the value of their product and capitalist consumption was insufficient to fill the gap. Hence capitalists must find 'a market outside the sphere of their own consumption' (Kautsky, as cited by Howard and King 1989, p. 92) which could offer the prospect of continuous growth. Their first target was the domestic peasantry, but its purchasing power was restricted by its steady impoverishment. According to Kautsky, 'as a sales market the colonies have become a condition of existence for capitalism' (op. cit., p. 92).

Luxemburg (1951) also argued that capitalism faced a continuous realisation crisis but, in an implied criticism of Kautsky, argued that this spurred capital 'on to a continual extension of the market' (op. cit., p. 350). Her argument was that, without exposing the problem of realisation, the impression is received that the accumulation of capital can continue without limit and socialism no longer appears as an historical necessity. Imperialism is thus a phase of capitalist development wherein capitalism can eventually meet its limits.

Luxemburg's conception of imperialism is thus a conception of a tendency towards economic globalisation and one which suggests at an international division of labour of dependency of peripheral states on European capital followed by struggles for independent capitalist development in these hitherto

backward areas (op. cit., pp. 444-5). Imperialism in this context is the political expression of the accumulation of capital in a globalised environment.

Luxemburg was criticised on several fronts, most notably on her insistence that the crisis of realisation could not be accommodated from within the central capitalist economies (Howard and King, 1989, pp.112—15). Nevertheless the argument she makes that the accumulation of capital cannot continue without limit and that this limit is at the global level has a contemporary 'globalisation' context. Another inconsistency in Luxemburg's arguments concerns the effects of exports to the periphery, which if they are offset by an equivalent amount of imports, have no direct impact on the level of demand. Only an export surplus provides a net increase in demand and (in the absence of an increase in the quantity of international money) a trade surplus necessarily involves an export of capital to the periphery. Luxemburg appears not to recognise this difficulty.

Hilferding (1980) in *Finance Capital* traces the connections between the export of capital and the struggle for economic territory as an explanation for imperialism. His book begins with an account of the Marxian theory of money and credit. He interprets credit as a means of keeping to a minimum the quantity of 'idle money', which is not used for productive purposes. Bank credit has significant advantages over commercial credit in economising on the use of money. Hilferding links the rise of bank credit and hence bank influence in the productive sector with facilitating the growth of large-scale production and the eventual dominance of oligopolies in many branches of industry in central states. In the era of finance capital, when 'capital at the disposition of the banks is used by the industrialists'

(Hilferding, 1980, pp. 225-6), investment slows down. This is because the actions of oligopolies in restricting production in order to maximise profits discourages further capital investment and the remaining competitive industries that have systematically lower profits than oligopolies also reduce investment. Consequently, 'while the volume of capital intended for accumulation increases rapidly, investment opportunities contract' (op. cit., p. 227). This contraction demands a solution, which it finds in the export of capital, 'though this is not in itself a consequence of cartelisation. It is a phenomenon that is inseparable from capitalist development. But cartelisation suddenly intensifies the contradiction and makes the export of capital an urgent matter' (op. cit., pp. 228-35).

Capital exports thus extend markets of central states and, also, by constraining price and output adjustments smooth out industrial crises in these states. Capital exports, however, lead to a growing politicisation of economic relations between states. Market extension and crisis amelioration is limited by the availability of wage labour in the periphery. This can be overcome through the violent elimination of pre-capitalist production, the introduction of forced labour and by immigration from regions with large labour reserves. All these measures require a degree of central state intervention, so that imperialist domination over the poor countries is a necessary consequence of the export of capital. So too is increasing rivalry between the advanced nations to establish and secure economic territory.

The economistic version of Lenin's *Imperialism* draws heavily on Hilferding. Seen in terms of purely economic concepts, imperialism to Lenin has five characteristics:

- (1) the concentration of production and capital has developed to such a high stage that it has created monopolies which play a decisive role in economic life;
- (2) the merging of bank capital with industrial capital, and the creation, on the basis of this 'financial capital', of a financial oligarchy;
- (3) the export of capital as distinguished from the export of commodities acquires exceptional importance;
- (4) the formation of international monopolist capitalist associations which share the world amongst themselves; and,
- (5) the territorial division of the whole world among the biggest capitalist powers is completed (Lenin, 1934, p. 85).

Lenin's economic emphasis is perhaps overrated. Between *Imperialism*, (written in the spring of 1916 and October 1917, Lenin had come to appreciate that the concepts of Imperialism lagged behind historical developments. Government Régulation and central planning had accelerated in the central capitalist states. Drawing on Bukharin (1972), Lenin began to use the term 'state capitalism' in later writings to reflect his recognition of the increasing management by the state of domestic institutions, thus politics and economics became fused in his perspective (Howard and King, 1989, p. 247). While Lenin used this development to argue that the route towards socialism lay therefore through revolution rather than through parliamentary democracy, with regard to peripheral states, he is distinguished from the earlier classical Marxists in that he makes explicit the relative importance of politics in determining economic events and so recognises the possibility of autonomous capitalist development on the periphery.

The general tenor of this discourse on imperialism is that political dominance by central imperialist, capitalist states over countries on the periphery is a necessary political condition to the prevention of crisis in the core or central states. It is through imperialism then, that the relations of capitalism spread globally. The discourse on imperialism adds to Marx's unfinished project at the level of the international by specifying a rationale for why and how capitalist relations of production spread globally. It is a very orthodox explanation in the sense that the spread of capitalist relations are determined by the contradictory logic of 'economic laws'. There is however, in contrast to Marx's progressive optimism, no sense of states on the periphery becoming fully developed capitalist states. Rather, such states exist to serve the needs of the central states. The international division that is presented is one of a 'first' international division of labour – of exports of manufactured goods from central states to markets created in the periphery and of exports of primary goods from peripheral states to the centre for use primarily as raw materials in manufacture.

Dependency and underdevelopment

Marxist theorists of dependency and underdevelopment who dominated the Marxist literature in the 1950s and 1960s sought to explain the core-peripheral international division of labour in terms of a North-South divide or of a divide between high-wage industrialised areas of the globe and low-waged non-industrialised areas of the globe. As argued above, in 'classical' Marxist debate, the economic structures of nations that are peripheral to central states and their

relationship to central states were viewed as arising out of imperialism. The forces of stability and change in the periphery were seen to operate primarily through the reproduction and growth of the major, central economies.

Capitalist development, or the lack of it, became increasingly evident after the Second World War. By then, per capita incomes in the advanced countries were over four times higher on average than those of less-developed areas, whereas in the mid-eighteenth century they had been approximately equal and 200 years earlier many non-European countries had been richer (Faaland, 1982).

Baran (1970; 1973) formulated most of the main economic propositions in the analysis of underdevelopment. In these works occurred a clear break with traditional Marxian views about capitalist economic development on the periphery. Baran's ideas were subsequently extended by Frank (1971), Wallerstein (1979) and the 'dependency theorists', but seldom improved upon (Howard and King, 1992).

The central idea in Baran's treatment of imperialism is more classical than Marxian. Economic growth is the result of the size and utilisation of the surplus product. Economies grow by allocating the surplus to productive investments and the more surplus is accumulated the faster is growth. Economic stagnation occurs either because the surplus is insufficient to expand the productive forces or, if adequate, is wasted in unproductive consumption. Thus, the divergent histories of the centre and the periphery, in which the development of the means of production is concentrated in the centre and development is hindered on the

periphery, hinges on the division of the world's surplus between different regions and the way in which it is used within them. Baran claimed that the seeds of autonomous capitalist development could be discerned everywhere (at least everywhere in Asia), when it could have been feasible for accumulation to occur all over the globe. In the event, it was concentrated in Western Europe only because European domination of other areas thwarted incipient bourgeois revolutions there and restructured their economies in the interests of the imperial centres. A small initial advantage possessed by Western Europe at the dawn of modern history was thereby turned into an enduring benefit and gave rise to cumulative divergence.

Baran contrasted economic development of India with Japan, and made the claim that what determined whether a country developed or became underdeveloped was its incorporation into an imperial economy or the retention of independence. Baran exaggerated his case. To assert that all of Asia was on the verge of bourgeois revolution was absurd (Howard and Smith, 1992, p. 170). His claim that colonisation did undermine existing productive forces and plunder the surpluses of the colonised is well established (Griffin and Gurley, 1985). At least in part, the speed of accumulation in Europe was a function of the exploitation of the periphery. Whether this brought about underdevelopment is more contentious. If the peripheral areas were more backward at the outset, as Marx believed, restructuring their economies for the benefit of the imperial power does not constitute evidence of underdevelopment. Rather it may be a necessary condition for sustained later growth.

Baran thought that this process would continue after decolonisation, supplementing his analysis with more Marxian elements. For Baran there is no discontinuity in the economies of the periphery, since neo-imperialism effortlessly replaced colonial control and engendered underdevelopment. Surplus continues to be drained off, principally through the repatriation of profits from foreign investments. Thus, to Baran, the third-world continues to be backward. The causes of such backwardness are exogenous rather than endogenous – that is, their poverty is due to relations with the West, not because of purely internal barriers to economic growth. These contacts result in underdevelopment rather than development since the rich capitalist countries have a strong incentive to block growth because this makes it more profitable to export capital to or to engage in commodity trade. By creating relations of dependence, rich countries also have the power to block growth.

Magdoff (1969) and others added some orthodox Marxian considerations to Baran's thesis, but the thesis was subjected to considerable criticism. An objection was that capital was not exported to the most backward areas of the globe but to 'regions of recent settlement' in America and Australasia, where living standards were exceptionally high, thus the supposed incentive for blocked development was therefore illusory (Nurske, 1961). Also, in the post-war years United States capital was directed towards Western Europe rather than to the third world. After 1945, as the mainstream economics discourse recognises, trade too grew more rapidly between the advanced capitalist economies with core-periphery exchange lagging well behind. Thus rich regions appeared to offer more lucrative markets and more profitable investment opportunities than poor countries and western

capital had no obvious incentive to block economic development in the periphery. Furthermore, the power of western states to do so was less than Baran claimed. While there are many examples of political and military intervention by advanced capitalist states in the internal affairs of third world countries (Chomsky, 1987), at the same time, decolonisation was not purely cosmetic with the larger of the newly-independent states – e.g. Brazil, Mexico, India and Nigeria – winning a significant measure of independence so as to be no mere puppets of imperialism.

The evidence for economic dependence, as with the first international division of labour, is stronger, but its implications are not straightforward. By itself, the geographic location of asset ownership is entirely irrelevant to questions of development and backwardness. The central issue is not who owns the surplus but where it is invested. If this were not the case, it is difficult to explain the post-war backwardness of Spain and Portugal who were the first, and very substantial, plunderers of the New World and Africa. Analogously, and this is a point that Lipietz picks up, is that countries in the periphery remained backward not because they were exploited by a central state but because the surplus was invested elsewhere (Howard, 1985). Also, while peripheral economies continued to rely technologically on the west, it is not clear why this should preclude development. Technological dependence has provided two completely incompatible complaints: that the third world is denied access to the most modern techniques, and that the use of these inappropriate methods of production has profoundly damaged peripheral countries development (compare Emmanuel, 1982, with Schumacher, 1973).

Despite these criticisms, Baran provided the foundation for a school of Marxian economists concerned with the theoretical comprehension of underdevelopment. Frank (1971) proved to be the most important Marxist writer to extend Baran's ideas. He did not repeat Baran's claim that incipient bourgeois revolution and autonomous capitalist development were worldwide phenomena from the sixteenth century. He accepted that most of the globe was genuinely underdeveloped, and that the 'development of underdevelopment' was a process of reconstruction to meet imperialist needs rather than a reversal of prior development. Frank maintained that monopoly had characterised the capitalist world from its inception. The system has always involved 'chains' in which surplus is extracted from 'satellites' by 'metropolises' which may themselves be satellites of higher-order metropolises. These chains operated within countries as well as between them so there was an extended continuum of exploitative relationships. Frank recognised that important changes had occurred in the five centuries since the capitalist world originated, but he claimed that there had been 'continuity in change' with no alteration in the underlying structure. This structure was in turn frequently presented as a matrix of zero-sum relations, in which the wealth of the metropolis is a direct function of surplus extraction from the satellites. Thus for Frank, economic development and underdevelopment are exact complements (Howard and Smith 1992, p. 179).

Frank's thought is extremely loose and ambiguities are everywhere. In particular is his conception of capitalism in which a continuum of metropole-satellite relations and zero-sum exploitation fits neatly. In the 1960s however, Frank's revisionism was widely embraced, particularly in Latin America. Towards the end

of the 1960s, Frank moved beyond Latin American underdevelopment towards the broader subject of the world economy. This also became the central topic for Wallerstein in whose hands Baran's original theory of underdevelopment underwent a second revision.

Wallerstein (1974; 1979; 1980; 1989), displaces the ideas of 'underdevelopment' and dependency with a view of a general interdependence between all elements of the world economy. Wallerstein focuses closely on the *longue duree*. While he sometimes refers to the existence of a chain of metropolis-satellite relations, he usually emphasises the tri-modal hierarchy of the world capitalist economy. At the apex is a core of rich powerful states, while the base is comprised of most countries in the third world. In between is the 'semi-periphery', whose characteristics are complex combinations of core and peripheral elements. For Wallerstein, the location of particular countries has varied over time, particularly movements in and out of the semi-periphery from both directions. Wallerstein analyses the changes in *The Modern World-System* and recognises the complex forces at play. As a general rule he regards the active role played by state organisations to be pivotal and the importance of political independence to be a pre-requisite for overcoming underdevelopment.

The major theories of dependency and underdevelopment of the periphery discussed above identify the export of capital as the fundamental mechanism by which metropolitan capitalism exploits the periphery. Theories of unequal exchange, (Emmanuel, 1972) in contrast, attribute dependency and underdevelopment to trade relations. Emmanuel's starting point is the existence of

a powerful tendency for the rate of profit to be equalised on a world scale, while there remain huge differences in both wages and rates of exploitation between advanced and backward countries. He suggests that the international mobility of capital has eliminated any substantial gap in profit rates after allowing for relatively small and quite stable risk premium. Thus in contrast to Baran and Frank, Emmanuel considers the world economy to be essentially competitive. However, he recognises one fundamental exception to this and it constitutes the foundation for his analysis of unequal exchange. Such labour mobility as is permitted by immigration controls in the west is inadequate to equalise wages between rich and poor countries. According to Emmanuel, wages 'can vary enormously in space but very little in time' (op. cit., pp. 24-25). Even the psychological minimum is elastic since socially-created needs can become biological needs if their satisfaction has been guaranteed for a long period of time:

a stage is reached at which certain needs created by civilisation become so habitual and urgent that a worker will cut down on his food and clothing other than do without the corresponding article or service. [In addition] there are considerable moral constraints upon the labour market. In spite of everything, capitalism retains certain vestiges of personal relationships inherited from the feudal Regime. One does not change one's employer as one changes the shop where one buys things', and one's employer is seldom proud of price reductions. [Finally], the trade-union struggle of the working class and the reactions of the employers' organisations prevent the free play of the market in this field (op. cit., pp. 24-25).

For these reasons, there exist very large international differences in the value of labour power, which Emmanuel takes to be exogenous in the sense that they are the cause of differences in commodity prices and in the level of economic development rather than the result. For him, wage differentials between rich and poor countries explain why it is that commodities produced in the third world are so cheap, and those from the west so expensive; and this is responsible for the wide and growing gap in economic development between them (Howard and Smith, 1992, p. 190).

Like Amin (1976; 1977), Emmanuel argues that unequal exchange serves to sustain and increase international differences in wages. Growing prosperity in the rich countries increases the speed of their economic development, allowing still further wage rises. In the poor countries, on the other hand, the narrowness of the internal market means that accumulation is retarded, so that unemployment increases and wages decline still further. With a widening wage gap, the consequences of unequal exchange become more and more serious: the entire process is a cumulative one. It can be reversed only by deliberate policies to raise wages in the poor countries, which will necessitate export taxes and import substitution under tariff protection.

The ramifications of Emmanuel's analysis are profound and far-reaching. He repudiates the entire Leninist conception of imperialism as a stage of capitalism dominated by the export of capital. On the contrary, 'all imperialisms are in the last resort, mercantile in character' (op. cit., p. 187), yielding their huge profits from commodity trade rather than from foreign investment. This explains why

capital has always flowed more freely to advanced than to backward areas and why decolonisation was implemented so rapidly after 1945 once the foundations for free trade had been secured. A further implication is that neither dependency on, nor specialisation in, agricultural production need preclude economic development so long as wages are high. Emmanuel compares Canada and the Congo, both considered to be highly dependent, to establish the first point, and cites the examples of Australia, New Zealand and Denmark in support of the second.

Finally, Emmanuel attacks the notion of international working class solidarity and replaces the class struggle with conflicts between rich and poor countries as the central divide in world capitalism. As the chief beneficiaries of unequal exchange, workers in the advanced countries no longer have a common interest with those in backward areas upon whose continued exploitation their own high living standards depend.

Evaluation of dependency theory and world-systems analysis

There are three problems associated with the dependency paradigm in its characterisation of the international division of labour. First, many dependency theories suffer from the fact that they locate the problem of third world underdevelopment within the realisation of surplus value on a global scale: the global circulation of commodities. The structural dominance that the core economies are assumed to possess within the world system (secured in large measure by transnational corporations) is argued to result from terms of trade

necessarily being stacked against peripheral economies. These theories then put the weight of explanation on the circulation of commodities (Hoogvelt, 1982). However, such theories are unable to explain how unequal exchange can be reproduced under changing economic and political conditions. Also unequal exchange seems to deny any real possibility for third world development in the context of a capitalist world economy. But this denial seems to fly in the face of empirical reality by refusing to accord significance to the spectacular growth rates and rising incomes evident in the newly industrialising countries (NICs) in general and the Asian 'gang of four', (South Korea, Taiwan, Hong Kong, Singapore) in particular.

For many critics of early dependency theory, the route to a more adequate explanation of uneven development lay in a shift of attention from the problem of realisation, to the problem of production of surplus value (Laclau, 1977; Cardoso and Faletto, 1979). What required theoretical and empirical attention, therefore, were the mechanisms by which surplus value was extracted from the periphery by means of the 'super-exploitation' of human labour. This leads back to the earlier debate about the importance of capital exports to sustain accumulation in core states. The Althusserian perspective, though, was concerned with the way in which elements of the capitalist mode of production articulated with economic and social relations emanating from non-(pre-) capitalist modes of production to produce particular class structures and state forms, which, though conducive to continued super-exploitation could theoretically hold out the possibility of harnessing global capitalism in the interests of national development.

Secondly, as with much orthodox Marxist theory, is the view of historical change in both core and periphery as largely a product of the working out of the logic of capital accumulation (Aronowitz, 1982). Whatever the state form or social structure of a developing country, it tends to be viewed as the product of the logic of capital accumulation in one period and functional to continued accumulation in the next. Social classes, races, nation states seemed to have little autonomy from the global structures of capital.

Thirdly, it was only concerned with development with third world societies. The paradigm was not designed to cope with structural changes in core regions in relation to development on the global periphery.

Wallerstein's version of world-systems theory suffers from many of the same defects of dependency theory but it does appear to have a number of advantages. It follows Marx in recognising that production and realisation of surplus value (circulation of commodities) are but moments of the same accumulation process that must be held methodologically in dialectical relation to each other if any adequate theory of core-periphery relations is to emerge. World-systems theory therefore bridges what Hoogvelt (1982) refers to as the circulationist and productionist versions of dependency theory and hence appears to advance the methodological possibility of a more rounded, comprehensive and historically-based theorisation of global uneven development than perhaps was previously possible. In addition, through the introduction of the concept of semi-periphery, Wallerstein recognises the possibility of genuine peripheral development within the capitalist world-system. In the concept of the semi-periphery is expressed the

possibility for capital accumulation in certain parts of the periphery and that some capital can be retained rather than necessarily transferred to the core. In spatial terms, accumulation in the semi-periphery is multi-directional. Partly by virtue of the emergence of transnational corporations indigenous to certain semi-peripheral countries, the semi-periphery is itself able to exploit labour-power in the periphery and the core. In addition, however, by virtue of foreign investment in production, the semi-periphery, as with the periphery, remains a location for the accumulation of capital which is then transferred to the core.

There are some problems with Wallerstein's spatial concepts of world-systems change. First, the core, semi-periphery, periphery configurations are used to designate particular territorial units in particular historical periods, but the historical processes that can transform a peripheral unit into a semi-peripheral unit, or a semi-peripheral unit into a core unit are neither specified, nor adequately theorised. Aronowitz (1981) points out that by adopting the concept of historical conjuncture developed by his mentor, Fernand Braudel, Wallerstein gives the impression that economic and social transformations between the tri-modal hierarchy are to be viewed as largely the result of a spatial convergence of a series of historical accidents. As such, Wallerstein's elaboration of a tri-modal hierarchy seems strangely discordant with the theoretical tenor of his argument about the development of the world-system as a whole. Secondly, although the designation of a spatial unit as core, semi-periphery or periphery is, in part, based on the extent to which the unit is the headquarters location for corporations which extract surplus value, or alternatively, of labour forces which have surplus value extracted from them, there is in Wallerstein's conceptualisation an inadequate

understanding of the role of organisational and technical control in the tri-modal configuration (Henderson, 1989). The assumption seems to be that core economies are the locus of control of these varieties. The possibility of semi-peripheral units operating as way-stations in the control structure of the world economy and as such having a capacity themselves to exercise control seems to have escaped Wallerstein's attention.

A final problem with Wallerstein's work, from the point of view of the international division of labour, is that it pays insufficient attention to a central element in the dynamics of a world-system; the nature, distribution and interrelationships of labour processes across the globe. This problem is addressed more directly with another body of literature associated with the world-system tradition that, following Fröbel, Heinrichs and Kreye (1980), has come to be known as the new international division of labour (NIDL) thesis.

Return to the technical division of labour: the new international division of labour

Beginning with the work of Palloix (1977), the NIDL thesis is that the world-system of capitalism had moved from a phase of extraction of surplus from the periphery, largely via the sphere of circulation, to a new phase of globalisation of production in order to create surplus value. The most developed empirical account, that of Fröbel et al. (op. cit.), is based on a number of interrelated historical processes. Fröbel et al. argue that the migration of industrial capital from the core to the periphery of the world system increased significantly after the

Second World War and resulted in the development in a number of third world countries of industrial enclaves composed of 'world-market' factories which manufacture commodities (often partially finished) primarily for export. This migration of capital had been spurred on by a gradual worsening of the conditions of valorisation in the advanced capitalist countries (partly because of successful industrial conflict), together with the existence at the periphery of seemingly endless supplies of low-wage, unorganised labour. There now existed an industrial reserve army of global proportions that in recent years, given increased national restrictions on the import of labour in many core economies, could best be exploited by the export of capital.

According to the NIDL thesis, the emergence of this industrial reserve army was relatively new and had resulted from the interpenetration of commodity relations into third world agriculture. As a consequence, traditional social and economic structures had been undermined and proletarianisation, under-employment and unemployment had advanced on a massive scale. This, in turn, had led to an urban migration of the rural poor. In addition, retention of forms of social reproduction and non-wage remuneration in households had helped to reduce pressure for rising industrial wages that might otherwise have been expected.

Developments in the labour process, particularly those associated with Taylorism and Fordism, had resulted in an increasingly minute technical division of labour that had allowed an organisational and ultimately spatial separation of particular labour processes within the same industrial branch or firm. Generally the more de-skilled and labour-intensive processes had been relocated to the periphery to take

advantage of cheap labour, whilst the more skilled and technologically advanced processes had been retained in the core economies. This relocation had resulted in decreased manual employment opportunities in the core, which in the context of deepening economic crisis in those economies, contributed to rising unemployment. The development since Taylor's day of increasingly refined forms of 'scientific management' had ensured that labour productivity in world-market factories now equalled that or exceeded that in many core economies.

At the same time, there had been a provision of incentives by international agencies (e.g. UNIDO, World Bank) and national governments to attract industrial development on the periphery. The latter, in particular, had been involved in the construction of export-processing zones, the institution of 'favourable' labour laws, involving, for instance, either the outright suppression or considerable restrictions on trade union activity, tax holidays and credits for foreign corporate investors, freedom to repatriate profits, infrastructure provision, negligible industrial health and safety regulations, freedom from planning and environmental controls etc.

The consequences of these developments at the level of the world economy were new possibilities to extract absolute surplus value through the 'super-exploitation' of third world labour. As a result, the globalisation of industrial production in this manner had helped to moderate one of the determinants of economic crisis, the tendency of the profit rate to fall.

The spatial dispersal of particular labour processes within the same industrial branch or firm had been facilitated by innovations in transport and communication technologies. The introduction of containerised shipping and efficient air cargo systems for instance, had been of major significance as had been the development of electronic information systems.

The conclusions of Fröbel et al. (op. cit.) lead to very pessimistic conclusions regarding the possibilities of genuine development in the periphery arising from export-oriented industrialisation strategies. They suggest, for instance, that these strategies result in the transfer of technologies that are either outmoded in core economies or at best other than state of the art. In addition, because the technologies transferred have deskilled labour processes associated with them, they do little to improve the skills of peripheral labour forces. As world-market factories tend to employ a predominance of young women, their presence does little to alleviate male under- and unemployment. The consequence of these two elements is that they help to generate badly skewed labour market structures constituted by male unemployment, a large component of unskilled female employment, and a smaller, but not insubstantial component of white-collar and professional labour. Referring to Hong Kong and Taiwan as those countries that have been incorporated into the NIDL the longest, they argue that that this situation does not appear to have improved over time. Finally they argue that world-market factories have few links with local economies. Most of their purchases involve intra-firm transactions or purchases from other foreign-owned corporations, and their only benefit to the local economies are their limited purchases of simple supplies, utilities and the stimulation of local commodity

sales by virtue of the wages they pay their workers. In short, though the forms of industrialisation after the Second World War on the periphery grasped by the NIDL thesis may constitute development in a country, city or region, it has little chance of assisting development of that territorial unit.

Evaluation of the new international division of labour hypothesis

Many aspects of the analysis of Fröbel et al. have been confirmed by earlier and subsequent case studies of particular industrial branches and/or territorial units (Evans, 1979; Evans and Timberlake, 1980; Lim, 1982; Sunoo, 1978; Portes and Walton, 1981; Luther 1978). There are, however, a number of problems with the analysis of the NIDL paradigm. At the most general level, as with much of the radical literature, the analysis of Fröbel et al. suffers from the fact that it posits a capital-logic approach to uneven development. In Fröbel et al.'s case this approach is insistently argued:

‘The new international division of labour is an ‘institutional’ innovation of capital itself, necessitated by changed conditions, and not the result of changed development strategies by individual countries or options freely decided upon by so-called multinational companies” (Fröbel et al., op. cit., p. 46).

As a result their work tends to replicate the theoretical error of devaluing the role of nation states, classes and other social forces in the development trajectories of particular countries. It is not that their account is wrong necessarily, but rather that

it is heavily one-sided and simplistic. By failing to accord any degree of autonomy to nation states, classes and other social groups, they appear to rule out the possibility of 'national' capitalist development within the world-system, in spite of what now must be taken as significant empirical evidence to the contrary.

Relatedly, as Henderson (1989) notes, Fröbel et al. appear to operate with a mechanistic 'superstructure-as-a-reflection-of-the-base' variety of orthodox Marxism, albeit spun-out at the global level, in their account of the contours and significance of the NIDL thesis. A more satisfactory concept of underdetermination is one that sees economic relations as determining political and social processes in the sense of setting structural limits to, and imposing pressures on, their possibilities for variation. Applied at the global level, such a concept of underdetermination would allow for the material and social transformations that have constituted genuine development in such semi-peripheral units as Hong Kong and Singapore. The actual economic structures that evolved arose out of the overdetermination of political relations.

Henderson (op. cit.) similarly argues that, in line with this orthodox Marxist approach, Fröbel et al. tend to undervalue the impact of the development of production facilities by particular branches or firms on particular territorial units. Their almost exclusive concentration on the supposed relationship between the internationalisation of industrial capital and the search for new opportunities for the extraction of absolute surplus value causes them to miss the significance of changes in the labour process and in the transformation of production which may occur in particular peripheral locations subsequent to the initial investment of a

particular firm or branch in productive facilities. Consequently, they fail to grasp the point that as a result of accumulation imperatives internal to the international organisation of transnational firms themselves, or pressure from national states, a concern to increase relative surplus value in particular production locations may develop over time. A concern with relative surplus value can result in rising wages, 'advanced' technological transfers, and lead to a greater integration between foreign-owned production facilities and local economies. In the best of circumstances, those peripheral operations to foreign firms that are organised around the question of relative surplus value can help to stimulate the development of local production complexes.

In contrast, Fröbel et al. seem to assume that whatever the origins of the internationalisation of production within one branch or firm, the course of the subsequent development of the internationalisation strategy remains much the same, irrespective of the particular branch or firm one is concerned with. It follows from this that they assume that the economic, technical and social impact of a given branch or firm tends to be much the same, irrespective of the particular peripheral country in which world-market factories are established. The account of the NIDL which Fröbel et al. provide therefore, is rather static and insensitive to the internal balance of social forces in particular nation states, and hence to differences in their development strategies. As a result they fail to recognise that production strategies of firms change over time subsequent to initial internationalisation, and that they are articulated in different ways, in different periods, with the economic, social, and political circumstances of particular territorial units be they developed or undeveloped.

Conclusion

This chapter explored the meaning of and the dynamic in the international division of labour as understood by Marx and those who followed his thought. The key argument developed was that Marx emphasised the capitalist mode of production to be an inherently expansive system that would eventually cover the globe, yet such expansion would occur unevenly. On the one hand, uneven development would be driven by developments within those advanced nation-states which adopted the capitalist mode of production in earlier historical era, here termed core states, and the international division of labour that evolved arose out of the technical division of labour of large-scale industry in core states. On the other hand, uneven development was consequent upon the development of capitalist relations of production, both in core states and peripheral states, in all of which, capitalism would evolve out of their own particular past historical developments.

Subsequent Marxist theorists, it was argued, interpreted the international division of labour in terms of a division between the relatively small number of people in rich states and the large number of people in poor states. The explanation for such a division variously lay in imperialism, the avoidance of crisis in core states, underdevelopment or the internationalisation of production. Two forms of the international divisions of labour could be interpreted as outcomes of these explanations. The first international division of labour, following Marx, arose as a division between labour in core states specialising in a division of labour in large-

scale manufacturing and labour in peripheral states specialising in the division of labour in primary production. The second international division of labour arose as an extension of the technical division of labour in large-scale manufacturing in core state wherein the more de-skilled and labour-intensive divisions of labour were relocated to the periphery to take advantage of cheap labour.

On the surface, the differences between the mainstream economics and the Marxist conceptions of the international division of labour would appear to be minor. Labour in nation states in each conception is specialising in the production of commodities that incur the least absolute cost and trade the surplus so generated. Below the surface however, the differences are stark. In the Marxist conception, such a division has a dual nature: one of workers who collectively produce but do not own commodities divided from those who own the product of their work and one of a division in income between the majority of people in poor third-world states and a minority of people who live in a handful of rich states. In the mainstream economics discourse such a division leads to gains from trade in which everyone benefits. The historical reality of the income division tests the correctness of the mainstream economics interpretation.

It is below the surface that differences in the dynamics in the international division also become clear. Marx, using England as illustration, argues that capitalism develops out of past historical developments. He demonstrates in great detail how capitalism in England evolved out of the increased incompatibility of the feudal system with the already developed productive forces. He also demonstrates, again in great detail, the dialectic between the social division of

labour and the technical division of labour in the capitalist mode of production which leads to continual revolution in the production processes. Technology and technological change is thus internal to Marx's understanding of the dynamic of capitalism. Thus the first and second international divisions of labour can be understood within this context of the pressure on capitalists to continually revolutionise the labour process so as to extract further surplus value. The separation of the first from the second division of labour also recognises the historical materialism of Marx. Each division is historically determined on the basis of past historical developments. The refusal by Marx and those who follow his approach not to take or assume that those aspects of society that are non-economic be treated as given and caused by some non-economic behaviour stands in marked contrast to the mainstream economics discourse. The mainstream economics discourse suffers from its methodology to make a clear delineation between what is endogenous to economic behaviour and what is exogenous and which treats rational individual behaviour as axiomatic. As such its models are static with no conception of historical development and can only incorporate dynamic change through exogenous change disturbing the equilibrium in the model.

The Marxist discourse, through its historical materialism therefore adds to the understanding of the international division of labour. Nevertheless, those theorists informed by Marx, with the possible exception of Wallerstein, can be accused of ignoring Marx in their failure to recognise that the social relations that develop in periphery nation states, while they may have historically resulted in dependent technical relations with core nation states, may also out of their own historical

path of development develop new social relations to change that dependency. The successful industrialisation of major parts of the former periphery over the last three decades is an example of such development in social relations, and is contrary to the thesis of the international division of labour within this discourse, and thus needs further explanation.

Chapter Four

The International Division of Labour: Régulation Approach Perspective

Introduction

This chapter introduces the perspective of the Régulation Approach to the international division of labour. Informed by Marx, this approach differs from the Marxist perspective in the claim that the development of capitalism in countries peripheral to core industrialised states is not to serve the needs of core industrialised states neither are these countries structurally dependent and underdeveloped in order to enable accumulation to proceed in core states. Rather, any articulation in external relations between states has to be understood as a consequence of autonomous capitalist development within states. In contrast to the orthodox Marxist perspective therefore, the Régulation Approach recognises the possibility of autonomous capitalist development in peripheral countries.

The understanding of the international division of labour within the Régulation Approach largely emanates from the work of one theorist, Alain Lipietz (1986; 1987; 1988; 1992; 1995; 1996; 1997). The perspective that is presented in this chapter is therefore principally that of this theorist. Additionally however, Lipietz is the one theorist who generally attempts to present a contemporary understanding of the international division of labour.

Principally through the work of Lipietz, the argument that is developed in this chapter is that the mid-range concepts of the Régulation Approach enable an understanding of a developing international division of labour as initially envisioned by Marx. As discussed in the previous chapter, in his materialist view of history, Marx thought of the development of the capitalist mode of production as arising out of existing social relations, thus capitalist models of development were necessarily societally-based. Marx also thought that capitalism would unfold to a global level, driven by developments in capitalist models in early industrialising countries. How these two dynamics would play out is difficult to discern in Marx's work.

The chapter first develops the conceptual framework of the Régulation Approach, out of which the argument of nation-state specificity of capitalist development arises. The understanding of the international division of labour that Lipietz derives from this argument for nation-specific capitalist development is then presented. Lipietz argues that three international divisions of labour can be identified and understood as outcomes of autonomous peripheral nation-state development articulating with emerging contradictions in early, core industrialised states. What this means is that international divisions of labour do not merely arise out of the laws of capitalist expansion of core industrial states, nor merely out of a correspondence between such laws and a political and ideological superstructure of imperialism, but more broadly through the overdetermination by developments in social relations within peripheral states of economic and political expansion from core states into the peripheral states

(Althusser, 1969). Both the shape of and the dynamic behind international divisions of labour are therefore historically contingent.

The Régulation Approach: the nation-state specificity of capitalist development and the implications for the international division of labour

The Régulation Approach originally developed in France based on the seminal work of Aglietta (1979). As an approach, it has an intellectual heritage emanating from the critique of structural Marxism that was particularly strong in France in the 1960s (Lipietz, 1987). These ‘rebel sons of Althusser’ (op. cit., p. 19) accepted the basic Marxist insight of society as a network of social relations, and that these social relations are contradictory (Jenson, 1987). What was critiqued was the structural Marxist focus on reproduction of social relations without acknowledging the contradictory nature of social relations. Obscured in the structuralist account was the importance of social struggle in which the relations of production assume their concrete form. Social agency was therefore important for structures to reproduce and because of social agency, structures could be significantly transformed. Thus, the orthodox Marxist view of the economic structure determining the legal, political and ideological superstructure and that the stage of development of productive forces determining the economic structure was overturned. The critique took the form that the growth of productive forces, and the shape of that growth, is the expression of a definite set of production relations.

The Régulation Approach also arose as a theoretical project to initially understand the widespread ‘long-boom’ of economic and social development across advanced capitalist countries after the Second World War and latterly to understand the economic crises occurring across these same states in the 1970s and early 1980s. As a theoretical approach it is sympathetic to Marx yet free of the determinist influences of an orthodox, non-dialectical Marxist interpretation of Marx which puts emphasis on tendencies in rate of profit to decline, but also as an alternative perspective to the dominant explanations afforded by mainstream economics to this widespread economic crisis.

In this context, in the opening pages of *Régulation and Crisis*, the seminal work on which much Régulation theory is based, Aglietta points to the inability of general equilibrium theory of mainstream economics to analyse contemporary economic dynamics or to account for the social content of economic categories. Aglietta criticises general equilibrium theory for its reductionism rooted in philosophical idealism and a naïve concept of human nature which seeks to explain the economic system in terms of the behaviour of individual economic subjects. General equilibrium theory attempts to elaborate a science of rational action based upon the automatism of exchange relations which are in turn totally devoid of any historical context. The reductionism of supposing a universal economic subject and of removing all historical specifications produces an ‘economy [as a] differentiable, linear continuum accessible to the manipulation of a calculus Aglietta, 1979, p. 13)’. General equilibrium theory presumes the existence of an ‘homogeneous, linear time in which empirically chosen variables unfold their evolution (ibid.)’. In Aglietta’s description, general equilibrium

theory has 'the rigour of a theological construction, purely internal to the world of ideas, totally cut off from reality (ibid.).

The role of abstraction in general equilibrium theory as a movement from the empirical to the theoretical thus has a very different function to the more complex Marxian dialectic of movement from the 'concrete to the abstract'. Aglietta contrasted these differences very clearly:

Abstraction is not a reflection of thought upon itself in order to apprehend its true essence (the rational subject); rather it is exclusively an experimental path for the investigation of the concrete (i.e. historically determinate relations of production). Concepts are not introduced at a fixed level of abstraction; rather they are transformed by the passage from the abstract to the concrete into the heart of the theory. The progression of thought entails not only "hypothetical-deductive" phases; it also consists of the alternation of these phases with "dialectical" phases. These last are primordial: they ensure that theory is something other than an explication of conclusions already embryonic in the initial premises (i.e. what is axiomatic). This transformation of concepts creates new forms and negates the limitations contained in their anterior expressions. If this transformation is effectively produced by an experimental procedure, the sequence of concepts can become a representation of historical movement' (Aglietta, op. cit., p. 15).

This contrast makes clear, as Davis (1978) also argues, that general equilibrium theory and Marxian theory are not merely different methodologies applied to the same empirical field, but treat dynamics in different ways. The two approaches differ methodologically in that general equilibrium theory attempts to explain variations in how individuals attain subjective ends with scarce means framed in an a-historic and Euclidian social space. The Marxian perspective, in contrast, is a theory of objective social relations which are qualitatively transformed over time. Dynamics is introduced in general equilibrium theory as an independent variable. The Marxian approach in contrast constructs time as real movement based on the logic of the internal transformation of social forces.

The Régulation Approach asks the question: How, despite the contradictions in capitalist social relations leading to tendency in the capitalist mode of production to crisis, does capitalism for significant periods not be in crisis? The answer was found in regulatory mechanisms, that is, 'institutional forms, societal norms and patterns of strategic conduct which successfully expressed and regulated conflict until the inevitable build-up of tensions and disparities among the various regulatory forms reached a crisis point' (Jessop, 1990, p. 308). When this occurred there would be an experimental period from which a new mode of regulation and a corresponding mode of accumulation regime might, or might not, emerge.

The key concepts of the Régulation Approach are 'regime of accumulation' and 'mode of regulation' (Aglietta, op. cit.; Lipietz, 1985). An accumulation regime is defined as a particular combination of production and consumption which can be

reproduced over time despite conflictual tendencies. A mode of regulation comprises an institutional ensemble and complex of norms which can secure capitalist reproduction for the moment despite the antagonistic character of capitalist social relations (Lipietz, 1985; Boyer, 1990). Lipietz, additionally uses the term 'model of development' to capture the idea of different conjunctures of regimes of accumulation with modes of regulation over history (Jenson, 1988). These key concepts can be considered as mid-range concepts in that the problem is not to explain the generic origins of class struggle and crisis tendencies, since this has been done adequately by Marx, but to explain the specific forms that these actually assume under different accumulation regimes and modes of regulation and in different economic and political conjunctures. In general, it is argued that capitalism's capacity to survive despite its crisis tendencies and continuing class struggles is due to modes of regulation institutionalising class struggle and confining class struggle within certain parameters that are compatible with continuing accumulation. Neither the mode of regulation nor the regime of accumulation can be taken for granted and their 'chance discovery' (Lipietz, 1995, p. 349) is always a product of social and political struggles which stabilise for a time around specific forms of institutionalised class compromise which shape the interests of all classes into conformity with the accumulation regime (Lipietz, 1985; 1986; Aglietta, 1979; Jessop, 1990).

In pursuing this line, the consistent point of view within the Régulation Approach is that there is no single logic of capitalist development and that any such logic is nation-specific. The development of capitalism is always mediated through historically specific institutional forms, regulatory institutions and norms of

conduct. Thus regimes of accumulation are always the product of past struggles and are always penetrated with present struggles. Additionally, once accumulation regimes and modes of regulation stabilise into models of development, they comprise a specific strategic terrain on and through which particular forms of struggle take place. There are, therefore, various logics of accumulation depending upon what modes of regulation are constructed out of class struggle. Additionally, the nation state is both the site and the product of past struggles and the specific strategic terrain upon which particular forms of struggle take place because ultimately it is in the nation state in the modern era that sovereignty exists. Thus for class struggles to become institutionalised and compatible with continuing accumulation, the state is an historically necessary form of regulation to define the legitimacy and durability of class compromises upon which regimes of accumulation emerge (Lipietz, 1988).

It is in this context of national specificity of capitalist development that Lipietz (1986; 1987; 1995; 1996; 1997), the Régulation Approach theorist who has almost singly within this school has focused some energy on the international division of labour, considers the international division of labour. Because class struggles take place within societies based on their own history and are legitimated and institutionalised within nation states, Lipietz is insistent that any relations that develop between nation states arise out of struggles within each state and become part of that state's regime of accumulation depending upon how class compromises are consolidated within each state. From this perspective, Lipietz is critical of both mainstream economics and of orthodox Marxist conceptions of the formation of international divisions of labour. For mainstream economics leaves

the development of social relations out of the picture and condemns each nation state to specialise according to comparative advantage because this is to the advantage of a world system of states. Similarly, orthodox Marxism condemns some nation states to dependency or underdevelopment to serve the accumulation needs of other nation states. Such perspectives imply that international divisions of labour were created by some authority outside of nation states so as to be functional for the needs of a world economy or a part thereof. This implication is wrong from Lipietz' view because regimes of accumulation are nation-state centred as it is at the level of nation states where class struggles take place, and, at this level where any compromises that result out of struggle become consolidated and legitimated and out of which are generated specific forms of production relations which in turn generate the development of production forces. Any international division of labour, in contrast, has to be viewed as arising out of the historic formation of national regimes of accumulation because the history of such external relations prove useful as modes of regulation are developed and consolidated. Thus 'when that happens, those relations mould the local society's habits, become part of its regular workings, and appear to have been designed on purpose' (Lipietz, 1986, pp. 19-20). What has in fact happened is that certain compatible relations have combined with each other.

Such a perspective does not deny that capitalists within nation states will specialise according to comparative cost, that uneven capitalist development occurs, and that certain structures of trade did lead to a more rapid accumulation of capital in the centre than on the periphery. What it does deny is that such

developments can be explained by some global logic of capital or to fit with the logic of a general equilibrium.

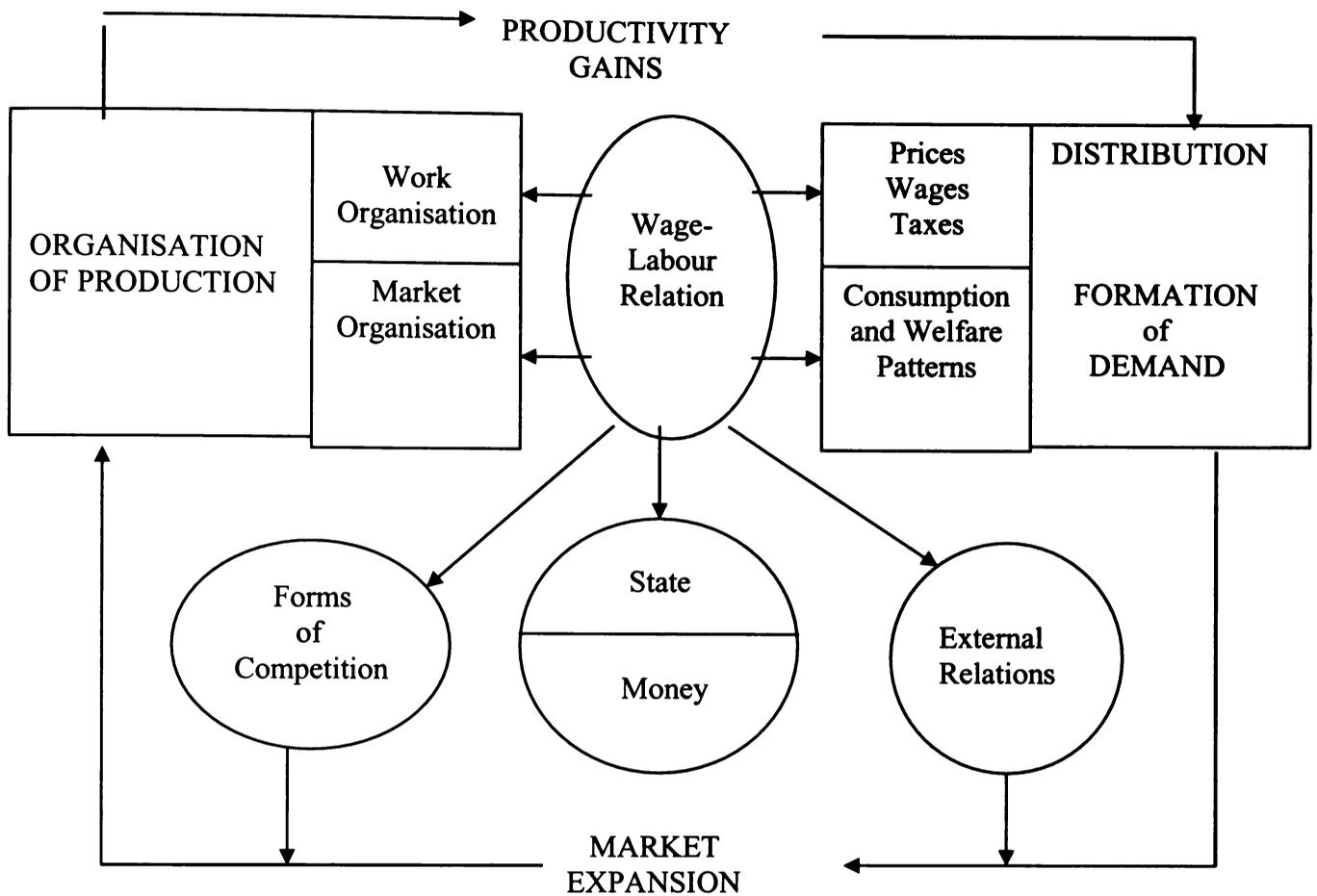
**Central Fordism and the international division of labour:
the ideal type of the Fordist model of development**

The claim of Régulation Approach theorists is that for advanced capitalist states in the period from after the Second World War until the late 1970s national models of developments arose which had sufficiently common characteristics to be theorised as an 'ideal type'. This ideal type model of development is termed Fordism. Regulation theorists also claim that the crisis that spread from such advanced capitalist countries in the late 1970s to early 1980s, in contrast was a crisis of this Fordist model of development. Understanding of contemporary economic developments, particularly the topic of this thesis, contemporary developments in the international division of labour, then follows from how contemporary patterns have evolved in response to the developmental tendencies that led to crisis in the Fordist model of development.

Regulation theorists consistently emphasise the centrality of the structural form of the dynamics and expansion of the wage-labour relation underpinning the Fordist growth regime (Boyer and Saillard, 2002; Lipietz 1997; Petit, 1999). Petit (1999) presents the logic of this centrality that leads to sustained economic development in diagrammatic form which is reproduced below.

Figure 4.1

Institutional Changes in the Fordist Era: the Centrality of the Wage-Labour Relation (Petit, 1999, p.228)



The argument presented by the Régulation Approach is that after the Second World War an intensive regime of accumulation centred upon mass consumption became generalised because a new ‘monopolistic’ mode of regulation incorporated both productivity rises and a corresponding rise in popular consumption into the determination of wages and profits *a priori* (Aglietta, 1979; 1998; Lipietz, 1987; Boyer, 1991). From the end of the nineteenth century, out of the social relations of production of early industrialisation, capitalism based upon the organisation of industrial and financial sectors became the main engine of

accumulation in place of individual entrepreneurs (Aglietta, 1998). The revolutionary mode of work organisation in these large organisations that became generalised in the United States and diffused into other advanced industrial nations was Taylorism. Taylorism is the organisation of work whereby the skills of workers collectives were expropriated and systematised by engineers and technicians using techniques of scientific management. A further step was taken when that systematised knowledge was incorporated into an automatic system, with moving assembly lines dictating working methods to workers whose initiative had been expropriated. This was the productive or technological aspect of Fordism (Lipietz, 1987).

Once this Fordist technological paradigm got under way, it led to a massive rise in labour productivity and to an increase in the per-capita volume of fixed capital. Prior to the discovery of a new mode of regulation, this rise in productivity led to overproduction and the crisis of the great depression in the 1930s (Boyer, 1988). The new mode of regulation that was discovered allowed Fordism as a model of development to develop fully. Termed 'monopolistic regulation', in this mode of regulation the distribution of income was significantly socialised through a series of compromises between capital and labour, between firms, and between the state, citizens and capital. These compromises allowed the continual adjustment of mass consumption to rises in productivity. This adaptation then led to huge changes in the life-style of wage earners – to its normalisation and to its incorporation into capitalist accumulation itself.

Aglietta (1979) and Lipietz (1987; 1988) present a more formal Marxist argument as to how accumulation succeeded in this environment and so acted to counter the tendency towards economic crisis. Marx in *Capital Vol. 1* and *Vol. III* presents variations on the theme of economic crises as caused by a 'falling rate of profit'. The rate of profit is defined in value terms as surplus value, S, (surplus labour) over constant capital, C, (raw materials, plant and technology) plus variable capital, V, (the value of the real wage). That is, the rate of profit, which equals $(S/C) + V$, represents the value advanced by the capitalist to set production in process. V is consumed in the course of the production process, and the value of C is transferred to the final product in the course of production. Surplus value represents the surplus product created in the act of production over and above the capital advanced by C + V.

The rate of profit is distinguished from the rate of exploitation which is S/V. The capitalist invests in new techniques of production which implies an increasing organic composition of capital, C/V. As C grows, assuming V and S remain unchanged, then there must be a fall in the rate of profit. However, capitalists will only invest in new techniques of production if they believe they can increase the rate of exploitation by doing so, that is, increase the ratio S/V. That is, there is no reason to assume that the rate of exploitation will remain unchanged if the ratio of C to V increases. In practice, capitalists will only invest in new techniques if they believe that this will raise S and lower V. As long as the increase in C/V is offset by the increase in S/V, then the rate of profit can remain steady.

The tendency for the rate of profit to fall, therefore, is not an invariant law. Rather it is dependent upon whether or not technical and social innovations can increase the rate of exploitation at a rate commensurate with the value costs of introducing that technical and social innovation. In contrast, if, for one reason or another, social and technical innovations fail to raise productivity commensurate with their cost, then the rate of profit will fall (Neilson, 1993).

Accumulation succeeded during Fordism because the production system of Fordism (Taylorism plus the moving assembly line) increased the rate of exploitation together with the social compromise between capital and labour which increased real wages (V) in line with increased productivity, allowed capital to be invested without the rate of profit declining. Given that the consequence of this social compromise allowed the organic composition of capital not to vary over time, the general rate of profit remained stable and accumulation could therefore continue at a steady rate. In advanced capitalist nations, until the mid-1960s these conditions were more or less met (Lipietz, op. cit.). The point the Régulation Approach theorists emphasise, however, is that there was no *a priori* reason why this should have been the case, for such accumulation required a coherent mode of regulation to succeed. The chance discovery of a monopolistic mode of regulation, central to which was class compromise in the regulation of wage relation allowed accumulation to succeed.

The regulation of the wage relation took different institutional forms in the various advanced capitalist states. It usually involved binding collective agreements applying to all employers within a given branch or region (and thus

preventing competition from low wages), legal procedures to index increases in nominal wages to price increases and more or less explicitly to increases in productivity, and a social insurance system financed by compulsory contributions guaranteeing all wage-earners a permanent income even if they no longer received a direct wage because of illness, retirement or unemployment (Boyer, 1995; Lipietz, 1987).

This regulation of the wage relation was stabilised by developments in the other structural forms. The centralisation of capital into industrial and financial groups created the conditions for monopolistic competition wherein such dominant firms could set their supply prices in response to fluctuations in the business cycle by an increasingly rigid mark-up of prices over the cost of capital. By accounting for the cost of capital nominally in book-keeping as non-depreciated capital, the general depreciation of constant capital was diluted by the general decline in the quantity of value represented by money and so did not penalise dynamic firms from revolutionising their own labour processes in their search for productivity gains (Lipietz, 1987).

Private banks acquired the ability to issue money by providing credit for both firms and households. This credit money anticipated the validation of values-in-process and was wiped out when the loans were repaid, thus was issued on the wager that there was a high probability that the borrowers would be able to repay loans. The monetary mass issued by banks thus represented a pre-validation of productively invested values-in-process. In order to clear off their balances, banks also required a form of currency that was unconditionally accepted and which had

to be accepted when debts were repaid. This required a currency that was issued by a state-controlled central bank. Some of the money issued by central banks (the monetary base) may have been represented by an international currency such as gold, the pound or the United States dollar, but most of the currency issued represented official pre-validation or pseudo-validation of debts contracted to the state treasury or privileged credits rediscounted by secondary banks. By establishing a level of pseudo-validation, and by using a battery of rules to oblige secondary banks to hold a certain portion of their credit in the form of central currency reserves, the central bank could influence banks' willingness to lend, or the interest rates at which to lend, and thereby influence other agents' willingness to borrow (Lipietz, 1985; 1987).

The state acquired a considerably reinforced role in directing economic activity. Following the experiences of the great depression and the Second World War and with an increasing proportion of the population earning wages, there was a strong shift towards social democracy emphasising national goals of full employment and maintenance of a social wage. Keynesian economic theory provided a theoretical framework from which to legitimate state involvement to protect wage earners from the vagaries of market failure. The advances in the regulation of credit money allowed the state to use monetary policy to attempt to stimulate or slow down the economy. It also acquired the ability to do the same thing through fiscal policy by juggling its spending and revenue. When the economy required a boost, it could cut taxes and increase spending, relying on the revenue generated by the subsequent recovery to cut its deficit. It could also manipulate minimum wages and/or the budget of welfare expenditure. Together, these various policy

devices constituted the toolbox of Keynesian policy of macroeconomic management. The role of the state was also considerably reinforced through its management of the wage relation (Boyer, 1995; Lipiez, 1997).

The Fordist model of development as an ideal type showed shared similarities in structural forms across advanced capitalist states, but because these forms were constituted and maintained within nation states and primarily served the expansion of the internal market by increasing purchasing power, they were thus national models of development. The relative autonomy of nation states as national models of development was also complemented by the form of external relations, particularly the institutionalisation through the Bretton Woods agreement of a regime of fixed exchange rates and the acceptance of one hegemonic currency, the US dollar, by these nation states as an international currency (Aglietta, 1982; Altvater, 1992).

Even though each structural form in the Fordist model of development represented historically specific relations of production developed to act upon specific domains of capitalist social relations, when considered as a set, the way in which these structural forms acted together to induce a coherent adjustment process for whole economies, that is formed a mode of regulation, becomes clear. This coherence is seen in the way the institutional forms of money, competition, external relations and the state complemented the wage-labour relation so that the reproduction of this relation could allow accumulation to succeed.

Therefore, to the conception of labour market structures within the mainstream economics discourse as not socially constructed, the Régulation Approach explicitly presents labour market structures as socially constructed. Through the conceptual framework of structural forms, the argument is presented that in the Fordist period of capitalist development, from which contemporary tendencies in labour market structures have evolved, the dominant wage-labour relation was a fortuitous consequence of a complex mediation of institutional or structural forms. Stability in the labour market was not a consequence of spontaneous tendencies towards competitive labour market equilibrium. Rather such stability rested on removing labour from competition and production stability and growth was enabled by an equivalent growth in purchasing power.

Lipietz's revision of the international division of labour

Lipietz (1987), in *Mirages and Miracles*, offers a sympathetic criticism of the classical theories of imperialism. His critique is that imperialism did reproduce dependency and an international division of labour with a centre-periphery division between the manufacturing and primary sector, but that this dependency and international division of labour was historically contingent and transitory. In so far as the classical theorists claim, the first international division of labour was created on the part of extensive central regimes to resolve their realisation difficulties, Lipietz's counter-claim is that this over-states the story. Lipietz is also critical of the functionalism of the underdevelopment theorists. All these theories treat capitalism as functioning on a global scale where monopoly power and unequal exchange redistribute surplus between geographic areas. To this

circulationist perspective is added a zero-sum description. Not only does advanced capitalism underdevelop the periphery, but also the centre has developed only because of the exploitation of the periphery. Lipietz argues that this claim is illusory and presents his own revision as to why industrial development in the periphery was variable in its success.

Drawing on Braudel's historical survey of the birth of capitalism (Braudel, 1980) and Frank's study of the period between 1492 and 1789 (Frank, 1979), Lipietz is drawn to the 'relativity of the territorial notion of the centre' (Lipietz, op. cit., p. 55). The earliest capitalist activity as such (the investment of funds with a view to selling at a profit at some later but uncertain date) was essentially confined to international or intercontinental long-distance trade and involved only a tiny proportion of world output, most of it directed towards the feudal or 'tributary' ruling classes, rather than other capitalists or wage earners. Some of the centres of these market networks (Venice being a prime example) began to transform the metals, spices and textiles in which they traded, and therefore developed a waged labour force. These 'cities or "centres of world-economies" floated at the edge of tributary empires or feudal kingdoms' (Lipietz, op. cit., p. 56).

The entire economic miracle of the seventeenth and eighteenth centuries thus revolved around the transition from city-centres to national economies. 'The market economy and the wages labour force centred upon these markets and metropolises grew sufficiently to create a *territorialized economic space* geared primarily towards internal consumption and accumulation' (ibid). Territorialized

economic spaces were usually consolidated via identification with a pre-existing nation state.

In contrast to imperialist perceptions of the periphery as a construction by central capitalism which being unable to resolve their contradictions within the closed central circuit project themselves outwards, almost the reverse is true. Capitalism was born of world trade, and it created first a waged labour force and then a home market for manufactures.

‘Initially it was an eddy within the great ocean of the non-capitalist economy which sustained it, but it then grew into territorialized capitalist structures which gradually became individualised and auto-centred’ (ibid.).

Referencing Mistral (1982), Lipietz shows that the ratio of trade flows between the central structures and their ‘thermostats’ to flows internal to the central structures (in terms of manufactured commodities) was initially very high, but fell as the home market was consolidated. Up until the Fordist model of development, central capitalist states were continuing to become more auto-centred in their ability to develop internal consumption and accumulation, and relying decreasingly on international trade. When central Fordism was at its heights in the 1960s, the share of exports in the manufacturing output of central capitalist countries reached an all-time low. Most foreign trade took place within the centre. Exports of manufactures to the periphery fell to two percent of the GDP in the EEC and to 0.8 percent in the USA (Lipietz, *op. cit.*, p. 69). Thus increasingly over time, and at the height of central Fordism, the centre, whilst still structured

into a first international division of labour, increasingly did not need the periphery as a market for manufactured goods.

From this perspective, the theories of underdevelopment, whereby capitalism functions on a global scale and the agents of central capital underdevelops the periphery, and develops only through the exploitation of the periphery overstate the case. The territorialized economic spaces of central capitalism were becoming increasingly auto-centric over the time period that 'peripheral' countries were developing along capitalist lines and so increasingly did not need the periphery for accumulation in the centre. Any explanation for underdevelopment on the periphery, or more particularly the variable success of capitalist industrialisation on the periphery, has therefore to be sought in the internal social structures of peripheral states.

Lipietz argues that the key to understanding the dynamic of capitalist development in peripheral nations is through the analysis of the dialectic of the evolutions of the logics of the regime of accumulation in each nation and of the evolution of the structural forms that together make up the national mode of regulation, and their articulation with central Fordism. While not explicitly stating so, Lipietz, in his revision of the development of the periphery, is drawing upon the world-system view of the NIDL thesis and the weaknesses identified in the NIDL thesis.

Lipietz argues that beginning in the 1960s a new process of international diffusion and integration of capitalist relations began. This was due to a combination of two

factors: one having to do directly with the logic of developing crisis in the technology paradigm in central Fordism; the other having to do with the character of peripheral political regimes.

In the first case, the productivity gains of the Fordist technological paradigm was reaching its natural limits while wages kept increasing. The increased capital investment by capitalists in production was not compensated by an increase in the rate of exploitation, leading in turn to a crisis of profitability. A response to falling profitability was to relocate parts of the Fordist production process in low-wage countries but realise the value back in the core states. This strategy restored profitability in two ways. First, through extending economies of scale within levels of the Fordist technological paradigm in peripheral countries, the increased productivity increased relative surplus value. Secondly, absolute surplus value was increased by locating such production in peripheral countries and exploiting workers there through extending the working day and paying workers low wages.

Fordism as a labour process or technological paradigm can be characterised by the division of activities into three levels. First, conception, organisation of methods and engineering, all of which require autonomous workers. Second, skilled manufacturing which requires a fairly skilled labour force. Third, unskilled assembly and execution which theoretically requires no skills. The possibility of articulating these three levels with a geographic distribution of the productive circuit within Fordist branches across three different labour pools is very attractive. The major differences between the labour pools relate to levels of skills and of exploitation, but there are also differences in terms of density of industrial

networks, proximity to major markets and so on. The first experiments in relocating unskilled tasks took place in 'peripheral regions' within the centre, and in the 1960s the process was extended to countries of the immediate 'outer' periphery: in Europe to Portugal, Spain and Eastern Europe; in the Americas to Mexico, and in Asia, the free-trade zones of Singapore, Hong Kong etc. Thus a new vertical international division of labour between levels of skill inside branches of industry was superimposed upon the old horizontal division of labour between sectors (primary, mining, agriculture/secondary, and manufacturing). As a dynamic process it was not generated to produce underdevelopment, but to expand and reorganise the Fordist regime of accumulation as a response to falling profits and growing wages while productivity levelled off. It occurred because the development of modes of regulation and strategies of accumulation in some periphery states articulated with the possibility of geographic distribution of the central Fordist production circuit across different labour pools.

Lipietz therefore argues that expansion of the Fordist regime of accumulation into peripheral countries or regions requires both a complementary strategy for industrialisation and complementary structural or institutional forms to guide the transformation of capitalist social relations within peripheral countries.

In this context, Lipietz provides an analysis of one failed strategy – early import-substitution policies. The object of an import substitution strategy was to shift surpluses derived from primary exports into the domestic manufacturing sector by restricting imports from the centre to capital goods and using very high tariff barriers to protect emergent industries. This strategy ran into serious difficulties in

the 1960s. Lipietz claims that this model of industrialisation failed because it implied the partial and often illusory adoption of the central model of Fordist production but not the corresponding social relations, and so failed to enter the 'virtuous circle' of central Fordism. Lipietz cites three reasons for its failure. In terms of the labour process, technology could just be transplanted by importing machinery. The corresponding social relations have to be constructed. Many peripheral countries had neither the experienced working class nor the managerial staff required for the implementation of the Fordist modes of operation. In terms of markets, the characteristic features of monopolistic regulation were restricted to the management of mark-up rates and credit money. There were very few cases of any significant expansion of worker and peasant purchasing power. Markets therefore remained restricted to the ruling and middle classes created by the export economy whose consumption did not include standardised Fordist products and the foreign market. Wage differentials notwithstanding, peripheral manufacturing was not yet competitive because of its low productivity. In terms of foreign trade, in addition to the question of whether the terms of trade were sufficient for raw material exports to finance industrialisation and the capital goods from the centre, climbing the productive ladder and going beyond the final assembly stage, implied a rapid increase in the volume of investment and therefore an increase in imports. Increased raw material exports could not make up for that.

Import substitution policies therefore inevitably came up against the obstacles of trade deficits or debts, with domestic inflation, or ended in stagnation and destruction of the model. Lipietz does argue that some of these experiments did

result in a real social transformation and in the emergence of a modern working class, modern middle strata and modern industrial capitalism. They might then be described as a 'sub-Fordism' attempt to industrialise by using Fordist technology and its model of consumption but without its social labour processes or its mass consumption norms.

In contrast, Lipietz argues that the regimes of accumulation developed in the NICs were characterised by a strategy of export-substitution. This strategy implies a decision to break with the primary-export model and to develop exports of manufactures produced at level three of the tripartite Fordist division of labour (unskilled labour-intensive activities). This strategy may be articulated with other elements within the local regime of accumulation, with central Fordism, or with regimes of accumulation elsewhere on the periphery. This articulation may involve a number of different logics of the departments within the regime of accumulation (Lipietz, 1987, note 7, p. 207). To Lipietz two articulations seemed particularly significant in the development of NICs during the central Fordist model of development. These he terms 'primitive Taylorisation' and 'peripheral Fordism'.

'Primitive Taylorisation' refers to a dominant logic within a regime of accumulation whereby specific and limited segments of the central Fordist labour process are transferred to states with high rates of exploitation in terms of wages, length of the working day and labour intensity. Most of the products are then re-exported to the centre. Jobs in this regime of accumulation are Taylorist rather than Fordist. That is, such jobs are fragmented and repetitive and not linked to any

automatic machine system. The equipment is light and requires only one operator. Examples include sewing machines in the textile industry and tweezers in electronics. Such jobs are labour-intensive in the strictest sense of the word.

Like that of 'primitive accumulation' in early capitalism, primitive Taylorism is designed to extract as much surplus value as possible, and no attempt is made to reproduce the labour force on any regular basis. Markets for these products are sought in the markets of central Fordism. At least some surplus value is accumulated in the country, and it often provides the first major source of autonomous accumulation.

'Peripheral Fordism' refers to a dominant logic within a regime of accumulation whereby the productive process is truly Fordist in that it involves both mechanisation and a combination of intensive accumulation and a growing market for consumer durables. The regime remains peripheral in that jobs and production processes corresponding to the skilled manufacturing and engineering levels are still mainly located outside these countries. This regime's markets represent a specific combination of consumption by the local middle classes, workers in the Fordist sectors having limited access to consumer durables and export demand from the centre of cheap manufactures. This regime of accumulation combines strategies of import-substitution and export-substitution in varying proportions. At the same time, industrialisation is accompanied by an increase in imports from the centre. Most imports are capital goods produced at levels one (conception and engineering) and two (skilled assembly) of the new division of labour and need to be paid for by exporting level three, unskilled assembly to the centre.

What Lipietz calls a new international division of labour results from this complex articulation of autonomous capitalist development in peripheral states with a geographic distribution of the productive circuit within Fordist branches across three different labour pools. This second international division of labour is an intra-industrial division of labour, in contrast to the first international division of labour, which it overlaps, which is an inter-sectoral division of labour.

Lipietz insists that the new second international division of labour is no more of a division of labour than the old first international division of labour, if by 'international division of labour' is meant a rational project determined by technological and/or economic forces. This new international division of labour in contrast has to be seen as a

'random configuration resulting from the myriad strategies adopted by different countries and states from a miraculous harmonisation of the very different regimes of accumulation adopted as a result of the impersonal process of class struggle between the multiple social formations in the North and the South' (Lipietz, *op. cit.*, p. 99).

The second international division of labour, as with the first, has to be understood as a historically contingent result from the dialectic between underdetermined attempts by central Fordist capital to raise profitability, over-determined by political regimes in peripheral states. Lipietz argues, indirectly addressing the critique of the NIDL thesis, that recognising degrees of autonomy for nation states, classes and other social groups, is necessary in order to break away from the capital-logic approach to uneven development. Political autonomy, if it could

be established, enabled the state to break from traditional forms of foreign domination. Political autonomy also enabled the state to break from ruling classes connected with earlier regimes of accumulation in sectors connected with either the primary export economy or the growth of the home market. Political autonomy also enabled the state to break, albeit in a limited fashion, from the popular masses in order to structure Taylorist industrial labour process and exploit as much surplus as politically feasible. Strong states, often dictatorships, were necessary to mobilise and stabilise an industrial workforce and to create managerial personnel to play the part of the ruling classes within the new regime of accumulation. In short, in contrast to the mainstream view which ambiguously places the state inside and outside of 'markets', the state is a key actor in the creation and maintenance of market forms of economic organisation.

Relatedly, while there is a strong capital-logic to the state being the agent of transnational firms in their encouragement of foreign investment through advantageous fiscal policies, the provision of transport and telecommunications infrastructure, the reproduction of low-wage labour markets through repression or subsidy, and a strong dependence on corporate decisions and technology originating from core nations, peripheral states also intervened in other ways that were not at the behest of transnational capital, but were rather a product of their own development priorities. Such 'state monopolistic' forms of competition added to autonomous forms of development within the territorial units themselves. Thus 'import-substitution' strategies by some East Asian states effectively blocked foreign imports by means of prohibitive tariffs while encouraging investment in domestic manufacturing industries in the context of a development strategy which

consciously privileged particular sectors. While South Korea and Taiwan have been good examples of national states intervening to encourage growth of indigenously-owned production capacity, there were also other ways in which state intervention created conditions conducive not to investment in unskilled assembly processes, but rather to investment in high-skill, capital-intensive production processes. The Singapore government, for instance, deliberately attempted to force up labour costs in the knowledge that its labour market could supply the engineers and technicians necessary to ensure continued domestic manufacture of semiconductors and electronics by foreign-owned firms, but on a restructured basis incorporate technologically advanced labour processes. Similarly, the Hong Kong government created a system of higher education capable of reproducing the skilled labour power on which much of its semiconductor industries relies (Henderson, 1989).

Lipietz makes the point that the results of such state monopolistic competition suited not only the development strategies of the states concerned, but also the transnational companies. For transnational companies, while seeking opportunities to find new ways of extracting surplus value was important, the establishment of new markets was also very important. Thus developing buying-power and production outside of the 'world-market factories' articulated with the production from such factories to reinforce autonomous capitalist development in peripheral Fordist territorial units.

This development process highlights the revisions Lipietz makes to the NIDL thesis in his construction of peripheral Fordism. First, the NIDL thesis, in

concentrating on the significance for globalisation of supplies of cheap unskilled labour at the periphery of the world-system, emphasises the opportunities for the creation of absolute surplus value at the expense of recognising other possibilities as structural forms evolve. While cheap unskilled labour was a major inducement for companies to locate part of their production process offshore, this need not rule out the possibility that over time, as structural forms evolve, they might gradually shift to regimes of relative surplus creation. Under such circumstances, rising real wages become a real possibility.

Second, such a dynamic also addresses the a-historical manner in which the NIDL thesis is presented. The NIDL thesis begins and ends its analysis at the moment of initial manufacturing investment when factories are in place and production systems begin to emerge. By arguing the articulation of the dynamics of globalised production with factors internal to given societies over time, Lipietz introduces an internal dynamic whereby autonomous development can occur.

Thirdly, the process of development moderates the negative assessment of foreign manufacturing investment in stimulating local industrial initiatives. The articulation between foreign investment and the growth of locally-owned production complexes points to possibilities that may differ from one sector or branch to another, and from one territorial unit to another. Similarly, in some such branches and territorial units this articulation results in locally-owned production being a more important contribution to economic growth than foreign-owned production. Thus, while the presence of transnationals was very important in a

qualitative sense to the development of peripheral Fordism, in a quantitative sense their importance should not be over-emphasised (Lipietz op. cit.).

Lipietz' revision of the NIDL also introduces the structural form of finance. Lipietz argues that local accumulation in peripheral Fordism far exceeded direct investment from outside sources, largely financed by borrowing on the international bank capital market. Most of the loans were in xenodollars or petrodollars and were pledged against future income from traditional export, the 'promise of work' which in turn depended on the profitable launch of new production processes in the NIC's and upon the existence of markets to buy future output, and the recycling of borrowed capital to buy capital goods from the north. The international lending community decided to gamble on this regime, particularly after the first oil shock when there was an explosion in liquid assets as OPEC had deposited its surplus with private bankers and borrowers were needed at any price. Forms of international finance therefore evolved over this historical period whereby direct investment began to be replaced by an emerging international credit economy. Lipietz cites the example of South Korea where, in 1960, direct investment accounted for 82 percent of all capital in-flow and borrowing on the international money market only 18 percent. By 1975, the proportions had been reversed.

The argument Lipietz develops is that the key to understanding contemporary developments in the international division of labour lies in the historical development of the capitalist mode of production in nation states across the globe. The consequences of the global spread of the capitalist mode of production have

led to what can be identified as two, superimposed, international divisions of labour. Capitalism as a mode of production began in what could be termed 'central' territorial units of Europe. Early relations with peripheral territorial units, while useful to complete circuits of extended reproduction in the central territorial units, were not created with that intention in mind. In contrast, the territorial units of central capitalism were increasingly 'auto-centric' and did not need the periphery. The 'first' international division of labour, one of central states exporting manufactures and importing raw and primary materials from the periphery, thus developed not as a consequence of the logic of comparative advantage, rather as a consequence of uneven development. Central capitalist states in the nineteenth century exported manufactures because they were already industrialised and thus had an absolute advantage in their production. Peripheral states on the other hand were excluded from the capitalist manufacturing centre because of this absolute disadvantage and so 'specialised' in raw materials so as to participate in the domestic 'gains' to be had from international trade.

While such relations between central and peripheral states may have resulted in peripheral nations failing to industrialise, the argument presented is that belief in the tendency towards dependency and underdevelopment fails to acknowledge the possibility of autonomous development of nation states from the globalising structures of capital. Thus the first international division of labour does not remain in its concrete form because it is functional to the centre, and so leaves peripheral units non-industrialised. Rather, the possibility is raised that such a division can become useful for autonomous capitalist development in peripheral states and so become part of such a state's regular workings and appear to have been designed

on purpose. Such is the case for former colonies of the United Kingdom, Canada, Australia and New Zealand who continue to remain predominantly in the first international division of labour yet can be considered developed capitalist economies. On the other hand, possibilities for underdevelopment and dependency still exist, as is the case for most peripheral nation states in the world. The key to understanding the field of possible positions lies in examining the articulation of the logic of the globalising structures of capitalist industrialisation and the internal social structures of national states.

Such an examination of the industrialisation possibilities yields a result which may be interpreted as a second international division of labour. In contrast to dependency theories which only focus on development within third world societies, the Régulation Approach to understanding development of the periphery, particularly after the Second World War, recognises a complex articulation of structural forms within central capitalist states, that resulted in a model of development that can be termed as an ideal type of central Fordism, with an articulation of the expansionary logic of central Fordism with peripheral states that had an eye for industrial development. The logic of the accumulation regime of central Fordism is argued to be Fordist. That is, the productivity regime was based on a labour process that controlled labour power by breaking down complex processes into simple tasks that could be performed by unskilled workers. The skilled requirements of production were removed from skilled workers and re-unified into simple machines. The requirements of production could then be satisfied by labour of the simplest sort and by routines embedded in machinery, both of which could be controlled and so enable extraction of maximum surplus

value. This labour process underpinned the economies of scale and mass production of large firms. The argument of the Régulation Approach is that this technological paradigm underpinned a model of development, or regime of stable economic growth in central Fordist states when the mode of regulation was such that the expanding productivity of this technological paradigm could be matched by rising mass consumption. The class compromise in the regulation of the wage relation to allow real wages to increase in line with increasing productivity was central to this mode of regulation.

The internal dynamic of the central Fordist regime of accumulation, however, had world-systems-type capital-logic to raise productivity by expanding the scale of production and by searching for cheaper wage-zones in which to locate production. The former tendency represented an authentic attempt to consolidate Fordism as an auto-centric model of development and the growth of international trade between central Fordist economies over the Fordist period of development reflects this logic of rising productivity gains based on an expansion of mass production and economies of scale. On the one hand, therefore, expansion of the market into similarly regulated Fordist nations increased the ability of each central Fordist nation to become increasingly auto-centric. On the other hand, direct investment in production facilities in peripheral countries, while having a global-capital-logic in the sense of expansion of markets, more particularly, the argument presented by Lipietz is that there was a global-capital-logic by large companies to seek cheaper wage zones to counteract the tendency for the rate of profit of production facilities based in central-Fordist nations to fall. Along similar arguments to the NIDL thesis, Lipietz argues that the dominant industrial form of

labour process allowed for the spatial separation of particular labour processes within the same industrial branch or firm, thus the possibility of articulating these labour processes across different labour pools was very attractive from the point of view of large capital.

In contrast to the NIDL thesis and to dependency theorists in general, the argument is that this capital-logic is not the determining logic and does not necessarily lead to underdevelopment and dependency in peripheral states. The key to understanding this process of successful capitalist industrialisation is the integral role played by peripheral national state formations, pressures from social groups in the periphery, and by the evolution of an international credit dimension to the institutional form of money. Lipietz identifies two export-substitution strategies, which he terms 'primitive Taylorisation' and 'peripheral Fordism', whereby the development needs of peripheral states articulated with a spatial production strategy of central Fordist firms to combat falling rates of profit in home markets. This articulation resulted in a 'new' or 'second' international division of labour whereby industrialisation of the periphery commences with level-three, unskilled assembly labour processes of goods, much of which, depending on the regime, is re-exported to the centre while labour processes in central Fordist states tend towards those labour processes involving levels-one, conception and engineering, and level-two, skilled assembly, of the Fordist model of production, and exporting the products of these processes, capital goods, to the periphery. This second international division of labour, an intra-sectoral division, overlays the first international division of labour, an inter-sectoral division.

A new third international division of labour arising from the crisis of Fordism?

Given the centrality of the capital-labour relation in the conceptualisation of national variants of the Fordist model of development, the Régulation Approach to the crises in these models has been to focus upon the forces that led to the break-down of this form of social relations of production so as to make prospective claims about what forms of capital-labour relations may evolve after Fordism. Within the complex of forces that led to a crisis in these national models of development, a general theme that emerges is one of a 'productivist' crisis in the Fordist regime of accumulation found in every country that adopted this model of development. This productivist crisis refers to a crisis in profitability underpinned by declining productivity in the Fordist principles of the organisation of labour. This slowdown in productivity gains was linked to technical problems in the scientific organisation of work and also to social limits in scientific management. With claims elsewhere⁴ that a new model of development was potentially contained in the technological revolution posed by the ICT platform, Régulation theorists, particularly Lipietz, have engaged in a critical debate. It is out of this debate that Lipietz poses the formation of a new third international division of labour.

The argument for technology leading a way out of the crisis of Fordism is simplistic (which probably explains its popularity). The basic idea is quite attractive. The problem with the Fordist technological paradigm was too low

⁴ See the extensive literature on flexible specialisation and techno-industrial paradigms

productivity, too high fixed capital industry and an unproductive tertiary sector. But electronics would make it possible to increase productivity thereby diminishing costs through increased buying power, to lower the cost of fixed capital and to create new needs and new goods. Thus the simplistic view is that in the ICT platform is a new model of production very like the Fordist model of production centred on mass production and consumption but with new products and processes, and a new central branch of production including electronics, office computerisation, telematics and automation. The crisis would only be a crisis of switching from one model of development to another.

Lipietz is particularly critical of such a simplistic view, 'for between technology and a model of development are a series of links - social relations' (Lipietz, 1988, p. 36). Lipietz' initial focus is upon the development of the immediate relations of production (who decides how the workforce will be organised) and the socioeconomic relations of production of the totality (the relations between production and consumption). That is, in order for a new model of production to occur, a new regime of accumulation and a new mode of regulation must be invented.

The potential productivity gains that the ICT platform offers are acknowledged. In particular, especially with regard to industry, the application of the ICT platform to informatics by using machines in a shop full-time but especially in making the shop flexible potentially overcomes the limitations met in the Fordist technological paradigm. However, to install electronics in a factory requires the mobilisation and recomposition of all know-how, including the paradoxical

involvement of even the most Taylorised worker. '[T]here can be no introduction of production informatics without a new systematisation of know-how' (Lipietz, op. cit., p. 37). Also, even in the most roboticised of workshops, the intervention of the skilled worker remains indispensable for the whole to function well. Therefore, to Lipietz, how the workforce is organised to utilise the ICT platform is an open question. Two trajectories in labour relations are however suggested, each evolving from the Fordist capital-labour relation. On the one hand, computer-assisted production can reconstruct Fordist discipline with unskilled workers filling in the gaps of a chain of complex robots designed by engineers and assembled by technicians. On the other hand, multi-skilled teams can be developed to watch over the entire production process. The interest of workers clearly lies in the second trajectory. However, the interests of employers are ambiguous. Whilst the development of multi-skilled teams to watch over the whole process opens up 'the mine of worker productivity', such a development in re-connecting what Taylorism sought to separate, runs totally contrary to employer traditions of control over the labour process. Thus, to Lipietz, the 'mines of labour productivity' can only be tapped by a change in the labour relation from Fordism: 'by an overall negotiation of profit shares, by a revision of classifications, the abolition of despotic hierarchy, and the invention of a career profile for the worker which enriches him with knowledge at the same time as the worker enriches the firm' (Aoki, 1986). This, to Lipietz, is social technology which does not have much to do with the ICT platform in its strict sense.

Lipietz' other particular concern is with aggregate demand. Does the application of the ICT platform to production mean a resumption of mass production and

consumption and full employment as during Fordism? If the ICT platform does increase total productivity, then a net number of jobs must be lost for the same quantity of finished products.⁵ Technical progress permits the creation of jobs if the demand for products increases, or if the labour time decreases. Aside from the indeterminate results of the struggle over the distribution of productivity gains between capital and labour, the prior question becomes whether the costs in capital investment per capita in the technological revolution were growing more rapidly or more slowly than the productivity to which it gives rise. For, to be able to share the fruits of growth productivity gains must be at least greater than the increase in the costs of roboticisation so that the expanded production of each worker can pay for the investments in informatics, for the increase in the worker's purchasing power and for more jobs.

At the time of writing (1988), Lipietz was unsure, and expressed doubt, whether productivity was growing more quickly than the costs in capital investment per capita and so allowing the potential of purchasing power to increase in line with productivity and so increase the number of jobs. By the mid-1990s however, Lipietz, in a series of articles and with Leborgne, hypothesised a new configuration in the international division of labour which had the potential to increase final demand (Lipietz, 1995; 1997; Leborgne and Lipietz, 1988; 1992). This, Lipietz termed the new third international division of labour.

The argument Leborgne and Lipietz (op. cit.) develop is that aggregate demand out of new social relations around the ICT technological platform could be

⁵ To say that technical progress does not eliminate jobs because people are necessary to build machinery is a sophism. If the same total labour were necessary for the same product, with or without robots, companies would not invest in robots (Lipietz, 1988 p. 39).

sufficient to create a new virtuous circle of growth. This aggregate demand could develop out of the co-existence of two different paradigms for capital-labour relations within the same trading zone. Each of these paradigms represent the two 'technological ways out' of the supply-side crisis of Fordism – on the one hand, unskilled workers filling in the gaps of a chain of complex robots designed by engineers and assembled by technicians; on the other hand, multi-skilled teams watching over the entire production process – but each paradigm is socially constructed, therefore dominant within a nation state. Within a trading zone, as envisioned by Ricardo's theorem of comparative advantage, countries or regions will tend to specialise in sectors where social relations have developed which give a comparatively best endowment, whether in low-wage, low-skill, low involvement labour flexibility or in high-wage, high-skill, high involvement labour flexibility. If such specialisation occurred 'the total amount of demand will be limited by wage competition' due to the co-existence of regions or countries of 'low wage and low involvement' with regions or countries with 'higher wage and higher involvement'. The latter Lipietz termed 'core' states in their relation to the 'periphery' (Lipietz, 1997, p. 32).

Lipietz' claim at the time of writing (the mid-1990s) was that these demand regimes existed in the European trading zone and in East Asia. In the European trading zone, social relations had evolved in both in the Scandinavian countries, Germany and the countries of the Austrian arc which promoted productivity gains through worker involvement in the whole production process, while at the same time elsewhere in Europe 'neo-Taylorist' social relations had evolved. In East Asia, aggregate demand is not a problem because it is 'super competitive on two

fronts: the over-involved and expensive labour of Japanese Toyotism, and the taylorised and incredibly underpaid labour from the bloody Taylorism of the new wave of NIC's' (Lipietz, 1997, p. 32). The countries in North America in contrast 'compete on the same technological paradigm (neo-Taylorism) and therefore by greater or lesser flexibility' (op. cit., p. 26).

The prospective conclusions that Lipietz is led to are thus a contemporary, de facto, new international division of labour. In core economies, which have adopted social relations which seek productivity gains through worker involvement in the whole production process, industry will be dedicated to high-technology and less labour-intensive production. The periphery, in contrast, will be composed of economies organised according to the neo-Taylorist paradigm, and industry in such countries will be dedicated to routinised and labour-intensive activities (Lipietz, 1995; 1997).

Conclusion

This chapter presented the Régulation Approach to understanding the dynamics of developments in the capitalist mode of production, and, through the work of one of its theorists, Alain Lipietz, how this approach is applied to the international division of labour. Through its mid-range concepts of mode of regulation and regime of accumulation, the Régulation Approach provides a perspective from which to be able to understand how the social relations of the capitalist mode of production can reproduce despite their inner contradictions. Thus the capitalist mode of production can be analysed as always structurally prone to crisis, but at the same time, the recognition of the role of agency and political struggle opens up the possibility of class compromise and a stabilising mode of regulation, out of which crisis can be postponed and in the process allow capitalist accumulation to proceed.

Two significant implications arise from this perspective. These are that there is no single logic of capitalist development and that the sites which capitalist developments occur are nation specific. By explicitly recognising capitalist forces of production as emanating from existing social relations that are themselves contradictory, the forms the development of capitalism takes becomes overdetermined by the political process. Thus there is no single logic of capitalist development: any such development that does arise is dependent upon the class compromise that evolves from the political process. Similarly, for class compromise to occur, it must be capable of being consolidated and legitimated for such compromise to reproduce as a social relation. The nation-state is the site of

sovereignty, where society claims the space in which to reproduce, thus the nation-state is the site where both class struggle occurs and where compromises, should they be reached, are consolidated and legitimated. The development of the capitalist mode of production is thus nation-specific.

It is Lipietz, in particular, who develops the insights the Régulation Approach offers to capitalist development at the level of the international. In his analysis of the international division of labour, Lipietz provides a perspective of autonomous capitalist development within nation states but in this process an articulation of developing countries with developments in more advanced capitalist states. Thus the first international division of labour (one between a centre producing manufactures and a periphery producing raw materials) does not appear to resolve the contradictions in industrialised countries or as necessary to allow accumulation in industrialised nations to proceed as orthodox Marxism supposes. Rather, the first international division of labour appeared as a response by peripheral states to their exclusion from the capitalist manufacturing centre because the central industrialised states had already achieved an absolute cost advantage in manufactures through the technical division of labour in industry. Similarly, the second international division appeared as a consequence of strong peripheral states determined to develop a capitalist model of development articulating with the expansionist tendencies within the logic of the Fordist model of development widely adopted in advanced capitalist states. Whilst more prospective, the third international division of labour is again presented as a consequence of autonomous nation-state capitalist development where different

class compromises across nation-states in response to the developing ICT platform create comparative advantage in the way manufactures are made.

The Régulation Approach in the hands of Lipietz thus extends Marx in the historic development of capitalism across the globe. As argued in Chapter Two, Marx emphasised the inherently expansive tendencies of capitalism, and envisioned in the state of development of industrialised states such as England the image of the futures of under-developed states. Yet, the historic process of how such peripheral states would industrialise was under-developed by Marx. The Régulation Approach provides an understanding as to how this process unfolded historically while at the same time retaining a conceptual framework that treats this historic process as essentially Marxian: as an uncertain process evolving out of class struggle. In this way, the Régulation Approach extends Marx's original insights on the global expansion of the capitalist mode of production, out of which de facto international divisions of labour arise.

Chapter Five

The International Division of Labour

Introduction

This chapter bridges the two parts of this thesis. It comprises two sections. The first section synthesises the critique of Part One of this thesis where a meaning to attach to the form and dynamic of the international division of labour was sought from major existing discourses. The second section prefaces the critique of Part Two of this thesis in which, out of the understanding gained from Part One, the form and dynamic of the contemporary international division of labour is hypothesised.

From the critique of the major discourses on the international division of labour in Part One, the basic insight of the Régulation Approach theorist, Lipietz, is preferred. This basic insight is that the form and dynamic of an ‘international division of labour’ cannot be properly understood without fully considering the historically contingent outcomes of autonomous state capitalist development. The more orthodox approaches, in contrast, only consider more deterministic (market and/or technological) rationale and place little importance on the political sphere.

Behind Lipietz’ map of existing international divisions of labour, however, is supposed the co-existence of differing and diverging national models of development. Lipietz’ characterisation of a new, contemporary third international

division of labour extends this map of co-existence of different national models of development. Part Two of this thesis critiques this co-existence of different national models of development within the one international space.

The understanding of the international division of labour which arises out of critique

Part One began with a critique of mainstream economics, moved to a critique of orthodox Marxism and ended with a presentation of the Régulation Approach which itself is a critique of both mainstream economics and orthodox Marxism. This demonstrates an unfolding of an understanding of descriptions of the international division of labour and of the historical dynamics underlying this division of labour. The dominant theme evident in the orthodox discourses is of a global structure of an international division of labour serving the needs of global capitalism, with the orthodox discourses differing in their conceptions of this global structure. Mainstream economics emphasises a benign structure of geographic specialisation in production in a global environment of free trade in commodities. In contrast, the orthodox Marxist discourse emphasises a malevolent structure of people in poor undeveloped states supporting people in rich developed states. Aspects of both of these conceptions can be seen in the international division of labour. Some, but not all, states appear to specialise in and produce more of some commodities than can be consumed domestically and export the surplus. Similarly, there is a distinct hierarchy in the distribution of global wealth with a few very wealthy states and many very poor states. The Régulation Approach acknowledges the possibilities of what is seen as international divisions of labour – be it specialisation in production or unequal

distribution of wealth. This approach differs however in that what is 'seen' is to fit with some logic of global capitalism. Rather, the Régulation Approach emphasises the relative openness of history: where there is no *a priori* global logic of capital, where capitalist development proceeds unevenly, and where the political sphere overdetermines the economic sphere. The conclusion that Part One of this thesis is that the Régulation Approach provides a superior perspective from which to understand the historic unfolding of the international division of labour. This section expands this claim.

The focus of the mainstream economics discourse is on exchange and it is out of exchange that an understanding of a map of the international division of labour arises, albeit indirectly, as does an understanding of the dynamics behind such a map. By deliberately eschewing social and political determinants, individuals in this discourse are 'fully presented' by society as willing and ready to engage in exchange. Such exchange is undertaken in order to maximise individual satisfaction and thus is assumed to be a rational process of comparing the benefits of a potential exchange with the benefits of alternative exchanges. From this rational decision-making process of individuals already fully-formed to engage in exchange is deduced the rationale that in production such individuals will specialise in those activities where the cost is least compared to the cost of alternative choices of production. In a market system the co-ordination of these individual decisions is achieved through price adjustment of excess demand or excess supply when the demanders of commodities, themselves rationally seeking maximum satisfaction in consumption choices, confront the suppliers of commodities who are rationally seeking to maximise profits from the supply

choices they make for exchange. This logic is pursued to the aggregate level where the activities of individual producers co-ordinated through markets in one social setting may result in low factor and low commodity prices compared to the same set of activities co-ordinated through markets in another social setting. With the possibilities of exchange (or trade) between individuals in the two social settings, specialisation by producers in the production of commodities for whichever price is comparatively less is an expected outcome. Thus both a potential map of, and a logic for, an international division of labour arises. Such a map is one of regional or national differences by specialisation in different commodity production, determined as a consequence of rational exchange by individual producers. Such exchange also by definition adds to human welfare. If individuals are presented as fully formed by society to engage in exchange, exchange that is not in the best interests of either party to an exchange will not take place; only exchange whereby both parties see 'gains' will occur.

Whilst the surface map of an international division of labour according to specialisation in commodity production is useful, the underlying dynamic is questionable. This is exactly the critique begun by Marx who was not willing to take capitalist relations of exchange as fully formed in societies, but explicitly examined the question how such relations are formed and thus what underlies the surface appearances of exchange. With regard to the explanations the mainstream economics discourse offers to the relationship between the globalising phenomena of newly emerging states and the emerging ICT technological platform and the international division of labour, the concepts of created absolute or comparative advantage are offered. But the discourse, because it is a-historical and deliberately

eschews the political and social spheres, is only able to offer a surface analysis of the dynamic of the creation of the economic conditions that lead to internationally low comparative prices and so to a new map of division of labour by commodity specialisation. Thus new states merely appear on the international stage as fully-formed, market co-ordinated states with a presumed set of resource endowments and market determined prices. Similarly, social relations outside individual exchange, such as technological change and state institutions, can only be imagined according to the logic of individual exchange. The discourse can thus only turn inwards on itself in order to incorporate new phenomena such as emerging states and technological change within its rational, individualist framework. Thus the interesting questions such as: What are the social relations that lead to societies emerging (or not) as 'fully formed' market economies on the international stage? and, What is really going on in production (where the social relations involved with technological change exist) while this emergence is occurring (or not)?, do not arise within the discourse.

It is in the Marxist discourse that these questions begin to be asked. Chapter Three has to be understood as the results of the critical mode of enquiry into questions unable to be examined by the mainstream economics discourse. Marx's unique contribution was, by starting with the totality of a social formation, to provide an understanding of the social processes through which the people in a society become presented as fully formed individuals subordinated to the social relations of capitalism. Marx thus goes deeper than mainstream economics into the underlying dynamics of an economic system co-ordinated through market processes. By beginning with the totality of the social formation, Marx recognised

that the capitalist mode of production differed in the dominance of generalised commodity production from modes of production from which it emerged. That is, production in capitalism is predominantly for the purpose of exchange and emerged from a mode of production where production for use was dominant. The dominance of generalised commodity production lay in the productivity gains arising from the coercive forces of capitalist social relations. Labour, through gradual social processes leading from formal to real subordination to capital, lose the ability to be independent producers. Instead the ownership of production passes to the owners of the means of production, the capitalist class. Capitalists in this process obtain a surplus-value from labour-power in excess of wages, some of which upon realisation into money must be reinvested into the labour process to improve productivity because of the pressure of extinction through competition between capitalists. Internal to generalised commodity production therefore is a dynamic for continual technological change to increase productivity. Marx traced this process of technological change in industry through formal to real subordination as productivity gains were achieved first through co-operation, then the development of manufacture, out of which emerged the technical division of labour in large-scale industry. Mainstream economics, in contrast, by focusing on exchange does not have the ability to understand production and the productivity dynamic (and inherent contradictions) rising out of the social relations of capitalist production. Marx's approach of internalising technological change into the logic of commodity production is thus an improvement over the logic of the mainstream economics discourse.

At the level of the international, in contrast also to the mainstream economics conception of social formations simply appearing as capitalist formations on the international stage, Marx recognised that such a process was an historical process, beginning in the material and social circumstances in England, then developing unevenly in other countries. His vision of this process of uneven development was that out of their own material circumstances, but driven by the demand for resources and the supply of cheap manufactures, countries would develop along the lines of England from formal to real subordination in the industrialisation process. However, Marx was largely silent on both the political process through which capitalist social relations in countries peripheral to the central, advanced states would proceed, and, other than an international division of labour between agriculture and industry, what relations between workers so subordinated into industrialisation across developed and developing nations would develop. It is here that the surface analysis of absolute or comparative cost advantage in the mainstream economics discourse provides an explanation, but this analysis needs to go deeper in order to incorporate Marx's basic insights concerning the evolution of capitalist social relations out of pre-existing material circumstances and social relations.

It is in this regard of social processes leading from formal to real subordination that the analyses of the underdevelopment theorists who followed Marx are important, for they highlight the structural relations between central, industrialised countries and peripheral countries that can manifest as an international division of labour based on exchange between a handful of rich, advanced capitalist states and a majority of poor, underdeveloped states. History has however demonstrated

that the determinist application of universal political economy laws, upon which the underdevelopment theorists base their international division of labour, lead to wrong conclusions since some former, underdeveloped peripheral states have since the mid to late twentieth century successfully become industrialised.

Although underdevelopment of the periphery can occur, it is by no means inevitable. As discussed in Chapter Three, the historical processes that can transform a peripheral country into an industrialised one were either not specified or not well theorised. The work of Palloix (1977) and Frobel et al. (1980) advance the understanding of this historical process through the idea of a new phase of industrialisation whereby industrial capital, in order to increase surplus-value, began to move the more de-skilled and labour-intensive aspects of large-scale industry to the periphery to take advantage of the low-waged, disorganised labour in such countries. Out of this historical process, a new perspective of the international division of labour appears. This international division of labour is one of specialisation in different types of tasks within the same branch of large-scale industry. This second international division of labour differs from the first international division of labour in that the latter is conceived of as country specialisation by commodity, whereas the former is conceived of (to a degree) as country specialisation by components within the disaggregated states of the Taylorist industrial paradigm.

It is in part in the critique of the qualification above to peripheral country specialisation in the second international division of labour that the Régulation Approach, particularly through the work of Lipietz, advances the understanding of

the historical process of the international division of labour. The Régulation Approach, as originally conceived, is distinctly Marxian, but unlike Marxist orthodoxy gives priority to the political processes that enable capitalist social relations to be reproduced, and thus when applied to the international division of labour, for capitalist social relations to be historically constructed in the first place. Similarly, their conception of how this occurs historically to result in periods of stable capitalist development provides an historically-based alternative to the a-historical general equilibrium conception of economic stability so favoured by the mainstream economics discourse.

The critique which Lipietz (1987) develops in *Mirages and Miracles* is that whilst patterns emerge between nations which can be interpreted as international divisions of labour, the presence of such patterns does not mean that these were constructed to serve the logic of a global capitalist structure. Rather than existing as a global logic, capitalism develops unevenly as nation-state-based projects out of existing social relations. Such patterns of international divisions of labour that do emerge, are therefore, a result of uneven capitalist development and are contingent upon that uneven development. This does not mean that geographic specialisation in commodity production or that relations of dependency are incorrect interpretations of patterns in the international division of labour. What it does mean is that '*results* should not be confused with *causes of existence*' (op. cit., p. 18, Lipietz's italics); that what appears as functional and as serving a global logic was not created for this end. History is a far more open project than is recognised within mainstream economics and Marxist orthodoxy.

From this perspective, industrialisation in the periphery, and underdevelopment and dependence in the periphery have to be seen primarily as the consequences of uneven, nation-state-based capitalist development. For the second international division of labour to arise as a regularity, not only were the under-determined efforts of capital from central Fordist states to increase profitability required, but also required was the over-determination of political processes within peripheral nation states. On the one hand, capital in core states that had adopted the Fordist model of development (itself a politically mediated project) had both the motive and need to continually improve the labour process and to expand markets to realise the output from this process. On the other hand, in some peripheral countries there emerged a state apparatus capable of sustaining a move in social relations outside of the development enclaves to formal subordination to capital. The articulation of political development projects within such peripheral states with capital wishing to expand from the core Fordist states thus led to the second international division of labour.

The Régulation Approach thus appears in this thesis as a method of critical enquiry into both the mainstream economics and orthodox Marxist interpretations of the international division of labour. From this critique it follows that there is no single cause to the international division of labour in the sense of such a division according to some prior allocation of factor endowments or to the invariant laws of capitalist expansion. Rather, an international division of labour may occur, but such a division is also contingent upon the complex social relations of production beneath exchange at the international level being capable of being developed,

reproduced and consolidated hence appearing as a regularity that can be interpreted as an international division of labour.

The form in which such a division appears is itself contingent upon the historical development of national models of capitalist development. The first international division of labour, one that is described as a division between some countries specialising in and exporting primary commodities and some countries specialising in and exporting manufactured commodities, can be understood as a process due to the absolute advantages in manufactured commodities held by early industrialising countries. Agents in countries on the periphery had not at that time created the relations of industrial production so had to find different commodities with which to engage in international exchange. These trade relations then consolidated into a competitive advantage by being able to be reproduced out of existing social relations of production.

The second international division of labour, one that is described as a division between specialisation in low-skilled and/or labour intensive commodity production and relatively high-skilled and/or a high capital/labour ratio commodity production, can be understood as a different, later historical process of articulation between the Fordist model of development and development projects to industrialise in peripheral states.

Post-Fordist nation-state diversity?

Lipietz goes further to propose an emerging new third international division of labour arising out of autonomous state responses to the crisis of the Fordist model of development. Lipietz' argument is that if the new ICT platform can be applied in different ways to resolve the productivity constraints of the Taylorist industrial paradigm in formerly 'Fordist' countries, then what labour process will get consolidated will be those which can be successfully reproduced. Lipietz identifies two political-economic trajectories emanating from the then existing social relations of the Fordist models of development, each of which create the social relations to make the same goods, but in different ways. National modes of regulation which favour the reproduction of labour skill and of labour involvement in the whole or large components of the production process, as in Scandinavia and Japan, co-exist with national modes of regulation, as in the United States, which do little to reproduce labour skill and favour the determination of wage relations through external market co-ordination.

To Lipietz, writing in the mid-1990s, this co-existence of diverse, developed industrialised states, was also a de-facto third international division of labour between developed industrialised countries possessing high-skill, high-wage and stable employment and developed industrialised countries possessing low-skill, low-wage and unstable employment as consolidated national regimes of accumulation.

Whilst the critical mode of enquiry, as presented, draws on the Régulation Approach as a useful theoretical framework within which to understand the expansion of capitalist development across the globe and the understanding and interpretation of the international divisions of labour arising from such a conceptual framework, the interpretation that Lipietz makes of a post-Fordist diversity in national regimes of accumulation based on national differences in modes of regulation seems somewhat inconsistent with contemporary reality. It can be argued that the contemporary reality is one of national convergences, particularly in formerly Fordist states, towards neo-liberal modes of regulation⁶. If this argument is so, then the appearance of a third international division of labour as proposed by Lipietz, may be expressing a past historical conjuncture which is increasingly less representative of contemporary times. In Part Two to this thesis, Lipietz' hypothesis of an emergent third international division of labour is itself subjected to critique.

Part Two to this thesis presents the results of this critique, to which are three aspects. First, Lipietz supposes a post-fordist configuration of co-existing diverse national models of development. The critique examines the extent of such diversity in contemporary times and argues that, rather than deepening or continuing diversity there is a converging counter-tendency towards the neo-liberalisation of social relations of production. Second, Lipietz privileges two paths of national models of development out of the crisis of Fordism, in each of which the form of the capital-labour relations is consistent with alternative technological paradigms. The inconsistent hybrid capital-labour relation – in

⁶ There is a growing literature debating converging or diverging tendencies in national models of development. A useful survey are the three volumes of articles edited by Coates (2002) in which aspects of models of capitalism are debated.

which at the national level external flexibility in wage relations co-exists with internal, functional flexibility in the labour process, Lipietz rejects as too inconsistent to be reproduced. The critique examines the possibility for the reproduction of a version of the inconsistent hybrid capital-labour relation at the national level. Drawing principally upon labour market segmentation theory, it is argued that a version of the inconsistent hybrid capital-labour relation existed during Fordism, and re-segmentation extends and deepens it in contemporary times. Thirdly, Lipietz identifies two technological paradigms evolving from Fordist mass production. The critique examines the emergence of a third trajectory, particularly at the level of the international in which these two trajectories merge into the one in which firms, notably multi-national enterprises (MNEs), seek to achieve productivity gains through combining economies of scale and scope. It is argued that at the level of the international, the productive capital so involved is increasingly engaged in this third trajectory. The argument advanced is that this form of production at the international level is made possible because, within neo-liberal competition states, re-segmented labour market structures enable the reproduction of the inconsistent-hybrid capital-labour relation in which the forms of labour, both numerically and functionally flexible, high-skill and low-skill, high wage and low wage, can co-exist within the one nation state. The modifications to the map of Lipietz' third international division of labour that this critique suggests forms the last part of this analysis in Part Two of this thesis.

Part Two

Chapter Six

Diversity in National Models of Development? The Overdetermination of Nation-State Autonomy by the Prevailing International Mode of Régulation

Introduction

In this chapter, Lipietz' hypothesis of a co-existence of different national models of development is critiqued. Lipietz, in his conceptualisation of a third international division of labour, is in effect proposing a divergence in national modes of regulation as nation states autonomously seek to construct new national models of development out of the crisis of Fordism. This chapter, in contrast, proposes, as a counter-tendency, convergence in national modes of regulation towards neo-liberal modes of regulation, particularly in the modes of regulation of advanced capitalist states.

The argument developed is that the degree of autonomy of modes of regulation in nation-states, both during Fordism and in after Fordist contemporary times, is strongly influenced by the form of the international mode of regulation. The post-Second World War global political project of development to achieve a stable nation-state system where each state is responsible for managing national

economic growth enabled the set of national Fordist models of development and peripheral Fordist development states to proceed. The creation of the international finance regime associated with this international mode of regulation also assisted in underwriting this set of national models of Fordism and peripheral Fordism. This international mode of regulation remains in the after Fordist period but in a changed form. From a multinational institutionalisation of embedded liberal states, the international mode of regulation has been transformed into a multinational institutionalisation of neo-liberal competition states. This change in the international mode of regulation constrains national states in the conduct of their economic and social policy to favour internationally mobile capital, and as such constrains states towards neo-liberal policy frameworks. This hypothesis of convergence in modes of regulation towards the neo-liberal competition states, particularly among advanced capitalist states thus stands in contrast to Lipietz who hypothesised a co-existence of nation states with different modes of regulation.

This argument develops out of a critique of Lipietz's claim of diversity in national models of development as characteristic of an after Fordist international configuration of autonomous state development. In his argument, diversity in national models of development is underpinned by the notion of autonomous state development, because it is at the level of the state that class struggle occurs and compromises exist and are legitimated. The critique focuses on what is meant by state autonomy in an international context and out of this critique, a more useful conceptualisation of relative state autonomy is suggested, in which, at the international level, state autonomy is relative to the prevailing international mode

of regulation. It is argued that the international mode of regulation has changed to a neo-liberal form which increases the international mobility of capital. Nation states, in turn, are increasingly compelled towards neo-liberal policy frameworks as they compete to attract and retain this internationally mobile capital. From this conceptualisation arises the tendency of convergence in national modes of regulation towards neo-liberal modes as a characterisation of an after Fordist configuration of national modes of regulation.

Relative state autonomy

Lipietz' (1987) fundamental insight into the international division of labour is that these phenomena are not the result of the deliberate or functional organisation of a global capitalism as orthodox mainstream and Marxist understanding supposes. Although a hierarchy of unequal allocation of world labour and its products between various countries can be observed, this is not to say that such an allocation was created to serve the needs of global capitalism. '*Results* should not be confused with *causes of existence*' (Lipietz, op. cit. p. 18). Merely because the international division of labour seems to form a system, does not mean that such a system is an intentional structure, or is inevitable due to the inherent contradictions of capitalism at the global level.

Lipietz (1987; 1997) rather, takes the position that any attempt to understand the significance of regularities that appear as international divisions of labour has to begin with the 'primacy of internal causes', that is, with autonomous state development. A mode of regulation can only exist at the level of the nation state

since it is at this level that effective sovereignty can be exerted to constrain individuals and groups within a national formation or society to observe the logic of existing relations. It is at this level there exists the capacity of a dominant group to legitimately impose new relations on all members in any society. It is thus at the level of the nation state where social contradictions are settled and through which the coherence of genuine regimes of accumulation can be gradually confirmed as they come to appear normal and natural.

Lipietz' argument, therefore, is that capitalist industrial development in the periphery was overdetermined by political developments in peripheral states which enabled the capitalist relations of production to exist and so permit the forms of industrial development observed as a second international division of labour. That is, whilst economic developments in core Fordist states were critical to the successful development of industrialisation in the Fordist periphery, a complex model of causality existed whereby autonomous state political developments were a dominant but not the sole or final cause.

Without denying that it is at the level of the nation state that sovereignty exists and where thus institutional compromises and social expenditures are legitimated, focus on the primacy of internal causes perhaps understates the importance of the international context within which state sovereignty exists, and therefore overstates the degree of autonomy with which nation states can or cannot conduct their own forms of economic and social development. The argument developed here is that from the Fordist model of development the autonomy with which

nations can conduct their own forms of economic and social development is in turn overdetermined by the prevailing international mode of regulation.

The idea of an international mode of regulation tends to be resisted by theorists within the Régulation Approach. In a strong interpretation of the concept, a 'mode of regulation' refers to:

the set of procedures and individual and collective behaviours that serve to reproduce fundamental social relations through the mode of production in combination with historically determined institutional forms; support and steer the prevailing regime of accumulation; and ensure the compatibility over time of decentralised decisions, without the economic actors themselves having to internalise the adjustment principles governing the overall system (Boyer and Saillard, 2002, p. 341).

Given the complexity and diversity of social relations, regimes of accumulation, and established norms of behaviour of agents within and between national formations, it is difficult to then conceptualise a mode of regulation in the strong sense operating at the international level. In addition, since the 'international' involves several different levels (region, nation and world) acting simultaneously, the analysis of international regulation is difficult (Vidal, 2002). Régulationists, including Lipietz therefore prefer to speak of a 'vague regime' and 'weak regulation' at the international level. The focus is more of how a given state is inserted into an international regime, rather than on how an international regime effects such insertion. Such a position fits closely with Lipietz' interpretation of the international division of labour arising as a configuration out of a weakly

regulated encounter between national trajectories dependent on the global context. Also, from a political perspective, resistance to the idea of an international mode of regulation is consistent with the skeptical view of globalising tendencies reducing the autonomy of nation-states. Lipietz and Régulation Approach theorists generally have a clear political agenda in insisting upon the autonomy of nation states in relation to the pursuit of national economic and social policy as within such autonomy the social democratic state can continue to exist as a state form after Fordism. This position stands as a skeptical contrast to the proponents of hyper-globalisation who argue that the capitalist world economy in contemporary times is so thoroughly integrated across national boundaries that an autonomous nation state is no longer possible (Radice, 1984; Gourevitch, 1986; Ohmae, 1995; Strange, 1996; Gray, 1998; Pieper and Taylor, 1998). Globalisation skeptics rather point to the continuation of diversity of capitalist social formations and the rootedness of all capital in discrete national formations as evidence for continued state autonomy in the contemporary era. Nevertheless, the argument developed here is that an international mode of regulation does exist which allows the strong regulatory results at the national level required in Boyer's definition.

During the Fordist model of development, the international mode of regulation is taken to be principally those guiding philosophies, policies and practices undertaken by multilateral financial institutions formed out of Bretton Woods in 1944. These institutional forms include the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (better known as the World Bank). they also include regional multilateral development banks, the World Trading Organisation (WTO, previously the multilateral institution of

General Agreement on Trade and Tariffs (GATT)), and the Organisation for Economic Co-operation and Development (OECD).

The argument that these institutions comprised an international mode of regulation during Fordism rests on the fact that they rose out of hegemony at the level of the international. That is, they are socially constructed institutions, the product of particular historical circumstances, and they were originally established for a purpose: to regulate for a stable global economic system that would avert calamities such as the Great Depression and its lingering effects which had culminated in the Second World War and continued into the Cold War: what will be defined as the 'regulation of development'. The institutional anchors of the Bretton Woods System were the IMF and the World Bank. The IMF was charged with providing a stable international monetary system that would promote trade, while the World Bank was to aid in the reconstruction of Western Europe, essentially by channelling US money into European Development. Subsequently, five major regional development banks came into being. The structure of these institutions is based upon the joint-stock model of private capitalist corporations, in which member countries are shareholders with voting powers in proportion to their relative economic performance. There is thus an inherent power relationship within these institutions – a power relationship based on each member state's economic strength. This structure is, however, also inspired by the logic of the basic mandate of these institutions, which is to act as intermediaries between private international capital markets and the governments of developing countries (Böas and McNeill, 2003).

The WTO was established on 1 January 1995 as part of the final agreements of the Uruguay Round negotiations. The establishment of the WTO is significant because 'it provides a sister institution for the Bretton Woods pairing of the IMF and the World Bank some 50 years after their creation' (O'Brien et al., 2000, p. 68). The roots of the WTO, however, lie towards the end of World War Two when the US invited 14 countries to begin negotiations on liberalising world trade. The negotiations had two objectives: to create an International Trade Organisation that would facilitate trading relations as the World Bank and the IMF facilitated monetary relations, and to implement as soon as possible an agreement to reduce tariff levels. The second exercise resulted in the General Agreement on Trade and Tariffs (GATT) which was signed in 1947 with the idea that once the International Trade Organisation was established, GATT would be subsumed into the larger organisation. Like GATT, the WTO is not a multilateral development institution, but a multilateral trading institution. Its main purpose is to organise multilateral trade negotiations to reduce tariff and non-tariff barriers to trade.

The OECD grew out of the Organisation for European Economic Co-operation which was formed to administer American and Canadian aid under the Marshall Plan for the reconstruction of Western Europe after the Second World War. It is a 'rich-countries club' in that its 30 country members produce two-thirds of the world's goods and services. Unlike the multilateral trade and financial institutions, the OECD is a forum out of which legally binding agreements on member countries may be established, or in which non-binding instruments or guidelines

(soft law) are produced. The OECD does not dispense money, but it is funded in proportion to the size of each member country's economy.

The guiding ideal behind the formation of these institutions it is argued here was 'the development project' (Böas and McNeill, 2003; 2004; McMichael, 1996). The development project was a post-war construct through which the world capitalist economy was stabilised. This construct has to be seen as a western hegemonic project, dominated by the foreign interests of the US, wherein social order on a global scale could be achieved, and averting the social disorder of the 1930s and 1940s, through raising the standards of living of people everywhere by national development projects that raised economic growth - based upon successful models of capitalist development, in particular the United States. The development project was thus based on a stable nation-state system where individual states were responsible for managing national economic growth. The development project was also a universal project, inspiring both accelerated industrialisation in the second world but also, as each state replicated the modernity of the first world (with the US at its apex), inspiring an expectation that the development gap between the first and third worlds would progressively close. The development project also recognised international trade as an important vehicle for economic growth (McMichael, 1996).

The institutionalisation of the development project into an international mode of regulation required a stable international monetary and trade regime so as to subordinate international capital movements and trade to systems of national economic management. Such institutionalisation was historically constructed.

Prior to the Great Depression, both trade and the movement of private financial capital around the world were subject to very few constraints by national states (Wade, 1996; Hirst and Thompson, 1995). However, in the wake of the great depression this largely liberal order collapsed as states began experimenting with increasingly comprehensive systems of capital and trade controls in order to protect domestic industrialisation and employment. By the time of the Bretton Woods negotiations, the views of one of the chief negotiators, John Maynard Keynes, supported by his US counterpart Harry White, prevailed. Keynes' persuasive case was centred on his *General Theory* in which the internal price of money, the interest rate, should be taken out of the play of market forces and instead be a policy instrument of government to achieve high levels of employment. Keynes extended this rationale at Bretton Woods. If the external price of money, the exchange rate, remained within the play of market forces, then interest rates would be affected. Domestic interest rates would thus be drawn into the play of market forces and undermine the ability of states to achieve the goals of high employment. Controls on international capital movements were therefore necessary. First, as Keynes noted 'massive, sweeping and highly capricious transfers of short-term funds ... constituted a major source of damage to the international monetary system' (cited in Helleiner, 1995, p. 318). Such capital flows would need to be controlled if a stable set of exchange rates were to be maintained. Second, more directly related to his General Theory, capital controls were necessary to prevent speculative international financial movements from disrupting the policy autonomy of the whole new Keynesian welfare state. As Keynes also noted 'the whole management of the domestic economy depends on being free to have the appropriate rate of interest without reference to the rate

prevailing elsewhere in the world. Capital control is a corollary of this' (cited in Moggridge, 1980, pp. 148-49). Similarly, White argued that capital flight motivated by political reasons or by the desire to escape the 'burdens of social legislation' had to be prevented from operating 'against what the government deemed to be the interests of any country' (cited in Helleiner, *op. cit.*, p. 318).

Thus out of this historical construction of regulation of trade and international capital movement arose an international regime of 'embedded liberalism' (Ruggie, 1982) wherein international trade and private international capital flows were subordinated to systems of national economic management all within the global construct of the regulation of development. The monetary regime which underpinned this established the principle of fixed exchange rates and mechanisms whereby the IMF could maintain stable currency exchange by extending short-term loans to those states with balance of payments imbalances. Alongside these multilateral arrangements were the geopolitical realities of the Cold War. The support of the United States, as the largest shareholder and the most influential country member in these multilateral institutions, has always been ambivalent (Böas and McNeill, 2003). Funding support for foreign aid has never been popular in the US Congress, thus US support for the IMF and the World Bank has been a foreign policy viewpoint that promoting economic growth and development in other parts of the world was in the US national interest. Thus multinational cooperation was seen as an effective way of both leveraging and allocating resources for development purposes and serving the national interests of the US. As Böas and McNeill comment ' the United States has viewed all multilateral institutions... as instruments of foreign policy to be used in support of

specific US aims and objectives' (op. cit., p. 24). The US, in this light, deployed Marshall Plan aid to re-distribute dollars to capital-poor regions of the world. This established the dollar as the international reserve currency (in addition to the dollar value underwriting the value of all currencies in the system of stable exchange rates), and promoted the market model as the litmus test of the so-called free world (Arrighi, 1982). Export credits extended to Marshall Plan recipients facilitated the transfer of American technology. In turn, the World Bank and other multilateral financial institutions disbursed long-term loan funds to encourage the development project.

The regulation of development thus constituted (and it will be argued, continues to constitute) an international mode of regulation in the strong sense as outlined earlier in Boyer's definition. It constitutes an international mode of regulation because it incorporates the ideal of human progress through modernity and economic growth that most nation states (since most are members of such institutions) buy into, and thus consider as normal. In addition to consent to this ideology, the development project was, and is, thoroughly institutionalised, and through this institutionalisation guides and coerces individual and collective behaviour at all levels –regional, national and global.

Lipietz' explanation for the second international division of labour thus needs to be modified in the light of the prevailing international mode of regulation. Whilst not denying the primacy of internal causes in the construction of national models of development, the character of domestic states, both core Fordist states and peripheral Fordist states, at this time was 'the function of the character of the

international and transnational environment' (Cerny, 1994, p. 321). The regulation of development, by stabilising an international monetary regime and the uniform political entity of the nation state, both legitimated under the security umbrella of United States foreign policy, created the conditions for national modes of regulation. Such external conditions overdetermined national Fordist modes of regulation and national Fordist models of development, the specific forms of which were based on internal causes. These external conditions also allowed for different projects of capital on the global periphery to gain hegemony around national peripheral Fordist models of development, the specific forms of which based were again based on internal causes.

Because this international mode of regulation regulated for a stable, nation-state system whereby individual states were responsible for managing national economic growth, in core Fordist states, the dominant forms of national-based industrial capital could make profits by increasing economies of scale in an environment of stable, increasing demand. In short, because capital in core Fordist states was constrained in its international mobility during this time, national-based industrial capital could accumulate in an environment of monopolistic competition through continuing to produce more at a lower cost per unit and sell more at a lower price per unit.

As Lipietz theorises, the successful industrialisation of parts of the global periphery during the Fordist model of development resulted from the articulation of the strategies of dominant industrial capital in core Fordist states to spatially separate sections of the Fordist labour process with low skilled labour to

developing countries where the overdetermination of state political projects to create these relations of production for export substitution strategies existed. There are two aspects of this articulation on which Lipietz is largely silent.

First, facilitating both the Fordist model of development in core advanced states and a cheap export strategy as part of successful industrialisation on the periphery was the hegemonic international mode of regulation described as the regulation of development. Successful development of states on the periphery was both encouraged by the ideology of capitalist development leading to social development and instituted by the Bretton Woods institutions which managed a fixed exchange rate regime, controlled the international mobility of private capital and mediated in the financing of long-term loans for development projects. Thus relatively autonomous state development in peripheral Fordist states occurred within an international mode of regulation that was structured to permit and encourage this form of relatively autonomous state development. Lipietz, in his theorisation of the second international division of labour, by not fully analysing the international constraints to relative autonomy, thus understates the importance of external causes in the unfolding of the second international division of labour.

Secondly, Lipietz does not sufficiently acknowledge that the internationalisation of sections of the Fordist labour process and the investment in development projects in the global periphery was accomplished through the internationalisation of finance, the regulation of which formed a significant part of the regulation of development. Primacy in internal causes was thus conditioned by the international regulation of finance.

Lipietz is substantially correct in his claim that internal political causes have priority in explaining the industrialisation of sections of the global periphery during Fordism. It is only at the level of the nation state that class compromise is possible and legitimated, so it is at the level of the nation state where modes of regulation exist to constrain agents to adhere to the rules of the game. However, the primacy Lipietz gives to internal causes does not sufficiently reflect the overdetermining effect of the international environment surrounding individual states. During Fordism, the autonomy which advanced capitalist states had to conduct Keynesian economic and social policy, and within this the autonomy to regulate the Fordist capital-labour relation, was itself facilitated by an international mode of regulation which constrained international capital mobility and promoted autocentric models of development. The same international mode of regulation also provided the security blanket for the development of capitalist production relations and the institutionalised financing of development projects in some peripheral states.

The shift to a neo-liberal after fordist international mode of regulation

In this section, the argument developed from the preceding critique of state autonomy is that, alongside the crisis of national Fordist models of development was a crisis in the prevailing international mode of regulation. This crisis was due to the debt crisis of failed development projects and the failure of the institutional framework at the international level to control international private capital movement. As a result of this crisis, the regulation of development has been re-

defined and ideologically infiltrated. This re-definition and infiltration constrains in process, discourse and practice, the relative autonomy of nation states to pursue the 'traditional' economic and social policies associated with the Fordist 'interventionist' state.

The unfolding of the international institutional framework which stabilised a system of nation states after the Second World War and enabled such states to pursue national development projects has been analysed from a number of perspectives. However, with the exception perhaps of Cox (1997), none of these studies interpret changes at the level of the international in terms of a re-regulation of the international mode of regulation. Using such perspectives, it is possible to identify tendencies which, when considered together, represent such a re-regulation. These perspectives have economic, technological and political components.

The impact of the globalisation of financial markets since the crisis of Fordism began is largely ignored by Lipietz in his hypothesis of a third international division of labour. In mainstream discourse, unstoppable technological and market forces are the dominant explanations for the globalisation of financial markets (McKenzie and Lee 1991; O'Brien, 1992). Technological developments in this discourse, especially the growth of global telecommunications networks, have dramatically reduced the costs and difficulties in transferring funds globally. Similarly, market developments such as restoration of private confidence in international financial transactions, the growth in multinationals, and the introduction of the floating exchange rate system have lead to a globalisation in

financial markets. According to these accounts, states played only a minor role in the overall globalisation process, rather, states were forced to accept these technological and market pressures because of the enormous costs in controlling international movements in finance.

However, whilst these phenomena are important, the dominant role of political choices and state behaviour in this globalisation process has to be recognised (e.g. Cerny, 1994). Helleiner (1995) provides a thorough historical account of the globalisation of finance process which suggests that states played a dominant role in this process. First, the development of the Eurodollar market in London in the late 1950s as a mechanism for international financial transactions, particularly financing international debt (Altvater, 1992) outside of national state regulations, was heavily dependent from the outset upon state support. The British state both refrained from imposing regulations on Euromarket activity in London and actively encouraged the market's growth in England through various regulatory and tax changes (Helleiner, *op. cit.*). Similarly, the support of the US state was equally important, in not only choosing not to prevent American banks and corporations from moving their operations to offshore branches, but also actively encouraging such moves.

Secondly, the growth in international financial movements following the creation of the Euromarket brought with it, as Keynes and White had predicted, large speculative financial flows that proved disruptive of the Bretton Woods fixed exchange rate system. Unilateral controls by states on capital movements to preserve existing exchange rate values proved ineffective, but importantly, the call

by states for cooperative controls, the second mechanism outlined by Keynes and White to effectively control finance, failed through US opposition. Thus the globalisation of finance was again enabled through states choosing not to implement more effective controls on international capital movements.

Helleiner (op. cit.) explains how US opposition to cooperative state action to control private speculative capital movement arose as a consequence of a new liberal approach towards international financial movements. The success of the development project had led to the US having both a large current account deficit and a high exchange rate. Thus a liberal exchange rate regime would talk down the dollar through market pressures revaluing European and Japanese currencies. Also, a liberal international financial system would favour New York and the Eurodollar market for private investors and preserve the privileged financial position of the US by securing the dollar's central international role and help the US to continue to fund internal and external deficits with foreign funds.

These national interest concerns also equated perfectly with a domestic US political project of capital to promote the globalisation of finance. Within United States administrations, prominence was given at the ideological level to figures who strongly rejected the restrictive embedded liberal approach to financial movements that inspired the Bretton Woods order. These 'neo-liberals' praised the role of market forces in promoting an efficient allocation of capital, not only internationally but also within domestic financial systems. They also opposed capital controls on the grounds that such controls represented a coercive power of the state that was inconsistent with individual freedom. Neo-liberals also

presented mainstream economic arguments that took issue with the two reasons outlined in Bretton Woods as justifying capital controls. Firstly, they rejected the view that speculative financial flows would disrupt stable exchange rate arrangements by arguing strongly in favour of a floating exchange rate system. Secondly, they did not sympathise with national Keynesianism and the autonomy of the nation state since this led to inefficiency in resource use. Instead, international financial markets would discipline government policy and force states to adopt more conservative, sound fiscal and monetary programmes (Helleiner, *op. cit.* p. 324). This ideology found support with dominant capital interests. Industrial leaders, initially supportive of capital controls, had become frustrated with the way capital controls increasingly infringed on their growing multinational activities. The interests of financial capital had never been in favour of capital controls.

Thirdly, Helleiner outlines how three failed initiatives (by Britain in the 1976, the US in 1979-80 and France in 1983), to re-regulate global financial markets further contributed to the globalisation of financial markets by setting the stage for ‘a flurry of liberalisation moves in the 1980s’ (*op. cit.*, p. 67). By the end of the 1980s, the restrictive Bretton Woods financial order had been effectively abandoned.

The degree to which the globalisation of finance constrains the autonomy of nation-states to conduct national economic and social policy, and whether there is convergence in such nation-state regulation will be discussed in the next section. To summarise the discussion to date, the argument developed is that Lipietz goes

too far in assuming the ability of nation-states to conduct autonomous economic and social policy. Such autonomy, it has been argued, is always relative. In the international context, when the global development project is recognised, state autonomy is relative to the context in which global capital movements are regulated (or not) and linked to this in how exchange rate systems are regulated. It is also relative to how trade rules are regulated. Further, in the regulation of the development project through the multinational institutions that were created after the Second World War, lies an international mode of regulation, itself a hegemonic order, that facilitates the relative autonomy within which nation states can conduct economic and social policy. During Fordism this facilitation promoted a global system of embedded liberal states. The crises of national Fordist models of development were also conditioned by the breakdown in this international mode of regulation and its re-regulation towards a neo-liberal international mode of regulation. Thus in an after or post-Fordist international order, the relative autonomy within which nation states conduct economic and social policy needs to have regard to the environment of the neo-liberal international mode of regulation.

Convergence tendencies to neo-liberal competition states as an after fordist international configuration

As indicated earlier, whether there is a tendency towards convergence in national economic strategies and policies is subject to debate. Skeptics, among whom Régulation theorists such as Lipietz are numbered, argue that while the globalisation of finance and competition may well impose similar kinds of economic disciplines on the governments of nation states, such pressures are

mediated by domestic structures and institutional arrangements which produce variations in the capacity of nation states to respond (Garrett and Lange, 1996; Weiss, 1998; Swank, 2002). States can and do make a difference, as the continuing diversity of national forms show. This is especially the case in relation to macroeconomic and industrial policy, where significant national differences continue to exist, even within the same regions of the world (Dore, 1996; Boyer and Drache, 1996; Garrett, 1998). Also critiqued is the claim that international financial discipline by itself prevents governments from pursuing progressive redistributive fiscal strategies (Garrett, 1998; Reiger and Liebfried, 1998; Hirst and Thompson, 1999; Swank, 2002). As Held and McGrew (2002) state:

‘in the judgement of the sceptics, national governments remain, for the most part, the sole sources of effective and legitimate authority in the governance of the world economy, while also being the principal agents of international economic co-ordination and regulation’ (p. 48).

The real question, however, concerns the limits within which states can exert such autonomy. Here it is argued that the neo-liberal international mode of regulation limits state autonomy to variations of neo-liberal competition states and so reducing the field of diversity in state forms. In this reduced field of diversity, there is thus a converging tendency in nation state forms.

The principal argument for convergence tendencies towards variations of neo-liberal competition states emerges from the capital mobility hypothesis. The international mobility afforded to financial and productive capital by the international mode of regulation constrains national governments to adopt

increasingly similar, neo-liberal economic and social strategies and policies (Reich, 1991; Gill, 1995; Strange, 1996; Amin, 1997; Hoogvelt, 1997; Scholte, 1997; Cox, 1997; Rodrik, 1997). The trans-national mobility resulting from the structural changes in production and finance, creates a 'territorial non-correspondence' (Ryner, 1999, p.42) between markets and states. Freed from nation state constraints, capital can pursue accumulation strategies that no longer align with national priorities. This freedom opens up new global forms of capital accumulation and inter-firm competition. Productive capital need only situate particular elements of its operation in any given country according to its own, now global, strategy. Capital can thus concentrate on particular workforce segments and industries within particular countries rather than being constrained by a national workforce and industrial structure as a whole.

Territorial non-correspondence causes nation states to re-prioritise national and economic and social strategies to favour internationally mobile capital. Such capital has increased structural power to counter attempts at regulation by states, either by exiting or threatening to exit, should economic and social policies not be to the liking of capital. The onus is now on nation states, now without the Fordist mode of regulation to secure employment, wage and output growth, to secure such growth through policies that attract and keep capitalist firms in each of their territories. As Hirsch (1995) usefully states:

'Intensified international competition and the growing flexibility of global capital has raised "locational politics" or "national forms of competitive advantage" (that is, the provision of optimal conditions for the valorisation

of capital within a nation-state framework) to a central policy for all nation states' (p. 45).

In re-prioritising national and social strategies to accumulation strategies which attract and keep capitalist firms to their territory, nation states become 'competition states' – they compete with each other for capital's attention (Jessop, 2003; Cerny, 2003).

In this international configuration of competition states, social democracies find themselves drawn towards neo-liberal or 'third-way' political frameworks as a means to achieve social goals. In this tendency, the social democratic Kalmarian pathway which Lipietz associates as the high-wage, high-skill, high value-added route towards social progress is undermined. The high costs associated with welfare and high wages, combined with the emergence of lower-cost structures in other competition states undermines the social democratic model. Other advanced but more neo-liberalised, competition states can offer a more cost-competitive environment for capital because they have achieved a more segmented and overall cheaper labour force. Additionally, the low-wage advantage of the newly industrialising countries has already promoted de-industrialisation and created unemployment in all the advanced competition states. Social democracies thus find themselves bound in a circle of causality where the ability to maintain a high-wage, high employment welfare state is undermined by a loss in cost competitiveness due to high wages, unemployment, and a comprehensive welfare system.

To break this circle of causality inevitably leads towards neo-liberal political frameworks which re-order the social and economic policies within social democratic states. Part of this tendency is discursive and one which (re)balances political forces. Ryner (1999) examines this in the context of the crisis of the Swedish Social Democracy to argue that internally, transformations in the 'form of policy discourse (what Foucault called *episteme*)' were critical in a political re-balancing towards what he terms 'compensatory neo-liberalism'. Ryner argues that the conversion of counter-interests (particularly among state managers) to compensatory neo-liberalism lies in the success of the Swedish social-democratic model. Regulation became conceived of as technocratic rather than strategic and political, thus the crisis of the Swedish model was 'interpreted not as a crisis of capitalism, but as a Popperian falsification of Keynesian ideas, and a validation of monetarism with regard to inflation' (op. cit., p. 68).

This shift in the epistemic form enabled state managers in particular to be converted to compensatory neo-liberal ideas. In a world driven by the mobility of capital, which in turn is guided in its understanding by the dominant discourses of its neo-liberal agents, state actors rationally equate national competitiveness with market reforms. Similarly, the identification of the material foundation of welfare state viability with national economic competitiveness becomes equated with neo-liberal measures. Thus neo-liberal social democrats win over traditional social democrats by strategically aligning neo-liberal methods with social democratic goals. This occurred in New Zealand as well as in Sweden. In the New Zealand case, Roger Douglas, the key Labour (social democratic) architect of New Zealand's neo-liberal project, presented the market as the only viable path for

economic prosperity, and thus as the only viable way to maintain the social protections of the modern welfare state. As Larner (1997) states ‘Labour tried to introduce “more market” as a means of achieving social democracy’ (Larner, 1997, p. 9).

Ryner takes the regulation of capital at the international level as given. Ryner’s argument can be extended to argue that at the international level the epistemic form of the mode of regulation was and remains technocratic. Thus crisis in the regulation of development, as in Ryner’s analysis, is not associated with a crisis in the development project itself, but in the technical means, the mode of regulation, through which the project was achieved. The solution to this crisis thus lay in new techniques – in this case, the agendas of structural adjustment and governance.

The regulation of development has always been seen as a technical problem. There are two interrelated aspects to this. First, the original means to resolve the problem of development (or the lack of it) were the main tools of modernisation – scientific and technical knowledge. According to Escobar (1995), Truman’s inaugural presidential address in 1949 captured the essence of this idea of development. The third world (as it began to be defined) was backward and primitive, but one day their problems would be solved, and the solution would come through these countries following the same path to wealth and prosperity as the civilised western world. The goal has always been modernisation, with underdevelopment explained in terms of obstacles, internal to the countries concerned, ideologically neutral and solvable by technical, pragmatic means (Gardner and Lewis, 1996). Second, because the governing structure of

multinational institutions is hegemonic, such structures are dominated by the interests of the dominant power, the US, but also to achieve hegemony, consensus amongst different constituents is critical. The discourse within which ideas to resolve the problems of development, perpetuated within the institutional structures themselves, was thus technical – both because the techniques of modernisation were believed by the hegemonic power to lead to development, and also, by de-politicising what were political issues as technical issues, consensus among different constituents could be more easily achieved (Böas and McNeill, 2003; 2004).

As the crisis of Fordism unfolded, promoted by the neo-liberal interests of the US, structural adjustment programmes followed by governance became the agendas within which the multilateral organisations promoted their programmes. Whilst structural adjustment programmes and governance are seemingly a departure from the established technical agenda of these institutions, as Böas and McNeill note, such agenda ‘fit within the established framework of technocracy and functionality’ (1993, p. 69). Structural adjustment programmes were purely economic, thus represented a technical solution to the diagnosed problem - incorrect economic structure. The failure of structural adjustment programmes to solve the development problems of some states led to the agenda of governance. The governance agenda represents a discovery of the political, but it is still a discovery that is technical and functional. The appeal of the concept of governance is that the problem of development was not wrong prescriptions (structural adjustments) by the external donor or lender, but by inherent failures in the governmental structures of donee or borrowing states. The state was the

problem. The recognition of the political however does not represent a break with neo-liberalism since governance is defined in efficiency terms – as one which is highly efficient in carrying out economic reforms. Thus the operationalising of governance is still presented in de-politicised terms.

The institutions of the development project still exist, despite the crisis of Fordism. By remaining within their technical episteme, however, the neo-liberal political project of capital initiated by US interests, has extended its project into the regulation of development. Structural adjustment programmes and good governance agenda now replace the Bretton Woods instruments as mechanisms to pressure developing countries and countries in crisis to follow orthodox liberal economic prescriptions of price reform and privatisation. In the codifying of such agenda into the Washington Consensus (Williamson, 1993) these become models of best practice for national hegemonic interests to maintain national competitiveness.

Once nation states discursively succumb to the neo-liberal rationality, they pursue policies that structurally reinforce this rationality. The distancing of the state from the economic sphere and the increased firm autonomy, which neo-liberalism implies, removes labour market rigidities in the form of rights, protections and representation and thus makes labour more flexible, that is, more directly bendable to capital's different requirements. Organised labours' direct exposure to such neo-liberalising reforms seriously undermines the ability of unions to pursue solidaristic strategies. A disciplining wedge is driven between two major goals of the union movement as firms have increased capacity to divide and rule their

workforces and as wage increases are discursively seen as a cost and a constraint on national competitiveness rather than as a source of demand.

In discursively succumbing to the neo-liberal discourse, states themselves restructure their agencies which in turn undermine the state's ability to pursue solidaristic strategies. Social democratic competition states restructure welfare regimes towards workfare policies in an attempt to move people off welfare into waged work (Jessop, 1993). Waged work is encouraged by active labour market policies of lowered and more conditional benefits, by case management and training programmes. In addition, waged work is morally encouraged via the reinvention of the work ethic and the vilification of the unwaged as second-class citizens (Bauman, 1998). Workfare facilitates a shift from unemployment to work readiness where all citizens are available, willing and actively seeking work. In these ways, unemployment becomes consistent with the neo-liberal meaning of the term, thus is individualised and distanced from the state. Workfare also helps constructs labour markets as individualised and distanced from the state since it increases competition for jobs and increases wage dependence.

In succumbing to the neo-liberal discourse, social democratic competition states also pursue increased marketisation and commodification of state agencies so that state expenditure is seen as consistent with national competitiveness. In the expectation that market regulation is associated with economic efficiency, competition within the state sector is viewed as an efficient use of taxpayer funds. In the New Zealand case, as in others, the state has corporatised and fully or partially privatised many state-owned enterprises. Within the core public service,

frameworks of competition are constructed where global funding constraints, legislatively constructed enterprise autonomy and user pays principles create a dynamic of competition between organisations for scarce consumers and or resources.

This commodification and marketisation of state activity distances the central state from the institutional and democratic pressures which seek to prioritise social goals over economic goals, and so embeds the neo-liberal discourse within a social democracy rather than a solidaristic discourse. Having removed itself directly from these pressures, the central state can shift responsibility for adverse economic and social outcomes rising out of restructuring the state apparatuses, such as redundancies, low wage increases, poor public service or insufficient infrastructure onto the broader institutions it has created or directly onto the economic agents themselves.

The distancing of the social democratic state from both the social and economic spheres thus undermines the Kalmarian pathway of social cohesion leading to improved economic and social outcomes. Instead, within a neo-liberal international mode of regulation, state autonomy is limited to variations of neo-liberal competition states. This implies a reduction in the field of diversity in state forms, not increased diversity as Lipietz claims. Thus through the structure of the neo-liberal international mode of regulation, there is a tendency towards convergence of national economic and social strategies that are neo-liberal. As a result, social democracies are under pressure to increasingly neo-liberalise the wage relation so that it is more flexible for the needs of capital. This represents a

counter-tendency to the divergence in national modes of regulation that is proposed by Lipietz in support of a third international division of labour.

Conclusion

This chapter presents a critique of autonomous state development that is held by dominant Régulation Approach theorists, including Lipietz. Out of this critique is advanced the argument that at the level of the international, Lipietz, in giving primacy to internal causes, does not give sufficient attention to the international regulation of economic relations. An argument is advanced that an international mode of regulation has continued to exist since the advent of Fordism after the Second World War. This international mode of regulation arose as a hegemonic political project comprising a discourse that social order on a global scale could be achieved through economic development and a set of institutional structures in the form of multinational institutions. The development project was based on a system of stable nation-states where each nation state was responsible for managing national economic growth. The multinational institutions existed to regulate for a stable international environment within which nation states have autonomy to conduct national economic and social policies to achieve economic growth. The international mode of regulation thus overdetermines state autonomy in an international context. Whilst at the level of the nation state it is correct to argue for primacy of internal causes in the social construction of labour market structures, it is an omission that such primacy is conditional upon the regulation of the international environment.

In the light of this construct of an international mode of regulation, the argument is that after the crisis of Fordism an international mode of regulation remains, and the multinational institutions regulating this project remain, but the project has changed with the politically-driven removal of controls on the international mobility of capital. This has had the effect of re-directing and significantly reducing the 'relative autonomy' of national states. By removing controls on the international mobility of capital, nation states themselves are much more directly constrained in their ability to conduct economic and social development by the requirements of capital. In short, they are pressured to neo-liberalise the mode of regulation in order to attract internationally mobile productive capital.

Coterminous with the internationalisation of production during Fordism was the internationalism of finance. This served the economic function of developing forms of money to serve as means of payment. The form of money assumed to serve this function was credit, since loans financed investments of different types on the periphery. Aided by dominant states, the international monetary regime incorporated within the development models of Fordism proved incapable of controlling money as the basis of international credit. The global credit system emerged as an unregulated one outside the control of the international monetary regime. This unregulated global credit system was a product of the success of Fordism but also was a factor in the crisis of the whole Fordist system. For private capital, keen to escape the clutch of national constraints on capital movements, exploited the presence of this unregulated regime and undermined the ability of central banks and the IMF to use official liquidity to fix exchange rates and so promoted trade and supported national policies of economic development. The

growing deficiencies of politically controlling international private capital movements made room for the emergence of international capital markets. The formation of interest rates therefore began to take place outside the reach and influence of national monetary policies. This 'loss of interest-sovereignty' for nation-states contributed to the impossibility of continuing Keynesian (autonomous) national development projects of demand management for economic growth and provoked the growing influence and attractiveness of monetary policy recommendations and of supply-side economics for the formulation of economic policy.

The international mode of regulation has, therefore, changed from one of promoting embedded liberalism as state modes to one of promoting international competitiveness as state modes. During the 1980s, governments across the advanced capitalist world abolished external capital controls, effectively abandoning the Bretton Woods financial order. The liberalisation decisions by the US and Britain encouraged similar liberalisation moves elsewhere in the OECD region. Acting to arbitrage regulation, national financial authorities could not hope to attract new financial business and capital from abroad or even maintain the financial business and capital of their own multinationals or international banks. These competitive pressures encouraged the idea of a policy of liberalisation and de-regulation designed to appeal to and attract footloose international financial market operators. Multinational institutions moved from supporting international private capital immobility to encouraging free international capital mobility. In addition to supporting an international capital mobility regime, multinational institutions continue to support the development project but have turned to

governance as the regulatory form through which development projects and structural reforms 'most efficiently achieve' the goals of economic growth.

The autonomy of nation states in this context is thus facilitated by the movement of the international environment towards neo-liberal policy frameworks. In such a convergence towards this relative autonomy therefore, lies a counter-tendency to Lipietz' theorisation of a divergence in national after Fordist modes of regulation. Capital may be able to choose which national mode of regulation best suits its competitive advantage, but the choice tends to become between which variant of neo-liberal national modes of regulation as nation states autonomously compete with each other to attract capital.

The re-regulation of labour markets within these converging neo-liberal state modes involves the distancing of the state from the regulation of employment relations and a correspondingly increased autonomy for such relations to be negotiated at the level of the workplace. This process makes labour markets more flexible, that is, more directly bendable to capital's different requirements, as rigidities in the form of worker rights, protections and representation are gradually undermined through legislative changes promoting workplace and individual bargaining and a weakened union movement.

The question, however, remains as to the relation between neo-liberal forms of labour market regulation and the relations in production and the prevailing production paradigm. This is the question Lipietz examines in his analysis of after Fordist trajectories in capital-labour relations. Lipietz dismisses the possibility of

worker involvement in the labour process in an environment of neo-liberalised labour market regulation since worker involvement is inconsistent with flexible employment relations. Lipietz does however identify a national hybrid capital-labour relation which he terms Toyotism in honour of the company with that name. The Toyotist production paradigm attempts to achieve competitive advantage through economies in scale and scope by a network of core firms in which workers are functionally flexible with a periphery of secondary firms who adjust output in response to demand from the core. Workers in the peripheral secondary firms are thus required to be numerically flexible in order to service fluctuations in demand. Worker flexibility and involvement in the production process of core Toyotist firms is achieved through social rather than technological innovations such as just-in-time techniques, jidoka and quality circles or continuous improvement. The production relations of core Toyotist firms are negotiated at the level of the firm. Involvement and flexibility is rendered possible by presupposed quid pro quo concessions for the employees. Social concessions and arrangements revolve around 'quasi-permanent intensive training, enlisting the efforts of virtually the whole of the workforce, the principle of a grading structure giving recognition to acquired skills and know-how, and rules over career structures that are clear and respected by one and all' (Coriat, 1995 p.). This employment relation is not explicitly bargained by the social partners. Rather, most arrangements remain informal and clear, written and explicit contracts are not drawn up but are based on trust.

The argument developed in the next chapter is that Toyotism as a form of production or a technological paradigm is facilitated by the neo-liberal regulation

of the labour market and is tending to become the dominant technological paradigm for multi-national firms engaged in global production systems. Similar to Toyotist production relations of core, involved workers segmented from peripheral, numerically flexible workers, it is argued that neo-liberal production relations in advanced capitalist states help to reproduce Toyotism through re-segmenting already existing labour market segments. This capital-labour relation where worker flexibility and involvement in the labour process is achieved within neo-liberal production relations is termed here the 'inconsistent hybrid capital-labour relation'

Chapter Seven

Segmentation and the 'Inconsistent-Hybrid: Counter-Tendencies towards Convergence in After Fordist Capital-Labour Relations

Introduction

The previous chapter presented the argument that the international framework sets the terms which define the nature and extent to which nation states can determine their own mode of economic and social development. The international mode of regulation during the Fordist period of development constrained the international mobility of capital and permitted advanced nation states to conduct Keynesian-style demand management and to develop welfare regimes in their social and economic policies. Fordism could develop as national models of development within this international mode of regulation. In contrast, in the contemporary period, the international mode of regulation permits international capital mobility. Nation states in this international mode of regulation have reduced autonomy in their conduct of economic and social policy. While restricted capital mobility facilitated the Keynesian welfare state, international capital mobility pushes national states to become competition states that tend to converge towards neo-liberal competition states because they must prioritise economic and social policies which attract internationally mobile productive capital to their shores.

The argument of this chapter is that the priority of national competitiveness in this environment encourages the neo-liberalisation of Toyotist production relations. In this technological paradigm, multinational firms seek to obtain competitive advantage in international production systems oriented towards achieving economies in both scale and scope. Neo-liberalised employment relations which flexibilise labour markets facilitate capital's capacity to re-segment already existing segmented labour market structures. This re-segmentation broadens and deepens existing labour market segments so as to incorporate both involvement and flexibility in the labour relation and flexibility in the wage relation by treating different labour market segments in different ways. This ability to re-segment labour market segments enables multinationals to reproduce the technological paradigm of economies of scale and scope in international production systems. This capital-labour relation is termed the 'inconsistent hybrid' because it succeeds in reproducing production relations of worker involvement in the labour process with externalised wage relations within the same social formation.

The relevance to this thesis of this argument for the inconsistent hybrid as characteristic of capital-labour relations in advanced capitalist states, is that this counters the tendency towards Lipietz' third international division of labour. Lipietz privileged two trajectories in after fordist capital labour relations: one towards neo-Taylorism, the other towards Kalmarism. These, he argued, co-exist as national models of production in being able to produce the same things but in different ways. This co-existence is a de-facto third international division of labour. The contrasting tendency towards the inconsistent hybrid capital-labour relation, however, acts as a counter-tendency to this co-existence of divergent,

nationally-based capital-labour relations, and so undermines Lipietz' conception of an emergent third international division of labour.

To ground this argument, capital-labour relations under Fordism are re-examined. The argument developed is that theorists within the Régulation Approach give too much emphasis to the continued dominance of the Fordist technological paradigm, and within this paradigm, to the tendencies towards the de-skilling of production workers. Rather, within the Fordist technological paradigm there was a continual and deepening hierarchy of skills, which, with the compromise between the interests of capital and labour became embedded into segmented labour market structures. The second international division of labour and trajectories in after Fordist capital-labour relations thus have nationally segmented labour-market structures as their starting-point.

The significance of labour market segmentation in core Fordist countries is overlooked by Lipietz in his initial account of the emergence of the second international division of labour and in his later account of the emergence of the third international division of labour. The international separation of low-skill components of the Fordist technological paradigm that formed the second international division of labour was preceded and initiated by the creation of these low-skill labour market segments in core Fordist states. The market structures at the crisis of Fordism in core Fordist states were not dominated by homogenous, de-skilled industrial workers, rather they comprised a hierarchy of skilled labour market segments that were diminished in size and a new industrial proletariat on the periphery that was increasing in size. The implications for trajectories in after

Fordist capital-labour relations of these pre-conditions of a more complex structure of segmented labour market structures formed during Fordism are subsequently developed.

The discussion on the neo-liberal international mode of regulation and the converging tendency toward the neo-liberal competition state in the previous chapter is brought forward to argue that these comprise a mode of regulation for the reproduction of the inconsistent hybrid capital-labour relation, at least within formerly core Fordist states. Within the neo-liberal international mode of regulation, competition states are forced towards neo-liberal forms of economic regulation so as to attract and keep internationally mobile capital to maintain employment within their geographic location. Neo-liberal regulation of labour markets increases the power of capital to dictate the terms of the capital-labour relation and conversely weakens the power of labour to resist. However, the labour markets constructed in this era of de-regulation, even if free markets based on voluntary exchange, remain socially constructed and evolve from existing forms. These pre-existing forms are segmented labour markets: a segmentation that was taking on an increasingly globalised scale at the onset of the crisis of Fordism.

Capital with this power reshapes the 'frontier of control' by eroding traditional job demarcations, by redefining job content, by sub-contracting, by adjusting, manipulating or removing pay and job grading structures and through introducing Japanese or lean production innovations in work practices such as multi-skilling, multi-tasking and work teams, and by selecting employees with the right attitude.

This re-shaping of the frontier of control erodes but does not deplete core, already involved workers but increases a periphery of flexi-workers who are both functionally and numerically flexible.

The mode of regulation of the neo-liberal competition state structurally couples with the accumulation strategies of international capital to reproduce a global regime of flexible accumulation. The predominant capital actors at the global level in contemporary times are multi-national enterprises (MNEs) who are increasingly engaged in global production systems of dynamic accumulation. That is, as a means of adapting to an international environment of increased competition and increased uncertainty, MNE's seek to create value through achieving both economies of scale and scope in production through maintaining the principle of mass production, adding to this principle the ability to differentiate and adapt products and so to add variety to commodity production. The organisational form of varied mass production is one of segmented industrial structures of a hierarchy of core firms subcontracting on just-in-time procedures and protocols to peripheral firms. This model of production requires a labour force that is flexible both functionally and numerically. This labour force is socially constructed through the re-segmentation of prior labour market segments whereby core labour market segments retain functional flexibility but are increasingly numerically flexibilised and peripheral segments are increasingly numerically and functionally flexibilised. Such a re-segmentation corresponds with the interests of capital and becomes embedded as a labour market structure. Out of the structural coupling of the neo-liberal competition state and the relative autonomy of global production systems, therefore, an extended form of the

inconsistent-hybrid capital-labour relation is embedded as re-segmented labour market structures.

After Fordist trajectories in capital-labour relations

In the post-Fordist debate, prospective after Fordist capital-labour relations begin with a common starting point in the Fordist capital-labour relation: Taylorism as direct control on the activity of workers and rigidity in the wage contract. One, perhaps dominant, position in this debate is that a post-Fordist technological paradigm, variously labelled 'flexible accumulation' (Harvey, 2001), 'dynamic specialisation' (Coriat, 2002), and 'flexible mass production' (Boyer and Drache, 1996) is emerging out of the Fordist capital-labour relation. Existing in this technological paradigm are tendencies to mobilise the craft skills, know-how and the intellectual activity of the labour force. Such a model represents a new model of development which increases productivity, adapts products continuously to demand and increases the efficiency of costly fixed capital (Piore and Sabel, 1984; Sabel, 1996).

Régulationists take the view that in a neo-liberal political environment, in which the state removes itself from the construction of wage relations and encourages individual bargaining between workers and employers (wage and employment flexibility), the technological paradigm of dynamic specialisation is unlikely to emerge and thus stabilise into a post-Fordist model of development. To support this view, Régulationists point to the basic contradiction between functional flexibility (the labour relation in flexible specialisation) and wage flexibility in a

neo-liberal regulatory environment. Capitalists, in order to become involved in a dynamic specialisation model of organisation of work, need some form of regulation to ensure the collective commitment of workers to produce surplus value. Market regulation, or external flexibility in the wage relation, does not achieve this commitment, since on the one hand capitalists are unwilling to invest in firm-specific skills and costly fixed capital if workers are free to exit into other forms of work. Likewise, workers will not be willing to become involved in the labour process if they can be fired at will and cannot be assured of gaining some of the dividends generated from the greater productivity resulting from their involvement. Collective involvement of workers is thus 'unlikely to be possible if there is no commonality of destiny of firms and their workforces' (Leborgne and Lipietz, 1992, p. 339). Rather, commitment needs to be negotiated and this negotiation will be based around some form of stability in the wage relation.

The presence of this basic contradiction leads Lipietz and others to conclude that this incompatibility between internal flexibility in the labour relation and external flexibility in the wage relation privileges 'two real pathways of development' (op. cit.) in after Fordist capital-labour relations emanating from the starting point of the Fordist capital-labour relation. One pathway, neo-Taylorism, regulates labour through the external market, but is associated with hierarchical direct control of the labour process. The other pathway, which is labelled Kalmarian in honour of the first car factory reorganised according to the involvement principle in a social democratic country, regulates the wage relation through negotiation and is associated with the society-wide negotiated commitment or involvement of workers to produce surplus value in the labour process. To Lipietz, (1997)

'offensive strategies' (Boyer, 1995) undertaken particularly within the social-democratic states of Scandinavia and Germany in the late 1980s privileged the Kalmarian trajectory and in so doing fostered a mode of regulation actually suitable for a regime of accumulation based on high wages, high skill and high value-added. In contrast, 'defensive strategies' (Boyer, (op. cit.)), undertaken in such countries as the UK, the USA and NZ, privileged the neo-Taylorist trajectory and in doing so fostered a mode of regulation suitable for a continuation of a neo-Fordism (Aglietta, 1979). On the basis of this duality, Lipietz argued for the possibility of a post-Fordist model of development comprising the co-existence of nation states within continental spaces, each adopting either offensive or defensive strategies. In the sense that such social adaptation to the crisis of Fordism creates a comparative advantage in the production of certain goods and services, such an international configuration could be considered as Ricardian. The international division of labour that Lipietz sees from this international post-Fordist configuration is one of core states specialising in flexible, high-value added production in which workers had:

'the highest salaries, the highest qualifications, the greatest "internal flexibility" and thus the greatest capacity to introduce new processes and to design and test new products', [and peripheral states specialising in extending Fordism but who can only maintain their competitiveness] with ever more extreme [external] flexibility and ever lower wages' (Lipietz, 1997, p. 17).

Despite this claim for a possible post-Fordist international configuration, Lipietz in his 1997 article can only offer Western Europe as a model for this

configuration. Of the rest of the world that Lipietz considers, the Americas were 'engaged in the same [neo-Taylorist] industrial paradigm [and could] only adjust reciprocally by greater or lesser (external) flexibility' (op. cit., p. 26), thus were not engaged in a project of co-existence of different paradigms. The Asian bloc in contrast, could be seen as a de-facto post-Fordist configuration because 'of the heterogeneity of Asian technological paradigms and the absence of regulatory constraints throughout the entire bloc' (op. cit., p. 33). It is Lipietz's view that unlike Western Europe where offensive strategies by certain states can maintain overall aggregate demand, the absence of regulation over aggregate demand in the Asian bloc would eventually lead to a crisis of overproduction. Lipietz also presents the view that at the time of writing (in the early 1990s), the well ordered hierarchy in Western Europe was being undermined by neo-liberal pressures for market regulation as a consequence of the reconstruction of Eastern Europe. This tendency towards market regulation, presented in the early 1990s has been subsequently confirmed towards the end of the century and into the new millennium. Also, subsequent to Lipietz's paper has been the continued economic growth and employment growth in the United States, a state supposedly 'no longer dominant: technologically, financially or socially' (Lipietz, 1997, p. 26).

While the logic of Lipietz' claims is consistent with core Régulation theory, the general applicability of his claims across international space and the actual historical turn of events suggest otherwise. Thus, in contrast to mainstream economic theorists who would prefer to modify reality make it fit with their theoretical framework, Régulation theory needs to be modified to reflect changing

historical practice. This theorisation begins with a critique of the Fordist capital-labour relation as a dominant type.

The Fordist capital-labour relation as a dominant, ideal type

The methodology of the Régulation Approach is to recognise that the precise configuration of the capitalist mode of production will tend to vary from state to state. To identify what is invariable in all such variations, the Régulation Approach resorts to the method of the ideal type, in which is captured the common features across the states that are the subject of examination. Such is the methodology with the concept of the Fordist model of development, which, while recognising the reality of many national varieties, is conceptualised as an ideal type of the common features of these national varieties. The Fordist capital-labour relation is a conceptualisation of an ideal type of capital labour relation: as Taylorism involving direct control on the activity of workers and rigidity in the wage contract (Lipietz, 1985), but at the same time acknowledging different national variants of this relation. These national variants notwithstanding, the common features of the Fordist capital-labour relation are understood as class compromises between industrial workers who have become sufficiently homogeneous in general labour skills so as to be able to unite against the degradation of work and the owners of capital for whom the source of production of relative surplus value lies in the very conditions that degrade work: machine pacing of de-skilled labour power. The compromise lies in the acceptance by unions representing these homogenised workers of Fordist forms of work organisation in return for wage increases according to expected productivity

achievements and the regularisation of this practice across all sectors through legislation by the state. Labour conflicts thus focused on wage demands with the (re-)organisation of work left largely uncontested because the right of managers to have the leading role in organising the production process had been ceded. Whilst national variations in how these struggles over the capital-labour relation are central to the Régulation Approach, the common features across national variations remains this social compromise between the representatives of homogenised workers and capital. The Fordist capital-labour relation as an ideal type becomes conceptually cemented as the dominant type, from which after Fordist capital-labour relations emanate following the crisis in the Fordist model of development.

The Fordist capital-labour relation conceptualises workers as, or continually tending towards, homogeneous, de-skilled collective workers. The source of the conceptualisation by theorists within the Régulation Approach of the general principle of organisation of labour, or technological paradigm during the Fordist model of development, lies with the work of Braverman (1974) in his work *Labor and Monopoly Capital: the Degradation of Work in the Twentieth Century*. Braverman's contribution derives from his successful attempt to renew Marx's theory of the labour process and apply it to subsequent historical developments, taking a fresh look at skills, technology and work organisation.

Marx, it may be recalled, placed a particular criticism of the view at his time (and still held today by orthodoxy) that science and technology are independent forces determining the future development of production. Machines in this orthodox

view are thus regarded as neutral and not held to determine human relations. Marx's criticism was that the appearance of technology as an external and unalterable power over workers fetishised technology by detaching the social nature of labour from the conditions that produced it. Marx commented that 'it would be possible to write a whole history of the inventions made since 1830 for the sole purpose of providing capital with weapons against working class revolt' (1976, p. 563). In giving numerous examples, Marx argues that only with generalised mechanisation did large-scale industry develop an adequate technical basis to expand labour productivity beyond the formal subordination of labour and intensify labour power to a real subordination of labour. Further, the major effect of the real subordination of labour to capital was a reduction in skills and a tendency to equalise types of work through the process of deskilling and homogenisation of tasks. Marx did not dismiss the importance of worker resistance and struggles against their real subordination, and deals at length with 'the struggle between worker and machine' (op. cit., pp. 553-64). In the concept of real subordination, Marx therefore, meant to indicate the new and more powerful mechanisms for control in the stage of mechanisation with which he was familiar. In Marx's view, in this stage of capitalist development, capital was given a greater opportunity to appropriate the knowledge required to design and enforce the way in which each individual worker functions as an appendage to the machine, but the thrust for control was always tempered by worker resistance to the modification and multiplication of the means used to subordinate labour (Thompson, 1989, p. 52).

Braverman emphasises three aspects of Marx's conceptualisation of the labour process. He emphasises the necessity for capital to realise the potential of purchased labour power by transforming it into labour under its own control. He emphasises the origin of management in the struggle to devise the most effective means of imposing the employers' will within a new social relation of production qualitatively different from what had existed before. He also emphasises a division of labour based on the systematic subdivision of work, rather than on a simple distribution of craft, that is only generalised within the capitalist mode of production. This separation of work into constituent elements reflects the necessary principle for capital to divide craft so as to cheapen the parts and in doing so provide the basis for the destruction of all-round skills. Braverman also renews Marx's theory of the labour process by outlining the greater possibilities for widespread de-skilling through the use of new forms of technology and science in the service of capital and argues that this same process offers considerably more scope for tighter managerial control; a process which Braverman argues comes to be located around Taylorism. In Taylorism, Braverman argues, capital had found a theory and practice of management in which it was able to 'render conscious and systematic the formerly unconscious tendency of capitalist production' (1974, p. 121) with respect to the control and uses of skill and knowledge.

Braverman points out that 'Taylorism raised a storm of opposition among the trade unions' (1974, p. 136), because of their realisation that it was an effort to relieve workers of their job autonomy and craft knowledge. Because Braverman in his work deliberately eschews any attempt to accompany the degradation of

work with an explicit theory of class consciousness and social change, worker resistance is only briefly mentioned. Braverman saw the limits to Taylorism more in terms of the inadequate scale of production for meeting the cost of rationalisation and of limits in the degree of scientific-technological advancement in the production process. Braverman gives prominence to the latter by arguing that Taylorism began to coincide with a new scientific-technical revolution leading to new techniques and machinery capable of increasing production through greater intensity of work. Large companies, allied to state intervention, were able to hasten the planned use of research in technology and product design in a manner far removed from the more spontaneous innovations evoked by the production processes when Marx was analysing large-scale industry. The more intensive and sophisticated mechanisation brought about faster and more efficient machinery which was incorporated 'within a management effort to dissolve the labour process as a process conducted by the worker and reconstitute it as a process conducted by the management' (1974, p. 170). Science then, 'has helped to turn work into a straight jacket' (Gorz, 1985, p. 172), but also deepened the trend towards deskilling and task fragmentation.

The Régulation Approach takes Braverman's approach further by arguing that, in addition to capital capturing scientific-technological advancement for use in the Taylorist production process, capital also came to some agreement with labour in order to respond to labour's resistance to this project. The outcomes of this compromise then underpinned the logic of the Fordist regime of accumulation whereby through increased wages workers could become the mass consumers of

the products of the mass production systems that employed their labour and in so doing allow capital to accumulate without crisis.

Insofar as this capital-labour relation became 'dominant' within a national formation however, the insistence on Taylorism as the dominant labour process within the Fordist capital-labour relation is perhaps exaggerating the extent of the real subordination of workers during Fordism. Braverman was concerned to renew Marx's theory of the labour process and apply it to subsequent historical developments. The historical development that Braverman focuses his theoretical efforts on is how, in Taylorism, capital had discovered a systematic means to achieve the real subordination of labour within large-scale industry. The expansion of this labour process into sectors outside large-scale industry were theorised as tendential as a consequence of competition within existing non-large-scale industry and as capital finds new areas to commodify within the social matrix. During Fordism, therefore, the Fordist labour process can only be considered as dominant in the sense that at this time, large-scale industry was the dominant form of capitalist accumulation. Other sectors were not Taylorised and as such remain 'blind spots' in the discourse on Fordism and the generality of the rigid Fordist wage relation.

If it is recognised that Régulation theorists exaggerate Taylorism as a dominant form during Fordism, a more nuanced account of the consequences for labour market structures, the contradictions in their regulation, and the form of the crisis in their regulation can be considered. This more nuanced account can be derived from the literature on the post-Braverman debate and on segmentation theory.

Both of these sets of literature examine the consequences for labour of capitalist development in the context of strategic interventions by organised labour and capital, and to a lesser extent, the state. Despite similarities in content, each set of literature places different emphasis on aspects of labour because each has evolved to consider different questions. The post-Braverman debate focuses on the labour process. This literature does not examine the constraints of industry structure, ignores the state, and does not examine how wages are formed. Segmentation theory was developed to explain widening wage inequalities in advanced capitalist states. In common with the post-Braverman literature, segmentation theory considers worker's skills, but only to a limited extent in the context of historical developments in the labour process. Segmentation theory, in contrast to the 'post-Braverman' debate, places considerable emphasis on the impact of industry structure and organised labour on labour market outcomes. Again, the state does not figure prominently in this literature. In short, the critique presented here is that both sets of literature lack the political economy of the Régulation Approach, but can add to the conceptual framework of the Régulation Approach through a deeper understanding of historical developments in the labour process, the constraints industry structure places on competition, and the role this competitive environment and organised labour have in wage formation.

The post-Braverman debate as a point of critique

Early empirical critiques of Braverman pointed to the variation of trends in skill formation and destruction within workplaces, not the unilinear trend towards homogenisation that Braverman predicted (Cutler, 1978; More, 1982; Littler,

1982; Wood, 1982). In practice, the degree of Taylorist control varied from one industry to the next, so it was difficult to conceive of Taylorism as the dominant labour process (Burawoy, 1979). Early studies identified that there were a number of mechanisms that counteracted de-skilling, notably the effect of worker resistance on the deskilling process (Friedman, 1977; Lee, 1980), a point taken up by Régulationists, and the role of organisation in mediating the relations between technological development and skill in the labour process. While the influence of craft organisation in retaining levels of skills and rewards was examined closely, with the key role being played by mechanisms of social engineering, (Penn, 1986) the focus of this discourse is more from the perspective of capital in arguing that that Taylorism was not the only strategy available to and used by capital to control labour.

For a number of theorists (e.g. Edwards, Burawoy and Friedman), the main constraint on Taylorism is its rigidity as a labour process. To these writers, the attempt to create a monopoly of conception also requires the contradictory requirement for some level of creative participation of shop floor workers in the production process. The latter tendency is described by Friedman as ‘responsible autonomy’ and defined in terms of ‘the maintenance of managerial authority by getting workers to identify with the competitive aims of the enterprise so that they will act “responsibly” with a minimum of supervision’ (1977b, p. 48). Responsible autonomy, to Friedman, constitutes the major strategic alternative form of management in exercising overall control of the labour process. To Friedman, Marxist orthodoxy (Braverman) in its one-sided emphasis on forms of direct control, fails to examine the means by which capital has to deal with the

contradictions within the labour process to sustain the model of production. Thus capitalists to Friedman have a frontier of control: a range of possible tactics wherein the discretion in the degree of control is conditioned by the pressure of worker resistance and competitive market pressures.

Friedman does not present a historical analysis in the sense of stages of development of forms of control. He does however, argue that after 1945 there was a shift in managerial strategies within large-scale firms to counteract the rigidity and resistance inherent in Taylorist forms of direct control. The inflexibility of managerial operation of Taylorism and the degree of adverse reaction was held to limit the usefulness of Taylorism. Given that managers in monopoly conditions have to deal with greater potential worker resistance, Friedman argues this accentuated the use by management of responsible autonomy to co-opt the workforce. Friedman thus argues that within large-scale industry in the post-war era there was a qualitative shift in managerial strategy to one of segmenting labour into internal labour markets in order to help with problems of inflexibility in the Taylorised production process. This strategy involved management applying different strategies to different sections of the workforce according to how essential their skills were to securing high, long-run profits. Central workers, those more skilled workers who already had elements of job control and discretion, were more likely to be dealt with in terms of responsible autonomy, while the expendability of peripheral workers made them more vulnerable to direct controls.

Edwards (1979) attempts a more comprehensive explanation of the varieties of control inside the historical development of the labour process. To Edwards, evolution of forms of control is governed by workplace conflict and economic contradictions in the firm's operations. Hence his term 'contested terrain'. Edwards argues that as competitive capitalism moved to monopoly capitalism following the impact of intensified class struggle and the centralisation of capital, large firms began to experiment with moving away from simple forms of control to structural forms of control. Using a limited definition of Taylorism he identifies technical control as that which 'involves designing machinery and planning the work flow to minimise the problem of transforming labour power into labour as well as to maximise the purely physically based possibilities for achieving efficiencies' (Edwards, 1979, p. 112). This is seen as a qualitative advance on work that has undergone mechanisation, or machine pacing, in that mechanisation increases the productivity of labour without altering structures of control. Technical control only emerges when the entire production processes, or large segments of it, are based on a technology that paces and directs the labour process, as represented by the Fordist assembly line.

Computer-based technology enables a further advance of technical control, but Edwards maintains a distinction between computer-based mechanisation and computer-based machine direction of the whole labour process. For instance, the latter is held to provide a total feedback system for the evaluation of work, whereas the former represents 'simply an advance in machine pacing of individual workers' (1979, p. 123). To Edwards, machine direction of the whole labour process created a weakness in control in the way it created a homogeneous

workforce by producing common pace and patterns of work. So while control problems of the individual section were solved, conflict is displaced and raised to a plant-wide level. Plant-wide conflict thus stimulated firms to find ways of simultaneously re-dividing the workforce, integrating the workforce into company structures and winning its loyalty. The other structural form of control, bureaucratic control, developed as a strategy to divide and rule the workforce and so control the risk of plant-wide conflict. Examples of bureaucratic control include routinising the functions and procedures of management, stratifying work and job titles, and governing appointments and promotion by impersonal rules. Thus each job has an approved description setting forth in considerable detail the tasks workers must perform, once having been rated. This drastically alters the role and power of foremen to exert direct control in that they are subject to the same supposedly objective rules and procedures.

Both Friedman and Edwards, in their different approaches, highlight the more subtle ways in which within the labour process, the tendency towards Taylorism in the face of its own internal contradictions and worker resistance leads to the segmentation by capital of workforces and the creation of internal labour markets in large firms. This consequence of segmentation arising out of Taylorism is not recognised by Braverman and is not taken up by theorists within the Régulation Approach in their analysis of the Fordist model of development.

While the labour process debate focuses upon differences in terms of dimensions of control, the perspective is from that of capital. The objective fact of control however, and the consequences its dimensions have for labour market

segmentation as a result of management strategy, is considered in the absence of any consideration of the process of subjective consent by labour to these dimensions. As Burawoy comments, even responsible autonomy requires a further step 'of eliciting support for managerial goals from workers' (1981, p. 92). A further line of critique of Braverman is that while he ignores worker resistance, resistance is not the whole story since resistance takes no account of the 'processes through which workers come to comply with and otherwise advance their own dehumanisation' (op. cit., p. 90). Burawoy's critique therefore holds that the processes during Fordism through which workers consented to work, particularly the role of trade unions, reinforced the consequence of management strategy to lead to segmented labour market structures.

From the perspective of the Régulation Approach, worker consent to Taylorism rests on worker acceptance of a productivity pay-off in return for allowing managerial prerogative to organise the labour process. The literature on legitimating and consent in work, particularly that of Burawoy, and the literature on segmentation theory, leads to a conclusion that both the process of consent, and the consequences of such consent was more complex than that presented by the Régulation Approach. In short it is argued that this bargain did not address or consider the capitalist project in large-scale industry to segment the labour force.

A basic methodological point of the Régulation Approach is that historically the capitalist mode of production has accommodated itself to crisis. Its conceptual tools are used to examine how forces, historically at least, operate to sustain and reproduce capitalist relations. With regard to the labour process, whilst seldom

made explicit, is the Marxian idea, renewed by Braverman, that conditions for securing profitable production lead to the homogenisation of labour and the concentration of workers under large-scale production: conditions which create class consciousness of their situation of exploitation and subsequent struggle within the labour process. The reproduction of this contradiction in the labour process in the Fordist model of development is presented in terms of a bargain between capital and organised labour. Silent in this emphasis on control, which Marx did not develop, is the view that within the labour process itself exist mechanisms 'of constituting workers as individuals rather than as members of a class, or co-ordinating the interests of labour and capital as well as that of workers and managers, and of redistributing conflict and competition' (Burawoy, 1979, p. 30). That is, within the labour process are mechanisms to manufacture consent to the labour process. Edwards, as discussed above in the divide and conquer strategy of capital, argues for a similar consequence of competitive individualism among workers resulting from bureaucratic control. Greater commitment (consent) to the enterprise is achieved through 'internal' labour markets which internalise at the point of production the features of competitive individualism of external labour market. At a general level, Burawoy develops Marx's conceptual tools of ideology and commodity fetishism by putting emphasis on the way that the particular relations of capitalist production are concealed from the worker, a process enhanced by the separation of visible ownership and control in industry. With the wage form workers cannot identify the distinction between labouring to produce the equivalent of wages, and working additionally to create surplus value. Thus while the specific developments in the ways in which work is organised

have implications for skill and control, such developments have implications for the concealment of, and consent to, class relations.

To the general points, Burawoy adds and highlights the part workers themselves play in creating the conditions of consent through their means of adapting to work. For Burawoy such adaptation is often in the form of games. In his own participant observation study of a piece-work machine shop, games are constituted as informal rules and practices aimed at creating space and time, controlling earnings, and making work more interesting. Drawing on his observations and others (Lupton, 1963; Gouldner, 1954), Burawoy explains the way that games take place within the indulgency patterns of management. Burawoy argues 'One cannot play a game and question the rules at the same time; consent to rules becomes consent to capitalist production' (1981, p. 92). This connects to a wider point in his analysis, that the pattern of games and practices shapes a distinctive pattern of conflict. Tensions in the assertion of worker discretion over time and money may be a consequence of managerial control and allocation of resources, but such tensions are often experienced as one group of workers seeking advantage over other workers. This in turn 'accentuates a lateral conflict that is endemic to the organisation of work' (Burawoy, 1979, p. 66) transforming and re-distributing management-worker conflicts into conflicts between workers.

Burawoy goes further to argue that this lateral conflict expresses a shift from coercion to consensual hegemony in the organisation of the labour process in industry after 1945. Burawoy supports the contentions of writers such as Edwards

that there had been a move towards methods of bureaucratic control dependent more on rules and procedures than coercion and the subsequent development of internal labour markets. Such developments in a culture of intra-worker conflict however, received the support of trade unions since collective bargaining then became the site of a further institutionalisation of bargaining beyond issues of worker resistance to include issues that increasingly set out common interests between workers.

When the Fordist capital-labour relation is therefore examined more closely from the perspective of how this practice was developed, a more nuanced view of labour market structure develops. Instead of the silence in the Régulationist account of labour market structure during Fordism, and the reading by default from Braverman that such a structure comprised homogenised workers rising out of direct control by capital on the activity of workers, a structure of labour market segmentation appears. While the capitalist imperative for control of the labour process is acknowledged, such an imperative does not imply that the sole strategy available for capital is to organise the labour process to control work. If, as the critique suggests, the Fordist capital labour relation was developed as a practice when large-scale industry was the dominant economic activity amongst those states that were advanced capitalist states, contradictions within Taylorism itself created counter-tendencies which led both capital and labour to devise structures to contain these contradictions. A picture emerges at the plant level of large-scale industry of a hegemony of capital and organised labour through collective bargaining around rules and procedures constructing the Fordist capital-labour relation which retained its internal stability through segmenting the labour force

into distinct internal labour market segments. From the perspective of capital, such segmentation provided a political means to manage the inherent limitations of Taylorism: its inflexibility, its continued resistance by workers, particularly when the assembly line raised conflict to the level of the plant, the need to involve some workers so as to keep plants going, and to maintain measures to be able to respond to competitive pressures. From the perspective of organised labour, such segmentation allowed groups of workers to defend their skills and a degree of autonomy against the tide of Taylorisation, and also allowed groups of workers to articulate their common interests when managerial discretion created a culture of intra-worker competition.

Spatial labour market segmentation: segmentation theory as a point of critique

The various streams of segmentation theory also lead to the picture of hegemony between large-scale capital and organised labour wherein each group's interests are met as a consequence of segmenting the labour force. Segmentation theory (with the possible exception of the radical version) places a greater emphasis on factors external to the labour process than the theory emerging from the labour process debate just discussed. It is in this context of industry structure that segmentation theory is presented in support of the argument that the Fordist capital-labour relation created segmented labour markets.

The meaning of segmented labour markets within segmentation theory is one of non-competitive, structured labour markets, or balkanised labour markets (Kerr,

1954). That is, there is limited mobility between different labour markets and different labour markets operate according to different rules.

Segmentation theory was developed specifically to explain the persistence of inequality and low wages in capitalist economies in the period of capitalist development that this thesis defines as Fordism. Two streams can be identified. One, originating in liberalism, identifies the existence of non-competing groups in the labour market, where social and political inequality is inherited and children are confined to the same segment of the labour market as their parents. Added to this model is the effect of discrimination in setting up further barriers to mobility, barriers which become more resilient in a world of imperfect information, where prejudiced beliefs can become self-justifying (Rubery, 1978). These theories continue the methodology of mainstream economic theory in that origins of inequality are exogenous to the economic system, which in the long-run, so long as free markets exist, will be eliminated. This stream does, however, add to the analysis a process of reinforcement of existing social and political inequality through the operation of the labour market.

A second stream, which is more fruitful for this thesis, adopts a different methodology by examining the relationship between the development of the economic structure and the emergence of segmented labour markets. Two main sets of theories have been produced within this methodology: dual labour market theories (Doeringer and Piore, 1971) and radical theories (Gordon, 1972; Edwards, Reich and Gordon, 1975). For an explanation of the emergence of labour market segmentation, dual labour market theories look primarily to

technological developments under capitalism or to the divergent development of the industrial structure. Radical theories, in contrast, attribute the origins of stratification in the labour market to the capitalists need to divide and rule the labour force. There are, therefore, immediate links with these theories and contemporary theorisations of capitalist development in that the former links to the dynamic specialisation thesis as a technological way out of the previously dominant mass production industrial structure. They even share one of the same authors (Piore) in the development of the *Second Industrial Divide* which heralded the potential emergence of flexible specialisation. The latter follows the Régulation Approach in attempting to place labour market outcomes in an historical framework.

Rubery (1978) is critical of both these sets of theories in that:

‘each adopts parts of the previous theories, with no one theory developing its arguments from first principles [and as such] is more a rationalisation of the [then] structure of the American labour market than an explanation of how this was arrived at from the range of development paths open to it’ (1978, p. 18).

This is perhaps unfair, as the authors of the radical approach do present a development argument in their concept of Social Structures of Accumulation which has been acknowledged as similar to the concept of mode of regulation used by the Régulation Approach. The radical approach does share with the dual labour market theory an explanation of segmentation based on the existence of a dual industrial structure.

To Doeringer and Piore (op. cit.) internal labour markets develop because worker skills are becoming more firm-specific and a worker's productivity is more and more a function of on-the-job training and experience, hence length of service, within a firm. In order to encourage the development of a stable labour force, their theory is that employers are willing to pay their workers more than their opportunity wage in an external labour market so as to reduce the incentive to mobility among the workers. With mobility restricted or eliminated, there will be little market influence on the shape of the internal wage structure, the form of which will come to be influenced by customs and by rules. The labour market will thus be divided into relatively independent sections.

Applying this theory to the labour market as a whole, Doeringer and Piore argue that the labour market becomes divided into primary and secondary sectors. Technology and workers' skills have become less general and more firm-specific and a stable labour force has become more necessary. To induce stability, high wages and prospects of advancement are offered by restricting the ports of entry and to each of these a promotion ladder is attached with progress up the ladder determined by seniority. The provision of such employment conditions is however, costly. The need for a stable labour force applies only to certain types of jobs. Where incentives to stability are not necessary, wages remain low, security of employment is not assured and promotion prospects are few. This type of job forms the secondary sector; the former constitutes the primary sector.

Doeringer and Piore (op. cit.) extend this analysis to argue that this labour market dualism stabilised due to the interaction of developments in industrial structure,

developments in technology and the pattern of labour market behaviour. Technological developments required a reduction in labour mobility, but only the development of oligopolistic markets which allow firms much greater control and certainty in their product and factor markets permitted the formation of stable, highly paid, primary workers. The secondary industrial sector in turn provided that degree of flexibility still required by the system. Expansion in demand over the business cycle could be achieved by subcontracting to the secondary sector or by employing secondary sector workers on a temporary basis. Likewise, the technologically determined division of the labour market is reinforced by reactions of workers to their position in the market. Workers confined to the secondary sector develop attitudes and modes of behaviour which turn them into inherently unstable workers, unsuitable for employment in the primary sector. In this interaction, all positive developments take place in the primary sector. It is here that technology is changing and that new labour market structures are developed. Changes in the secondary sector serve only to reinforce its already dominant characteristics: lack of structure, stagnant technology and absence of differentiation between workers.

Doeringer and Piore emphasise the importance of technology in the development of dualism in the labour market. Control of the labour force enters into the model only in so far as employers cannot expect workers to form a stable labour force unless they are offered advantages over and above the external market wage. The introduction of a technological perspective does however provide a more expansive view of the contradictions in Taylorism that labour process theorists such as Friedman identified, wherein managers in large-scale manufacturing

employing a strategy of using technology for control run against the parallel requirement for some level of creative participation of shop floor workers to keep production going. Thus the motives of large-scale capital for the maintenance of a stable, core labour force based on the need for firm-specific skills as argued by Doeringer and Piore are the same as those used by Friedman where such firms needed responsibly autonomous workers who could identify with the competitive aims of the enterprise so that they will act responsibly with a minimum of supervision. Where Doeringer and Piore do improve upon the labour-process literature is their consideration of the broader industrial structure around monopoly capitalism. Labour process theory, like Régulation theory, focuses upon the dominant labour process in large-scale manufacturing and fails to consider the articulation of this dominance over the business cycle with the secondary sector.

However, the failure to explicitly consider control is a weakness in Doeringer and Piore's theory. Radical theories developed out of the dual labour market approach in an attempt to incorporate this theory:

‘into a more general radical framework, convinced that the dual labour market hypothesis can be generated by radical theory and that radical theory provides some important historical foundations to the specific conclusions of dual labour market analysis’ (Gordon, 1972, p. 52).

Gordon retains the requirement of a stable labour force for the efficient functioning of complex technology but to this adds an imperative for control since with the development of factory production the labour force was becoming more homogeneous and thus more likely to unite against capitalists. Stratification would allow the capitalists to divide and rule the labour force. Jobs were divided

into grades, or clusters, but within each grade promotion ladders were established. This stratification served to reduce the likelihood of the development of class consciousness between grades in the labour force but within each grade the promotion ladders provided the incentive necessary to motivate the workers. According to Gordon:

‘employers will seek to develop in the labour force a kind of “hierarchy fetishism”- a continual craving for more and better job titles and status, the satisfaction of which leads eventually to intensified hunger for still more and better job titles and job status... And in order to create hierarchical incentives without providing too many mobility opportunities, in order to satisfy “hierarchy fetishism” without simultaneously establishing a continuum of relationships among workers along which they can develop common class consciousness - employers may find it useful to forge hierarchical ladders within clearly defined job ladders’ (1972, p. 77).

The radical theorists extend the analysis of stratification to emphasise differentiation between workers within internal labour markets as well as between the primary and secondary sectors. The lowest stratum of workers may either be attached to the bottom of the job hierarchy within a particular firm or industry, or be employed in secondary sector industries or occupations located outside of the internal labour market sector. Those groups most subject to discrimination and prejudice would be concentrated in these menial, low paid occupations. This segmentation serves two purposes. First, the existence of a lower stratum increases the status and status orientation of those in the higher strata. Second, workers in the upper strata are unlikely to identify with the interests of the types

of people (blacks and women) who are concentrated in the menial occupations, and thus low wages can be paid to these workers without risk of class opposition.

In sharing a common lineage, it is not surprising that the theories emanating from the post-Braverman debate are similar to the radical theory of labour market segmentation. In both literatures is the recognition that capital has a range of strategies available to both obtain worker commitment to, and reduce worker resistance to, Taylorisation. Gordon's concept of hierarchy fetishism mirrors Edwards' concept of bureaucratic control where through rules and procedures workers can be divided in such a manner that the differences in their interests are emphasised, not their common interests, and within the internal markets or clusters the competitive features of the external labour is retained. As with Doeringer and Piore's theory, the radical theory represents an improvement over the post-Braverman theories and over the Régulation Approach in that the utilisation of a range of control strategies by capital within an industrial structure of a large-scale, technologically progressive primary sector and a competitive, technologically stagnant secondary sector, extends this theory across the labour market within the industrial sector as a whole.

The perspective of the radical theory, as it is with those labour process theorists who emphasise worker resistance to explain the forms of labour market structures that evolve, is however largely from the motivations and actions of capital. Workers in these theories play little part in the formation of structured labour markets. Gordon (1976) does bring worker organisation into his analysis, but only in a passive role. Mirroring Edwards' distinction between technical control

and bureaucratic control, he differentiates between the system of work organisation which may be efficient for technology (the technological or quantitative aspect) and that which affords capitalists the most control over the labour force (the qualitative or control aspect). He argues that as worker organisation develops, qualitative efficiency considerations will dominate quantitative ones in the forms of work organisation. Worker organisation is thus brought into which system of organisation employers choose, but it is only a passive role in that it is based on the threat of worker resistance and worker organisations that do not play an active part in the development and organisation of the work process.

It is this process by which workers consent to the forms of work organisation through the bargaining process that informs the critique of Gordon within the radical literature. Gordon, in his thesis of hierarchical fetishism, captures the same idea used by Burawoy that the particular relations of capitalist production can be concealed from the worker; a process enhanced by the separation of ownership and control in industry. Thus the specific developments in the ways in which work is organised have implications for skill and control but also have implications for the concealment of, and consent to, class relations. Burawoy in his development of the way that managerial discretion to the 'games' workers play lead to intra-worker conflict and the subsequent role that organised labour have in mediating this conflict through collective bargaining, brings to light the role that labour organisation has in helping capital to create hierarchical fetishism. Burawoy thus adds to Gordon's thesis.

Overlooked to a degree by Burawoy, because of his emphasis on the subjective conditions of work, is the role that organised labour plays in defensive strategies to maintain old skill divisions against the Taylorist tendency to deskill workers. The argument, developed by Rubery (1978) in particular, is that a key interest group that organised labour represented and could bargain for were the skilled and semi-skilled industrial workers whom capital wished to retain as core workers. The strength of the bargaining position of trade unions was based on their ability to organise to control the supply of labour against the continual threat of displacement and redundancy through Taylorism. Attempts may be made at the macro-level to limit the supply of new types of labour, such as females and immigrants. Far more important to Rubery were workers' strategies to control entry into an occupation, firm or industry. Any degree of success of such exclusion 'must be to the detriment of groups excluded from the organised sectors, as it reduces their mobility and may even increase competition in the external sector.' (Rubery, *op. cit.*, p. 29). The development of worker organisation may thus facilitate segmentation in the external labour market.

Rubery (*op. cit.*) further argues that the establishment and maintenance of bargaining positions within the organised sector may further depend on stratification of the labour force. The most effective tactic of organised labour to defend themselves against the threat of substitution and competition is to differentiate themselves from potential competitors. Such protection through differentiation may be provided by various systems from union organised apprenticeship schemes to promotion lines based on strict seniority provisions. Both types of systems provide shelter from labour market competition for the

incumbent workforce, varying from protection for specific groups of workers such as trades people, to protection through a whole range of jobs by restricting entry to the bottom of the hierarchy. As the labour process theorists and radical segmentation theorists argue, these systems offer various degrees and methods of control for capital. On the other hand, the existence of a structured labour force where jobs are strictly defined and workers are not interchangeable provides a bargaining base for labour against managements' attempts to increase productivity and introduce new technology. As Rubery argues:

‘changes in job ladders, skill demarcations and the pace of work become areas for bargaining, whereas a homogeneous labour force, interchangeable in function, would lay itself open not only to competition from the external market but also to further declines in workers' control of production and a continuous undermining of bargaining power’ (op. cit., p. 29).

Division of the labour force by custom, rule and status therefore become an essential part of the bargaining strategy of organised labour for unless advantage is taken of capital's strategy to divide and rule by creating a bargaining strategy on a new organisation of work, the development of a more homogeneous labour force undermines the basis of workers' industrial organisation.

Segmented Labour Markets in the Periphery

In his unique contribution, Lipietz argues that two historically contingent conditions, each related to the re-organisation of the Fordist regime of production, articulated to result in the second international division of labour. The first

condition related to the latent crisis of declining rates of profit for capital in core Fordist states. With the possibility of geographically separating the Fordist production process into three levels and articulating these levels with labour pools differentiated by skills and social conditions, the lower level jobs requiring de-skilled execution and assembly could be exported to regions with abundant, cheap labour and so reduce pressure on the decreasing rate of profit. The other condition was the existence of peripheral countries with authoritarian political regimes which selected the economic strategy of 'supplying' this cheap, low-cost labour to these multi-national firms.

Lipietz characterises and distinguishes between two 'ideal type' social formations in which authoritarian regimes of the periphery successfully articulated with the delocalisation of Fordist work tasks. The first social formation Lipietz labels bloody Taylorism in which an export substitution strategy of mainly Taylorised and relatively non-mechanised components of the Fordist labour process is undertaken in social formations with very strong rates of exploitation to increase absolute surplus value – low wages, intense, long working days/weeks under strict supervisory control. In the 1960s, the free zones and the workshop states of Asia were the best illustrations of this strategy. The products of these production processes, largely around textiles and electronics, were mainly re-exported back to core states for value to be realised there.

Lipietz acknowledges that the predominant worker in bloody Taylorism is female, but what he does not fully develop is that the labour market for such workers is heavily segmented. As with the arguments for segmentation in core Fordist states,

the argument here is that structural and socio-political factors in peripheral states combine to create labour market segments which complement the re-organisation of Fordist production in core states.

Significant in bloody Taylorism schemes is a concentration in light industry such as textiles, clothing, footwear, plastic products, electrical machinery, electronics and precision instruments. The success of bloody Taylorisation however, rests on the social construction of a particular segmented labour force. The work activities in light export industries are mainly Taylorised, are labour-intensive and relatively non-mechanised. The special characteristics of employment complementing work in these light, export manufacturing industries are in general, relatively low skill levels, low wages, employment insecurity, lack of career mobility, and high concentrations of young and female workers (Deyo, 1989). This is a gender-based, wage-dependent labour market segment and is a pattern associated with early industrialisation in Britain, the United States and Japan (Ashton, 1964; Lockwood, 1970).

A number of factors can be used to explain the predominance of young, female workers in these industries. Peripheral states, in different ways, have removed the means of independent subsistence amongst the majority of the population within their territories and have created a large class of wage-dependent workers. Among these wage-dependent workers, young females have few dependents to support and are thus willing to work for low wages (Elston and Pearson, 1981). In some cases, where workers do not live at home, wage employment can provide escape from family authority and obligations as well as a chance to meet new friends,

purchase luxuries and perhaps meet a future spouse. In other cases, employment simply supplements the family income. Generally, a volatile workforce whose members fall back on family resources during periods of unemployment minimises the need for public and private economic assistance. Family-based security is thus encouraged both culturally and by state policy.

The socialisation of young female workers also provides a relatively skilled workforce. For example, in the case of clothing and related industries, home training can provide immediately useful job skills. High rates of job turnover also reduce seniority wage increments and thus help to maintain low wages for new recruits. High levels of worker instability also generate substantial workforce flexibility for the owners of capital in the face of demand fluctuations in product markets. Workforce instability also reduces the potential for unionisation and industrial unrest.

The second international division of labour can thus be conceptualised as a process of globalising labour market segmentation. This segmentation emanated from core industrialised states where labour market segmentation arose in Fordist production as a consequence of a social process of real subordination of labour to capital. The historical contingency of falling profits of Fordist capital leading to a re-organisation of Fordist production with the emergence of a labour market segment of semi-skilled, low wage, predominantly female workers in peripheral states which comprised part of these states' development projects articulated into a globalising labour market segmentation of the second international division of labour.

The second ideal type peripheral social formation which Lipietz characterises and distinguishes as successfully articulating with the delocalisation of Fordist work tasks is what he terms peripheral Fordism. Lipietz is characteristically brief in his examination of its development. He describes peripheral Fordism as an authentic Fordism, that is, a regime of accumulation based on the coupling of intensive accumulation with the growth of internal markets for manufactured goods and exports of manufactured goods to core industrialised countries. Lipietz insists on the political aspect of the choice of a strategy of peripheral Fordism, but does not develop this.

In focusing on the political choices taken by regimes in those successful, newly industrialising south-east Asian states of South Korea, Taiwan, Singapore and Hong Kong, Lipietz does not fully develop the story that 'bloody Taylorism' in such states proved so successful that it eventually eroded the cheap, disciplined labour supply that made it possible. Starting in Singapore, with its lack of a rural hinterland labour reserve, all of these countries had by the 1970's experienced growing labour shortages (Fei et al., 1979). Increasingly tight labour markets were reflected in rising wages, which in turn undercut the international competitiveness of the export-oriented goods produced in east-Asian newly industrialising countries (NICs).

In response to growing labour shortages and upward wage pressure, as well as to increasing industrial protectionism from core industrialised states, capital began to shift their labour-intensive operations to other countries in the region or into core

industrialised countries in order to evade trade restrictions (Deyo, 1979). As a means of coping with this new threat to the previously successful export-oriented development strategy, the governments of Taiwan, South Korea, Singapore, and to a lesser degree, Hong Kong, sought to encourage mechanisation of industry, and expansion of modern service sectors. Their goal was both to diversify their economies and to shift labour into industries characterised by higher levels of skill and productivity, and so maintain the attractiveness of their states for capital.

The effect of these development projects emphasising higher-value added, capital and technology-intensive industries is captured in shifts in the percentage of GDP across manufacturing and non-manufacturing sectors of these economies. More importantly, output increased with relatively minimal changes to employment. These regimes in effect moved from creating value absolutely through low wages and long and intense working days, to creating value in a relative sense through increased worker productivity.

Associated with these industrialisation projects was a shift in labour regimes towards what, while differing in their regulation, correspond to the subordinate primary labour market segment described by Gordon et. al., (1982) for North American workers. This sector consists of low-level white collar and civil service workers, transportation workers, and the predominantly male workers in heavy industry. Unlike North America and other core industrialised states, autonomous labour movements were effectively demobilised by the authoritarian south-east Asian states in the early period of bloody Taylorism in the 1960s. Unionism, where it did exist or survive (but less so in sections of South Korean heavy

industry) was state sponsored and corporatist in the sense that union officials worked with capital to ensure labour discipline and peace. Diversification into new, higher-value industries was, however, accompanied by expanded vocational and technical training and by growth in occupational sectors employing better educated workers for less routinised tasks demanding greater skill and greater autonomy. These changes in economic structure also required increased training expenditures from employers and the state. Increased training in turn encouraged management efforts to reduce worker turnover and to enhance worker commitment and productivity. Thus proletarian labour strategies have gradually given way to bureaucratic paternalism where job ladders, internal labour markets and seniority adjustments shelter workers from labour market competition and bind them to the firm through non-performance - based welfare benefits, and encourage job effort through the promise of career advancement.

Whilst regulated in a different manner because of the general absence of autonomous labour movements, labour markets in the peripheral Fordist states of south-east Asia, like labour markets in the core industrialised states were, as the crisis of Fordism was unfolding, increasingly segmented in a similar manner to labour markets in the core industrialised states. The second international division of labour thus comprised a globalising labour market segmentation pushing further into the division of the Fordist production process to include not only deskilled execution and assembly but also qualified manufacturing requiring skilled workers and into the conception, organisation of methods and engineering. This structure of globalising labour market segmentation that developed during

the crisis in core Fordist states is one that is more complex than envisioned by Lipietz in his theorisation of the second international division of labour.

The internationalisation of Fordism is therefore premised on labour market segmentation. Segmentation in the core Fordist states was the natural precondition for its subsequent development as an internationally disaggregated production process. Additionally, various local conditions in the newly industrialising countries, and dynamics of their development, also facilitated labour market segmentation in the newly industrialising countries. The emergence of labour market segments in both core and peripheral states thus further deepened and extended the second international division of labour.

This more complex understanding of the processes that led to the second international division of labour also has important ramifications for consequent development in core states towards the inconsistent hybrid capital labour relation. The structure of labour market segmentation during Fordism serves as the precondition for after Fordist evolutions in capital-labour relations. If the international division of labour that evolved during Fordism can be conceptualised as a globalising structure of labour market segmentation, then Lipietz' conceptualisation of trajectories emanating from the Fordist capital-labour relation becomes more complex. Lipietz' conceptualisation of two trajectories in capital-labour relations out of the Fordist capital-labour relation supposes the dominant form of labour to be deskilled, Taylorised workers. From this starting point of the dominant form of labour, the appearance of two trajectories appear to be consistent with regulating the contradictions in the labour process, as does the

non-appearance of the inconsistent hybrid- a dominant capital-labour relation incorporating both flexibility in the labour relation and flexibility in the wage relation. However, if after Fordist trajectories begin from a market structure of globalising labour market segmentation, the appearance of this inconsistent hybrid is possible, as different groups of workers can be engaged in different forms of labour within the same production process. Whether this inconsistent hybrid can appear as regularity, depends upon whether the social relations supporting this capital labour relation can be reproduced. Here it is argued that an extended form of the inconsistent hybrid characterises the contemporary form of capital-labour relations since its evolution into re-segmented labour market structures in neo-liberal competition states from segmented Fordist labour market structures facilitates the reproduction of Toyotism – an emerging technological paradigm of dynamic specialisation whereby multinational firms compete in global production systems through economies of scale and scope and segmented national labour markets.

International production systems

A fundamental change to the nature of commodity production at the international level since the 1970s has been the increase in the number and scale of multinational enterprises (MNEs) organising such production (Clegg, 1996). Multinationals originating from the fourteen leading industrial nations of the world numbered about 7000 in 1969, but by the early 1990s had reached around 24,000. By 1996, it was estimated there were around 37,000 multinational firms controlling, in total, around one-third of all private sector capital in the world and

generating a sales value of about \$US 5.5 million million, a figure approximate to the GDP of the US in 1993 (Clegg op. cit.). Very few MNEs operate abroad in the form of branches (through extensions of the parent enterprise itself). Rather, the preponderant pattern is for parent firms in the home countries to work through foreign affiliates incorporated according to local law. Control by the parent over the affiliate is usually exerted through owning significant equity in the affiliate, although as MNEs increasingly move towards involvement in services, control is exerted through contracts such as franchising. Based on this pattern, foreign direct investment (FDI) is often used as a measure to gauge the activities of MNEs. During the 1960s, FDI grew at twice the rate of GNP in the countries of the OECD. Following the oil shocks in the mid-1970s, FDI accelerated in the 1980s at an average annual rate of 27 percent, three times faster than the growth of exports and almost four times faster than the growth in world output. Much of the acceleration in FDI activity in the 1980s is attributed to the rise of Japanese MNEs over this period (Clegg, op. cit.).

The sectoral composition of FDI flows indicates a change away from natural resource-oriented FDI into the less developed countries and import substituting FDI in the developed countries towards integrated methods of international production. Associated with this shift in FDI focus has been a sectoral movement in FDI away from manufacturing and into services (Clegg, op. cit.). MNEs can, therefore, be understood to be major actors in the organisation of production on a global basis thus trajectories in national models of development need to incorporate the correspondence between national institutional forms and the strategies for accumulation favoured by MNEs.

This shift by MNEs towards integrated methods of international production represents the emergence of a fundamentally new technological paradigm. For in such internationally integrated production, MNEs can achieve economies in both scale and scope (Coriat, 1997). Within the same organisational form, MNEs can achieve both volume and variety in production while reducing costs and maximising productivity by strategic geographic location of different parts of the production system.

Coriat, (1997) in his characterisation of a 'regime of variety', explains why and how MNEs organise so as to achieve economies in both scale and scope. In building his characterisation Coriat distinguishes between internationalisation in production and globalisation in production. By internationalisation in production, Coriat is referring to the Fordist period of diffusion across national frontiers of the Fordist industrial model of mass production as the dominant style of production. As second generation Régulation theory exposes, such diffusion, when combined with a national development project, resulted in various national models of development that were Fordist as an ideal type, but diverse depending on the shape of the institutional forms within each nation state (Boyer, 1988). Because of the prevailing international mode of regulation, the logic of the regime of accumulation in the national Fordist model of development was of demand growth predominantly from within nation states. Additionally, what international trade that existed belonged to the first international division of labour and to the spatial disintegration of components of the Fordist industrial system of the second international division of labour. Whilst competition between national-based

producers existed, it was competition that did not create much uncertainty for producers, based as it was on extending economies of scale in an environment of increasing demand and expected stability in returns on capital investment.

In contrast, by globalisation in production, Coriat (op. cit.) is referring to the heightened competition, and more particularly of increased uncertainty, that producers face as a consequence of both the success of the diffusion of the Fordist industrial paradigm internationally and from the productivity limits reached in this paradigm in core Fordist states. For from such success and failure in different institutional settings emerge 'rival innovators operating in multiple dimensions from at least several national bases in a more open world market – the result of which heightens competition, and critically, uncertainty' (op. cit., p. 243). To Coriat, such competition becomes 'multidimensional, with emphasis on price, quality, speed of production and product differentiation' (op. cit., p. 242). The multidimensionality of such competition heightens uncertainty for individual producers since, in contrast to Fordism, it is not known from which direction competition will come from. The regime of variety thus represents a new technological paradigm in which value is created and realised at diverse points in the globe by agents, MNEs, who have no particular national focus, other than as local sites from which to create value in production and/or to realise this value. It differs from national forms of Fordism and traditional conceptions of after Fordist national technological trajectories which maintain the nation-state as a unit of reference.

Coriat (op. cit.) argues that faced with such competition and uncertainty, key large producers, here viewed as MNEs, have changed from organising production around the principles of specialisation (mass production) to one of an organising logic dictated by the very constraints of the multidimensionality of competition. The organising principles of production created out of the constraints of globalised production which characterise what he terms the regime of variety, Coriat lists as: 'virtual production, based on the property of reactivity; zero inventory and just-in-time production; and original and better quality' (op. cit., pp. 246-7). These principles arise from the constraints of variety in competition demanding both flexibility and adaptability in a production structure and a rapid response to a large range of demands. The regime of variety is thus a regime of permanent innovation, requiring firms to have the capacity to keep ahead of, or at least abreast of, changing conditions in demand. The imperative for innovation in turn defines two new lines of rationalisation for innovation. One line of rationalisation concerns the reduction of work in progress and in every type of stock since a regime of variety is a regime of just-in-time production. In turn, just-in-time production, or production without stock, removes the security net of stocks to cover for imperfect intermediate commodities, thus manufactured goods and components must be faultless.

In a similar but more detailed fashion to other Régulationist and Régulationist inspired analyses, Coriat demonstrates the impact of the logic of the regime of variety on capital-labour relations and on inter-firm relations. On capital-labour relations Coriat argues that there are three elements required for efficiency gains in a regime of variety:

‘organisational innovations centred on employee multi-skilling and “internal flexibility”; internal labour market policies built upon professional careers; and employee commitment based on explicit contracts or implicit conventions’ (1995, p. 147).

On inter-firm relations Coriat emphasises three elements of change brought about by the transition to the regime of variety, virtual integration, hierarchical networks, and co-operation and long-term contractual relationships. The regime of variety draws the whole supply chain from distributors and their agents, the final assembler and the subcontracted component manufacturers into a complex web of mutual, but self-improving dependence. In this network, the final assembler has dominance because as final assembler it has a direct relationship to the market and therefore is a nerve centre of production operations, and as a revolving point in disseminating and receiving information to coordinate the complex network of supply.

This characterisation of the dynamics of organisational change at the level of the international resonates with other studies of contemporary forms of organisational change at the industry level. Surveys and case studies of organisational change during the 1990s within large firms in those nation-states in the vanguard of neo-liberal regulation, Great Britain and the United States, suggest a widespread adoption of an organisational strategy of ‘lean production’ or ‘Japanisation on the cheap’, as promulgated by the MIT automobile study and published in the report *The Machine that Changed the World* by Womack et al. (1990). Sustained by the Japanese myth that such a strategy explains the competitive strength of Japanese companies, (Jürgens, 1995) this strategy aims to create lean organisations capable

of varied production whilst keeping costs down. This is achieved through flattening the organisational hierarchies of internal labour markets (de-layering), reducing the bureaucratic overheads (sub-contracting) and introducing workers to the technologies and philosophies of just-in-time production (Womack et al., 1990).

Capital-labour relations in international systems of production

However, the capital-labour relations that complement global production structures of varied production at lowest possible cost do not just appear. They evolve out of past structural forms within the possibilities afforded by an over-determined neo-liberal political structure. The argument of the previous section was that the Fordist capital-labour relation and its internationalised Fordist variant was one of a (globalising) segmented labour market structure. It is out of this structure that after Fordist organisational forms arise in which, over-determined by the political sphere, national capital-labour relations which are consistent with global production may arise. After Fordist capital-labour relations thus do not merely occur or rise out of the needs of capital or out of the needs of technology. Such capital-labour relations have to be politically created. New rules of the game, or institutional forms, have to be created out of the old in order for labour market structures that are complementary to the technological and market needs of the regime of variety to exist.

The contemporary context of political over-determination has also to be understood as tendencies towards neo-liberal competition states which seek to

attract internationally mobile productive capital to their shores. As Standing (1977; 1999) points out, the de-regulation of labour markets that followed the policy prescription of neo-liberal governments as a cure for the crisis of Fordism, when seen in the light of how the Fordist capital-labour relation as politically, socially and economically constructed, was in practice an experiment in re-regulation. Perfect competition does not, and cannot exist. Thus the policy mechanisms introduced by neo-liberal governments in the belief they created the conditions for free markets based on voluntary exchange, in practice increase the power of capital to dictate the terms of the capital-labour relation and conversely weaken the power of labour to resist. The strategy by capital permitted within this neo-liberal policy framework can be seen to re-align the frontier of control through re-segmenting components within an already existing segmented labour market structure where labour is least able or least willing to resist.

Re-segmentation of labour market structures

An essentially dualist reading of trajectories in labour market such as in the much-popularised flexible firm model (Atkinson, 1984; 1987; Atkinson and Gregory, 1986) is that pressures for flexibility and market responsiveness induce organisations to segment their workforces into a core element for which employment is relatively secure (approximating the primary sector of Fordism) and a peripheral element for which employment is relatively insecure. The core workforce is seen to enjoy secure, skilled, well-paid, co-operative and functionally flexible employment characterised by the mutual long-term commitment of both employers and employees. By contrast, the peripheral

workforce is described as insecure, sub-contracted, and poorly paid, semi-skilled and increasingly exposed to the uncertainty of market forces. Harrison, (1994) for instance, as an example of this genre, makes the prediction that the spread of flexible production and related practices of lean production across the manufacturing and service sectors would involve the 'explicit reinforcement or creation of *de novo* sectors of low-wage "contingent" workers, frequently housed within small business suppliers and subcontractors linked to a growing, and international, problem of working poverty' (Harrison, 1994, p. 12).

Surveys and case studies suggest, however, that the evolution of labour markets along with lean production has not followed the trajectory predicted by this core-periphery model (Pollert, 1988; 1991). The Anglo-American pattern that emerges is one suggesting that it has been the core labour market, not the peripheral labour market that had served as the principal source of numerical flexibility. It is true that 'peripheral' forms of employment have increased in advanced capitalist countries, but what is striking about this development is not so much the speed but the sluggishness with which these forms have grown. Further, the use of temporary and fixed-term contract labour has not been concentrated among the poorly paid and semi-skilled. The highest incidence of temporary working is found where skilled workers are in the majority (Robinson, 2000). Robinson argues that, compared to their European counterparts, the ease with which British and American employers can hire and fire members of their core workforce into 'permanent' contracts of employment results in such employers being less reliant upon temporary workers for the provision of their numerical flexibility. Castells (1996) and Dicken (1992) argue that Atkinson's core-periphery model reflects

more the employment structures of the *Shushin Koyo* system in Japan (ignored in the Japanese myth) where long term job security in large companies is estimated to apply to only one-third of Japanese employees with the rest of the workforce consisting of part-time, temporary, and dispatched workers who have no job security, and are hired and fired according to their employers' convenience. Castells suggests that it is this large pool of periphera' workers that has helped Japan to maintain its highly developed domestic subcontracting networks.

The same empirical research indicates that in many respects the more far-reaching changes in re-organising work were those to increase the functional flexibility of low-level workers. As with numerical flexibility, this research indicates that the core labour market has served as the principal focus of workplace re-organisation to increase functional flexibility. The success of these reforms was heavily dependent upon the consent and skill of workers to undertake a wider range of functions and responsibilities. The ability of employers to shift this frontier of control from the traditional working practices of internal labour markets was strengthened with the pressures of redundancies, lay-offs, natural wastage and other forms of downsizing. As described by Rinehart (1995) and MacDuffie, (1996), such measures were used even by the most secure and profitable companies, not just because they were seeking to protect themselves from declining sales or market share, but because they were looking for an opportunity to re-engineer the systems which governed the activities performed by their workers and to select 'the right kind of people'. Studies of recent patterns of job cuts also argue that they are often implemented as a proxy for productivity change, as firms attempt to mimic best practice. In part, downsizing policies are

seen to provide an indicator of an organisation's short-run performance, in the absence of any new investment in capital, and in recognition of the difficulties in monitoring work productivity among growing areas of knowledge-based work in the service sector (Grimshaw and Rubery, 1998). Such downsizing often has immediate value reward in financial markets as share values often increase in the light of 'downsizing' announcements. Grimshaw et al., (2001) point out that this emphasis on reputation in financial markets runs counter to traditional internal labour market models of employer strategy which argue that opportunistic behaviour by employers is minimised by its potential negative impact on the reputation of the organisation among future labour market recruits. Reputation effects are clearly now considered more important in financial markets. Also, the long period of relatively high unemployment, and the general downward shift in employee expectations of employment security, have made managers less cautious in their labour market behaviour (Grimshaw et al, 2001).

Capital has thus found, with its greater room to manoeuvre in the neo-liberal environment, a means of obtaining numerical, temporal and functional flexibility at low cost from production workers and low-level workers within the web of subcontracting across firms. Case studies and surveys present how solutions to ensuring adequate labour supply and ensuring labour control are obtained (Grimshaw and Rubery, 1998; Grimshaw et al., 2001; Burchell et al., 2002). Traditional job demarcations have been eroded, job contents have been redefined along with customary measures of work and peer and authority relations have been transformed. Alongside this, pay and job grading structures have been adjusted, manipulated or removed in order to adjust to both the external labour

market opportunities and pressures and to changing internal skill career and work organisation requirements. Such innovations in work practices include multi-skilling, multi-tasking, skills flexibility, multi-roling, multi-functioning and role-modelling. Some of these innovations were designed to increase the skills and competencies of individual employees, through for example training initiatives, possibly linked to a national qualifications framework. The focus of training policy, where it exists, has however switched from investment in technical skills to generic competencies (Cappelli et al., 1997; Senker, 1996). Other innovations are more concerned with the promotion (and re-organisation) of teamwork. Other closely related initiatives are aimed at fostering and attitudinal or culture change among the workforce, particularly in service sectors.

The combined effect of down-sizing, de-layering, sub-contracting and multi-skilling (and its variants) has thus created at the lower levels of organisations a labour market segment of flexi-workers who are flexible both numerically and functionally. These flexi-workers cannot merely be seen as contingent workers, peripheral in the traditional sense of low-skilled, poorly paid workers in insecure employment. Whilst including such workers, most of these workers emanate from previously core employment structures. In contrast to the orthodox Régulation Approach, therefore, which sees the move to market regulation in terms of the dominant existence of external labour markets, this analysis proposes that internal labour markets have also changed their form, both as a result of changed external conditions (including the wider existence of external labour markets) and the greater room re-regulation offers firms to manoeuvre internally to shape employment relations along their frontier of control.

It is in this re-segmented labour market structure that the inconsistent-hybrid capital-labour relation can reproduce. Overdetermined by the neo-liberal possibilities opened up by competition states, internationally mobile capital has increased power to dictate the terms of the capital-labour relation to suit their global production strategy. The consequence of this power is to fragment previously existing labour market segments into numerically and functionally diverse flexible segments. This re-segmentation is deeper than the inconsistent hybrid which Lipietz dismisses, since external employment relations comprise both functionally and numerically flexible workers, but internal labour markets also comprise functionally and numerically flexible workers.

Conclusion

This Chapter has closely examined the possibility of the reproduction of the after Fordist capital-labour relation which Lipietz considers is incompatible as a post-Fordist relation. Lipietz' reference point, as is the reference point of this thesis, concerns how capital-labour relations evolve in attempts to resolve the limitation reached in the effectiveness of Taylorist principles in organising productivity gains in the Fordist labour process. This limitation is held by Lipietz to be one of the explanations for the supply-side crisis of Fordism. Lipietz is critical of the (dominant) view that ICT's provide a technological way-out of this supply-side crisis of Fordism by enabling the fixed plant of mass commodity production to be replaced by flexible, multi-purpose plant, capable of commodity production in batches to meet a differentiated demand. Lipietz, consistent with the perspective

of the Régulation Approach, argues that any such technological way-out depends for its existence upon how capital-labour relations are constructed. Lipietz, along with other Régulation approach theorists, argues that flexible commodity production requires the commitment and involvement of workers in the labour process and that such commitment and involvement is inconsistent with a neo-liberal political environment in which capital can hire and fire workers at will. In contrast, the ‘negotiated involvement’ or Kalmarian trajectories of the Scandinavian and Austrian arc countries of Western Europe presented the political environment consistent with flexible commodity production. This section of the thesis has focused upon this very possibility: the existence of an inconsistent hybrid capital-labour relation in which worker commitment and involvement exists within a neo-liberal political environment which encourages the ‘externalising’ of employment relations and discourages collective bargaining by unions.

The argument for the existence of this inconsistent hybrid rests on two pillars. First, the effects of the neo-liberal competition state flexibilised employment relations which increases the power of capital to dictate the employment relations at the level of the workplace. Second, through flexible labour market regulation employers could re-segment already existing segmented labour markets and so re-shape the frontier of control in production relations.

This chapter has focused upon the second pillar, labour market segmentation. The critique developed was that the Fordist capital-labour relation did not comprise a homogeneous labour market structure of low-skilled industrial workers, but rather

was one of segmented labour markets of internal labour markets in large firms where workers enjoyed a permanent job, steady career progression from a lowly-skilled to a highly-skilled position, internally integrated and transparent pay structures, on-the-job training and protection against layoffs and peripheral or secondary labour markets which lacked the characteristics of the internal labour market. Neo-liberal labour market re-regulation which flexibilised employment relations was able to build on this labour market structure which is more complex than that envisioned by Lipietz.

If capital-labour relations are taken to be politically mediated, policies that flexibilise the regulation of the employment relation increase the power of capital to dictate the terms of capital-labour relations and weaken the power of labour to resist. This power is however not absolute: some compromise in practice between the interests of capital and the interests of labour needs to be reached. By a strategy of re-segmenting labour market structures, capital in a neo-liberal policy environment can achieve the commitment of workers to the production process and also achieve external flexibility and so reduce direct and indirect costs by having different rules of the game for different groups of workers. This strategy is assisted by an increasingly large proportion of workers employed in the services sector where historically, through the development of trust relations, the exploitative nature of the employment is well hidden. The re-segmentation of internal labour markets suits the interests of many workers who enjoy the high-pay, employment flexibility and status of the positions they occupy. Re-segmentation has also occurred at the lower-levels of internal labour markets, but through the introduction of some practices and ideology of Japanisation on the

cheap, assisted by the disciplining presence of wage-dependent contingent workers, such workers either consent or are coerced into the productivity regime imposed by capital.

In addition to the tendency towards neo-liberal competition states as characteristic of the contemporary mode of developed capitalist states in which neo-liberal re-regulation of labour markets tend to lead to re-segmented labour market structures, the inconsistent hybrid capital-labour relation becomes a widely embedded capital-labour relation because re-segmentation of labour market structures is a mode of regulation which fits with how multi-national firms accumulate in global production systems. Born out of the successful international diffusion of the Fordist industrial paradigm and the resulting multi-dimensional competition and uncertainty in commodity demand, global production structures, driven by MNEs, they respond to such competition and uncertainty through flexible and adaptive production structures and the ability to rapidly respond to changed commodity demand. This global supply regime of Toyotism seeks, therefore, to secure economies in both scale and scope in production and so needs flexible workers. The neo-liberalised labour market structure of re-segmented labour market structures of numerically and functionally flexible core and peripheral workers corresponds with the means by which multi-national firms seek to achieve competitive advantage through a technological paradigm of economies in scale and scope. In this way, the correspondence between re-segmented labour markets and a labour process requiring flexible workers of all sorts establishes the inconsistent hybrid capital-labour relation as a dominant relation in developed capitalist states.

While not denying the possibility of a Kalmarian trajectory out of the crisis of Fordism, the historical record of the 1980s and 1990s is one of an increasing number of competition states adopting neo-liberal ideology and moving policy and practice towards a re-regulation of social relations through market regulation. Analysis of the form of the capital-labour relation under a neo-liberal political response to the crisis of Fordism, leads to a modification to the prospective analysis of Lipietz. In contrast to neo-Taylorism conceived of as Taylorist control of the labour process and the absence of social support for workers who are compelled to seek work through external labour exchange, the externalisation of wage relations is conceived to articulate with the need for capital to have worker involvement by transforming internal labour markets. In contrast to the 'core-periphery' model of labour market segmentation during Fordism, it is argued that capital with its greater room to manoeuvre in neo-liberal regulation has, by externalising the wage relation of skilled, formerly core workers, found it can involve such workers as demand permits through high pay and relations of high trust. Similarly, through the practices and ideology of lean production, capital has found an instrument to transform lower-level production into a functionally-flexible labour process. The existence of an external pool of workers reliant on paid employment articulates with transformation of formerly core labour and the internal needs of capital to provide such labour at low cost. In short, neo-liberal competition states regulate for the reproduction of the inconsistent hybrid capital-labour relation and this is the tendential trajectory in capital-labour relations for developed capitalist states as they attempt to resolve the crisis of the Fordist model of development.

Chapter Eight

A Revised Map of the Contemporary International Division of Labour

Introduction

In this chapter the elements of the critique of Part Two of this thesis are brought together to hypothesise a revised map of Lipietz' third international division of labour. Lipietz conjectured a post-Fordist de-facto new industrial division of labour developing out of the co-existence in international space of different national models of development. In contrast to the Fordist historical model of development where the dominant technological paradigm across industrialised developed capitalist states was Fordist, Lipietz conceptualised a post-Fordist international configuration of different technological paradigms within divergent national models of development of industrialised developed capitalist states. These different technological paradigms develop out of different political approaches to incorporating the emerging ICT technologies to resolve the supply-side crisis of the Fordist technological paradigm. In effect, within each industrialised developed capitalist state, different post-Fordist models of production were being constructed but with each model capable of making the same commodities. The de-facto third international division of labour reflects the privileged pathways in capital-labour relations from Fordist capital-labour relations and is an international division between industrialised developed states where highly-waged, highly-skilled workers who act with responsible autonomy

in the workplace are dominant and industrialised developed states where lowly-waged, lowly-skilled workers whose work is heavily prescribed and controlled by management is dominant.

The revised map of the third international division of labour sees this distinction between the high-wage, high-skill, highly involved workers (or Kalmarian) trajectory and the low-wage, low-skill, highly controlled workers (or neo-Taylorist) trajectory as less profound. Rather, each trajectory reflects different sides of the same tendency which could be termed Toyotism. That is, at the national level among developed nation states at least there is a converging tendency towards national models of production in which the inconsistent hybrid capital-labour relation is dominant. In this capital-labour relation, highly-skilled, highly-waged, highly involved workers and lowly-waged, lowly-skilled, highly controlled workers co-exist but in labour market segments. This inconsistent hybrid capital-labour relation evolves from the structural fit between the re-segmented labour markets of neo-liberal labour market regulation in states tending towards neo-liberal competition states with international production systems where the major actors in international commodity production and exchange, MNEs, strategically seek to achieve economies of scale and scope on a global basis so as to respond to the heightened uncertainty of international competition. The distinctions between post-Fordist national models of development, from which the third international division is identified, thus closes towards a one-best-way (here labelled Toyotism) and in such closure, the third international division of labour becomes less apparent as a regularity across the international space of industrialised, developed capitalist states.

Additionally, in this map the second international division of labour continues, as new social formations, particularly China, are drawn into further internationalisation of the Fordist mass production paradigm. However, within this second international division there is a counter-tendency toward re-nationalisation, or reduced geographic specialisation according to low-wage/low skill factor'. This is because the inconsistent hybrid capital-labour relation in industrialised, developed states facilitates lowly waged, lowly skilled labour market segments and thus there is reduced cost pressure from capital in industrialised, developed states to export components of Fordist production to lowly-waged states.

Indicative empirical evidence for the revised map of the contemporary international division of labour is presented in two forms. First, an analysis is conducted by returning to and updating the data Lipietz presented in his 1997 paper. This update critiques his claim for an emergent third international division of labour and supports the claim of this thesis for counter-tendencies towards reduced international specialisations of labour in production and a reduced but changeable hierarchy in wage differentials for workers between states. Second, empirical evidence for the existence of the inconsistent hybrid capital-labour relation across advanced capitalist states is sought by operationalising the Toyotist model of production and by examining trends in atypical employment.

An after Fordist international diversity in national models of development?

The previous chapter has argued for a convergence of state forms into neo-liberal competition states that facilitate the inconsistent hybrid as a key characteristic of the contemporary arrangement between nation states. In the environment of a neo-liberal international mode of regulation, nation states, themselves the authors of this international regulatory mode, are constrained towards neo-liberal policies so as to attract and retain an internationally mobile productive capital in order for accumulation to occur within their own national boundaries rather than within another nation's boundaries. In this sense then, nation states are competition states and their autonomy to conduct economic and social policy is severely reduced by the need to attract internationally mobile capital. But, nonetheless, their need to attract all forms of capital is intensified in an international environment where competition has already de-industrialised advanced capitalist countries.

This view of convergence towards common modes of economic regulation stands in contrast to the position held within the Régulation Approach, and generally held within the comparative and international economics literature, of continual and continuing divergences in institutional forms across nation states. Arguments for tendencies towards convergence tend to become associated with the mainstream economics discourse and are thus treated as naïve and not representative of the actual political and social processes involved in institutional change. As discussed in Chapter One, in the mainstream economics discourse is a strong technological and market determinism leading to convergence of social, political and economic structures between states. Liberal development theory of

the growth decades of the 1950s and 1960s located the source of convergence in technology (Rostow, 1960). The core notion was that as countries sought to increase levels of well-being for their citizens, and to maintain the military requirements of survival in an anarchic world, they progressed along a common trajectory of technological possibilities. The path of innovation on which they moved was the same for all. Countries would advance, more or less rapidly, through common stages, and adopt over time more and more of the same social, political and economic structures. International specialisation in production from this perspective is not on the basis of technological differences, but on the basis of relative abundance of factors of production.

The view that technology dictated the optimum organising principle of production and so creating common economic institutions and practices had lost its dominance by the 1990s. New research gradually undermined the dominance of technological explanations for economic and social growth and gradually dominated the intellectual debates. Starting in the 1970s and 1980s a number of unrelated projects carried out in various countries focused on successful companies making the same products with the same technologies, but organising production in fundamentally different ways (Dore, 1973; Maurice, Sellier and Silvestre, 1986). A second generation of research in this line, such as Jaikumar's work on flexible manufacturing systems in the United States (Jaikumar, 1986) and Womak et al.'s (1990), comparative study of automobile assembly plants in various countries, further called into question a technologically based understanding of industrial societies and stimulated new lines of speculation and research on societal, cultural, political and organisational factors that might

explain the different performances of firms using the same technologies in different national settings.

A new research agenda appeared at the end of the 1980s, in which the Régulation Approach features, at a time of the apparent weakening of strongly neo-liberal states, particularly the United States and the United Kingdom, and the strengthening of the states of Japan, Germany and Scandinavia with quite different economic institutions and practices. The notion of different forms of capitalism, with each type characterised by different institutions, practices, values and politics began to appear. Whilst the distinctions between different forms of capitalism varied in their labelling, such forms, whether the market-based economies of the United States and the United Kingdom, or the societally and state-co-ordinated economies of Germany, Japan and Sweden, are characterised as coherent, alternatives forms of capitalism, not as detours off a common trajectory (Albert, 1993; Sockice, 1991; Streek, 1992). Thus by the 1990s, outside of the mainstream economics discourse, the idea that technology dictates a single, optimum way of organising production leading all states towards common economic institutions and practices, was not the dominant view.

Nevertheless, into 2005 the expectation that structures of production and the economies of advanced capitalist states are converging still remains strong. Rather than draw on technological determinism, the renewal and persistence of the theory of convergence through the 1990s draws on conceptions of the impact of international competition, globalisation, and the deregulation of national structures within economies. Support for such conceptions come from both

mainstream and radical sources. As argued in Chapter One, neo-classical conceptions of trade, competition and growth sustains an expectation of convergence towards common institutional configurations and ways of organising economies, so long as markets and players are allowed to behave according to that rational behaviour assumed in their models. Also, as argued in Chapter Six, in versions of the radical literature, arguments for convergence emerges from the capital mobility hypothesis. Here, internationalised systems of production, together with the globalisation of financial markets constrain states into regulatory arbitrage in order to attract capital which can easily exit. In the strong version of this argument the nature and extent to which nation states can determine their own mode of economic and social development becomes severely limited to being transmission belts for international capital and national institutional structures to converge towards common forms. This thesis poses a weaker form of convergence towards the neo-liberal competition state where in response to external change in international production and in the international mode of regulation that intensifies international competition, nation states assume a strategic role to attract and retain capital rather than act as mere transmission belts for a freely mobile capital.

There is also support for the theory of convergence from the school of evolutionary economics: a school in which the neo-classical economics discourse is attempting to re-colonise the social sciences. In this school of thought, the importance of institutions outside of exchange is recognised as crucial for exchange to occur, but the forms that exist are purely functional for exchange and arise from some form of natural selection (North, 1990; 1993). With regard to the

convergence theory, the central idea is that economic interaction among countries in a free market leads to competition among diverse models. This competition may lead to convergence, not necessarily because of the overall strength of one or another model, but rather because certain features of each system will be seen to have decisive advantages in solving certain kinds of problems. This stimulates borrowing and imitation of the desirable institutions. The interplay among models provides flexibility and a capacity for different responses to various situations and pressures. There is thus some sort of meta-competition between models, in which an apparently superior model – either the economic system as a whole, or some separable component – displaces inferior ones as part of a rational process of selection and adoption towards standards of best practice. Curiously, Boyer, one of the key theorists within the Régulation Approach, in a recent revision to the Régulationist position, subscribes to this convergence argument, observing but deploring a ‘Gresham’s law of capitalism’ in which good capitalism is driven out by the bad through the selection process of globalised finance (Boyer, 1996; Grahl and Teague, 2000).

Boyer’s revisionism notwithstanding, the standard Régulationist position is that of diversity in national models of development. Aside from the empirical observation that diversity in nation states remains the norm, fundamental to this observation is that capitalism is an instituted order in which economic behaviour is embedded in institutions and practices which have been historically constructed on a national basis. Thus at the level of nation states, the paths of development along which the embedding institutions of capitalism move take on a distinct national flavour. Lipietz in his hypothesis of an emergent third international

division of labour theorises divergent national models based on the complementarity of nation-based institutional forms with ways of organising production. Other authors develop more complex taxonomies. A notable example is the Régulation Approach inspired typology of 'social systems of production' (Hollingsworth and Boyer, 1997). These authors identify several historical models or systems of production and demonstrate how the variability in such models is consistent with the variations in the social environments in which they are embedded. A typology of social systems of production, that are national models of production, is mapped from this analysis. Emergent technological paradigms evolving from Fordism are thus national technological paradigms and are diverse to the extent of the diversity in national social systems of production.

Diversity in national institutional forms as functional equivalents for global production?

Yet perhaps the insistence by the Régulation Approach on diversity in national models of production misses the significance of national diversity in institutional forms within international systems of production. The idea that possible after fordist technological paradigms are strictly or wholly determined by corresponding national institutional forms that articulate into national models of development can be flawed or misleading because, within limits, similar technology paradigms can be sustained by a diversity of national institutional frameworks. That is, national institutional frameworks, whilst diverse, may be functionally equivalent in international systems of production. Whilst embedded in national institutional forms and forming part of national models of development, in themselves, international production systems are not located

within national models of production. Thus it may be that in international production systems exists a common schema to which all national capitalisms have to respond, but which entail in and of themselves changes in those national capitalisms (Strange, 1997).

The agency on the part of MNEs to achieve economies of scale and scope in the Toyotist technological paradigm and realise the value from such production in diverse locations provides a different perspective from which to view national diversity in institutional forms. For such national diversity as seen from the global perspective of the MNE can complement the organisation of international production. National diversity in institutional forms in this sense can then be seen as part of a common organisational framework at the international level. This is in contrast to the view of diversity in institutional forms as seen from the perspective of nation states. These see such diversity complementing particular national ways of organising production or complementing the production of particular nationally-based commodities or as functional equivalents of producing the same commodities. From this national Fordist perspective, what is seen is diversity in institutional forms attracting different forms of industrial capital. The global perspective, however, sees the same industrial capitals (the MNEs) organising the one international production system out of such diversity in institutional forms. Thus, while there is diversity in national modes of regulation and in the subsequent reproduction of diverse institutional forms, this diversity is compatible with growing convergence of the dominant technological paradigm at the global level.

Toyotism represents a new technological paradigm in which value is created and realised at diverse points in the globe by agents, MNEs, who have no particular focus, other than as local sites from which to create value in production and/or to realise this value. It differs from national forms of Fordism and traditional conceptions of after Fordist national technological trajectories which maintain the nation-state as a unit of reference. Toyotism, however, co-opts diversity in national institutional structures, and uses such diversity in its global circuit of capital accumulation.

Capital involved in international production is not entirely footloose nor is there a one-best-way of international production which national institutional forms functionally reflect. Nevertheless, there are tendencies for the diversity in national institutional forms to lessen. Paradoxically, the search to obtain flexibility in production within an international system of production strengthens local production networks. Faced with the heightened uncertainty of international competition, MNEs have sought to introduce flexibility in global production systems. Part of this re-organisation of work requires the creation of inter-industry production networks whereby subcontractors are expected to become both more and less closely integrated with their large firm customers (Sabel, 1996). They become more integrated in the sense that major subcontractors are expected to enter into long-term contracts to deliver components of quality and low-cost at just-in-time intervals. Major subcontractors become less integrated in that they are expected not to be dependent upon the one major large firm for custom and are thus obliged to seek outside customers. Such integration leads to large firms and subcontractors sharing information in order to reduce development and

operational costs. Major subcontractors in turn apply these rules to their subcontractors, and so on down the supply chain. The cumulative effect of these changes is a two-fold convergence of large and small firm structures and an embedding of the operating units of MNEs within localities which increasingly take the form of industrial districts.

In their interaction with social and economic systems which are different from those in which they first developed, the international production systems of MNEs hybridise (Boyer, 1998). Principles of international production which MNEs codify on the basis of previous experience are contingent on that experience and are adapted in the light of diverse national institutional forms. This leads to national hybrids of the international system of production. What may be seen as different national technological paradigms, are hybrids of international production systems which have been transformed through their interaction with nationally specific institutional forms. Nationally specific institutional forms in such cases prove to be functional equivalents within the one international system of production.

This conception of nation-state diversity within a global production system differs from Lipietz' conception of nation-state diversity models of development. Rather in this alternate conception, in such diversity are different mixes of the inconsistent hybrid capital-labour relation serving common international production systems. The two privileged pathways in post-Fordist models of development which Lipietz identifies reflect different sides of the same model.

Each national form is a variation of the same international production systems, they are not different models of development.

The revised map of the contemporary international division of labour

The argument of the previous two chapters is that neo-liberal competition states will act to modify national forms of industrial relations in order to attract the capital of MNE's. Modifications are generated from existing labour relations with centrally involved segmented labour markets. The modifications that ensue are re-segmented labour markets which support the inconsistent capital-labour relation which proves to be functional for both nation states in attracting capital and for the international production systems of MNEs. This tendency towards the inconsistent hybrid capital-labour relation therefore assists, and is assisted by, the implantation of international models of production generally across geographic space, despite diversity in national institutional forms. There is, therefore, pressure from without (global production systems) and within (competition states) for national diversity in the form of the hybrid capital-labour relation to become functionally equivalent variations of Toyotism.

Viewed from this perspective of a global circuit of capital accumulation, the debate about tendencies towards convergence or divergence loses much of its relevance. Both tendencies co-exist, but there is a reducing tendency towards divergence as national institutional forms become functionally equivalent in order to compete within the terms of Toyotism, defined as an international model of production with corresponding national segmented labour market structures

From Lipietz' perspective, the third international division of labour emerges from the co-existence of different national models of development in the same trading space where nation-specific institutional forms, particularly capital-labour relations, attract different forms of productive capital. These diverse national models co-exist in the same trading system because they have each been socially constructed to favour the production of the same manufactured goods. The third international division of labour is the de-facto division of labour between different ways of organising such production – a division between highly skilled, highly-waged labour-states and lowly-skilled, lowly-waged labour-states. This division differs from the first and second international divisions of labour where, in the former, the division of labour is between the production of manufactured commodities and the production of primary commodities and, in the latter, the geographic division of the technical division of labour within the one manufacturing supply chain.

The argument here, in contrast, is that the form of internationally productive capital that is dominant in contemporary times belongs to MNEs who are engaged in global production systems. Therefore, what appear as different national models of development are, rather, national variations of functionally equivalent production systems comprising inconsistent hybrid capital-labour relations within the one global production system. The implications for national specialisation in production of this structure of global production is that national specialisation reduces as each nation-state increasingly utilises and shapes institutional forms to be functionally equivalent in this global system of production. In short, the third

international division of labour does not show as a division between states based on the different ways to organise the production of the same manufactured commodities, but rather shows as declining international specialisation as states move towards combinations of highly-waged, highly-skilled workers and lowly-waged, lowly-skilled workers engaged in the same, national hybrids of global manufacturing processes.

The re-segmentation of labour market structures facilitated by competition states also constructs a neo-proletariat of wage dependent, low-cost workers within core states. The advantages of geographic separation of components of mass production to low-cost peripheral areas of the globe to be re-exported back to core states is lessened with this reconstruction of the neo-proletariat in the core, advanced capitalist states. This neo-Fordism at the international level therefore also creates a counter-tendency to the second international division of labour whereby low-skilled assembly of mass production is re-nationalised back to core advanced states, and forms part of the declining international specialisation that characterises the contemporary international division of labour.

This is not to say that the second international division of labour disappears entirely. State elites within the periphery continue hegemonic development projects modelled on the successful industrialisation of formerly peripheral underdeveloped states. The social relations of capitalist production in such states still have to be created, they do not appear as manna from heaven, and markets have to be found for the commodities so produced. Bloody taylorism therefore continues in development states such as China where extreme exploitation of

labour articulates with an export substitution strategy via MNEs. The second international division of labour thus continues as a pattern within the contemporary international division of labour.

Indicative empirical evidence (1) of the contemporary map of the international division of labour

Indicative support for the thesis of declining specialisation in production as a contemporary pattern in the international division of labour among the industrialised developed capitalist states can be found by empirically re-examining Lipietz' own data supporting his hypothesis of a third international division of labour with more recent historical data.

Lipietz' principal empirical argument for divergence in nation state forms of production lies in the breadth in movement of a cross-country comparative index he terms *the index of international value* (Lipietz, 1997, pp. 19-20). Lipietz argues from a continental perspective that the range in the value of this index represents a core-peripheral structure in the third international division of labour. The hypothesis of declining specialisation in international production amongst the advanced states can therefore be tested by examining how this index has changed over time: the hypothesis being that if international specialisation is declining, this index would move towards unity.

The second argument for decline in international specialisation in production rests on the degree of movement in intra- and inter-regional trade flows over time.

Lipietz' map of the third international division of labour recognised a strong triadic pattern in world trade flows, with the major share in trade flows occurring within the geographic spaces of Asia, Western Europe and North America. The map of the third international division of labour focuses on this triadic pattern by hypothesising a centre-peripheral relationship between countries within these geographic trade blocs. If this centre-periphery structure is appearing, intra-regional trade should increase over time as specialisation and gains from trade occur. A counter-tendency of reduced specialisation can thus be examined by hypothesising that convergence is indicated if intra-regional trade has decreased or not increased over time.

The index of international value

The ratio of GDP per capita has long been used as a useful indicator of a society's productivity and of the average purchasing power of its members. For international comparisons, such ratios as measured in national currencies need to be converted into a common accounting unit. There are two ways of conversion to a common unit. The first way is to use market exchange rates, the second way is to use purchasing power parities.

In an internationalised world in which there is no significant difference between the supply prices of products on the domestic or international markets, the measure of GDP per capita at current exchange rates captures, more or less, the effective capacity of one country's labour product to buy the labour product of another country. Thus, if supply prices are the same everywhere, a relatively high

GDP per capita at current exchange rates means that the average member of that society can buy more goods than can an 'average member of a society whose GDP per capita is relatively low. The corollary of this also is that should the average members of a high GDP per capita society and a low GDP per capita society buy goods off each other, goods in the low GDP per capita country are cheap (relative to income) from the perspective of the high GDP per capita economy, and goods in the high GDP per capita country are dear from the perspective of the low GDP per capita economy. GDP per capita at current exchange rates in an internationalised world therefore capture, more or less, the value of labour on the international market: high GDP per capita at market exchange rates reflects a relatively high value on the international market (they sell dearer) whereas a low GDP per capita at market exchange rates reflects a relatively low value on the international market (they sell cheaper).

The supply prices of goods in an internationalised world are, however, not the same: Different levels of prices (inflation) exist between states as do differences in relative prices (Schreyer and Koechlin, 2002). Thus comparison between the GDP's of countries at market exchange rates can produce inconsistent results because they do not reflect different price levels and they do not move with changes in relative prices. The use of an alternative accounting unit, termed purchasing power parities (PPPs), are designed to overcome the weakness of comparison based on market exchange rates. PPPs are in effect relative price which show the ratio of prices in national currencies of the same set of goods or services in different countries. A well known example of a one-product comparison is The *Economist's* BigMacCurrency Index whereby the BigMac PPP

is the conversion rate that would mean hamburgers cost the same in America as abroad. Thus a BigMac PPP of 1.2 would mean that in that geographic space, \$US1 would buy $1/1.2$ or 0.83 of a BigMac in the US. Equivalently in a geographic space where a BigMac PPP is 0.8, \$US1 would buy $1/0.8$ or 1.25 BigMacs in the US.

In practice, PPPs are not only calculated for individual products, they are also calculated for product groups and for each of the various levels of aggregation up to and including GDP (Schreyer and Koechlin, *op. cit.*). The OECD and the World Bank calculate and publish PPPs on and for their member states. The purpose for the gathering and publishing of PPPs by both organisations is similar: to obtain rates of currency conversion that eliminates the differences in price levels between countries and so permit volume comparisons.

PPP is thus a conversion rate that reflects how many goods a national currency buys within the country. Thus, to the extent that people spend their earnings in their own countries, this index allows the comparison of the mean standard of living in different countries, as per capita volume indices based on PPP converted data reflect only the differences in the volume of goods produced. Also, when worked with other economic variables, PPP converted data allows the comparison of the relative size of economies, the comparison of labour productivity between economies and comparisons of price levels between economies (Schreyer and Koechlin, *op. cit.*).

As an index of international volume, per capita volume indices based on PPP converted data share a weakness in that it is assumed that in this role all countries produce the same thing in the same way. Lipietz' argument is that this is never the case, since different countries are situated at different levels within the three international divisions of labour. While comparison of volume is important to reflect productivity within a country (highly productive countries produce more, that is to say their per capita GDP is superior by volume), countries also differ in the value of the product of their labour on the international market (they sell dearer). This second aspect, Lipietz argues, is captured by the ratio of per capita GDP 'at current market rates on the same index as according to PPP' (Lipietz op. cit., p.19). Such a ratio Lipietz terms '*the index of international value*' (ibid, his italics), and so it is as this ratio contains a price index of current exchange rates relative to PPP's. Thus, this price index is in effect a comparison of the value of a given volume of goods from a country at international prices. A comparison of this index across countries thus compares international values of the same nationally produced volume of goods and as such reflects the position of each country in the international division of labour.

Lipietz' analysis was based on OECD data for a limited set of countries and is represented in Table 8.1 below. The interpretation of this data is that some countries, notably the Scandinavian countries and the Alpine arc countries of Western Europe, the United States and Japan rank highly in both international volume, that is, they produce more, but also rank highly in international value, that is, a given volume of goods is worth more abroad than domestically (the value of US labour is 1 by convention). These, according to Lipietz are core

countries which are most productive at the international level, both by volume and by value. The other countries, by contrast, are peripheral in that their labour is less productive and under-valorised relative to the core economies.

Table 8.1

The Index of International Value

GDP per Capita in Dollars				
	conversion by current exchange rates (94-93)	conversion by PPP (94-93)	conversion by PPP (03-02)	index of international value (94-93)
Australia	15963	17103	29300	0.93
Denmark	26204	19335	29900	1.36
France	21706	18700	27900	1.16
Japan	33802	20523	28000	1.65
Mexico	3968	6808	9300	0.58
New Zealand	12630	15493	23100	0.82
Norway	23995	19476	36100	1.23
Portugal	8688	11953	18300	0.73
Spain	12227	13311	23300	0.92
Sweden	21256	16831	28200	1.26
Switzerland	33453	23195	31400	1.44
Turkey	2928	5410	6800	0.54
United Germany	23537	18510	26400	1.27
United Kingdom	16279	17036	29100	0.96
United States	24302	24302	37600	1.00

Source: Lipietz, 1997, Table 1 p. 20

Lipietz uses this differentiation of indices of international volume and international value to support his hypothesis of a third international division of labour. Core economies are more productive in both a volume and international value sense because the social construction of labour markets in those countries favouring worker involvement in the labour process attracts capital that uses involvement intensively in production and which can afford to do so because the productivity achieved reduces average total costs comparatively. In contrast,

peripheral economies struggle to raise international volume and international value because the social construction of labour markets in those countries favour Taylorist control of workers in the labour process and external flexibility in wage relations attracts capital that uses Taylorist methods intensively in production and can afford to do so through the productivity gains associated with greater control of the labour process and lower wages. In one sense, the third international division is a re-appearance of a differentiation between high-wage and low-wage economies. In another sense, the third international division of labour appears as a differentiation of country specialisation in sectors that seek economies of scope and sectors that seek economies of scale.

The contrasting empirical test of convergence is to return to the index of international value that Lipietz calculated to hypothesise that if these counter-tendencies exist, over time this index would, for neo-liberal competition states, tend towards unity. This is because if goods are increasingly made in functionally equivalent ways, the differential between the value of nationally produced goods valued at international prices relative to domestic prices should narrow. Thus the index of international value should increase towards unity for peripheral states and should decrease towards unity for 'core' states.

Table 8.2 presents tabulations of the index of international value at ten year intervals for all countries within the OECD. These tabulations are drawn from the OECD national accounts which are the same data source from which Lipietz drew his original data. Comparison of 1994 country indices of international value between Table 8.1 and Table 8.2 indicate that the indices are not identical for this

same year, suggesting that the data sets are not identical. However, the index values for each country are very close and for most of the countries concerned differ by less than four one-hundredths. This similarity in data values between tables, together with the fact that the source statistics have been gathered by the OECD for some time, suggest that the data in 1994 is the same data, the differences being due to revisions the OECD statisticians periodically make as more accurate statistics come to hand.

There are four rationale for the choice of years for which the data is presented in Table 8.2. One is that an interval of ten years should be sufficient to identify structural change, if any. A second is that since 1994 is a year upon which Lipietz presented his data, a ten year interval around Lipietz' conclusions seems appropriate. Thirdly, a point within each decade fits with the theoretical framework of the Regulation Approach: the early seventies being the period when the crisis of Fordism was becoming manifest, the early 1980s being the period of crisis, the early 1990s being the period of successful adjustment by some economies to the crisis of Fordism, and by the early new century, the period of convergence amongst advanced capitalist states. The fourth rationale is the choice of 2003 which is the latest year for which data was available.

Table 8.2:***Divergence then Convergence of International Value*****Index of International Value**

	1974	1984	1994	2003	GDP/ Capita 2003: current prices, USD based on PPP
COUNTRY					
AUSTRALIA	1.21	1.00	0.97	0.88	29,300
AUSTRIA	0.82	0.66	1.14	1.03	29,600
BELGIUM	0.99	0.64	1.12	0.99	28,500
CANADA	1.09	0.93	0.89	0.89	31,400
CZECH REPUBLIC			0.36	0.51	16,100
DENMARK	1.05	0.79	1.35	1.28	29,900
FINLAND	1.00	0.83	1.08	1.09	27,500
FRANCE	0.94	0.71	1.13	1.03	27,900
GERMANY	1.02	0.71	1.23	1.07	26,400
GREECE	0.62	0.47	0.75	0.77	19,600
HUNGARY			0.46	0.54	14,600
ICELAND	1.23	0.79	1.06	1.23	30,100
IRELAND	0.74	0.66	0.95	1.15	33,800
ITALY	0.67	0.60	0.90	0.95	26,200
JAPAN	0.88	0.87	1.76	1.19	28,000
KOREA	0.45	0.54	0.82	0.66	19,600
LUXEMBOURG	1.14	0.71	1.20	1.12	52,100
MEXICO	0.64	0.49	0.64	0.64	9,300
NETHERLANDS	0.98	0.71	1.09	1.04	29,300
NEW ZEALAND	0.77	0.58	0.86	0.85	23,100
NORWAY	1.42	1.10	1.26	1.31	36,100
POLAND			0.40	0.48	11,500
PORTUGAL	0.59	0.35	0.73	0.75	18,300
SLOVAK REPUBLIC			0.38	0.46	13,000
SPAIN	0.63	0.49	0.85	0.84	23,300
SWEDEN	1.20	0.87	1.20	1.17	28,200
SWITZERLAND	0.91	0.85	1.47	1.34	31,400
TURKEY	0.69	0.39	0.42	0.49	6,800
UNITED KINGDOM	0.69	0.67	0.95	1.01	29,100
UNITED STATES	1.00	1.00	1.00	1.00	37,600
EURO AREA	0.86	0.65	1.07	0.99	
EU15	0.85	0.66	1.06	1.00	
OECD - EUROPE	0.85	0.66	1.04	0.99	
OECD TOTAL	0.91	0.82	1.10	0.99	26,000
co-efficient of variation	24.59	25.17	32.43	26.07	
mean	0.89	0.71	0.96	0.93	
s.d.	0.22	0.17	0.31	0.24	

Source: OECD (2005) Annual National Accounts - Gross Domestic Product A. Comparative Tables based on Exchange Rates (Tables A1 to A14) & B. Comparative Tables based on PPPs (Tables B1 to B12)

In general, the data confirm the hypothesis drawn out of the theoretical framework. The hierarchy in the international division of labour from 1974 is clearly apparent, with the countries of North America and the majority of Western European countries having an index value close to the United States benchmark of 1, and the Mediterranean countries of Europe, Latin America and the countries of Asia having an index value of >1 . The interpretation of this hierarchy is the co-existence of the Fordist model of development in the former group of countries and forms of peripheral Fordism in the latter group of countries. That is, the formation of the second international division of labour is apparent with the core Fordist countries maintaining economic growth in both value and volume terms as the logic of the Fordist regime of accumulation suggests, and the peripheral countries industrialising through an export strategy of selling cheap to the centre. The outliers among the core Fordist states are Australia, Iceland, Norway, Luxembourg and Sweden, each of which are strong social democratic states with highly centralised bargaining in capital-labour relations but also with the ability to sell dear on the international market. In Australia's case this is based on a highly productive minerals sector, and in the case of the Scandinavian countries, on the proximity of high-value markets to the European east and west. New Zealand, a country high in the hierarchy in GDP per capita terms, in 1974 has an index of international value of 0.77, thus is already showing the structural and competitive weakness of reliance on the export of agricultural commodities, that is, it continues to sell cheap on the international market.

The crisis of Fordism is apparent in the 1984 data. Except for Japan and Korea, the index relative to the United States falls for all countries. The interpretation

offered by the theoretical framework to this data is that except for Japan and Korea, a supply-side crisis in the virtuous circle of the Fordist regime of accumulation is now apparent. In contrast, successful autonomous development in South East Asia, represented by Korea and Japan, developed out of the weaknesses in the Fordist model of development, particularly in low-cost and flexible labour.

The new hierarchy in the third international division of labour is evident in the 1994 data. As Lipietz (1997) theorised, those countries that chose responsible autonomy on the part of workers in the labour process flexibility in the labour process appear to be doing better in adjusting to the supply-side crisis of Fordism. The Scandinavian and European Alpine arc economies and Japan, in which the negotiated involvement of workers in the labour process was an integral part of the process of adjustment, appear to be producing more of value at an international level, than in those economies where labour markets were re-regulated to be co-ordinated by 'market forces'. This is evident in the index of international value for the former economies increasing to values much greater than one (thus selling relatively more by value), and the index for the latter set of countries remaining below (thus selling more by volume). The differentiation in this hierarchy is also evident in the co-efficient of variation of this index for all the countries in the data set in 1994 increasing by seven percent between 1984 and 1994.

The hypothesis proposed for empirical support for declining specialisation in production was that a movement in the index of international value towards unity

would reflect these counter-tendencies as states, in effect, became increasingly similar in how things were made. This movement in the index is generally evident. The exceptions are the states of Finland, Iceland, Ireland, and Norway for which the index increases and diverges away from unity. For New Zealand, Australia and Korea, the index decreases and diverges away from unity. The interpretation that can be given to these differences is that the former group have found ways to increase international value relative to the United States and the latter group have not structurally adjusted to the third international division of labour (being stuck in the first and second international divisions of labour), whereas the majority of states are becoming increasingly similar. Convergence is also indicated with the co-efficient of variation in the index of international value decreasing by eight percent between 1994 and 2003.

The movement in inter and intra- regional trade

The second piece of empirical evidence that Lipietz draws upon to map his third international division of labour is inter- and intra-international trade statistics in merchandise goods and manufactured goods. This data covers the period of the early 1980s to early 1990s. Lipietz makes use of this data in two ways. The first use is descriptive in, whilst noting that the separation of intra-bloc trade from inter-bloc trade is subjective, there is a continentalisation of international trade. The degree of integration of such continentalisation is variable, with Western Europe very integrated, Asia less so and America less so again. Also integration in Western Europe and Asia constantly increases, while intra-regional trade in North America declines and that of Latin America declines.

The second use of these international trade statistics is interpretative and draws upon the descriptive patterns of integration observed. For it is in the differences in the patterns of continental integration of trade that Lipietz draws his interpretation of the third international division of labour. The existence of continentalisation of international trade indicates to Lipietz that the third international division of labour is not international in a global sense, but international in a regional or continental sense. The primary level at which the third international division of labour is mapped is therefore at the continental level, with Lipietz identifying three continental blocs or three sets of third international divisions of labour: Western Europe, North America and Asia.

The other interpretation Lipietz draws out of the continentalisation of international trade is that the degree and trend of integration of such trade reflects the strength of, or degree of, the third (continental) division of labour. The strength of such a division in turn reflects the political responses to the crisis of Fordism able to be taken by individual states within these continental spaces. Western Europe from this interpretation represented a 'well-ordered hierarchy' (op. cit., p. 22). That is, a high and growing level of intra-Western European trade indicated a strong third international division of labour where:

each region tends to specialise in those sectors which use most intensively that factor of production with which it is best endowed, whether it be a flexible and Taylorised workforce, or a skilled workforce with negotiated involvement. Just as the movement of capital is free and the market is in

reality unitary, the divisions of labour within the EU⁷ as a whole tends to polarise between regions, by sector (or sub-sector), according to each one's highly particular 'comparative advantages'. 'It is this that allows Denmark to co-exist with Portugal, where wages are five times lower' (op. cit., pp 23-24).

The primary reason Lipietz argues for the existence of this well-ordered hierarchy, is the institutional structure of the EU itself. For within the EU is the institutional scope for a diversification of national strategies for resolving the crisis of Fordism. Thus countries such as the British Isles and those in southern Europe could resolve the crisis of Fordism through relatively low wages whereas other countries, particularly the Scandinavian countries could adjust through negotiated involvement. It is the dominance of the latter strategy among the states of Western Europe which determines the gains from trade from such a conjunction of comparative advantages. For with such dominance, the total volume of the single market of Western Europe becomes determined by the relatively high wages of those countries where involvement predominates over the relatively low wages of flexibilised countries. This is in contrast to the stagnating tendencies of declining demand which would result if the organisation of labour was the same everywhere and if competitiveness was played out through low wages and a Taylorised labour process. What arises rather from these diverse national strategies is the core, which grows in international value through its comparative advantage in negotiated involvement, and a periphery which only grows in volume through its comparative advantage in a flexible and Taylorised workforce.

⁷ Western Europe is taken at the time of Lipietz' article to refer to the European Community in the strict sense comprising the countries of the EU itself and those of the European Free Trade Association (EFTA) which were in the process of joining the European Union.

Paradoxically, it is within this dominant institutional structure that Lipietz sees both the cause of the high level of unemployment in the Western European countries of the centre and, (at the time of his writing in the mid-1990s), the cause of how this was being undermined. For capital that was unprofitable under a regime of negotiated bargaining exited to countries where capital-labour relations were negotiated at a lower level, leading to unemployment in those vacated sectors in the centre. Also, reunification of Germany in 1989 'led to an incoming of labour from Central and Eastern Europe *which was ultra-flexible but also skilled*' (op. cit., p. 25, Lipietz' italics). The availability of such labour undermined the ability of key agents of capital, labour and the state within central states to maintain the advantages of negotiated involvement.

The low and declining level of integration of trade within the North American continental bloc was interpreted by Lipietz (op. cit.) as indicative of a bloc that was not engaged in the third international division of labour. For the dominant centre, the US, and its periphery, primarily Canada and Mexico, were engaged in the same industrial paradigm of neo-Fordism – that is Taylorism plus automation with flexible labour. Thus in the North American continental bloc Lipietz expected to find a vertical division of labour in the circuits of Fordist sectors between Canada and the US along the lines of the second international division of labour. Mexico has developed a true peripheral Fordism by way of developing Japanisation on the cheap. Thus, to Lipietz:

'the North American bloc stagnates, as Canada, the US and Mexico are aligned along an axis of increasing flexibility but in a universally Taylorist

industrial paradigm. [Thus] the majority of industrial sectors can only compete by cutting basic wages and worsening conditions for the workforce, the inevitable consequence being either an ever closer alignment with Mexican conditions, or the moving of plant to Mexico, a process that will only be checked by the need for proximity in markets organised on a just-in-time basis (op. cit., p. 29).

In interpreting the relatively low but growing integration of trade in the Asian continental bloc, Lipietz refers to 'the informal dynamic of Asia' (op. cit., p. 32). The Asian bloc is characterised by extremely diverse regimes of accumulation from a central state with negotiated involvement, Japan, to the more flexible peripheries, across the three international divisions of labour. As discussed in earlier chapters, such international divisions of labour are the de-facto outcome of autonomous state development.

Intra-and inter-regional trade statistics for the major trading blocs on from 1991 to 2003 are presented in Tables 8.3 and 8.4 below. Table 8.3 presents statistics on merchandise goods, whilst Table 8.4 presents statistics on a subset of merchandise goods, manufactured goods.

With regard to the major trading blocs, several changes of the patterns observed by Lipietz a decade earlier are noticed. First intra-North American integration, whilst still low compared with Western Europe and Asia, has reversed its pattern of decline. Secondly, intra-Western European integration whilst still high, declines over the 1990s in contrast to the constant increase Lipietz noted for the

previous decade. Thirdly, intra-Asian trade continues its earlier pattern of increased integration. Fourthly, in contrast to the patterns of inter-regional trade of the earlier decade, North America is increasingly an export destination from Western Europe, whilst Asia is decreasing as a destination for exports from both Western Europe and North America, and Western Europe and North America are decreasing as destinations of exports from Asia.

Table 8.3 *Intra and inter-regional trade flow in merchandise exports (% of world trade)*

Origin	Destination	North America	Latin America	Western Europe	Asia	Rest of World	World
North America	1991 ²	5.3	1.9	3.8	4.0	1.0	16.0
	1995 ³	5.7	2.0	3.0	4.3	0.8	15.8
	1998 ⁴	6.4	2.8	3.3	3.6	0.9	17.0
	2001 ⁵	6.5	2.7	3.1	3.5	0.7	16.6
	2003 ⁶	5.5	2.1	2.5	3.0	0.6	13.7
Latin America	1991 ²	1.9	0.7	0.9	0.4	0.3	4.2
	1995 ³	2.2	0.9	0.8	0.5	0.2	4.6
	1998 ⁴	2.8	1.1	0.8	0.3	0.2	5.2
	2001 ⁵	3.5	1.0	0.7	0.4	0.2	5.8
	2003 ⁶	3.0	0.8	0.7	0.4	0.3	5.2
Western Europe	1991 ²	3.4	0.9	34.0	3.5	5.2	47.0
	1995 ³	3.3	1.1	31.1	4.3	5.2	45.0
	1998 ⁴	4.0	1.2	30.7	3.3	5.5	44.5
	2001 ⁵	4.3	1.0	28.0	3.3	5.0	41.5
	2003 ⁶	4.1	0.8	29.2	3.4	5.6	43.1
Asia	1991 ²	6.2	0.5	4.7	10.4	1.8	23.7
	1995 ³	6.3	0.6	4.3	13.5	1.6	26.4
	1998 ⁴	6.4	0.7	4.7	10.9	1.8	24.5
	2001 ⁵	6.3	0.7	4.2	12.1	1.8	25.0
	2003 ⁶	5.9	0.6	4.4	13.0	2.2	26.1
Rest of World	1991 ²	0.9	0.2	4.1	2.0	1.8	9.1
	1995 ³	0.8	0.2	3.7	2.0	1.6	8.3
	1998 ⁴	0.9	0.2	3.8	1.7	2.2	8.7
	2001 ⁵	1.3	0.2	4.5	2.5	2.6	11.1
	2003 ⁶	1.3	0.2	4.9	2.8	2.7	12.0
World	1991 ²	17.8	4.2	47.5	20.4	10.2	100.0
	1995 ³	18.2	4.8	42.9	24.6	9.4	100.0
	1998 ⁴	20.4	5.9	43.3	19.8	10.6	100.0
	2001 ⁵	21.9	5.6	40.6	21.7	10.3	100.0
	2003 ⁶	19.8	4.4	41.7	22.6	11.4	100.0

1. see WTO (2004), Technical Notes, for definition of manufactures

2. Source: GATT (1994), Table A2

3. Source: WTO (1998), Table A2

4. Source: WTO (1999), Table III.3

5. Source: WTO (2002), Table III.3

6. Source: WTO (2004), Table III.3

Table 8.4

*Major Regional flows in world exports of manufactures
(% of world trade)¹*

	1992 ²	1994 ³	1997 ⁴	1998 ⁵	2001 ⁶	2003 ⁷
Intra-Western Europe	36.3	32.0	29.7	31.6	29.3	30.4
Intra-Asia	10.7	12.3	13.5	10.8	12.3	13.6
Asia to North America	8.1	8.8	7.8	7.9	7.8	7.4
Intra-North America	5.4	6.0	6.3	6.5	6.3	5.3
Asia to Western Europe	5.7	5.5	5.1	5.3	5.0	5.2
Western Europe to North America	4.0	4.1	4.2	4.6	4.9	4.7
Western Europe to Asia	4.2	4.7	4.8	3.8	3.9	4.1

1. see WTO (2004), Technical Notes, for definition of manufactures

2. Source: GATT (1993), Table III.4

3. Source: GATT (1994), Table III.4

4. Source: WTO (1998), Table IV.26

5. Source: WTO (1999), Table IV.26

6. Source: WTO (2002), Table IV.21

7. Source: WTO (2004), Table IV.21

These patterns are broadly consistent with the thesis of counter-tendencies to reduced specialisation in the third international division of labour. The patterns suggest that Western Europe, whilst still more productive in value than other continental blocs, is less able to maintain the well-ordered hierarchy in the third international division of labour hypothesised by Lipietz. If, as theorised, the international mode of regulation has changed in a neo-liberal direction which constrains state autonomy to pursue autonomous economic and social policy, this will affect in particular those Western European states of the core as these states are by definition those who pursue autonomous development. If these core states are constrained in constructing a comparative advantage in a skilled workforce with negotiated involvement, then specialisation in sectors that uses this factor of production most intensively will not occur to the same degree, the gains from trade will be less and less trade will occur. Thus the trend towards decreased integration within the Western European continental bloc is consistent with the

thesis of counter-tendencies in the third international division of labour. The Western European countries of the core remain more competitive than the North American bloc, therefore increased trade flows from Western Europe to North America are consistent with this higher degree of competitiveness. If, as argued, capital has found in labour market segmentation a strategy to obtain both internal and external labour market flexibility and this strategy is facilitated by an environment of national neo-liberal regulation, then intercontinental trade can increase based on an intercontinental labour market segmentation. The North American continent is thus further engaged in the second international division of labour and this is reflected in the trend of increased integration in trade within this continental bloc, including increased integration with Latin America. Asia continues its differences of diverse regimes of accumulation behind autonomous state projects. These differences maintain a virtuous hierarchy combining first, second and third international divisions of labour within this continental bloc, thus trade integration within this bloc increases. However, in sectors where worker involvement is important, the national modes of regulation in Asian states, particularly Japan, lead to increasingly uncompetitive sectors relative to Western Europe and the Americas. A trend of decreased trade flows between Asia and the other major continental blocs is thus consistent with this interpretation of the effect of the thesis of counter-tendencies within the Asian continental bloc. Asian states, because they continue to maintain autonomy in economic and social policy, become more interested in maintaining a growth dynamic within the Asian continental bloc, whilst Western Europe and the Americas become less relevant.

Indicative empirical evidence (2): The inconsistent hybrid capital-labour relation: operationalising toyotism as a new (old) model of work organisation

Introduction

This section provides indicative empirical support for one of the contentions of this thesis: that Toyotism, as both a model of production or technological paradigm and as a capital-labour relation, is tending to become the key drivers of production through multi-national firms engaged in global production systems. As a technological paradigm, the argument is that Toyotism achieves competitive advantage through economies in both scale and scope through a flexibilised labour process. Such labour flexibility is complemented by Toyotism's organisational form of networks of core dominant, large corporations with a peripheral network of subordinate, subcontracted secondary firms. This labour process and organisational form facilitates a dual labour market structure within nation states of worker flexibility and involvement in the production process together with numerical flexibility. This is the inconsistent-hybrid capital-labour relation of co-existing labour market segments corresponding to a production process seeking both functional and numerical flexibility.

To fully operationalise Toyotism is a large empirical task beyond the scope of this thesis. Nevertheless, indicative empirical support for the Toyotism thesis is attempted here through examining secondary sources.

The approach developed here to partially operationalise Toyotism is of four parts. Firstly, Toyotism as conceived is outlined in more detail by examining the two

components which together comprise Toyotism as a model of production: its relationship to suppliers and its organisation of work. Secondly, these components of Toyotism are considered in turn: first that the Toyotist system of relationship to suppliers is that which MNE's are beginning to emulate. The Toyotist system of work organisation is then compared to the shape of claimed emerging new forms of work organisation which appears in both discourse and empirical research in the international literature in industrial and employment relations variously as 'flexible production systems, lean production systems, high-performance work systems or high involvement workplaces'. The purpose of this comparison is to build the claim that Toyotism as conceived is the same as those that contemporary research identifies as emerging new forms of work organisation. Thirdly, from this claim, the literature on the international diffusion of these new forms of work organisation is critically examined to develop the argument that such diffusion indicates a gradual diffusion of Toyotism as a model across advanced capitalist states. Fourthly, additional support to this argument for diffusion is sought through examining changes in temporary and self-employment within advanced capitalist states.

A detailed conceptualisation of the Toyotist model of production

A model of production is an abstract theoretical representation of the relations that exist between different concepts or parts of a whole. Variations of this model are expected to be observed in practice, or in different contexts, but the essential point is that it is possible to generalise about certain sets of relations between different components of the model. Thus in a Weberian sense, a model is an 'ideal type'. In

the Regulation Approach, models such as Taylorism and Fordism are used to represent the complexities of the world of work. They are not meant to depict specific workplaces, but rather a set of principles that underlie the organisation of work in many different workplaces. The analytical value of such representations lies in their ability to distill complex sets of relations into a broader whole. This thesis has been developing the model of Toyotism as a representation of the general set of relations of the organisation of work of MNE's engaged in global production systems. This section expands and refines the underlying relations in this model so as to compare these relations to what the dominant empirical discourse refers to as 'new forms of work organisation'. In a methodological sense, this is a move from the abstract to the concrete as a partial validation of the process of abstraction which has been the core focus of this thesis.

Toyotism can be examined in more detail through considering the general features of three components which make up the whole: the management of production, the organisation of work, and the employment relation. Production management refers to the overall logic of organisation of the processes through which commodities are produced and distributed. Work organisation refers to the ways jobs are defined and configured within the overall logic of organisation of production. Employment relations refers to the policies and practices governing the employment relationship of individuals and groups involved in production. Following Dohse, Jürgens and Malsch (1985), these three components of Toyotism can be examined and analysed.

Dohse et al were writing at a time when considerable research was being undertaken to understand the 'secret' behind the success of Japanese automobile manufacturers in producing automobiles at sufficiently low cost to change the competitive conditions of the world automobile industry. This research identified that the cost advantages Japanese automobile manufacturers held were not primarily due to superior technology, as the Japanese had frequently bought or copied Western technology that was also available to other automobile firms on the world market. Rather, the understanding that developed was that superior management systems was the dominant contributor to the cost advantage Japanese automobile manufacturers held. The dominant thinking was that the Japanese style of management was an alternative organisational paradigm which could be transferred into Western settings in order to enable Western automobile manufacturers to be more competitive with Japan. Because much of the research on Japanese automobile manufacturers was based on the Toyota motor company, this organisational paradigm is given the term "Toyotism".

Dohse et al take issue with the assumed ease with which the Japanese style of management could be transferred. This critique did not rest on the view that cultural features of Japanese society underpin Japanese management systems and were thus not transferable. Rather, cultural factors were secondary to the system of control of work in Japanese plants which would not be acceptable to Western trade unions. It is for this reason, Dohse et al argued, that the Japanese organisational model would not be easily transferable to the West. What Dohse et al could not predict was the demise of the international mode of regulation of Fordism, the crisis of autocratic Fordist states, the opening up of neoliberal

global regulation leading to the advent of neoliberal competition states, the weakening of the power of trade unions and the strengthening of the power of capital to dictate the terms of the capital-labour relation. The argument developed here is that Dohse et al were correct in their production-control approach to explain the superior features of the Japanese model of management. However, they underestimated the ability of management in a neoliberal environment to utilise Western human relations management (HRM) techniques to transfer this method of production-control globally.

Dohse et al. identify two causal circumstances cited to explain the superior productivity of the Japanese automobile industry: the relationship to suppliers and the organisation of the labour process. These are now discussed in turn.

Relationship to suppliers

The relationship of the Toyota motor company to suppliers is cited to yield productivity advantages in two respects: 'first, the economic relationship between large plants for sub-assembly and final assembly and their smaller suppliers; second, the organisation of the supply process itself' (op. cit., p.118). The Japanese economic structure is characterised by a strongly dualistic structure. This dualism is one of large firms paying relatively high wages, providing employment security and social benefits with small firms which pay low wages with little or no social benefits and little employment security. According to Dohse et al 'the Japanese automobile firms derive productivity benefits from this dualism insofar as they order parts and components from the economically dependent suppliers

rather than producing them themselves' (ibid.). Whilst dualistic structures and subcontracting of parts production to smaller firms existed in Western states, it is much more pronounced in Japan. The Japanese method of subcontracting is also contained within a highly integrated production structure 'because the smaller firms are economically and legally dependent and in many cases can be regarded as divisions of the larger firms. The large firms have thus internalised dualistic structures' (ibid., p. 119).

Dohse et al. claim that this relationship to suppliers was possible only because of the fragmentation of plant-level unions in Japan, who 'were unable to match the economic integration of the large firms with uniform collective bargaining, and the homogenisation of wages and working conditions' (ibid., p. 119). In the West in contrast, highly integrated automobile manufacturers were usually confronted with the unified demands of the union in its smaller plants as well as its larger plants, thus could not exploit what dualism that did exist to the same extent as in Japan.

Compared with the Toyotist relationship to suppliers, the internationalisation of production of Western automobile firms to low-wage countries, which heralded the second international division of labour, still suffered from cost disadvantages in the organisation of the supply process itself. Japanese automobile firms derived cost advantages in the organisation of the supply process through frequent deliveries to the assembly plant and through "just-in-time" procedures thus could 'avoid the investment of capital in large inventories and storage facilities and reduce the personnel costs of transportation within the plant' (ibid., p. 119). This

is difficult to achieve in a spatially separated production system. In the next section however, it is argued that MNE's have overcome these limitations by imitating the Toyotist relationship with suppliers by developing power-driven internal and external networks within global production chains.

MNE's and their relationship to suppliers

Drawing principally from Dicken (1998), the argument developed here is that MNE's in the general form of their internal organisation and in their relationships with external suppliers, have developed Toyotist-style supply relationships in global systems of production. Dicken insists on national and sectoral diversity in forms of MNE's. Such diversity is not in dispute here, rather the claim is that within such diversity, general features can be found in the nature of how MNE's shape global production systems.

Dicken (op. cit.) in particular,, and to a lesser degree other commentators (for example, Buckley and Ghauri, 2004; Kleinert, 2003; Feenstra, 1998; Buckley and Casson, 1998), outline and describe how the uncertainty and multi-dimensional form of international competition shape the internal relationships between constituent parts of MNE's and shape the relationships between MNE's and other firms. Referencing Bartlett and Ghoshal (1989), an emergent ideal-type MNE is arising in response to the uncertain global competitive environment which seeks to be 'globally efficient, multi-nationally flexible, and capable of worldwide learning all at the same time' (Dicken, op. cit., p. 205). This 'complex global' organisational model is 'characterised by an integrated network configuration and

a capacity to develop flexible co-ordinating processes'. Thus on a global scale, is identified an emergent MNE organisational model which attempts for reasons of cost to integrate production on a global scale, yet at the same time be flexible in response to global competitive conditions. The key feature of this globally integrated model of production is the externalisation of various operations within global production chains by MNE's to be performed by independent firms. The general form of this externalisation of production is subcontracting – that is, through a commercial contract to an independent firm to undertake some activity according to the specifications or plans provided by the firm offering the contract.

The dynamic and shape of these 'webs of enterprise' are however essentially Toyotist supply relationships. That is, there is a centrally coordinated complex structure of power and dependency between the core functions of very large MNE's and smaller firms who are economically dependent on the MNE's. The advantages to MNE's are considerable: they save capital because they do not have to invest in new or expanded plant; they gain flexibility as it is easier to change subcontractors than to close or shift their own fixed capacity; through specification in the contract they gain a large amount of control over the subcontracted operation; and it externalises some of the risks and costs of certain operations (Dicken, *op. cit.*, p. 232). While small firms may benefit from subcontracting through increased market access, continuity of orders and capital and technology injections, they become economically dependent upon continued subcontracts from the MNE's and bear some of the MNE's risks by being expendable or bendable. This is a Toyotist system of organising relations between suppliers.

Dicken and others who focus upon 'global shifts' and the key role which MNE's play in shaping these shifts do not consider how firms within these global integrated networks organise production. In the next section, returning to Dohse et al (op. cit.), it is argued that in secondary factor explaining the superiority productivity of Japanese production, the organisation of the labour process, is how firms within global production networks are tending to organise flexible production.

Production-control in the Toyotist model of production

Dohse et al. (op. cit.) cite comparative studies which identify greater utilisation of working time, flexibility in labour deployment, alternatives in the division of labour, work effort, and utilising the innovative potential of employees as key features behind the productivity advantages of the Toyotist organisation of the labour process. Japanese workers had a greater proportion of their paid time as time worked when compared with their American and European counterparts. This difference was primarily due to workers taking less paid vacation and having lower absenteeism and also functional flexibility. Japanese workers can be allocated to different tasks at short notice according to changed requirements by management. Outside of Japan such flexibility has been limited due to job demarcations, detailed job classifications and wage security agreements. There were a low number of indirect production workers (such as quality inspection and maintenance workers) in Japanese organisations compared to their counterparts in the West. Work intensity in Japanese organisations seemed not subject to any

restrictions. In the West in contrast, work intensity is subject to a high degree of regulation. Japanese workers also participate in the innovation process within organisations, 'not only in measures to improve product quality, but also in the optimisation of production, line balancing, and the efficient use of personnel and production facilities' (op. cit., p. 121). In the West in contrast, innovation and rationalisation are the domain of management, who are frequently unable to use the knowledge of employees.

The human-relations approach gives priority to this system of management unlocking the creative involvement of workers in the management of the labour and production process as the explanation for why Japanese workers behave as they do. Dohse et. al. argue that the motivation of workers is a secondary factor which *results from* the organisation of production. From Dohse et al's perspective the Japanese system of work organisation is one of extreme control – to the degree that it out-Taylorises Western variations of Taylorism. Work in the Japanese automobile industry was no less repetitious and standardised than in the West, and Taylorist principles were the basis of the Japanese organisation of the labour process. Where the labour process differed however was the aid which Japanese workers gave to employers to rationalise the labour process. Taylor, in the West, made every effort to get the aid of workers in rationalising production, but frequently failed because workers refused to co-operate. As Dohse et al state: 'Toyotism is, therefore, not an alternative to Taylorism, but rather a solution to the classic problem of the resistance of the workers to placing their knowledge of production in the service of rationalisation' (op. cit., p. 128).

In contrast to the human-relations school which maintains that productivity gains are achieved through highly motivated workers who identify with the work and the goals of the firm and through job security, and so secure worker co-operation, Dohse et al cite studies which point more to worker submission to employer power in the organisation of work. In contrast to the West, in post-war re-industrialisation in Japan, Japanese firms, especially in the automobile industry:

‘succeeded in destroying the militant post-war unions that had an industry-wide focus, and in firing union representatives. The Japanese automobile industries were thus able to prevent from the outset, the development of a strong labour-union movement, to particularise the interest representation of employees into plant or company unions, and to limit considerably the scope of labour-union demands’ (op. cit., p. 134).

The trade union movement in the West was shaped by the historically contingent experience of management attempting to implement Taylorism and at the same time attempting to suppress trade union collective organisational efforts with authoritarian force. Unlike Japan, trade unions in the West were not suppressed. The consequence in Japan was that workers had no independent voice or collective organisation to resist management efforts to implement Taylorism or to resist an individualisation of wage relations.

Underlying what the human relations school see as evidence of co-operative behaviour, notably functionally flexible teams motivated to meet the output goals of the firm, and life-long employment, are regressive practices from western trade

unions' point of view. Lacking effective collective voice, the social pressure from work groups is used as a functional part of production control. Rationalisation in Japanese production processes is not only achieved through the famous just-in-time, no-buffer system, but also by reducing manning and working time buffers. Application of visualisation of underutilisation, such as warning lights above assembly lines signalling problems or bottlenecks in work flows, serves both as a means to 'balance the line' by redeploying workers, but also serve as work intensification functions by also identifying where personnel or working time buffers exist *elsewhere* on the line and thus where workers can be deliberately pulled off the line to identify if such buffers exist. Pressure to meet quantitative quotas in a production process where workers can to a large extent be flexibly deployed in a variety of work tasks and to assume the job activities of colleagues who have been withdrawn results in a great deal of group pressure to avoid or eliminate stoppages. From this perspective it is peer pressure from the group that stimulates individual performance and leads to continuous productivity improvements, not the co-operative relationship of the group of motivated individuals assumed by the human relations school. As Dohse et al. observe, in the absence of any effective means of collective resistance, this flexibility means that the process of individual work intensification is effectively open.

Dohse et al. are similarly critical of the human relations view that the principle of life-long employment of core Japanese workers originates from co-operative relations between workers and their employers. Whilst the human relations school emphasises the function of employment security in promoting motivation and identification with the company, a more critical view is that employment security

also increases the economic dependence of employees of the firm. As Dohse et al. state:

‘When an employee enters the internal labour market of the large Japanese firm, there is no further possibility of advancement outside that firm; all large firms recruit externally only for positions at the bottom of the job hierarchy and train their specialists for better jobs through on-the- job- training and job rotation’ (op. cit., p.359).

In the West, advancement rights were regulated through collective bargaining to be based on seniority and precisely defined job classifications, hence individual advancement was largely independent of management preferences (and independent of firms?). In Japan, in contrast, in the absence of such independence, individual advancement in the internal labour market is largely determined by management. At Toyota for instance, management alone decided upon promotions. Age and seniority are considered, ‘but factors like work effort, cooperativeness, conscientiousness, and innovativeness are the decisive factors for promotion consideration’ (op. cit., p. 136). Similarly at Nissan, where a company union exists, ‘employees have to prove their loyalty and work effort in order to advance in the internal labour market’ (ibid.).

At Toyota, this dependence on management for career advancement was reinforced by an individualised wage system. The much heralded ‘spring offensive’ through which company unions negotiated wage increases in line with company profits, only related to the total compensation of the whole work force.

But 'pay increases for individual workers cannot be deduced from this overall percentage' (ibid.). Total wages comprise both a basic wage and work-area-related incentive pay which averages about fifty percent of normal monthly pay. Wage increases are thus largely allocated on the basis of the efficiency of individual work areas which increases the pressure of the work group on the work effort of individuals. Additionally, increases in the total basic wage component are allocated in a differential manner according to a hierarchy of status amongst work groups. Even this allocation is individualised and used for management control, since wage increases through promotion to a higher status group is based upon the individual's previous wage. In contrast therefore to the classic Japanese system of promotion based upon seniority, 'individual wages are absolutely "individual" to workers' (ibid.).

It the West in contrast over this time, wages, through collective bargaining, were strictly related to jobs. Trade unions, as part of the compromise in the labour-wage relation, won wage scales negotiated at national levels or across multiple sights within the same companies which were also related to strictly defined job classifications. 'The fixed hourly wage left no room for wage drift, individual bonuses, or individual wage increases' (op. cit., p. 142). Individual wages and wage increases were intimately connected to the jobs workers held. Workers did not have to compete with each other for wages and wage increases and increased their individual wage through increased qualifications or skills, not on the goodwill of management in deciding upon a person's advancement.

To Dohse et al. therefore, Toyotism may be superior to Western production systems in terms of productivity, but such superiority is only possible in an employment relations environment in which there are hardly any limits to managerial prerogative. In contrast to the human relations protagonists, this is not a system developed out of a correspondence of interests between capital and labour, rather it is a system developed out of the suppression of the independent collective interests of workers. As such, Dohse et al. claim, Toyotism is not easily transferable to the West and may even have counter-productive effects. In employment relations systems where independent trade unions exist and have some power, it is difficult to intensify the labour process and rationalisation according to the no-buffer system would this would 'lead to disruptions in production rather than to an increase in work effort and flexibility in labour deployment' (op. cit., p. 141). Further in such a system, should flexibility in labour deployment be implemented, any conflict lifts disruption to the level of the plant which this would increase the power of such unions in relation to management. Dohse et al could not however anticipate such global structural change which drastically limited the power of trade unions in the West, and therefore the possibility of the transfer of Toyotism into Western-type employment relations systems.

New Forms of Work Organisation?

This thesis has argued that neoliberalising tendencies in the international mode of regulation forces nation states to become neoliberalised competition states in order to attract internationally mobile capital. These neoliberalising tendencies

weaken the power of labour and facilitates the embedding of the inconsistent hybrid capital-labour relation which has been termed Toyotism. Toyotism, it has been argued, comprises of a model of production where the production process is flexible to achieve economies in both scale and scope together with segmented labour markets which enables a correspondingly flexible organisation of work within the production process.

This section argues that empirical evidence for the emergence of the Toyotist model of production can be seen in the contours of a claimed new model of production which since the early 1990's in both discourse and practice has variously taken the term: flexible production systems, lean production systems, high performance work systems, high involvement workplaces (Marchington, Wilkinson, Ackers, Goodman, 1993; Applebaum and Batt, 1994; Applebaum, Bailey, Berg, Kalleberg, 2000; Harley, 1999; Osterman, 1994, 1999, 2000). Whilst often confounding in its variations in practice in different contexts, and at different levels of analysis, it is possible to identify the major principles of this model of production, which, to many commentators (e.g. Bélanger, Giles, Murray, 2002; Butler, Felstead, Ashton, Fuller, Lee, Unwin, Walters, 2004), is different in significant ways to the Fordist model which preceded it.

Identified in this model are changes in the overall organisation of the production processes through which commodities are produced. In contrast to the principles of mass production during Fordism, production processes have changed to produce less standardised and more varied products whilst still seeking production efficiencies through some form of standardisation somewhere in the production

chain. As Bélanger et. al. argue in their discussion of the new production model, 'developments in production management can best be understood as a continuous effort to reconcile two principles: productive flexibility and process standardisation' (Bélanger et al., p. 32). Firms are thus attempting to achieve economies in both scale and scope in the organisation of production as a response to the multidimensional nature of contemporary competition. Katz and Sabel (1985) noted the transformation occurring in the car industry in the 1980s, emphasising the trend towards more flexible production systems. Whilst the automobile industry has shifted steadily towards variations of flexible mass production, so to has the notion of flexibility in production systems spread to most economic sectors. As described by Coriat, product variety and business speed have become key elements in firms' struggles to experiment with new forms of corporate strategy and organisation (Coriat, 1997).

In addition to a shifting emphasis towards flexibility, identified in the new model of production is continued emphasis on standardisation in order to achieve the cost efficiencies and quality standards required by ever more competitive and demanding product markets. Information and communication technology assists standardisation and quality control through enabling the use of general-purpose equipment rather than the single purpose equipment of Fordist production. In addition to flexible technology however, is an extension of Taylorism into production management, driven principally by industrial engineers, to use the ICT technological platform to refine programmes, procedures and rules through the use of statistical techniques and monitoring so that the variability and uncertainty associated with the production of non-standard goods and services is reduced as

much as possible. The ICT platform is therefore used to develop procedures and measures to assess and monitor performance within successive stages in production chains. According to Bélanger et al. (2002), the concepts of 'process management' and 'customer focus' underlies these Taylorist extensions in production management. Process management is understood as an attempt to conceive of production 'as a global process and not as a succession of different activities organised in different departments' (p. 34). In a complementary manner, customer focus 'holds that operations should be driven or "pulled" by customer specification' (ibid.).

Developments in process management and in customer focus are not just limited to quality control. MNE's have also developed programmes to monitor supply management and to introduce time-based management. Through benchmarking measures systematically comparing similar plants over time, the diffusion of 'best practice' and process standardisation across global production systems can be driven by central corporate managers of MNE's. Once well established and understood by all participants, the theory holds that production systems become both leaner in the sense of a reduction in non-value-added activities and more fluid in the sense of a more continuous flow of production.

The impact on the organisation of work of tendencies in production systems towards productive flexibility and extended standardisation is often presented as a clear move away from the organisation of work under Fordism. The pursuit of production flexibility with standardisation together with the use of ICT's in production leads, it is argued, in contrast to Fordism, to a greater emphasis on the

mobilisation of tacit knowledge and worker discretion in the control of the production process and achievement of production objectives, a greater emphasis on worker polyvalence rather than individual worker specialisation, and more worker autonomy in the achievement of jobs rather than direct supervision by managers. The development of flexible production systems and the intensive application of the ICT platform reduces, it is argued, the importance of manual work and makes output and quality more dependent upon the application of skills and worker knowledge at the point of production (Zuboff, 1988; Castells, 1996). Such changes have implication for the organisation of work. Reliance upon labour power in the form of worker knowledge, skill, and in more abstract form in flexible production systems, places workers in the position of holding tacit knowledge, over which they have discretion in application, which when applied is difficult to monitor on an individual basis. This creates a problem of control for managers who have to mobilise such tacit knowledge and worker discretion.

Team-working and 'off-line' activities such as problem-solving groups or quality circles become central features of the organisation of work in new production systems as means to elicit tacit knowledge and worker discretion and are held to represent a break from Taylorism. Interaction between team members or quality circles helps disseminate tacit skills and knowledge from individual workers to groups of workers which are then embedded and refined in production programmes, routines and rules. The practice of sharing skills across traditional job classifications and occupational specialisations is claimed to represent a distinct movement away from the narrow specialisation and direct supervision that characterised the Fordist model of production.

Clearly, the elements of production process (flexible production plus standardisation) and the elements of the organisation of work (greater utilisation of working time, flexibility in labour deployment, team work, greater work effort, utilisation of the innovative potential of employees) in new forms of work organisation are the same as that of the Toyotist model of production. What is in question however is whether the employment relations in the new forms of work organisation are Toyotist and driven by exploitative employment practices through managerial control or are new forms of employment relations favouring job enrichment and self-management. This question is still one of debate.

Following Applebaum (2002), the extent of whether there are new forms of employment relations surrounding new forms of work organisation can be considered across three dimensions: whether the organisation of work is such that it provides employees with the opportunity to participate in decisions; the extent of human relations practices which increase workforce skills; and the extent of incentives for workers to participate effectively. In her review of survey evidence, she finds it difficult to draw definitive conclusions about what high performance workplace systems do for workers (op. cit., p. 148). Edwards, Geary and Sisson (2002) in a more comprehensive survey of national studies of the extent by which new forms of work organisation had diffused find:

‘the overall picture is one of significant experimentation in employers’ use of work organisation strategies but within a context of considerable continuity that is not often recognised or acknowledged. Certainly, it would seem that use of new

initiatives had increased in recent years in countries for which good information is available, like the UK and the USA' (Edwards et al., 2002, p. 92).

As other observers also note, Edwards et al (op. cit.) recognise there are a number of methodological issues in generalising from survey evidence on new forms of work organisation. NFWO are difficult to define, and what definitions researchers use varies enormously. Even with a definition it is enormously difficult to measure their diffusion. For instance, knowing that a workplace has team work says nothing about the nature of the practice, such as the degree of autonomy, a team has. There is also the issue of response rates, as is the quality of response, particularly when surveys attempt to go beyond general information. There is also the problem of selection bias, with companies not associated with NFWO being less likely to participate in surveys, and practitioners selecting sampling frames of companies, such as top performing or large companies, who are more likely to have some NFWO.

In this context, the 1996 Employee Participation in Organisational change (EPOC) cross national survey of ten EU member countries is important, as this survey was designed to overcome many of these methodological limitations. The results of the EPOC survey offered robust support for various national survey evidence of considerable uneven experimentation in NFWO. This was especially true when the nature and extent of the scope and autonomy of team work is taken into account. In this survey, only a third of workplaces in the ten countries surveyed had any kind of formally designated teams, with only around five percent practicing forms associated with the textbook models of worker

empowerment and less than two percent were close to the ideal-type of the Scandinavian (Kalmarian) model. 'Most [teams] lie between this model and its Toyota equivalent with a tendency towards the Toyota' (op. cit., p. 99).

Whilst the EPOC survey considerably mutes other claims of widespread diffusion in NFWO (for instance, Osterman, 2000; Applebaum, 2000), what is perhaps not reflected upon well by Edwards et al is the degree of movement away from the more corporatist industrial relations arrangements in many of the EU countries in the EPOC survey. Bearing in mind where employment relations in these states had come from, an interpretation of the EPOC results is that by 1996 there had been considerable movement by firms within the EU nations surveyed towards NFWO, and that within this shift there was a pronounced tendency towards Toyotist forms of work organisation.

Case studies are somewhat less equivocal about the power relationship within NFWO. There are numerous studies illustrating an 'exploitation' view. McArdle, Rowlinson, Proctor, Hassard and Forrester (1985) describe total quality management (TQM) initiatives in a British electronics and argue explicitly that TQM 'forced workers to indulge in their own work intensification and exploitation' (McArdle et. al., p. 170). Pollert (1996) shows that team working in a chocolate factory in Britain involved tighter budgetary controls which in many ways reduced rather than enhanced the autonomy of supervisors and for workers 'there was no indication of a change from a primarily instrumental orientation to labour' (Pollert, 1996, p. 201). Barker (1993), in a pure Toyotist interpretation of a study of team work in a US printed circuit factory, found that there was coercion

but it was generated by work teams and not by management. Danford (1998), in a study of a British autocomponents firm, found that 'disempowerment and deskilling may more accurately describe the effects of teamworking (Danford, 1998, p. 424). Danford, Richardson, Stewart, Tailby and Upchurch (2004), in a study of a British aero engine manufacturer, found that team working did not give rise to greater skill flexibility and autonomy, but rather the re-shaping of existing forms of flexibility 'into more functionally and spatially focused types of work organisation' (Danford et al., 2004 p. 13). The same themes are in evidence in Brown's (1999) study of an Australian apparel manufacturer where HRM methods 'are not designed so that management "squeezes" more work out of employees; rather this task is handed over to workers themselves' (Brown, 1999, p. 253).

On the other hand, other cases claim to affirm teamwork as empowering workers. For instance, Clark's (1995) study of a Greenfield site opened in South Wales by the Pirelli company, found the companies HRM strategy of workforce flexibility, pay linked to learning new skills and self supervision led to high worker satisfaction and 'created a sense of involvement and empowerment' (Clark, 1995, p. 235). Clark is also however very clear that change was a complex process with limits and contradictions. Workers felt powerless in relation to such issues as pay and staffing levels, a weakening of the influence of the trade union, and self-supervision was often accompanied by 'intensified work effort over a shift' (ibid., p. 154).

Case studies such as Clark's support deeper survey results such as the UK workplace industrial relations surveys (WIRS). This representative survey of employees attempts to measure the incidence of given HPWO practices but also gets behind the labels and examines in a detailed way, the nature of the labour process. Gallie and White (1993) and Gallie, White, Cheng and Tomlinson (1998), in their analysis of the WIRS surveys, found that 20 percent of employees participated in quality circles or similar groups but more particularly that employees were more empowered as a result. The study's findings indicate thus that practices such as quality circles can be highly effective in promoting employees' sense of involvement. The consequences of such changes in work organisation were not always unambiguous however. On the one hand workers enjoyed more autonomy, made greater use of their skills, and had more opportunities for self development. On the other hand, workers also experienced an extensive and expanding use of control systems and considerable intensification of effort levels. Also, more strikingly, was the rarity with which UK workers were permitted to take part in decisions that involved changes in work organisation. Only a third felt that they could exert some influence and nearly half were dissatisfied with their level of influence. Similarly, of those employees who reported that they were a member of a work group (46 percent), only fifteen percent worked in a group which has a 'lot of responsibility'. There was also evidence to suggest that the level of employee participation had not increased from the mid-1980's, but may have declined.

What this apparent ambiguity between worker autonomy and control in NFWO suggests is what has been argued earlier in this thesis on labour market

segmentation during and after Fordism. During Fordism, it was argued, the extent of worker real subordination to the labour process was overstated and did not take into account agency on the part of employers and employees. During Fordism, employers were interested in releasing workers' creativity as well as regulating them tightly. This has not changed in NFWO. Strategies to encourage workers' active participation have always been on the agenda, but there is still control because there are limits to the extent to which employers can cede full autonomy to the workforce. During Fordism, this was regulated through collective bargaining with strong trade unions. In a contemporary environment of a weak labour movement, what has changed is the means of control, not a move away from all forms of control. This is understood by Edwards (2001), to whom the explanation for apparent ambiguity in worker autonomy and control in NFWO lies in understanding the balance between the need for creativity and control. Edwards argues that it is the failure to understand this balance which renders the worker autonomy and empowerment model of HRM intellectually flawed. To Edwards, under new forms of work organisation the control system is based on outcomes, not specific instructions to detail. Via the techniques of HRM, risks and responsibilities are internalised in the sense that employees are held responsible for their own actions (Edwards, 2001, p. 23). Thus task discretion does not mean the lifting of organisational control, rather it means the widespread use of HRM as opposed to more direct means of control. Thus increased responsibility arising from changes in work organisation and intensification and stress are internalised via performance management and other employee relations techniques.

Taylor (1997) argues similarly from his analysis of workers in two customer service organisations. Taylor argues the existence of what he terms 'tactical responsibility'. As workers are given increased autonomy in the detailed planning of tasks, equally there is a centralisation of strategic control through the use of surveillance (see also Sewell, 1998) and the setting of hard production targets. These forces are not separate but are part of what Taylor terms a dialectic of control: they are necessarily intertwined and in combination reflect a new way of managing the continual tension between the granting of autonomy and the exercise of managerial control.

In summary therefore, in the literature which identifies and surveys the nature and extent of new forms of work organisation, can be seen the emergence of the Toyotist system of production and organisation of the labour process. In contrast to those who argue that such forms of work organisation represent a break with Fordism, the argument that has been developed that the vacuum in the regulation of employment relations created by the weakening of trade union power in advanced capitalist states has been filled by HRM techniques, which shifts the means of control largely to the workers themselves. This is not a new model of work organisation, rather a transfer of the Toyotist production process and organisation of work into advanced capitalist states.

Labour market segmentation

An essential component of the emergent inconsistent hybrid capital-labour relation is the interrelationship that exists between functional and numerical flexibility. The argument developed in the thesis was that capital in a neoliberalised environment is able to deepen existing forms of labour market segments and so simultaneously combine both functional and numerical flexibility within the workplace. This section begins to operationalise this aspect of Toyotism.

The focus of studies on new forms of work organisation has tended to emphasise the work done by regular, full-time workers and neglect flexible staffing strategies involving non-standard forms of employment. Such studies generally therefore do not consider explicitly whether a necessary condition for securing the benefits of stable, functionally flexible, variably involved and committed employment is a demand buffer of external flexibility provided by a group of temporary and other non-standard workers. Studies on non-standard forms of employment, in contrast tend to occupy a separate stream in the literature and seldom make links to new forms of work organisation. Such studies focus upon employers' attempts to obtain numerical flexibility and otherwise reduce costs by using workers who are not their regular, full-time employees.

As with the discourse on new forms of work organisation, the definition of numerical flexibility is a problem; variously termed flexible staffing arrangements (Houseman, 2001), market-mediated work arrangements (Abraham and Taylor,

1996); contingent work (Povlika and Nardone, 1989); non-standard work arrangements (Cousins, 1999); and atypical employment (De Grip, Hoevenberg and Willems, 1997). Nonetheless what can be understood by the term are several kinds of employment arrangements which differ from full-time, permanent, wage and salary employment. Such arrangements include the use of short-term temporary workers who are hired for finite periods on an as-needed basis. Another arrangement is the externalisation of administrative control through the use of temporary help agencies or contract workers. Such workers are considered to be the employees of the temporary agency or subcontracting company, not the client organisation, and could include both highly skilled and lowly skilled workers. Additionally, firms can limit the duration of employment using part-time workers, though part-timers are often relatively permanent members of an organisation.

There seems little doubt that numerical flexibility has increased in the advanced capitalist states since the crisis of Fordism. Whilst there are differences between nation states, De Grip et al (1997), using EUROSTAT data, observed a fifteen percent increase in the numerically flexible (variously comprising self-employed, part-time and temporary employment data) workforce in the EU between 1985 and 1995. Deconstructing this, in a more recent publication, the OECD (2002) observes that temporary employment is 'a significant feature of the employment landscape in most OECD nations' (OECD, 2002, p. 130), but also notes cross-country diversity in both the proportions of temporary to total employment and in growth of temporary employment to growth in total employment. The same report also notes that temporary jobs are disproportionately held by younger and less educated workers and by those employed in low-skill occupations, agriculture and

small firms; the average wage of temporary workers lags those of permanent workers between 17 and 47 percent; there is low *de facto* eligibility to employment benefits compared to permanent workers; temporary workers are less satisfied with their job than permanent workers, particularly pay and job security; and the majority of temporary workers have considerable continuity in employment.

There has also been a notable increase in the use of temporary agencies. In the US for instance, from a small base in the 1970s with 184, 000 workers on its daily payroll, by the end of the 1990s, more than 2.5 million workers were in temporary staffing agencies (Peck and Theodore, 2004). In France, the world's largest temporary agency, Manpower, has over 1000 agencies, more than in the US (Newsweek, 2006). Whilst the proportion of temporary agency placements to total employment is small, Peck and Theodore (op. cit.) argue that temporary employment agencies play a significant role in mediating flexible employment through 'new roles in screening, recruitment, and reassignment; in job design; in supervision and labour control; and in the restructuring of remuneration and incentive systems' (Peck and Theodore, op. cit. p. 3).

Whilst generally overlooked in statistics of flexible employment, there is evidence of an increase in the number and proportion of the self-employed in most OECD nations over the 1990s. During the 1990s, self-employment grew faster than civilian employment as a whole (OECD, 2000). Comparisons in this same report indicate that this increase contrasted with the 1970s and 1980s where the share of self-employment tended to fall. This report also notices a stabilising in the

proportions of self employed with employee in the 1990s, in contrast with earlier decades where these proportions had been falling. The report also observes that 'the distinction between self-employment and wage employment may have weakened' (ibid., p. 1). That is, that an increase in certain forms of employment, such as franchising, and self-employed people who work for just one company, blur both forms of employment.

Most studies that examine the interrelationships between functional and numerical flexibility within organisations have sought to explain their simultaneous use using Atkinsons' core-periphery model (Atkinson, 1984, 1987; Atkinson and Meager, 1986). This model offered managers and policy-makers a framework for identifying the main practices on which they should focus in order to obtain both numerical and functional flexibility. It suggested that they seek to establish long-term employment relationships with part of their workforce (the 'core', regular, permanent workers who are highly trained, skilled and committed to the organisation) and at the same time externalise other activities or workers by means of transactional contracts (the 'periphery'). Core workers were expected to have those attributes for functional flexibility; peripheral workers were expected to provide numerical flexibility. Segmenting the organisation's workforce into fixed and variable components is assumed to achieve cost effectiveness and core worker productivity as the numerically flexible non-standard, peripheral workers could be used to buffer and protect the regular, core workers from fluctuations in demand without affecting their employment security

Several assumptions of the core periphery model have been the subject of considerable empirical research, particularly whether firms utilise both functional and numerical flexibility simultaneously and that managers strategically pursue such flexibility. The research evidence is mixed. Many studies have found a negative relationship, or no relationship, between functional and numerical flexibility within establishments (Osterman, 1999; Davis-Blake and Uzzi 1993; Cappelli, 1995; Cully, Woodland, O'Reilly and Dix, 1999). By contrast, other studies found that patterns of internalisation and externalisation coexist within the same organisation (Kalleberg, 1989, 2001, 2003; OECD, 1999; Purcell and Purcell, 1998). Evidence that managers strategically pursue both forms of flexibility is similarly mixed (Kalleberg, 2001).

Whilst the evidence that employers strategically seek to flexibilise the workforces both numerically and functionally is mixed, it remains the contention in this thesis that this is occurring but has yet to be found empirically. Two arguments support this contention. First, most studies use data and observation of a decade ago, thus the tendencies which are argued to exist may not have been quite so apparent when these studies took place (Purcell and Purcell, 1998). Secondly, most studies assume a rather narrow view on what constitutes the core and the periphery and use simple measures to capture any differences, if any. What seems increasingly apparent in more recent studies, which this thesis also agrees, is that the core-periphery model oversimplifies the homogeneity and dynamic of the core and periphery. The definition of who constitutes the core and who constitutes the periphery varies from firm to firm, and the ability of firms to obtain both forms of flexibility through, for instance, the use of subcontracting or the use of temporary

staffing firms, is underplayed. Empirical studies of the core-periphery model tends to be firm centred and pay little attention to dualism between firms created through the use of organisational networks that are at the heart of the Toyotist model of production in which there is are differences in job quality. Whilst still open empirically therefore, there is sufficient evidence to support the claim here of a deepening labour market segmentation driven by employer strategy to flexibilise labour both numerically and functionally.

Conclusion

The meaning given to the international division of labour as this thesis has progressed has been in two dimensions. One dimension concerns the international specialisation of labour in commodity production or in parts of commodity production. The second dimension concerns the hierarchy along a spectrum from relatively rich, high GDP per capita, developed nations to the relatively poor, low GDP per capita, undeveloped nations.

In contrast to Lipietz' hypothesis of a new international specialisation in commodity production and new hierarchy in the international division of labour among advanced capitalist states rising out of nation-specific, socially constructed adjustment to the possibilities offered in commodity production to the ICT platform, this thesis argues that there is a counter-tendency towards reduced specialisation in production in the contemporary international division of labour. In the revised map of the third international division of labour, Lipietz' distinction between the Kalmarian trajectory and the neo-Taylorist trajectory closes and is

less profound, tending rather towards functionally equivalent national variations of international production systems. That is, there is a tendency towards convergence in national models of development at the global level in which in which both highly-waged, highly-skilled, highly involved workers and the lowly-waged, lowly-skilled, highly controlled workers co-exist in labour market segments. This inconsistent hybrid capital-labour relation structurally fits with the growing tendency towards international production systems where the major actors in international commodity production and exchange, MNEs, strategically seek to achieve economies of scale and scope on a global basis so as to respond to the heightened uncertainty of international competition. Additionally, in this map the second international division of labour continues, as new social formations, particularly China, are drawn into further internationalisation of the Fordist mass production paradigm. Also, within this second international division there is a counter-tendency toward re-nationalisation, or reduced international specialisation according to lowly skilled/lowly-waged factors, by re-incorporating the new industrial proletariat in core Toyotist states. In a parallel way, some of the NICs (for example, Korea and Taiwan) move towards Toyotism.

The argument for a tendency towards a convergence in national models of development flows principally from the argument for the embedding of the inconsistent-hybrid capital-labour relation in advanced capitalist states. In this relation, worker involvement can co-exist with worker control through the presence of labour market segmentation. This hybrid capital-labour relation corresponds with the organisational form with which MNEs seek to achieve economies of scale and scope so as to respond to the heightened uncertainty of

international competition. That is, MNEs can obtain, within the same national space, Taylorist control, numerical flexibility, worker autonomy and functional flexibility, high wages and low wages with a hybrid capital-labour relation and so have the nation-based labour relations to engage in global projects of dynamic mass production.

It is still acknowledged that capitalism is an instituted order in which the embedding institutions of capitalism take on a national flavour. However, in contrast to the standard Régulationist position that such national differences lead to different, divergent national models of development, the argument here is that what diversity in nation-based institutional forms do exist are functionally equivalent for common global production systems of MNEs. International production must occur within some nation state, but this does not mean that MNEs can impose the same one-best-way of their general industrial paradigm. Rather, MNE's hybridise their general production systems as an adaptation to local institutional forms. With functional equivalence in national forms of hybrid capital-labour relations, and with hybridised national production models of global production systems, MNEs do not need to seek particular national forms of capital-labour relations in order to obtain competitive advantage. National specialisations in highly-waged, high value-added or lowly-wage, low-value added production, which Lipietz projects as post-Fordist trajectories, are less profound. Rather there is a tendency for each nation state to proceed with diverse institutional forms along the same trajectory. There is thus a tendency for the third international division of labour to lessen as each state becomes as productive as

each other in the international model of production. This tendency forms part of the contemporary international division of labour.

The hybrid capital-labour relation also allows the reversal, or re-nationalisation, of geographic labour specialisation in components of the one Fordist production process that is the dynamic behind the second international division of labour. The rationale behind the formation of the second international division of labour - the need by Fordist capital to lower costs in the technical division of labour - is reversed with the reconstruction of a neo-proletariat in advanced states out of the hybrid capital-labour relation. Low costs in Fordist production can be achieved within the home national space. The ability of formerly international Fordist capital to lower costs in domestic production permits more of such production within the home states of this capital. In sum, this re-nationalisation in early Fordist states is a tendency within the contemporary international division of labour.

Chapter Nine

Concluding Reflections and Thoughts on the Revised Map of the Contemporary International Division of Labour

Introduction

The purpose of this study has been to understand what the implications of the contemporary structure of global capitalism were for the international division of labour. In this contemporary structure, which some term globalisation in an attempt to give meaning to its form and dynamic, there is a sense of a conjuncture of three inter-connected historical processes. First, there is a sense of new production and consumption possibilities based upon a new technological framework using micro-electronics. Second, there is a sense of widespread political shifts among established capitalist states away from neo-corporatism towards neo-liberalism. Thirdly, there is a sense of an increased internationalisation of economic activity, part of which is an increase in the number of capitalist states engaging in such activity.

The thesis takes its point of departure from the work of the Régulation Approach theorist, Lipietz. He, in papers published in the mid-1990s, building on his earlier book, *Mirages and Miracles*, published in 1987, hypothesised a de-facto third international division of labour as a map of the contemporary form of the international division of labour. This thesis revises this map in the light of new technologies, political shifts towards neo-liberalism and internationalisation of

economic activity which perhaps were not as strongly apparent in the early mid-1990's as they are early in the new millenium .

This chapter reflects on this revised map of the international division of labour and the dynamic underneath its form. The purpose of this reflection is primarily to support the claim that this thesis' examination of the contemporary form of the international division of labour represents an advance on the body of knowledge informing capitalist developments at the global level.

The revised map of the international division of labour: where it departs from and adds to the body of knowledge

The first part of the mode of enquiry of this thesis was to establish the content of the concept of the international division of labour through examination of discourses which use or suggest the term in their theoretical and discursive frameworks. Out of this mode of enquiry, a content for the concept was established across two dimensions. One dimension concerned the international specialisation of labour in commodity production or in parts of commodity production. The second dimension concerned the hierarchy along a spectrum from relatively rich, high GDP per capita, developed nations to the relatively poor, low GDP per capita, undeveloped nations.

With this broad frame of reference, the point of departure of this thesis was the hypothesis of an emergent third international division of labour hypothesised by the Regulation approach theorist, Lipietz. Lipietz proposed a new international specialisation in commodity production and new hierarchy in the international

division of labour, particularly among advanced capitalist states, rising out of nation-specific, socially constructed adjustment to the possibilities offered in commodity production to the ICT platform. This form comprised an international configuration of different technological paradigms within divergent national models of development of industrialised developed capitalist states. These different technological paradigms developed out of different political approaches to incorporating the emerging ICT technologies to resolve the supply-side crisis of the Fordist technological paradigm. In effect, within each industrialised developed capitalist state, different post-Fordist models of production were being constructed, but each model capable of making the same commodities. The de-facto third international division of labour reflected the privileged pathways in capital-labour relations from Fordist capital-labour relations and is an international division between a Kalmarian trajectory of industrialised developed states where highly-waged, highly-skill workers who act with responsible autonomy in the workplace is dominant and a neo-Taylorist trajectory of industrialised 'developed' states where lowly-waged, lowly-skilled workers whose work is heavily prescribed and controlled by management is dominant.

Building and extending on Lipietz' work, this thesis is that there is a counter-tendency to this third international division of labour. In the revised map of the third international division of labour, Lipietz' distinction between the Kalmarian trajectory and the neo-Taylorist trajectory closes and is less profound, tending rather towards functionally equivalent national variations of international production systems. That is, there is a tendency towards convergence in national models of development at the global level in which both highly-skilled, highly-

waged, highly involved workers and the lowly-waged, lowly-skilled, highly controlled workers co-exist in labour market segments. This is an inconsistent hybrid capital-labour relation of Toyotism which encompasses both the form of the new best practice in international production systems and the corresponding segmented form of national labour markets. Additionally, in this map the second international division of labour continues, as new social formations, particularly China, are drawn into further internationalisation of the Fordist mass production paradigm. Also, within this second international division, there is a counter-tendency toward re-nationalisation, or reduced international specialisation according to low-wage/low skill factors by re-incorporating the new industrial proletariat in core Toyotist states. In a parallel way, some of the NICs (for example, Korea and Taiwan) also move towards Toyotism.

The significance of this revised map for labour in advanced capitalist countries is that at the international level the Toyotist technological paradigm outperforms the Kalmarian technological paradigm. Thus instead of a hierarchy of labour markets between states from workers in the neo-corporatist states of Western Europe who enjoy high wages and high income security producing high value-added goods to workers in the United Kingdom, United States and New Zealand states enjoying low wages and low income security, the tendency is for this hierarchy to exist within all such states. Further, because workers are involved in functionally equivalent national variations of Toyotism competing for productive capital in international production systems, there is a tendency for a deepening and widening of this hierarchy within states. In contrast to Lipietz' map, therefore, there is less of a tendency towards a win-win co-existence for labour in different

locations, rather more of a tendency towards lose-lose competition in the revised map.

This revised map and the development of the dynamics underlying it extends and updates into the new century Lipietz' work on the international division of labour. It is in this extension and updating of Lipietz's work that this thesis adds to the existing body of knowledge on the international division of labour and its contemporary form.

Lipietz' already significant contributions are not downplayed in this revision of the form and dynamic of the contemporary international division of labour. In *Mirages and Miracles* Lipietz, through a critique of mainstream economic and Marxist orthodoxy, made a significant contribution to the understanding of the international division of labour. The orthodoxy views a global structure of an international division of labour as serving the needs of global capitalism but differ in their conceptions of this global structure. Mainstream economics emphasises a benign structure of geographic specialisation in production in a global environment of free trade in commodities. In contrast, the orthodox Marxist discourse emphasises a malevolent structure of people in poor 'undeveloped' states supporting people in rich developed states. Lipietz, from the perspective of the critical Régulation Approach acknowledges the possibilities and realities of geographic specialisation in production and dependency. His approach differs to orthodox interpretations that see in these regularities a fit with some logic of global capitalism, be it according to some prior allocation of 'factor endowments' as in the mainstream economics discourse, or to the 'invariant laws' of capitalist

expansion in the Marxist discourse. Rather, an international division of labour may occur according to an economic logic, but there is no single cause as such a division being also contingent upon the complex social relations of production beneath exchange at the international level being capable of being developed, reproduced and consolidated. Therefore, crucial to any developments of international divisions of labour are political processes through which capitalist social relations are developed, reproduced and consolidated. This thesis accepts this basic premise.

The form in which any international division of labour is identified is contingent itself upon the historical development of national models of capitalist development. Lipietz identifies the first international division of labour, one that is described as a division between some countries specialising in and exporting primary commodities and some countries specialising in and exporting manufactured commodities, as developing out of the absolute advantages in manufactured commodities held by early industrialising countries. Agents in countries on the periphery had not at that time created the relations of industrial production and so had to find different commodities with which to engage in international exchange. These trade relations then consolidated into a competitive advantage by being able to be reproduced out of existing social relations of production.

He also identifies a second international division of labour, one that is described as a division between specialisation in low-skilled and/or labour intensive commodity production and relatively high-skilled and/or a high capital/labour

ratio commodity production within the one internationalising Fordist mass production technological paradigm. This pattern developed later and overlaid the first international division of labour. For the second international division of labour to develop as an historical regularity required the chance event of the underdetermined efforts of capital from central Fordist states to increase profitability articulating with the overdetermined efforts of political processes within peripheral nation states which developed corresponding capitalist relations of production. On the one hand, capital in core states that had adopted the Fordist model of development (itself a politically mediated project) had both the motive and need to continually improve the labour process and to expand markets to realise the output from this process. On the other hand, in some peripheral countries there emerged a state apparatus capable of sustaining a move in social relations outside of the development enclaves to formal subordination to capital. The articulation of political development projects within such peripheral states with capital wishing to expand from the core Fordist states thus led to the second international division of labour. The historical process of articulation between the Fordist model of development in advanced capitalist states and development projects to industrialise in peripheral states appeared later and overlays the first international division of labour.

Lipietz goes further in his later writings to propose an emerging new third international division of labour arising out of autonomous state responses to the crisis of the Fordist model of development. Lipietz' argument is that if the new ICT platform can be applied in different ways to resolve the productivity constraints of the Fordist industrial paradigm in formerly Fordist countries, then

what labour process will get consolidated will be that which can be successfully reproduced. Lipietz identifies two political-economic trajectories emanating from the then existing social relations of the Fordist models of development. Each of these trajectories create the social relations to make the same goods, but in different ways. National modes of regulation which favour the reproduction of labour skill and of labour involvement in the whole or large components of the production process, as in Scandinavia and Japan, co-exist with national modes of regulation, as in the United States, which do little to reproduce labour skill and favour the determination of wage relations through external 'market' co-ordination. These trajectories differ from the first and second international divisions of labour. In addition to being later historical developments, these trajectories differ in that the first international division of labour is conceived of as country specialisation by commodity, whereas the second international division is conceived of (to a degree) as country specialisation by components within the disaggregated states of the Fordist industrial paradigm

To Lipietz, writing in the mid-1990s, this co-existence of diverse, developed industrialised states, was also a de-facto third international division of labour between developed industrialised countries possessing high-skill, high wage and stable employment and developed industrialised countries possessing low-skill, low-wage and unstable employment as consolidated national regimes of accumulation. This theorisation seemed to fit with the historical pattern and indicative data among advanced capitalist states at the time – the late 1980s to early 1990s, when the social democratic states in Europe and Japan which retained the social relations which facilitated worker involvement in new

production paradigms appeared to be better performing economies relative to the neo-liberal states of the United States, the United Kingdom and New Zealand.

This theorisation, however, needed reviewing as the empirical pattern seemed under pressure at the commencement of this study towards the end of the 1990s. In particular was the 'alarming good health' of the US economy and other neo-liberal states, crisis in Japan, and pressures in the social democratic states of Europe to adjust to international competition. Also occurring was the rapid industrialisation of China and to a lesser extent India and some Latin and South American states, the development of capitalist relations in Eastern Europe and the failure of capitalist development in Africa. The lens through which the Régulation Approach and Lipietz views global capitalist development and its impact on labour thus needed modification and it is these modifications which add to the body of knowledge informing some of these developments from a global labour perspective. The critique covered two issues: the international context facilitating state autonomy to conduct economic and social policy development, and within this, the ability within nation states to socially construct different production relations. These are discussed in turn.

International modes of regulation

The first modification to Lipietz's conceptual framework clarifies the degree to which nation states have autonomy to conduct economic and social development in an international context. From the perspective of the Régulation Approach, a mode of regulation can only exist at the level of the nation state. It is at this level

where effective sovereignty can be exerted to constrain individuals and groups within a national formation or society to observe the logic of existing relations. Further, it is at this level where there exists the capacity of a dominant group to legitimately impose new relations on all members in each society. It is thus at the level of the nation state where, through political processes, social contradictions are settled and through which the coherence of genuine regimes of accumulation can be gradually confirmed as their regulation come to appear normal and natural.

Whilst there is no fundamental disagreement with this view on state autonomy, Régulation theorists generally pay insufficient attention to the relative autonomy of the state in an international context. The consequence of paying insufficient attention to the overdetermination of national modes of regulation by the international mode of regulation is that Régulation theorists then overemphasise the degree to which institutional structures between nation states have the capability to diverge. Lipietz' hypothesis of a co-existence of different national models as the contemporary post-Fordist international configuration is a global structure of diverging national models, with each national model having different institutional structures.

This thesis examined the international context in which Fordism developed and the after Fordist international context within which nation states, particularly advanced capitalist states, attempted to resolve the crisis of their national Fordist models of development. From this examination, the argument is advanced that an international mode of regulation existed during the Fordist period of development from after the Second World War until the mid-late 1970s and a new mode exists

in contemporary times. Each of these international modes of regulation overdetermine state autonomy in an international context.

Lipietz' explanation for the second international division of labour needs to be modified in the light of the thesis that national modes of regulation are overdetermined by the international mode of regulation. Whilst not denying the 'primacy of internal causes' in the construction of national models of development, the character of domestic states, both core Fordist states and peripheral Fordist states, at this time were overdetermined by the international context. The regulation of development stabilised an international monetary regime and the uniform political entity of the nation state, legitimated under the security umbrella of United States foreign policy, created the conditions for national modes of regulation. Such external conditions overdetermined national Fordist modes of regulation and national Fordist models of development, the specific forms of which were based on internal causes. These external conditions also allowed for different projects of capital on the global periphery to gain hegemony around national peripheral Fordist models of development, the specific forms of which based were again on internal causes.

Because this international mode of regulation regulated for a stable, nation-state system whereby individual states were responsible for managing national economic growth, in core Fordist states the dominant forms of national-based industrial capital could make profits by increasing economies of scale in an environment of stable, increasing demand. In short, because capital in core Fordist states was constrained in its international mobility during this time,

national-based industrial capital could accumulate in an environment of monopolistic competition through continuing to produce more at a lower cost per unit and sell more at a lower price per unit. Conditioning both the Fordist model of development in core advanced states and a cheap export strategy as part of successful industrialisation on the periphery was the hegemonic international mode of regulation described as the regulation of development. Successful development of states on the periphery was both encouraged by the ideology of capitalist development leading to social development and instituted by the Bretton Woods institutions which managed a fixed exchange rate regime, controlled the international mobility of private capital and intermediated in the financing of long-term loans for development projects. Thus relatively autonomous state development in peripheral Fordist states occurred within an international mode of regulation that was structured to permit and encourage this form of relatively autonomous state development. Lipietz, in his theorisation of the second international division of labour does not fully analyse the international constraints to relative autonomy, thus understates the importance of external causes in the unfolding of the second international division of labour.

Also, Lipietz does not sufficiently acknowledge that the internationalisation of sections of the Fordist labour process and the investment in development projects in the global periphery was accomplished through the internationalisation of finance, the regulation of which formed a significant part of the regulation of development. State autonomy was thus conditioned by the international regulation of finance.

During Fordism therefore, the autonomy advanced capitalist states had to conduct Keynesian economic and social policy, and within this the autonomy, to regulate the Fordist capital-labour relation, was itself conditioned by an international mode of regulation which constrained international capital mobility and promoted autocentric models of development. The same international mode of regulation also provided the security blanket for the development of capitalist production relations and the institutionalised financing of development projects in some peripheral states.

The international mode of regulation overdetermines state autonomy in an international context. Whilst at the level of the nation state it is correct to argue for the primacy of internal causes in the social construction of production relations, this does not give sufficient recognition that such primacy is conditional upon the regulation of the international environment.

From this critique that the Régulation Approach gives insufficient attention to how the international context overdetermines nation state autonomy, this thesis argues that the Régulation Approach conceptualises the mode of the state in an international context in contemporary times as unchanged from the Fordist period of development. This leads to the view that nation states in contemporary times have the autonomy to conduct economic and social policy development projects independent of the international context and so permit diversity in national models of development.

However, the argument of this thesis is that the international context has substantially changed from the Fordist period of development and that this pushes nation states to transform themselves into neo-liberal competition states. Crisis in the Fordist period of development also comprised a crisis in the international mode of regulation. Coterminous with the internationalisation of production during Fordism was the internationalisation of finance. This internationalisation of finance served the economic function of developing forms of money to serve as means of payment. The form of money assumed to serve this function was credit, since loans financed investments of different types in the periphery. Aided by dominant states, the international monetary regime incorporated within the development models of Fordism proved incapable of controlling money as the basis of international credit. The global credit system emerged as an unregulated one outside of the control of the international monetary regime. This unregulated global credit system was a product of the success of Fordism but also was a factor in the crisis of the whole Fordist system. Private capital, keen to escape the clutches of national constraints on capital movements, exploited the presence of this unregulated regime and as such undermined the ability of central banks and the IMF to use official liquidity to fix exchange rates and to support national policies of economic development. The growing deficiencies of politically controlled international private capital movements made room for the emergence of international capital markets. The formation of interest rates, therefore, began to take place outside of the reach and influence of national monetary policies. This 'loss of interest-sovereignty' for nation-states contributed to the impossibility of continuing Keynesian (autonomous) national development projects of demand management for economic growth and provoked the growing influence and

attractiveness of monetary policy recommendations and of supply-side economics for the formulation of economic policy.

During the 1980s, governments across the advanced capitalist world abolished external capital controls, effectively abandoning the Bretton Woods financial order. The liberalisation decisions by the US and Britain encouraged similar liberalisation moves elsewhere in the OECD region. Acting to arbitrage regulation, national financial authorities could not hope to attract new financial business and capital from abroad or even maintain the financial business and capital of their own multinationals or international banks. These competitive pressures encouraged the idea of a policy of liberalisation and de-regulation designed to appeal to and attract footloose international financial market operators. Multinational institutions moved from supporting international private capital immobility to encouraging free international capital mobility. In addition to supporting an international capital mobility regime, multinational institutions continue to support the development project but have turned to governance as the regulatory form through which development projects and structural reforms 'most efficiently achieve' the goals of economic growth.

An international mode of regulation thus remains, and the multinational institutions regulating this project remain, but the project has changed with the politically-driven removal of controls on the international mobility of capital. This has had the effect of re-directing and significantly reducing the relative autonomy of national states. By removing controls on the international mobility of capital, nation states themselves are much more directly constrained in their ability to

conduct economic and social development by the requirements of capital. In short, they are pressured to neo-liberalise the mode of regulation in order to attract internationally mobile productive capital.

The mode of states in an international context has changed in contemporary times from embedded liberal states and therefore from the possibility of divergent national models, and tend to converge towards neo-liberal competition states. In these converging tendencies lies a counter-tendency to Lipietz' theorisation of divergence in national after-Fordist modes of regulation. Capital may be able to choose which national mode of regulation best suits its competitive advantage, but the choice tends to become between which variant of neo-liberal national modes of regulation as nation states autonomously compete with each other to attract capital.

The re-regulation of labour markets within these converging neo-liberal state modes involves the distancing of the state from the regulation of employment relations and a correspondingly increased autonomy for such relations to be negotiated at the level of the workplace. This process makes labour markets more flexible, that is, more directly bendable to capital's different requirements, as rigidities in the form of worker rights, protections and representation are gradually undermined through legislative changes promoting workplace and individual bargaining and a weakened union movement. This neo-liberal re-regulation in turn facilitates the re-segmentation of existing Fordist segmented labour market structures. The implication for the conceptualisation of the third international division of labour is, therefore, that in those states which attempted to move along

a Kalmarian trajectory in response to the Fordist crisis, there is pressure to flexibilise labour relations in order to attract and keep internationally mobile productive capital.

Production Relations

If the conception for the Régulation Approach to the international context within which nation states exist is modified to recognise the overdetermining effects of an international mode of regulation on nation-state autonomy and the hypothesis of a contemporary neo-liberalised international mode of regulation constraining nation states towards neo-liberal competition states and thus to the flexibilisation of employment relations, the question that follows is: What is relation between neo-liberal forms of labour market regulation and the relations in production and the prevailing production paradigm? This is the question Lipietz examines in his analysis of after Fordist trajectories in capital-labour relations. Lipietz dismisses the possibility of worker involvement in the labour process in an environment of neo-liberalised labour market regulation since worker involvement is inconsistent with flexible employment relations. Lipietz does, however, identify a national hybrid capital-labour relation which he terms Toyotism in honour of the company with that name. The Toyotist production paradigm attempts to achieve competitive advantage through economies in scale and scope by a network of core large corporations with a peripheral network of subcontracted secondary firms. This industrial structure of core large firms and a periphery of medium and small enterprises facilitates a dual labour market with which worker flexibility and involvement in the production process and numerical flexibility is obtained.

Functional and numerical flexibility is achieved through social rather than technological innovations in the labour process, such as just-in-time techniques, jidoka and quality circles or continuous improvement. This flexibility, however, is regulated with the presence of strong internal labour markets of lifetime employment, seniority wage escalation systems and fringe benefits for core workers in the large corporations and the absence of the same in the subcontracting firms. The subcontracting system is, therefore, used to both assist with just-in-time and for continuous improvement but also utilised for labour flexibility using irregular workers who work in the parent firms but who are employed by the subcontractors.

This thesis is that Toyotism, both as a form of production or technological paradigm and as a capital-labour relation, is facilitated by the neo-liberal regulation of the labour market and is tending to become dominant for multi-national firms engaged in global production systems. The tendency towards neo-liberal employment relations in advanced capitalist competition states helps to reproduce Toyotism through re-segmenting already existing labour market segments. This capital-labour relation where worker flexibility and involvement in the labour process is achieved within neo-liberal employment relations is termed the inconsistent hybrid capital-labour relation.

This thesis that neo-liberal employment relations facilitate the inconsistent-hybrid capital-labour relation was developed out of critical enquiry into the nature of labour market structures in the Fordist capital-labour relation. The critique developed was that theorists within the Régulation Approach have given too much

emphasis to the continued dominance of the Fordist technological paradigm, and within this paradigm, to the tendencies towards the de-skilling of production workers. Rather, within the Fordist technological paradigm there was a continual and deepening hierarchy of skills, which, with the compromise between the interests of capital and labour became embedded into segmented labour market structures. The second international division of labour and trajectories in after Fordist capital-labour relations thus have nationally segmented labour-market structures as their starting-point.

The significance of labour market segmentation in core Fordist countries is overlooked by Lipietz in his initial account of the emergence of the second international division of labour and in his later account of the emergence of the third international division of labour. The international separation of low-skill components of the Fordist technological paradigm that formed the second international division of labour was preceded and initiated by the creation of these low-skill labour market segments in core Fordist states. The market structures at the crisis of Fordism in core Fordist states were not dominated by homogenous, de-skilled industrial workers, rather they comprised a hierarchy of skilled labour market segments that were diminished in size and a new industrial proletariat in the periphery that was increasing in size.

The implications for trajectories in after Fordist capital-labour relations of these pre-conditions of a more complex structure of segmented labour market structures within neo-liberal employment relations is that, through flexible labour market

regulation, employers could re-segment already existing segmented labour markets and so re-shape the frontier of control in production relations.

This thesis is thus that the Fordist capital-labour relation did not comprise a homogeneous labour market structure of low-skilled industrial workers, rather it was one of segmented labour markets of internal labour markets in large firms where workers enjoyed a permanent job, steady career progression from a low-skilled to a high-skilled position, internally integrated and transparent pay structures, on-the-job training protection against layoffs, and peripheral or secondary labour markets which lacked the characteristics of the internal labour market. Neo-liberal labour market re-regulation which flexibilises employment relations was able to build on this more complex labour market structure that that envisioned by Lipietz.

If capital-labour relations are taken to be politically mediated, policies that flexibilise the regulation of the employment relation increase the power of capital to dictate the terms of capital-labour relations and weaken the power of labour to resist. This power is, however, not absolute: some compromise in practice between the interests of capital and the interests of labour needs to be reached. By a strategy of re-segmenting labour market structures, capital in a neo-liberal policy environment can achieve the commitment of workers to the production process and also achieve external flexibility and so reduce direct and indirect costs since this strategy by having different rules of the game for groups of workers. The re-segmentation of internal labour markets suits the interests of many workers who enjoy the high-pay, employment flexibility and status of the positions they

occupy. Re-segmentation has also occurred at the lower levels of internal labour markets, but through the introduction of some practices and ideology of Japanisation on the cheap, assisted by the disciplining presence of wage-dependent contingent workers, such workers either consent or are coerced into the productivity regime imposed by capital.

Through neo-liberal re-regulation of labour markets which leads to re-segmented labour market structures, the inconsistent-hybrid capital-labour relation becomes a widely embedded capital-labour relation. This is because re-segmentation of labour market structures fits with how multi-national firms accumulate in global production systems. Born out of the successful international diffusion of the Fordist industrial paradigm and the resulting multi-dimensional competition and uncertainty in commodity demand, global production structures, driven by MNEs, respond to such competition and uncertainty through flexible and adaptive production structures and the ability to rapidly respond to changed commodity demand. This global supply regime of Toyotism seeks to secure economies in both scale and scope in production and so needs flexible workers. The neo-liberalised labour market structure of re-segmented labour market structures of numerically and functionally flexible core and peripheral workers corresponds with the means by which multinational firms seek to achieve competitive advantage through a technological paradigm of economies in scale and scope. As such the correspondence between re-segmented labour markets and a labour process requiring flexible workers of all sorts establishes the inconsistent hybrid capital-labour relation as a dominant relation in developed capitalist states.

This analysis of the form of the capital-labour relation under a neo-liberal political response to the crisis of Fordism, leads to a modification to the prospective analysis of Lipietz. In contrast to neo-Taylorism conceived of as Taylorist control of the labour process and the absence of social support for workers who are compelled to seek work through external labour exchange, the externalisation of wage relations is conceived to articulate with the need for capital to have worker involvement by transforming internal labour markets. In contrast to the core-periphery model of labour market segmentation during Fordism, the advance that this thesis offers is that capital with its greater room to manoeuvre in neo-liberal regulation has, by externalising the wage relation of skilled, formerly core workers, found it can involve such workers as demand permits through high pay and relations of high trust. Similarly, through the practices and ideology of lean production, capital has found an instrument to transform lower-level production into a functionally-flexible labour process. The existence of an external pool of workers reliant on paid employment articulates with transformation of formerly core labour and the internal needs of capital to provide such labour at low cost.

In short, neo-liberal competition states regulate for the reproduction of the inconsistent-hybrid capital-labour relation and this is the tendential trajectory in capital-labour relations for developed capitalist states as they attempt to resolve the crisis of the Fordist model of development. It is this relation which Lipietz overlooks in his conceptualisation of the third international division of labour as a contemporary global structure, and which this thesis offers as an improved theorisation of tendencies in the international division of labour in the new century.

Other contributions

Out of the critical mode of enquiry of this thesis a number of other modest contributions to the body of knowledge on the international division of labour are offered. Firstly, in the debate examining whether there are converging or diverging tendencies between national models of development as a consequence of globalising processes, this thesis offers a nuanced view supportive of tendencies towards convergence. The standard sceptical position of convergence, to which Régulationists generally adhere, is that in addition to the empirical observation that diversity in nation states remains the norm, that capitalism is an instituted order in which economic behaviour is embedded in institutions and practices which have been historically constructed on a national basis. Thus at the level of nation states, the paths of development along which the embedding institutions of capitalism move take on a distinctly national flavour. Lipietz in his hypothesis of an emergent third international division of labour theorises divergent national models based on the complementarities of nation-based institutional forms with ways of organising production.

This support for continued diversity in national models of production, however, misses the significance of national diversity in institutional forms that are functionally equivalent within international systems of production. The idea that possible after Fordist technological paradigms are strictly or wholly determined by corresponding national institutional forms that articulate into national models of development can be flawed or misleading because, within limits, similar technology paradigms can be sustained by a diversity of national institutional

frameworks. That is, national institutional frameworks, whilst diverse, may be functionally equivalent in relation to international systems of production. The agency on the part of MNEs to achieve economies of scale and scope in the Toyotist technological paradigm and realise the value from such production in diverse locations provides a different perspective from which to view national diversity in institutional forms. For such national diversity as seen from the global perspective of the MNE can complement the organisation of international production. Lipietz, writing and interpreting changes in the structure of global capitalism from the mid-1980s to the mid-1990s, may well have been correct in identifying national diversity in institutional forms with different technological paradigms in international production systems. However, this thesis argues that ongoing changes in the structure of global capitalism has tended to reduce national diversity in institutional forms to the extent that they become functionally equivalent forms which facilitate (to differing degrees) the segmented, inconsistent-hybrid. Thus, while there is continued diversity in national modes of regulation and in the subsequent reproduction of diverse institutional forms, this diversity closes and is compatible with growing convergence of the dominant technological paradigm at the global level.

Toyotism represents a new global technological paradigm and a corresponding capital-labour relation at the national level in which value is created and realised at diverse points in the globe by agents, MNEs, who have no particular focus, other than as local sites from which to create value in production and/or to realise this value. It differs from national forms of Fordism and traditional conceptions of after Fordist national technological trajectories which maintain the nation-state as

a unit of reference. Toyotism, however, co-opts diversity in national institutional structures, and uses such diversity in its global circuit of capital accumulation. What may be seen as different national technological paradigms, are hybrids of international production systems which have been transformed through their interaction with nationally specific institutional forms. Nationally specific institutional forms in such cases prove to be functional equivalents within the one international system of production. What appear to be different national models of development are rather different sides of the same model. Each national form is a variation of the same international production systems, they are not different models of development.

The critical enquiry of this thesis also offers an avenue to re-ignite a radical perspective on labour market segmentation. Critical perspectives on labour market segmentation have virtually disappeared in recent literature. This thesis has drawn on recent case studies in support of the argument for re-segmentation of labour market structures. Absent in the segmentation literature is an appreciation of the broader political and economic structural determinants within which tendencies towards re-segmentation are observed in case studies. This is an avenue for future research.

The critical enquiry of this thesis also contributes to the critique of the dominant economics discourse that free trade inevitably leads to welfare gains for all. Currently the discourse of international competitiveness and free trade is dominant among the political and economic elite, perhaps with greater intensity and fervour than when Lipietz was last writing on the international division of

labour in the mid-1990s. Lipietz' criticism of the orthodox mainstream economics and Marxist interpretations of global labour organised according global capital logic is amplified in this thesis, and made more specific.

In particular, the fundamental deceit that through the doctrine of comparative advantage general welfare gains are achieved through global specialisation and exchange is exposed. The doctrine of comparative advantage is based upon the logic of opportunity cost – that agents freely choose those actions in which the costs of foregone actions are the least. Following from this logic, in production, assuming an environment of free choice, general welfare is increased if agents specialise in the production of those commodities where the opportunity cost is the least and trade or exchange the surplus generated. China, according to this logic, specialises in the production of labour intensive commodities such as clothing because a surplus of labour that have chosen to make themselves available as labour supply to production makes labour cheap relative to capital in the form of plant and machinery. This logic, however, only holds in the ethereal world of economic models. It ignores the history of uneven capitalist development and, within this history, it ignores the development out of existing social relations the relation of capitalist production from formal to real subordination of labour to capital. The historical story is one of removal of choice for workers – of the removal by dominant elites of subordinate group's ability to subsist independent of a money wage, following which, if state apparatuses can be developed to reproduce these relations, labour further becomes really subordinated to capital through industrialisation. This historical process bears little resemblance to the doctrine of comparative advantage. In contrast, as state elites negotiate trade

arrangements with each other on the understanding that free trade leads to general welfare, the reality is that this increases the power of globalising capital and reduces the power of local labour which, through global competition as functional equivalents in global production systems, creates a lose-lose situation for geopolitically separated labour.

In sum, through a process of critical enquiry this thesis identifies that counter-tendencies exist within the contemporary global environment for the international division of labour, perceived as strong national specialisation and a hierarchy of poor to rich states, have become less pronounced. The dominant views of the international division of labour identify specialisation in production according to geopolitical differences and a hierarchy of high GDP per capita to low GDP per capita as descriptions of the form of the international division of labour. In contrast, this thesis argues that, for advanced states at least and among some NICs, new technologies, geopolitical shifts to neo-liberalism and internationalisation of production, have generated counter-tendencies towards reduced geopolitical specialisation and towards widening income differentials and employment insecurity within states rather than between states.

Strategic implications for labour movements

The contemporary international division of labour is one that tendentially segments and divides labour within and across nation states whilst at the same time connects this labour through globalised Toyotist production systems. The implications for labour movements of this internationalised labour market

segmentation are that this undermines worker solidarity and increases competition between labour market segments both within and across nation states.

Competition between labour market segments has two moments. The first moment is a tendency within nation states for wage competition to become the dominant mechanism for labour to secure employment. Whilst labour market segmentation reduces direct wage competition between labour market segments, the ability of national labour movements to sustain this lack of competition increasingly becomes undermined. First, the strength of organised labour is weakened both numerically and financially because their traditional stronghold, the core, hierarchical internal labour is shrinking in proportion to a growing flexible peripheral labour force. Secondly, this growing peripheral labour force, often in new segments of the service sector, tends to be non-unionised. This is in part because the expense and resources of financially strapped existing unions limit their ability to organise in these diverse, flexibilised segments. Non-unionisation is also partly due to the 'divide and rule' of labour market segmentation as a strategy of capital, as a result of which, workers in the periphery have difficulty recognising their collective situation and the possibilities open with the collective power of a union. It is also in part due to the state in this vacuum regulating for minimum wages and in so doing reducing the role and relevance of unions to flexibilised workers on low incomes. Gradually, as capital continues to hollow out and reduce the core workforce and the peripheral labour force correspondingly increases, wage competition becomes the dominant means to regulate employment within nation states.

The second moment of competition is between labour market segments in different nation states. As functionally equivalent labour forces for global production systems, but segmented on a nation-state basis, national labour markets segments are in wage competition with each other internationally in order to attract productive capital offering employment to their location.

In the face of this international competition, national labour movements responsible to national fee-paying union members have quite rationally sought national solutions. Unions in the advanced countries have recognised that they cannot directly compete with low cost labour from the NICs. Their strategic response has been to focus on the core high pay workforce, by attempting to differentiate unionised segments of their labour force according to skill and involvement and to so use these labour force characteristics to attract employment and high wages from high-skill, high value-added components of global production systems as the basis of competitiveness. In so doing, they turn a blind eye to the growing peripheral workforce. This strategy demonstrates the extent to which the labour movement, finding itself in an environment of intensified international competition, tries to articulate its traditional goals of increasing wages and employment security with the needs of internationally mobile capital. However, absent from this discourse is any strategy to address the needs of the growing peripheral labour force. As an effect, national labour movements in advanced capitalist states increasingly become subordinated, as a matter of strategic survival, to global capital and to the competition state.

The obvious limits to this high-skill, high-wage strategy can be more fully identified as follows. First, within advanced capitalist states, the high-skill proportion of the labour force is a shrinking minority, thus this strategy does not serve the interests of the increasing number of peripheral workers often in low-paid, insecure employment, or serve the interests of a labour movement that aspires to some kind of hegemonic representation of the workforce. Second, and importantly, the limit to the high-skill-high wage survival strategies of national labour movements is the neo-liberal international mode of regulation facilitating international capital mobility and competition states. Subordination to global capital and to the competition state does not remove competition between national labour movements each of which are seeking the same high-wage, high-skill solution to the international context of wage competition. Thus at the limit, high-skill segments across advanced capitalist states will compete on wages in order to attract employment to their locations. Subordination of national labour movements to global capital and competition states further embeds the neo-liberal international mode of regulation. The strategic implications for national labour movements is an old one- they must become international in focus and recognise that their local collective interests cannot be ultimately achieved if there is not collective organisation at the international level to counter international wage competition between national labour markets.

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