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An historical, theoretical and empirical analysis of direct foreign investment in the United States during the twentieth century

Steven Louis Widener

University of New Hampshire, Durham

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An historical, theoretical and empirical analysis of direct foreign investment in the United States during the twentieth century

Abstract
This thesis employs both aggregate data and a dissaggregated sample of 135 non-U.S. multinational enterprises to analyze the extent of direct foreign investment (DFI) in United States manufacturing since 1900, its characteristics and causes. This research revealed that: (1) DFI originates primarily from other developed capitalist countries, (2) most DFI is relatively recent, accelerating markedly after 1970, (3) from the perspective of relative interpenetration of DFI, U.S. imperial power versus its major trading rivals has waned since 1970, (4) there is a strong tendency for the parent firm to penetrate the market through acquisitions of existing U.S. firms, and (5) that, normally, the investor acquires 100% control of its investment.

Mainstream theories of DFI, which evolved from ideas advanced in the areas of marketing and industrial organization, argue that market imperfections create the firm's decision to undertake DFI. This view is seen as lacking due to its failure to account for the inherent advantages of investment over trade for servicing foreign markets. Additionally, this thesis rejects the view of many radicals in the U.S. concerning the nature of modern capitalist production and accumulation. Specifically, it is argued that monopoly capital theory is unable to explain the growing interpenetration of productive capital. Instead of solidified monopoly and perpetual stagnation, this thesis presents a dialectical view of competition and monopoly whereby the competitive interaction of capital continually undermines the old monopoly positions while creating new elements of monopoly (at a higher level) as the international concentration and centralization of capital proceeds.

This thesis also illustrates that the growth of direct foreign investment in the U.S. is tied to the transition from a long wave of expansion to a long wave of stagnation in the world capitalist economy. This transition to stagnation in the early 1970s produced a heightening of the forces of competition which is increasingly expressed through the internationalization of the circuit of productive capital. Moreover, this movement of capital is seen as an important aspect in explaining the processes by which a foundation for a new social structure of accumulation is being erected.

Keywords
Economics, Theory, Economics, History

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An historical, theoretical and empirical analysis of direct foreign investment in the United States during the twentieth century

Widener, Steven Louis, Ph.D.

University of New Hampshire, 1988
AN HISTORICAL, THEORETICAL AND EMPIRICAL ANALYSIS OF DIRECT FOREIGN INVESTMENT IN THE UNITED STATES DURING THE TWENTIETH CENTURY

BY

STEVEN LOUIS WIDENER
BA, Xavier University, 1974
MA, University of New Hampshire, 1978

DISSERTATION

Submitted to the University of New Hampshire in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy in Economics

December, 1988
This dissertation has been examined and approved.

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December 2, 1988
Date
DEDICATION

To my family, especially my wife, Peggy, whose love and support allowed me to complete my graduate work, and to the memory of my father, Louis Widener, may he rest in peace.
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ABSTRACT

AN HISTORICAL, THEORETICAL AND EMPIRICAL ANALYSIS OF DIRECT FOREIGN INVESTMENT IN THE UNITED STATES DURING THE TWENTIETH CENTURY

by

Steven Louis Widener
University of New Hampshire, December, 1988

This thesis employs both aggregate data and a disaggregated sample of 135 non-U.S. multinational enterprises to analyze the extent of direct foreign investment (DFI) in United States manufacturing since 1900, its characteristics and causes. This research revealed that: (1) DFI originates primarily from other developed capitalist countries, (2) most DFI is relatively recent, accelerating markedly after 1970, (3) from the perspective of relative interpenetration of DFI, U.S. imperial power versus its major trading rivals has waned since 1970, (4) there is a strong tendency for the parent firm to penetrate the market through acquisitions of existing U.S. firms, and (5) that, normally, the investor acquires 100% control of its investment.

Mainstream theories of DFI, which evolved from ideas advanced in the areas of marketing and industrial organization, argue that market imperfections create the
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This thesis also illustrates that the growth of direct foreign investment in the U.S. is tied to the transition from a long wave of expansion to a long wave of stagnation in the world capitalist economy. This transition to stagnation in the early 1970s produced a heightening of the forces of competition which is increasingly expressed through the internationalization of the circuit of productive capital. Moreover, this movement of capital is seen as an important aspect in explaining the processes by which a foundation for a new social structure of accumulation is being erected.
CHAPTER 1

COMPETITION AND MONOPOLY IN CAPITALIST ACCUMULATION

INTRODUCTION: THE NEED FOR A FRAMEWORK

The goal of this thesis is to analyze the growth of direct foreign investment (DFI) in the United States, primarily in the 1970s and 1980s. I will attempt to show that this increase of DFI is an expression of growth in the forces of competition between units of capital on an international level in the post-World War II period. This development is significant since it represents a transition or evolution of world capitalism away from a system dominated by monopoly imperialist relations. A thorough analysis of this hypothesis requires a number of simultaneous approaches. These can be summarized as follows:

1. An historical presentation of the aggregate magnitude and rate of growth of DFI in the U.S.

2. An historical investigation of the dominant agents (disaggregated) participating in the process of DFI. This includes a. specific identification of agents; b. investigation of the concrete historical process undertaken.

3. Analysis of the factors causing the growth of DFI in the U.S.

The first two approaches are predominantly empirical questions that will be explored through a presentation of both aggregate and disaggregate data. The third and fourth approaches, however, require a framework (or an a priori system) through which DFI in the U.S. can be incorporated into the theory of capitalist production and accumulation. The purpose of this introductory chapter is to develop the methodological and theoretical framework which will then (in following chapters) be applied to the data presented.

THE DEBATE

The fluctuations in economic activity experienced by the world capitalist system in the 1970s and 1980s have generally been recognized as symptoms of something more than merely the traditional business cycle. Many economists believe that the past decade (or more) has been a period of relative stagnation of that system. Mainstream conservatives claim that tampering with the competitive market economy has produced stagnation. They point to OPEC and the growth of government expenditures and regulations as the source of declining private investment, accumulation and employment. Liberals decry the lack of appropriate 'industrial policies' by the leading capitalist nations' governments. They speak to the need to have a government
concerned with social justice in the face of a widening gap between the wealthy and the poor. This government should work with the private business sector (which itself needs ethical refurbishment) in a cooperative framework of national planning to promote economic growth and opportunity in the face of stagnation. The liberals are skeptical of the purely market-based solutions to stagnation advanced by the conservatives. Pointing to the example of Japan, liberals see the need for an expanded role of government in stabilizing the process of production and accumulation. Radicals, having long believed that the laws of motion of capitalist production generate stagnation, express relief that the post-war expansion has run its course and have returned to an analysis of Marxian and neo-Marxian crisis theory in their attempts to explain the causes of the current economic malaise.

This resurgence of interest in crisis theory among radicals has reopened numerous debates on such topics as: the labor theory of value, the tendency of the rate of profit to fall, underconsumption, overproduction, disproportionalities, class struggle, and the role of technological change, to name just a few. An analysis of this literature leads one to the conclusion that while the left is united in identifying the symptoms of current capitalist stagnation, there is a good deal of disagreement concerning its causes.
One of the key components in many of these debates has been the question of the form of interaction of firms in the modern capitalist system. The question is whether the modern capitalist system is dominated by competitive relations between units of capital, or has the process of concentration and centralization of capitals, originally exposed by Marx, led to the formation of monopolies that are able to transcend the forces of competitive capitalist production and accumulation. A resolution of this debate is important since the viewpoint adopted has significant consequences regarding:

1. the choice and characterization of the laws of motion that govern the process of production and accumulation of modern capitalism;
2. the interpretation given to the historical course of capitalist development since its inception;
3. the understanding to be received from the specific investigation of the concrete relationships and interactions existing between units of capital in modern capitalism, including the movement of capital between countries.

The participants in this debate can be divided into two schools of thought. One group, designated as the monopoly capital theorists (or Neo-Marxists), contends that the growth of large 'monopolistic' corporations in the modern capitalist system has rendered obsolete many parts of Marx's
analysis of capitalist production and accumulation. Hence, they believe that the laws of motion discovered and exposed by Marx in *Capital* must be discarded and replaced by new laws which take into account the existence and dominance of monopoly elements in the modern economy. The second group, which could be called the non-monopoly theorists (or traditional Marxists), argues that the process of concentration and centralization of capital has not led to the destruction of the competitive nature of capitalist interaction and, hence, the laws of motion discovered by Marx are still appropriate to the analysis of modern capitalism. In order to better understand the debate, the rest of this chapter will undertake the following progression:

1. an analysis of the role of competition envisioned by Marx.
2. an investigation of the elimination of competition advanced by the monopoly capital theorists and the impact of the growth and dominance of monopolies on the laws of motion of the capitalist system.
3. a review of the criticisms of the monopoly capital school by the traditional Marxists.
4. an analysis of the significance of this debate in explaining capital exports in general and, specifically direct foreign investments in the U.S.
THE ROLE OF COMPETITION IN CAPITALIST ACCUMULATION ACCORDING TO MARX

Paul Sweezy has remarked that for Marx

competition was an elemental force, somewhat comparable to the force of gravity, which keeps the parts of the system in place and interacting with each other in intelligible ways.\textsuperscript{4}

A careful reading of Marx's work, however, indicates that such a view is one-dimensional and, hence, inappropriate. Gravity, which operates in one direction only, is a poor metaphor for a concept that in Marx's view was dialectical by nature. A true understanding of Marx's conception of the role of competition requires a dual perspective, simultaneously comprising forces of attraction as well as forces of repulsion.

Many theorists initially assume a competitive framework for their investigations for the sake of simplicity. This allows them to develop concepts about production, circulation, distribution and reproduction with which they explore the relations that exist in the system and the process by which it develops under these competitive conditions. Once this abstract model is understood these theorists turn their attention to how the 'more realistic' assumption of some form of imperfect competition changes the system's relations and alters the process of development. Mainstream economists tend to emphasize that either form is equally plausible but they generally profess their faith in
the virtues of competition's market discipline. Monopoly capital theorists often utilize a similar approach in order to argue the impossibility of applying a competitive framework to the modern day monopolistic economy. Marx, however, did not assume the existence of competition (perfect or otherwise) as did the other classical economists. Competition did not have to be assumed in his framework because capitalism necessitated competitive relations. The assumption of capitalist production relations (as a mode of production) was sufficient since, from Marx's view, the relationship of one capital to many capitals in this mode must be of a competitive nature.

Conceptually competition is nothing other than the inner nature of capital, its essential character, appearing in and realized as the reciprocal interaction of many capitals with one another, the inner tendency as external necessity.

Thus, the role of competition exposed by Marx was intimately connected to (appears as a logical result of) Marx's development of the laws of motion of capitalist development. These laws explain the path and set the limits to capitalist production and accumulation.

Marx argued that the process of capitalist production and accumulation would lead to the progressive growth and general extension of the capitalist system. As Ernest Mandel has pointed out, Marx used his reproduction schemes to illustrate the internal rationale and logic of continued capitalist development. Marx did not believe, however,
that this process of capitalist growth would be a smooth one. Instead, accumulation would proceed in an uneven and disrupted fashion, producing not only periods of capitalist expansion, but also periods of stagnation and decline (or crises). According to Marx, capitalist crises result from a rising organic composition of capital (growing capital intensity) which produces overaccumulation (excess commodities, capital and labor) and a long-term decline in the rate of profit. This leads to stagnation of investment and, hence, retards accumulation. This decline in the rate of profit and accumulation heightens the forces of capitalist competition as capitalists struggle to prevent devalorization of their capital. In the Marxian scheme, the process of capital devalorization is a counterforce which helps to restore profitability for the surviving capitalists who expand production and accumulation until their efforts at expansion are thwarted by a new crisis, whereby the process of competitive devalorization is repeated. Through this movement capitalist production is increasingly socialized (takes on a social character) while profits remain the source of enrichment for private appropriation. Marx argued that in order to survive this process of uneven and disrupted accumulation, the capitalist must continually strive to attain a size that is greater than his rivals.

The cheapness of commodities depends, all other circumstances remaining the same, on the productivity of labour, and this depends in turn on the scale of production. Therefore,
the larger capitals beat the smaller... Everywhere the increased scale of industrial establishments is the starting-point for a more comprehensive organization of the collective labour of many people, for a broader development of their material motive forces, i.e., for the progressive transformation of isolated processes of production, carried on by customary methods, into socially combined and scientifically arranged processes of production.

While Marx did not develop a complete theory of capitalist crises, he made his view clear that only an analysis of the competitive forces of capitalism would provide an adequate foundation for understanding their development.

World market crises must be conceived as the real gathering together and forcible smoothing out of all the contradictions of bourgeois economy... No crises can exist unless sale and purchase become separated from each other and come into conflict, or the contradictions inherent in money as means of payment come to the surface; unless therefore crises at the same time emerge in the simple form - as the contradiction inherent in money as means of payment. But these also are mere forms, general possibilities of crises, and consequently also forms, abstract forms, of actual crisis. In them the nature of crises appears in its simplest form, and, in so far as this form is itself its simplest content, in its simplest content. But it is not as yet a content which has a determinate cause... (The real crisis can only be presented on the basis of the real movement of capitalist production, competition and credit-in so far as crisis arises from the forms characteristic of capital, its properties as capital, and not from its mere existence as commodity and as money."

Further, Marx felt that the forces of competition were themselves a variable that depended on the pace of
accumulation, with relative stability during periods of
prosperity followed by cutthroat competition during periods
of stagnation as individual capitalists attempted to
maintain the value of their capitals in the face of
dec linen sales and profits.

It is clear, however, that this kind of actual
devaluation of the old capital would not take
place without a struggle, and that the
additional capital C could not function as
capital without a struggle. That competition
which results from the overproduction of
capital would not cause a fall in the rate of
profit. Rather the reverse. Since the
reduced rate of profit and the overproduction
of capital spring from the same situation, a
competitive struggle would now be
unleashed...Whatever the circumstances, one
part of the old capital would have to lie idle
as far as its property as capital was
concerned, i.e., the property of functioning
as capital and being valorized. As to which
section is particularly to be affected by this
idling, this is decided in the course of the
competitive struggle. As long as everything
goes well, competition acts, as is always the
case when the general rate of profit is
settled, as a practical freemasonry of the
capitalist class, so that they all share in
the common booty in proportion to the size of
the portion that each puts in. But as soon as
it is no longer a question of division of
profit, but rather of loss, each seeks as far
as he can to restrict his own share of this
loss and pass it on to someone else. For the
class as a whole, the loss is unavoidable.
But how much each individual member has to
bear, the extent to which he has to
participate in it, now becomes a question of
strength and cunning, and competition now
becomes a struggle of enemy brothers. The
opposition between the interest of each
individual capitalist and that of the
capitalist class as a whole now comes into its
own, in the same way as competition was
previously the instrument through which the
identity of the capitalists' interests was
asserted.
For Marx, then, capitalist competition must be viewed from a dual (dialectic) perspective. At certain times (periods of prosperity) capitalist competition acts to establish norms of operation, an identity of capitalists' interests, an orderly division of surplus and relatively stable accumulation and reproduction. During periods of stagnation and crisis this relative stability is destroyed. It is during these periods that the competitive struggle, which is unleashed, produces changes in the way the surplus is divided, a redefinition of capitalist alliances and a restructuring of the norms of operation and accumulation. For Marx, an understanding of the forces producing periods of capitalist growth as well as periods of stagnation require a dialectical and functional view of competition between capital.

The competitive struggle that is unleashed is functional in the sense that it produces counteracting forces that act to restore the rate of profit and, hence, production and accumulation.

But other agencies come into play at the same time. Stagnation in production makes part of the working class idle and hence places the employed workers in conditions where they have to accept a fall in wages, even beneath the average: an operation that has exactly the same effect for capital as if relative or absolute surplus-value had been increased while wages remained at the average...The fall in prices and the competitive struggle, on the other hand, impel each capitalist to reduce the individual value of his total product below its general value by employing new
machinery, new and improved methods of labour and new forms of combination. That is, they impel him to raise the productivity of a given quantity of labour, to reduce the proportion of variable capital to constant and thereby to dismiss workers; in short, to create an artificial surplus population. The devaluation of the elements of constant capital, moreover, itself involves a rise in the profit rate. The mass of constant capital applied grows as against the variable, but the value of this mass may have fallen. The stagnation in production that has intervened prepared the ground for a later expansion of production — within the capitalist limits. 11

THE MONOPOLY CAPITAL THEORISTS

Early Baran and Sweezy

With the publication of their book, Monopoly Capital: An Essay on the American Economic and Social Order in 1966, Paul Baran and Paul Sweezy proclaimed (in the tradition of Rudolf Hilferding, Vladimir Lenin, and Josef Steindl) that the development of the forces of monopoly had made Marx's analysis of the laws of motion of capitalist development insufficient because Marx was examining the stage of competitive capitalism. They believed that an analysis of post-war capitalist societies must begin by recognizing that the forces of monopoly, not competitive capitalist interaction, are the dominant forces operating in modern capitalist accumulation.

Decision-making in these post-war societies is conducted by "a tiny oligarchy resting on vast economic power and in full control of society's political and cultural apparatus."12 The large corporations in these
countries possess freedom which allows them "to exercise undisturbed their vast monopoly powers." The current stage of capitalism has seen competitive forces give way to monopoly power which has produced a movement toward non-price competition. In addition, the large profits of the monopoly corporations have released these firms from domination by bankers since internal funds are sufficient to finance all possible investment and expenditures. These firms, operating in a world of oligopolistically administered prices, attempt to maximize their profits by lowering their production costs and, hence, raising their profit margins. And these efforts to produce a higher profit margin for the firm create a growing surplus for the economy as a system.

If it is true, as we have argued, that oligopolies succeed in attaining a close approximation to the theoretical monopoly price and if their never-ceasing efforts to cut costs,...are generally successful, then it follows with inescapable logic that surplus must have a strong and persistent tendency to rise...This means that under monopoly capitalism, declining costs imply continuously widening profit margins...(W)e can formulate as a law of monopoly capitalism that the surplus tends to rise both absolutely and relatively as the system develops....By substituting the law of rising surplus for the law of falling profit, we are therefore not rejecting or revising a time-honored theorem of political economy: we are simply taking account of the undoubted fact that the structure of the capitalist economy has undergone a fundamental change since that theorem was formulated. What is most essential about the structural change from competitive to monopoly capitalism finds its theoretical expression in this substitution.
For Baran and Sweezy, then, stagnation occurs not from a fall in profits, but rather from a rise in the surplus. This shifts the problem of capitalist economic stability from one of restoring profitable accumulation to one of absorbing an ever-growing surplus. According to Baran and Sweezy, the problem that confronts the capitalist is insufficient demand leading to unplanned inventory accumulation and the resultant cutbacks in production. As a result, "(t)he stimulation of demand - the creation and expansion of markets - thus becomes to an ever greater degree the leitmotif of business and government policies under monopoly capitalism."15

Baran and Sweezy then proceed to examine the factors that influence the ability of the economy to absorb the growing surplus. Their analysis attempts to expose the limitations of the countertendencies (capitalist consumption and investment, the sales effort, and civilian and military government expenditures) which in their view act to absorb the surplus. They conclude that none of these countertendencies will provide a solution to the problem of insufficient aggregate demand.16

Twist and turn as one will, there is no way to avoid the conclusion that monopoly capitalism is a self-contradictory system. It tends to generate ever more surplus, yet it fails to provide the consumption and investment outlets required for the absorption of a rising surplus and hence for the smooth working of the system. Since surplus which cannot be absorbed will not be produced, it follows that
the normal state of the monopoly capitalist economy is stagnation.\textsuperscript{17}

Finally, Sweezy and Baran date the rise of the forces of monopoly to 1870 and conclude that the transition from the competitive to the monopoly stage was complete by 1907. The first world war and the automobile boom of the 1920s 'submerged' the forces of stagnation only temporarily as evidenced by the return to stagnation in the 1930s. This stagnation has remained the normal situation ever since except in times of war and war-related prosperity. And as this stagnation has dragged on, capitalism has become an increasingly irrational system (as proclaimed in the title of Baran and Sweezy's last chapter)\textsuperscript{18}. For them, the system becomes irrational when the development of monopolies leads to the elimination of the equivalent exchange that had existed in the stage of competitive capitalism.

Only on the basis of equivalent exchange was it possible to realize the more rational utilization of human and material resources which has been the central achievement of capitalism. At the same time, it must never be forgotten that the rationality of \textit{quid pro quo} is specifically capitalist rationality which at a certain stage of development becomes incompatible with the underlying forces and relations of production...(D)uring the life span of capitalism itself, \textit{quid pro quo} breaks down as a rational principle of economic and social organization.

The giant corporation withdraws from the sphere of the market large segments of economic activity and subjects them to scientifically designed administration. This change represents a continuous increase in the rationality of the parts of the system, but it is not accompanied by any rationalization of the whole. On the contrary, with commodities
being priced not according to their costs of production, but to yield the maximum possible profit, the principle of quid pro quo turns into the opposite of a promoter of rational economic organization and instead becomes a formula for maintaining scarcity in the midst of plenty.19

THE MONOPOLY CAPITAL THEORISTS REVISITED

More than twenty years have passed since Baran and Sweezy first published Monopoly Capital. Their intention at that time was to bring Marxian analysis of capitalist development into the twentieth century by incorporating into the foundation of their theoretical analysis the "obvious fact" of the existence of large monopolist firms in the real world.

We must recognize that competition, which was the predominant form of market relations in the nineteenth century Britain, has ceased to occupy that position, not only in Britain, but everywhere else in the capitalist world...It is therefore impermissible to ignore monopoly in constructing our model of the economy and to go on treating competition as the general case. In an attempt to understand capitalism in its monopoly stage, we cannot abstract from monopoly or introduce it as a mere modifying factor; we must put it at the very center of the analytical effort.20

If this transfer of focus proved successful, the authors felt that a major factor causing the "stagnation of Marxian social science" since the end of the Second World War would be eliminated. Yet, unfortunately (though not suprisingly) these twenty years or so of continued analysis, criticism, reflection, and debate have produced few, if any, new insights into the operation and reproduction of modern
monopoly capitalism from its exponents. Instead, one might well argue that the introduction and growing theoretical acceptance of a capitalist system dominated by all-powerful monopolistic firms has made it increasingly difficult to comprehend the direction (let alone causal factors) of future growth and development of the capitalist world system. The reason for this theoretical stagnation is that the monopoly capital model employed by these theorists leads them to deny the possibility of internally generated capitalist growth and development.

The norm of mature capitalism is stagnation, not vigorous growth. In the absence of powerful extraneous stimuli, of which there are no signs anywhere on the horizon, the stagnation drags on and, except for occasional zigs and zags, feeds on itself.21

The political implication that follows from this analysis is that capitalism as a reproducible economic system is limping along in poor health, if not in the throes of its final demise. The development of monopolies has intensified the internal contradictions of capitalist production and accumulation to such a degree that expanded reproduction becomes increasingly difficult and only possible on increasingly irrational grounds. And, if this is true, then it is only a matter of time before socialism is called upon to replace the inherently irrational system of capitalism.

(C)apitalism is an antagonistic system. It survives beyond its comparatively rational and historically necessary competitive stage only
by intensifying its antagonistic and irrational characteristics... (T)he prevalence of surplus capacity makes waste (i.e., the production of luxury goods such as military hardware, and unproductive outlays on circulation, like advertising) enormously profitable.... By the final quarter of the nineteenth century monopoly capitalism had emerged: a society which was increasingly irrational even by capitalist standards, and which sustained itself (and this is where Marx may have underestimated capital) by its very irrationality. In fact, the massive contradictions of the contemporary socioeconomic in the advanced industrial states.... are due almost entirely to the fact that socialism as a mere objective necessity is long overdue. 

While the message has thus remained the same, the years that have passed since Monopoly Capital was first published have produced a number of interesting points of criticism from traditional Marxists which has prompted defensive responses from the neo-Marxians. This dialogue has focused on a number of areas of contention which the monopoly capital theorists have attempted to clarify. A classification of the major points of clarification is offered below:

1. The role of competition in the monopoly stage of capitalism (MSC).

2. A further delineation of the operation of the variables in the monopoly capital model.

3. The role of the state in the MSC.

4. The role of imperialism and under-development in the MSC.
5. An attempt to reconcile monopoly capital
theory with traditional Marxian value
theory.

The rest of this chapter will restrict itself to a
consideration only of the first point and the implications
of this competition-monopoly debate for analyzing DFI in the
United States. Obviously, a resolution of the
competition-monopoly debate has significant implications for
the remaining points of contention. These issues, however,
cannot be addressed at this time since to do so would take
one beyond the scope of this thesis.

Writing in 1981, Sweezy claimed that the early work on
monopoly capital by authors such as Thorstein Veblen, Rudolf
Hilferding and V. I. Lenin did not attempt to argue that the
development of the monopoly stage brought about the
elimination of competition.

What is at issue in the transition from
competitive to monopoly capitalism, therefore, is not at all the elimination of competition
but rather a change in the forms and methods
of competition.23

J. B. Foster supports this position.

Tracing its ancestry to both Hilferding and
Lenin, neo-Marxian monopoly capital
theory...does not assume that the present
economy is 'noncompetitive', but merely that
the nature of competition is radically
transformed with price competition, in
particular, playing a much smaller role.
Under conditions of oligopolistic rivalry,
competition is....'co-respective', each firm
carefully taking into account the price,
output, and investment strategies of its major
oligopolistic (or monopolistic) competitors.
This leads to a situation, in highly concentrated markets, which is roughly analogous to that of a single firm monopoly. Yet, the monopoly capital theorists do not anywhere investigate how the development of capitalist production and accumulation has "transformed the nature of competition" in the past or how it continues to do so in the present. Instead of analyzing how the increasing concentration and centralization of capital brought about in the process of capitalist development continually alters the competitive environment of further capitalist accumulation, the monopoly capital theorists continue to argue (despite the softened approach) that the transformation is one in which the competitive environment is changed into one "which is roughly analogous to that of a single firm monopoly". From this transformed and now static stage of monopoly capitalist theory it is then contended that capitalism is trapped by its (monopoly) internal logic into a position of permanent stagnation.

Sweezy recognizes that the elimination of competition (equated with price competition) is not complete. He identifies three cases where competition may still exist in modern capitalism. These are: (1) small markets as yet not transformed by oligopolies; (2) oligopoly markets during periods of battles over market share; and (3) new industries which have yet to go through the "shakedown process which, in effect, repeats the experience through which many older
industries had to pass many years earlier."\textsuperscript{25} Sweezy goes on to claim that these are, however, short-lived exceptions that "should not be allowed to obscure the truth" of the dominance of monopoly administered pricing in modern capitalism. Foster is even more direct. For him, "the determining element within the modern economy is one of impure monopoly, in which the nature of competition is transformed."\textsuperscript{26}

But again, no analysis of how the nature of competition continues to be transformed is presented. Instead, we are presented with an approach that sees the "transformation" as already completed, and the result of this transformation is permanent economic stagnation. This paper takes the position that such an analytical framework denies the dialectical nature of capitalist interaction. The process of capitalist accumulation and development can only be understood if it is recognized that this process continually negates existing relations and through this negation reproduces capitalism's competitive nature at a higher level and in new forms. \textsuperscript{27}

\textbf{TRADITIONAL CRITICISMS OF THE MONOPOLY THEORISTS}

A number of traditional Marxists have expressed similar criticisms of monopoly capital theory. Steve Zeluck agrees that modern capitalism is best characterized by a generalized monopoly mode. He goes on to argue, however, that such a system of universal monopoly leads to the
elimination of the individual monopolist's advantage due to
the necessity of any such firm having to trade with other
monopolists. Zeluck's analysis leads him to conclude that
the interaction between monopoly firms attempting to
maintain their monopoly advantage (defined as the ability to
set price above value) produces two possible outcomes in the
long-run. One possibility is generalized inflation as the
monopolies participate in a time-lagged process of catch-up
where one firm initially succeeds in increasing prices only
to be followed by a second and then a third, etc. The end
result of this interaction is rising nominal prices but, no
net gain for the individual firm. This then led Zeluck to
the second possibility that a system of generalized monopoly
produces a competitive interaction process between
monopolies.

Each monopolist, in his capacity as seller,
sets his own price above value. His price is
determined not by his cost, or by the average
cost in the industry, but is limited only by
the buyer's ability to pay. In short, the
monopolist sets an administered price. But
this [selling] monopolist will quickly
discover in a world of other monopolies, the
results are not the same as in a situation in
which the monopolist is the exception. For
now the same monopolist must also buy from
other monopolists, who also can (apparently)
set their prices above value, and try to gain
pure monopoly profits....As a result, the
price of commodities will not turn out as
intended, above value, but will end up
determined by value after all, just as in
competition. Indeed that is just the point.
Universal monopoly eliminates the potential
gains of isolated, single monopolies. Universal
or generalized monopoly becomes its
own negation, turns into its opposite,
competition. More monopoly becomes less... (A)s the quantity of monopoly increases its qualitative significance decreases, and in fact reverses itself, tending to turn any monopoly-administered prices into their opposite, competitive ones.28

Ernest Mandel, in his book, Late Capitalism, undertook a parallel (and more substantial) challenge of the monopoly capital view of post-World War II capitalist development. He identified the period 1945-1970 as a distinct new phase of monopoly capitalism, called "late capitalism". One of the characteristics of this new phase is growth of competition between monopolists. Mandel maintained that even if one ignored the effects of technological change on a firm's monopoly position, oligopolistic industries were limited in their ability to acquire permanent surplus profits because the continuation of permanent above average profits would require either permanent unequal exchange with the non-monopolized sectors of the economy (the non-monopolized sectors would then earn permanent below average rates of profit), or a permanent rise in the social rate of surplus value (i.e., a permanent decline in the value of labor power). Mandel proceeded to argue that both of these processes were self-limiting in the medium and long term since, in both cases, monopoly profits would inevitably be reduced. He concluded that the main error of Baran and Sweezy

....derives from an eclectic attempt to combine Marx's labour theory of value with a
neo-classical theory based on Keynes' concept of "total demand"....Monopolies cannot emancipate themselves from the operation of the law of value. Competition must in the long-run reassert itself, although not necessarily price competition....(N)ot a single monopoly in a single branch of production has succeeded in withdrawing itself from the law of value in the long-run. After an initial phase in which substantial monopoly profits were obtained, all have sooner or later gone through phases of cyclical decline in sales. They are thus all threatened by the danger of permanent over-capacity or a relative structural decline in sales, if these have not already set in. The ability of the monopolies to secure long-term stability of profits, proclaimed by several bourgeois authors and others who claim to be Marxists, is a myth.

Mandel pointed out that despite all of the efforts by the state to prevent a fall in the monopoly's rate of profit, the post-War accelerated expansion....has led to a new phase of accelerated concentration and centralization of capital, which has made the multinational corporation into the decisive organizational form of late capitalist enterprise....As the forces of production out-grow the national state, they likewise gradually out-grow the State's role in controlling the industrial cycle and promoting economic upswing and growth. The more the monopolies think they have withdrawn from the law of value nationally, the more they become subject to it internationally.

Mandel went on to identify the forces that have played "an exceptional role" in making the multinational corporation the "determinant organizational form of big capital". One factor was change in production, transportation and communication technology that significantly raised capital requirements of investment as
well as the production volume generated by these new investments. Additionally, many industries that had become dominated by large oligopolistic production at a national level during the stage of classical imperialism possessed incentives to expand abroad due to the existence of a limited home market and a large investable surplus which resulted from domestic marketing and pricing arrangements. A third factor was the need to circumvent trade barriers which are themselves caused by "(t)he uneven development of the various big imperialist powers (or regions), and the protectionist or partially protectionist policies which they pursue."\textsuperscript{31} Lastly, Mandel claimed that the growing centralization of capital on a national scale produces an increase in the degree of specialization and rationalization of control over capital. This in turn allows the development of the corporation's global view which promotes direct foreign investments since it "permits preferences for new investments to be determined by objective criteria irrespective of national or international conditions".\textsuperscript{32}

Stephan Hymer and Robert Rowthorn have argued that modern technology requires large corporations able to transcend limitations of the domestic market.\textsuperscript{33} Writing in 1970, their analysis of the dialectics of the MNC led them to conclude that the European merger movement of the 1960s had produced administrative structures more able and willing to establish foreign subsidiaries of an efficient size.
Coupled with greater financial strength brought about by these consolidations and a growing share of foreign markets, Hymer and Rowthorn predicted a large expansion of European direct investment abroad both inside and outside the United States. The U.S. multinationals would not attempt to restrict entry into their domestic market. Rather, they would respond by picking up the pace of their investments abroad.

We can therefore expect a period of intensified multinationalization (almost amounting to capital flight) over the coming decade (1970s) as both U.S. corporations and non-U.S. corporations try to establish world-wide market positions and protect themselves from the challenges of each other.34

The significance of these analyses is the position of primacy given the multinational corporate form of organization within the dynamically competitive world capitalist system. In addition, Mandel draws important distinctions between the various forms capital assumes during the process of its progressive internationalization.

To clarify the long-term tendencies of development of the international centralization of capital and its relationship to the late capitalist state, it is essential to make a strict distinction between the internationalization of the realization of surplus-value (the sale of commodities), the internationalization of the production of surplus-value (the production of commodities), the internationalization of the purchase of the commodity of labor power (or the specific market for this commodity) and the internationalization of the power of command over capital which is ultimately always based on the internationalization of capital.
ownership....In the past there was only marginal internationalization of production of surplus-value in actual manufacturing industry, outside of the domain of raw materials. Today it constitutes the really new and specific aspect of the internationalization of capital in the late capitalist epoch....this development started immediately after the Second World War....and has today become a world-wide phenomenon which for the first time actually provides an immediately international framework for the competition of capital.

In Mandel's view, the capitalist economies embarked on a new form of development in the period following the Second World War. In the place of national corporate oligopolies, and an emphasis on the export (realization) of commodities to foreign markets, arose the integrated multinational corporation and the thrust to produce commodities (create surplus-value) in foreign markets.

And it is precisely this development that is missed by the monopoly capital theorists. They fail to grasp the significance of this change of form of capital exports as well as the impact of this change on continued capitalist development and accumulation because the model of the capitalist system that they employ excludes an analysis of this change from the outset. Sweezy and Baran's view that large corporations "are free to exercise undisturbed their vast monopoly powers" is a misconception related to the inappropriate level of abstraction applied to their analysis of capitalist production. The authors recognize that the capitalist system has always possessed an international
character, placing significant importance on an understanding of this concept.

From its earliest beginnings in the Middle Ages capitalism has always been an international system. And it has always been a hierarchical system with one or more leading metropolises at the top, completely dependent colonies at the bottom, and many degrees of superordination and subordination in between. These features are of crucial importance to the functioning of both the system as a whole and its individual components, though this is a fact the importance of which bourgeois economists have consistently ignored or denied and even Marxists have often underestimated.3

Yet, despite their stated intention to place "the international character of the system at the very center of the analytic focus",38 Sweezy and Baran build the foundation for their analysis of the ills of capitalism within a single nation-state.

Now Marx derived his theoretical model of the competitive capitalist system from study of Britain, by far the richest and most developed capitalist country of his day. This was necessary and unavoidable. And on the same principle a theoretical model of the monopoly capitalist system must be based on study of the United States, which is today as far ahead of other countries in terms of capitalist development as Britain was in the nineteenth century....The purpose of this book is to begin the process of systematically analyzing monopoly capitalism on the basis of the experience of the most developed monopoly capitalist society39

The monopoly model developed by Sweezy and Baran (and subsequently utilized by other monopoly theorists) thus excludes from analysis an investigation of the significance of growing international cross-penetration of capitalist
production and accumulation as a whole. While it was both necessary and unavoidable that Marx would build his analysis and draw his generalizations about capitalist production by studying only Britain, since world capitalism was at a stage in its development where production relations were dominated by local, regional and emerging national units of capital; this is no longer the case. The growth of international production and the resulting emergence of the multinational corporation as "the decisive organizational form" of modern capitalism makes an analysis based on the level of the nation-state useless for an exploration of the forces that are operating to shape the current stage of capitalist development.40

The futility of this approach becomes obvious when Baran and Sweezy turn to a discussion of the growth of the multinational corporation. From the context of their monopoly model they assume that the expansion of United States corporate investment abroad is an expression of the attempt to vent (find investment outlets for) the growing economic surplus. Their concern is to show that this investment will not cure the economic malaise of monopoly capitalism produced by insufficient aggregate demand, deficient surplus absorption and the resulting perpetual stagnation. Using data from the Survey of Current Business, Baran and Sweezy show that in the period from 1950-1963 income from direct foreign investments by U.S. corporations
was greater than direct foreign investment outflow. This analysis leads them to conclude that

....foreign investment, far from being an outlet for domestically generated surplus, is a most efficient device for transferring surplus generated abroad to the investing country. Under these circumstances, it is of course obvious that foreign investment aggravates rather than helps to solve the surplus absorption problem. 41

While the conclusion that foreign investment pumps surplus out of recipient countries is not incorrect, the analysis hardly captures the significance of multinational production and exchange in the post-war period. 42 Once it is recognized that the increase in direct foreign investment and the resultant growth of multinational corporate activity is an expression of growing competition produced by a reduced rate of profit and the overproduction of capital (not as an attempt to vent the economic surplus but as an attempt to raise profits in the face of a tendency for profit rates to fall), the data presented by Baran and Sweezy take on new meaning.

CONCLUSION: COMPETITION, MONOPOLY AND DIRECT FOREIGN INVESTMENT

Werner Olle and Wolfgang Scholler, in their analysis of German foreign investment in the post-war period, have criticized monopoly capital theory. 43 They argued that viewing the export of capital as a vent for the economic surplus was appropriate during the historically specific stage of Lenin's classical imperialism. The form of capital
exports in this period was primarily one of loan capital.

The principals in this export of capital were foreign governments and municipalities (debtors) and large domestic banks which centralized investment-seeking capital from a large number of creditors....It was this specific historical phenomenon of steeply rising exports of loan capital around the turn of the century which Lenin interpreted as the outcome of the "rule of the monopolies".

Agreeing with Mandel, the authors went on to point out that continuing to focus on capital exports as a 'safety valve' by which the domestic surplus can be vented, prevents the monopoly capital theorists from offering a valid explanation of the process of direct foreign investment and the resultant growth of multinational production. Instead of venting surplus, Olle and Schoeller argued that the change in form of capital exports from portfolio to direct investment, which began during the phase of world-wide economic stagnation in the late 1960s, represents the beginning of a structural reorganization of the world economy. The major features of this structural reorganization can be summarized as: (1) a world-wide increase in direct foreign investment; (2) a relative weakening of the position of the former dominant investing countries (i.e., the U.S. and Britain); and (3) the emergence of new recipient countries (primarily the U.S. and the newly industrializing countries of the third world). Their analysis of these developments for West Germany led them to conclude that
monopoly-theory is neither historically, theoretically nor empirically convincing as an analysis of the internationalization of productive capital, and, in fact, yields practical conclusions which further diminish the applicability of the theory to real circumstances by narrowing down its field of vision to embrace only "a handful of large companies". The formulation of capital export as "monopoly raised to a higher power" in reality represents a retreat from the real world "at a higher power"....(T)he stage which the world capitalist system has now reached contains a tendency which is forcing companies, regardless of their size, to undertake a global reorganization of their manufacturing processes on pain of extinction....(M)onopoly theory's....partial approach obstructs any qualitative specification of the three interlinked sub-processes which mark out the current reorganization of the world economy: the worldwide reorganization of production sites; the reorganization of the structure of production itself; and the reorganization of production techniques. It is the historically unique combination of innovations in site, products and processes in a phase of world economic stagnation which constitutes the substance of the reorganization of the world economy over the last ten years. The causes and consequences of this particular new development in the world economy demand an explanation....Such an explanation cannot be built upon the conservatism implicit in monopoly-theory, but on a historically grounded theory of international competition.

This paper shall adopt the position that the current "innovations in site", reflected by the growth of direct foreign investment in general and direct foreign investment in the United States in particular, cannot be analyzed from a monopoly capital theoretical perspective. Indeed, the monopoly model offers no explanation for the growing international cross-penetration of capital between the
developed capitalist countries in the 1970s and 1980s. The inability to analyze this structural change is a direct outcome of the static and stagnant monopoly model developed from an incorrect interpretation of the forces determining modern capitalist production and accumulation. As John Weeks has argued,

"the monopolies that stalk the pages of the writings of Baran and Sweezy have no existence beyond the work of those authors. For these monopolies, which at will set prices, control and suppress innovation, and the like, are idealistic resurrections of 'feudal monopoly' before competition".46

In a futile attempt to rebuke the traditional Marxists, Sweezy contends that Marx had inklings of the impending transition to the MSC. He claimed that Marx believed that the development of joint-stock companies and growth of monopolies marked the beginning of the end of the capitalist system through a phase of transition to the development of socialism. Sweezy referred to the following passage from Capital, Volume III, to support his contention.

This is the abolition of the capitalist mode of production within the capitalist mode of production itself, and hence a self-abolishing contradiction, which presents itself prima facie as a mere point of transition to a new form of production. It presents itself as such a contradiction even in appearance. It gives rise to monopoly in certain spheres and hence provokes state intervention. It reproduces a new financial aristocracy, a new kind of parasite in the guise of company promoters, speculators and merely nominal directors; an entire system of swindling and cheating with respect to the promotion of
companies, issue of shares and share dealings. It is private production unchecked by private ownership.47

Sweezy feels that this shows that Marx and Engels mistakenly believed that the impending transition would be one to a completely new mode of production, that is, socialism. According to Sweezy this shortcoming was due to the fact that these changes were just beginning during the time of their writings as well as Marx being "too optimistic (as most revolutionaries are likely to be)".48 What Sweezy and the monopoly theorists fail to see, however, is that Marx believed that these developments produced a "self-abolishing contradiction". Further along in chapter 27 of Volume III, Marx makes it clear that he sees these developments, and the growing social nature of production and accumulation they usher in, as having the potential to produce either a transition to socialism or to a new form of capitalist production relations.

Expropriation is the starting-point of the capitalist mode of production, whose goal is to carry it through to completion, and even in the last instance to expropriate all individuals from the means of production - which, with the development of social production, cease to be means and products of private production, and can only remain means of production in the hands of the associated producers, as their social property, just as they are their social product. But within the capitalist system itself, this expropriation takes the antithetical form of the appropriation of social property by a few; and credit gives these few ever more the character of simple adventurers. Since ownership now exists in the form of shares, its movement and transfer become simply the result of
stock-exchange dealings, where little fishes are gobbled up by the sharks, and the sheep by the stock-exchange wolves. In the joint-stock system, there is already a conflict with the old form, in which the means of social production appear as individual property. But the transformation into the form of shares still remains trapped within the capitalist barriers; instead of overcoming the opposition between the character of wealth as something social, and private wealth, this transformation only develops this opposition in a new form. Capitalist joint-stock companies as much as cooperative factories should be viewed as transition forms from the capitalist mode of production to the associated one, simply that in the one case the opposition is abolished in a negative way, and in the other in a positive way.  

Thus, contrary to the claims of Sweezy, it appears that Marx felt that the result of concentration and centralization could take one of two paths. One is that the increasing socialization of production could lead to the positive growth of a socialist transition. The other path is that individual competitive expropriation gives way to 'associated' expropriation and accumulation within capitalist limits, (i.e., a negative way). And, for Marx, this negative capitalist development could only continue in a competitive framework.

In practical life we find not only competition, monopoly, and the antagonism between them, but also the synthesis of the two, which is not a new formula, but a movement. Monopoly produces competition, competitors become monopolists...and the more the mass of the proletarians grows as against the monopolists of one nation, the more desperate competition becomes between monopolists of different nations. The synthesis is such that monopoly can only
maintain itself by continually entering into the struggle of competition.
CHAPTER NOTES

1. Foreign investment, in general, and direct foreign investment, in particular, have a long history in the growth of the capitalist world economy. Indeed, one aspect to this thesis will be to explore early DFI undertaken in the United States at the turn of the century. The thesis will, however, attempt to establish that the current wave of DFI in the United States is both qualitatively and quantitatively different from earlier adventures into the U.S. market. The foundation for this expanded role of DFI was established after World War II, with DFI in the U.S. gaining momentum since the late 1960s. Chapter II will present aggregate data to show historically the development of this foreign penetration. Chapter IV will undertake a disaggregated analysis of this presentation utilizing a sample population of 135 foreign firms.

2. Some of the more informed discussions of these topics can be found in the works chronologically listed below:

3. There is some question over whether the new "laws" of motion derived from the monopoly framework require that Marx's laws (i.e., the labor theory of value, the tendency of the rate of profit to fall and the replacement of the concept of surplus value with the one of economic surplus) be discarded or merely amended. Naturally, the monopoly capital theorists emphasize that they seek only to amend
Marx's laws of motion to take into account the modern day reality of monopoly dominated production. As an example, J.B. Foster claims that "the law of value operates in its fullest sense - establishing an orderly relationship between production and exchange - only as long as competition between capitals serves to enforce the innermost relations of the system in a straightforward way....Since capitalism is becoming increasingly irrational from the standpoint of its own logic, it is necessary to recognize that the theory of a purely capitalist economy, where the law of value operates virtually unhindered, is no longer an adequate guide to the present as history; which means that it is necessary (even at the risk of abandoning pure economic logic) to find ways of adapting theory to take account of modifications in the laws of motion of the system. It is at this point that Marxian value theory, given the link made between the quantitative and qualitative aspects of value relations, proves itself to be far superior to all other economic paradigms, enabling it to incorporate the monopoly factor into the core of its analysis." See J.B. Foster, The Theory of Monopoly Capitalism: An Elaboration of Marxian Political Economy. Monthly Review Press, N.Y., 1986, pp. 72-3. Or see, for instance, Henryk Szlajfer who "would insist that the category of economic surplus introduced by Baran and Sweezy is an analytical category adjusted to conditions of modern capitalism. It is a category enabling an evaluation of the economic possibilities of labor emancipation, as well as an instrument for the critical analysis of the way these possibilities are taken advantage of within the framework of modern capitalism. In this sense, the category of economic surplus is not an alternative to the category of surplus value. On the contrary, it is a consistent and historically justified development of the surplus value category". See H. Szlajfer, "Economic Surplus and Surplus Value Under Monopoly Capitalism", in J.B.Foster and H. Szlajfer, eds., The Faltering Economy: The Problem of Accumulation Under Monopoly Capitalism, Monthly Review Press, N.Y., 1984.

What Foster fails to see, however, is that Marx never believed that the operation of the law of value would proceed "virtually unhindered". The operation of the law of value encounters resistance and countertendencies in all historical stages of capitalist development. Indeed, one could view (at a high level of abstraction) the transitional stages of development historically experienced by the capitalist mode of production as structurally altered expressions of changes in the forms of resistance and countertendencies which act to hinder the operation of the law of value. The "guide to the present as history" requires an analysis that takes into account both the tendency of the law's operation as well as the altered forms of resistance encountered and countertendencies produced. A framework that
seeks to "adapt" the law by incorporating "the monopoly factor into the core of its analysis" substitutes the operation of a countercendency for the operation of the law itself, and in the process elevates the countercendency to the level of a law that operates independently of the Marxian law of value. This paper takes the position that such an approach amounts to discarding the Marxian notion altogether. Similar responses could be made to Szlajfer, who attempts to defend elevating the concept of a rising economic surplus to the level of a law which can explain the system's motion by arguing that this substitution is "historically justified" by the development of monopolistic production. Further development of these arguments, however, lies beyond the scope of this investigation which will attempt to focus on the competition-monopoly controversy.


We shall first abstract from all semimonopolistic and monopolistic factors, in other words, we shall assume so-called perfect competition. Let me add immediately that this is a most unrealistic assumption not only for the present phase of capitalism but even for the so-called competitive capitalist economy of past centuries: surely this competition was always in general very imperfect. Perfect competition, when its actual status of a handy model is forgotten, becomes a dangerous myth.


It is obvious that schemes designed to prove the possibility of periodical equilibrium in the economy, despite the anarchical organization of production and the segmentation of capital into competing individual firms, will be inadequate for use as analytical tools to prove that the capitalist mode of production must, by its
very essence, lead to periodic ruptures of equilibrium, and that under capitalism economic growth must always lead to disequilibrium just as it is itself always the result of it. (p.27).


11. Ibid., pp.363-64.


13. Ibid.


15. Ibid., p.110.

16. As will be seen below, this paper takes the position that Baran and Sweezy's emphasis on the monopoly elements of capitalist interaction is misplaced, ill-advised and the source of subsequent analytical errors. Yet even if one accepts their assumption of monopolistic domination, a significant problem with their analysis is that they fail to take into account all of the factors that influence the countervailing forces of surplus absorption. An example of this is evident in their analysis of military expenditures and the ability of these expenditures to absorb the surplus. They assert that these expenditures are subject to two limitations. The first is that current technology (capital-intensive) has limited the ability of military spending to create jobs and, hence, stimulate aggregate demand. The second limitation is the growing political opposition to further stock-piling of nuclear armaments. They conclude from this that military spending offers no way out of the surplus absorption problem. In reaching this conclusion they have overlooked a number of important factors. First, while the job-creating power of military spending has been reduced it has not been eliminated. Congressional pressure for new programs to bolster regional employment is as strong as ever. In addition, their argument fails to account for the ability of governments to negotiate the retirement of 'old' missiles and the building
of new ones to replace them. Further, Sweezy and Baran fail to see that technological developments have created a new area for spending, namely anti-nuclear armaments (satellites, lasers, space stations, etc.). Most importantly, the authors fail to perceive that military spending involves much more than the production of just bombs. A growing share of military spending is directed towards non-armament hardware such as computers, communications, and delivery vehicles, all of which offer an unending range for technological improvements and, hence, further investment and surplus absorption. Similar criticisms of Baran and Sweezy's reasoning could be advanced against the arguments that civilian government expenditures, the sales effort, capitalist consumption and private investment spending provide inadequate outlets for the (supposed) ever-growing surplus.

20. Ibid., p. 6.

As the world revolution spreads and as the socialist countries show by their example that it is possible to use man's mastery over the forces of nature to build a rational society satisfying human needs of human beings, more and more Americans are bound to question the necessity of what they now take for granted. And once that happens on a mass scale, the most powerful supports of the present irrational system will crumble and the problem of creating anew will impose itself as a sheer necessity. (Monopoly Capitalism, p.367.)

24. J.B. Foster, *The Theory of Monopoly Capitalism: An Elaboration of Marxian Political Economy*, p.69. This line of reasoning has been developed in response to a criticism of monopoly capital theory put forth by Willi Semmler. See "Competition, Monopoly, and Differentials of Profit Rates: Theoretical Considerations and Empirical Evidence", *Review of Radical Political Economics*, 1982, 13(4). Semmler argued that two streams of thought have been presented in post-Marxian analysis of modern capital, one stream emphasized the abolition of competition. Power, especially regarding prices and profits, becomes the dominant force in the economy, bringing about a persistent hierarchy of profit rates. The other stream holds to the Marxist notion that, regardless of the genesis of oligopolies and oligopoly groups, capitalism is regulated by the self-expansion and competition of capital. Monopoly is related to special cases and, in the long run, is threatened by competition from other capitals. (p.43).

Semmler goes on to admonish later post-Marxian economists (M. Dobb, M. Kalecki, O. Lange, P.M. Sweezy, J. Steindl and H. Sherman) for picking up on only "one tradition" in the post-Marxian literature. In addition, Semmler argues that little empirical evidence exists to support the existence of a persistent hierarchy of profit rates. (The question of the ability to prove empirically the position of one side or the other in the monopoly-competition debate will be returned to later.)


27. The re-emergence of competition after periods of intense consolidation and monopolistic dominance is a necessity. The re-emergence of competition is the market expression of the resurgence of the discipline of the law of value (which for capitalism is a reproductional necessity) in its quantitative capacity, thereby giving expression to its qualitative existence. Slajfer fails to comprehend this. See: Henryk Szlajfer, "Economic Surplus and Surplus Value Under Monopoly Capitalism", in J.B. Foster and H. Szlajfer, *The Faltering Economy*. In this work Szlajfer supports the position of Sweezy, Foster and other monopoly capitalist theorists who hold that a theory of price determination under modern capitalism is indeterminant. Szlajfer writes, if the model of monopoly
capitalism....destroys, in effect, 'economic theory' as a whole, then within the Marxian labor theory of value the main result of this model is the loss of the timeliness of the 'quantitative aspect' of the labor theory of value. The 'qualitative aspect' of this theory, pointing to the sources of profit and surplus value, remains valid. (p. 274).

This is a weak attempt to reconcile Marxian value theory with the supposed existence of administered prices in the long-run. If, however, one rejects the ability of monopolies to permanently escape the forces of competition, then the "timeliness of the quantitative aspect" of the law of value in the long-run is restored. This question shall be returned to later with an investigation of long-run fluctuations in the rate of growth and development of DFI in the capitalist system.

28. Steve Zeluck, "On the Theory of the Monopoly Stage of Capitalism", Against the Current, Fall, 1980, vol. 1, no. 1, p.46. While this abstract theoretical approach is intellectually amusing it hardly serves as a refutation of monopoly capital theory in the real concrete process of capitalist interaction. There are three reasons why this approach is insufficient. First, the analysis suffers from the same static approach which grips the work of all the monopoly capital theorists. It does not analyze the continuing dynamic process of concentration and centralization in modern capitalism but, instead, implicitly assumes that this process stops with the single firm monopolization of every industry. Second, the analysis is developed at the wrong level of abstraction, that of the monopolized industry instead of at the level of many capitals which increasingly transcend standard industry classifications. Last, the analysis suffers from an incorrect focus on the sphere of circulation and price determination instead of the production and appropriation of surplus value. To his credit, Zeluck recognizes the limits of his approach. He concludes that,

What is required beyond this negative critique is a positive theory of how the growing concentration and centralization of capital in the post-war period has affected the forms of crisis in a still competitive economy....The alternative to monopoly capital and administered prices theory....must begin from an examination of tendencies to falling profits, intensified competition, and constant alteration of capital surplus and shortage within the business cycle. (p.51).
36. As shall be seen in the chapter reviewing the literature on direct foreign investment, some theorists have argued that the internationalization of productive capital has proceeded in waves beginning as early as the turn of the century. See, for instance, Stephan Hymer, "The Multinational Corporation and the Law of Uneven Development", in J. Bhagwati, ed., *Economics and World Order from the 1970s to the 1990s*, Collier-Macmillan, N.Y., 1972, p. 121.
40. Analyzing modern capitalism at the level of the nation state is analogous to Marx limiting his analysis of capitalist production and accumulation to Liverpool, excluding the rest of England. Had this been the case, 'Marxian economics' would surely have been relegated to an obscure footnote by economic historians.
42. The point is that the framework used by the monopoly capital theorists prevents them from even asking the appropriate questions concerning the role of foreign investment. For example:

We are only interested in foreign investment as an outlet for investment-seeking surplus generated in the corporate sector of the monopoly capitalist system. And in this respect it neither does nor can be expected to play an important role. (See *Monopoly Capital*,}
43. Werner Olle and Wolfgang Schoeller, "Direct Investment and Monopoly Theories of Imperialism," Capital and Class, no. 16, Spring, 1982, pp. 41-60.

44. Ibid., p. 48.

45. Ibid., pp. 56-57.


Under capitalism, the relations of production-labor power as a commodity prevent the permanent monopolization of production in any branch of industry, for the form of capital's exploitation of labor continuously creates the conditions for competition...Centralization does not reduce competition - causality runs the other way from competition to centralization...Since the process of centralization does not eliminate the alienation of labor but intensifies and advances it, centralization does not eliminate competition. Modern monopoly emerges as the synthesis of the competitive contradiction and the process of centralization. (See pp. 163-65).


49. Ibid., pp. 571-2.

CHAPTER II

THE COMPETITIVE INTERNATIONALIZATION OF CAPITAL AND DIRECT FOREIGN INVESTMENT IN THE UNITED STATES

COMPETITION, MONOPOLY AND THE PARADOX OF INCREASING CONCENTRATION

In this chapter data will be presented to support the position that the growth of the internationalization of productive capital in the post-World War II period corresponds to a new stage in the development of the world capitalist system. It shall be argued that a basic deficiency of the theory of generalized monopoly capital is its failure to adequately comprehend and integrate the changes that have occurred in the capitalist global economy since the end of World War II. As was seen in the previous chapter, the reason for this failure is an inappropriate focus on capital accumulation within one nation-state under the control of powerful monopolies and oligopolies. Within this framework international relations of exchange and investment are "tacked on" to an otherwise closed domestic monopoly economy. In addition, once this static model of monopoly capital at its "highest stage" is accepted, any further conceptualization of periods or stages in capitalism's continued development becomes meaningless. The stagnation of this highest stage simply drags on and on, except for occasional periods of external stimulation.
In the last chapter it was noted that the monopoly capital theorists believe that the spread of monopolies was a natural outcome of Marx's law of increasing concentration and centralization of capital. The development of a generalized monopoly environment in capitalist societies, in turn, makes the laws of motion developed by Marx (in his analysis of the competitive stage of capitalism) inadequate. Erected in their place are the notions of ever-rising surplus and permanent stagnation. The monopoly capital theorists have proclaimed their mission to advance Lenin's theory of imperialism by placing monopoly at the center of the analysis. Baran and Sweezy point out:

....that neither Lenin nor any of his followers attempted to explore the consequences of the predominance of monopoly for the working principles and "laws of motion" of the underlying capitalist economy....Lenin, who was strongly influenced by Hilferding's analysis of the origins and diffusion of monopoly, based his theory of imperialism squarely on the predominance of monopoly in the developed capitalist countries. But as also noted, neither he nor his followers pursued the matter into the fundamentals of Marxian economic theory. There, paradoxically enough, in what might have been thought the area most immediately involved, the growth of monopoly made the least impression.

A careful reading of Lenin, however, reveals that it was no paradox that Lenin chose not to pursue the matter of the apparent contradiction between the process of increasing concentration and centralization of capital and the Marxian conception of competition between capitals. Lenin did not
confront the apparent contradiction because he did not believe one existed. In a polemic against Hilferding, Lenin wrote that:

.....the most deep-rooted economic foundation of imperialism is monopoly. This is capitalist monopoly, i.e., monopoly which has grown out of capitalism and exists in the general capitalist environment of commodity production and competition, and remains in permanent and insoluble contradiction to this general environment. Nevertheless, like all monopoly, this capitalist monopoly inevitably gives rise to a tendency to stagnation and decay. As monopoly prices become fixed, even temporarily, the stimulus to technical and, consequently, to all progress, disappears to a certain extent and to that extent, also the economic possibility arises of deliberately retarding technical progress....Certainly, monopoly cannot, under capitalism eliminate competition in the world market completely and for a long period of time (and this, by the by, is one of the reasons why the theory of ultra-imperialism is so absurd). Certainly the possibility of reducing cost of production and increasing profits by introducing technical improvements is an influence in the direction of change. Nevertheless, the tendency to stagnation and decay, which is the feature of monopoly, continues, and in certain branches of industry, in certain countries, for certain periods of time, it becomes predominant.

Thus, Lenin made it clear that he believed capitalist monopoly exists in a generally competitive environment and that (like Marx) monopoly "remains in permanent and insoluble contradiction" to this generally competitive environment. This contradiction gives rise to a movement of synthesis through which monopolies continually find it necessary to enter into the competitive fray. And this movement itself lays the foundation for renewed monopoly
positions. Thus, monopoly appears permanent because it always exists, but it is in fact temporary, because the competitive environment continually generates challenges to and produces transformations of the monopoly positions within this environment. (It is precisely this situation which elevates finance capital to a position of predominance). In Lenin's view, the rise of monopolies and finance capital in the particular concrete conditions existing at the end of the 19th century led to the conclusion that the tendency toward stagnation and decay would become predominant "in certain branches of industry, in certain countries, for certain periods of time".

**MONOPOLY THEORY AND MULTINATIONALIZATION**

The lack of a dialectical conception of the competitive process by the monopoly theorists leads to further confusion regarding the internationalization of capital and the proliferation of the multinational corporation (MNC). Their fundamental error results from an attempt to use a general monopoly framework to explain the process of the internationalization of productive capital and the formation of MNC's. Writing in 1978, Sweezy points out that

...the pioneer MNC's were the oil companies... Multinationality was forced on them by geographical conditions... In more recent times, and especially since the Second War, geography has been less important and the imperatives of monopolistic business strategy (emphasis added) more important. A corporation starts with an export market and then, to protect it from competition, moves to
assemble and then manufacture its products on the spot. 3

The reasons Sweezy cites for this monopolistic strategy of neutralizing potential competition included the pull of cheap labor supplies, tariff and non-tariff barrier costs of exporting and the monopoly firm's belief that, if it doesn't invest someone else will. Sweezy reasons that the imperatives of monopoly business strategy have produced two types of multinationalization. In the first case direct foreign investment occurs between developed countries, creating an "interpenetration of each other's territory by national oligopolists". 4 Sweezy defines imperialism as the process through which national oligopolies and monopolies team up with the nation-state to expand beyond their borders. In his view, direct investment between developed countries poses few problems for the state and must therefore be of little importance in understanding imperialism.

(I)nterpenetration does not pose any particularly urgent problems for the state....Since all these countries have well developed capitalist systems and stable state structures, and since they are all deterred from putting obstacles in the way of this kind of capital movement by the credible threat of retaliation, the states involved have not found it necessary or useful to adopt policies or apply measures with respect to foreign capital greatly different from those in force domestically. 5

Sweezy noted the Japanese "exceptionalism" in lagging behind in the process of interpenetration, but, predicts
that they will slowly open their markets to foreign capital.

The second type of multinationalisation occurs between the developed core countries and the underdeveloped periphery. From Sweezy's perspective, imperialism necessarily focuses on the role of the MNC's in the Third World. Nevertheless, he claimed that one is better able to understand the MNCs if one first analyzes some of the characteristics of their activities between developed countries.

Here there is a strong and persistent tendency toward **interpenetration** of each other's territory. This fact has been obscured by the special conditions which existed in the years immediately after the Second World War. At that time U.S. corporations were the only ones in a position to move freely on the international stage....As more and more U.S. corporations moved into Europe, especially after the establishment of the Common Market, it began to appear that the MNC was a specifically American instrument for establishing hegemony....More recently, however, we can see that this is not really so. European and Japanese corporations have the same reasons for wanting to establish branches and subsidiaries in the United States as U.S. corporations have for invading Europe and Japan....The reason is basically simple: the more markets an oligopolist is represented in, the stronger will be its competitive position vis-a-vis rivals in each and every one of them".6

From Sweezy's perspective nothing more needs to be said as he abruptly shifts to an investigation of MNC's in the Third World, where (for Sweezy), the imperialistic aspects of the MNC and nation-state activities can be grasped.

Sweezy, then, explained the growth of direct foreign
investment penetration between developed countries as the outcome of monopoly business strategy. Yet, while he has an inkling that this has something to do with competition, his failure to understand the dialectic of competition and monopoly (and the antagonism between them which in practical life presents itself as a movement by which monopolies strive to maintain themselves by entering into the competitive struggle), leads him to see DFI between developed countries as simply an extension of oligopolistic rivalry across borders. These self-perpetuating oligopolies simply become internationally intertwined. There is no understanding of how this growing interpenetration undermines old monopolistic positions, alters the nature of competitive capitalist relations and leads to a restructuring of the fractions of the capitalist class within and between each country.

This conclusion is supported by Sweezy's comments on the lack of contradictions within the developed countries between the state and the MNC's, since the developed countries' governments are (somehow or other) all to be viewed as pursuing the same (identical) interests. His comments on Japanese reluctance to participate in the process of multinationalisation and interpenetration seem particularly ironic in light of the most recent controversy in U.S.-Japanese trade relations and the imposition of penalty tariffs by the Reagan Administration due to the
alleged dumping of computer chips on world markets. Clearly, the internationalization of capital and, specifically, the interpenetration of productive capital between the developed countries does pose problems for the states of these countries. Additionally, this international interpenetration of productive capital is just as much an aspect of imperialism and the drive for hegemony as is the multinationalisation between the developed core countries and the underdeveloped periphery.

Vladimir Lenin, in his attacks on Karl Kautsky's concepts of imperialism and particularly the possibility of ultra-imperialism, criticized him for onesidedly and inaccurately connecting imperialism with the annexation of backward "agrarian" regions.

The characteristic feature of imperialism is precisely that it strives to annex not only agricultural regions, but even highly industrialized regions (German appetite for Belgium; French appetite for Lorraine), because, 1) the fact that the world is already partitioned obliges those contemplating a new partition to stretch out their hands to any kind of territory, and 2) because an essential feature of imperialism is rivalry between a number of great powers in the striving for hegemony, i.e. for the conquest of territory, not so much directly for themselves, as to weaken the adversary and undermine his hegemony. (Belgium is chiefly necessary for Germany as a base for operations against England; England needs Bagdad as a base for operations against Germany, etc.)

The true paradox of this situation is that the monopoly capital theorists, who proclaim their attempt to update the neo-Leninist tradition, fall into the same trap as Kautsky.
1) They arbitrarily focus on the activities of MNC's in the Third World; 2) they fail to see how DFI in the U.S. is the modern expression of an attempt to "weaken the adversary and undermine his hegemony"; 3) they fail to comprehend the significance in the change of form of the internationalisation of capital as an expression of the heightened forces of competition which acts to undermine old monopoly positions and redefine the structures of accumulation. The fundamental cause of these errors is a misconception of the modern capitalist business enterprise operating in a generally monopolistic framework. As M. Herold and N. Kozlov have noted,

(t)he concept of a capitalist enterprise (an individual capital) can be formulated at different levels of abstraction. It is possible to remain at a high level of abstraction (capital in general) and yet derive certain insights from the analysis of an individual capital in regard to, for example, the investigation of the labor process. In fact, the concept of capital as self-expanding value is produced at this level of abstraction....But to understand the determinants of capitalist enterprise behavior, it is necessary to proceed to a lower level of abstraction, from capital in general to a multiplicity of capitals and the action of capital upon capital, i.e., competition. The accumulation of surplus value becomes "problematic" because the accumulation of a particular capital takes place (can only take place) in the proximity of other capitals which are all trying to drive away and exclude each other from markets, i.e., to destroy each other.9

Table 2-1 below summarizes the major distinctions between the monopoly and non-monopoly theorists regarding
DFI and multinational production.

Table 2-1: Major Distinctions Between Monopoly Capital and Competitive Capital Theorists

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Monopoly capital theorists</th>
<th>Competitive capital theorists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of capitalist interaction</td>
<td>General monopoly framework</td>
<td>General competitive framework</td>
</tr>
<tr>
<td>Level of abstraction</td>
<td>Nation-state</td>
<td>World capitalist system</td>
</tr>
<tr>
<td>Result of concentration</td>
<td>Solidified monopoly</td>
<td>Competition-monopoly dialectic</td>
</tr>
<tr>
<td>Underlying cause of DFI</td>
<td>Venting of surplus</td>
<td>General decline in rate of profit</td>
</tr>
<tr>
<td>Multinationalization between DC's</td>
<td>Oligopolies reproduced</td>
<td>Former monopoly position undermined</td>
</tr>
<tr>
<td>Imperialism</td>
<td>Relegated to DC-LDC relations</td>
<td>Related to both DC-LDC and DC-DC</td>
</tr>
<tr>
<td>Nation-state in DC's &amp; DFI</td>
<td>DFI poses no problem</td>
<td>Interpenetration source of conflict</td>
</tr>
<tr>
<td>Rationality of capitalism</td>
<td>Increasingly irrational</td>
<td>Rational within capitalist limits</td>
</tr>
</tbody>
</table>

Before proceeding, it should be made clear that the argument presented in no way implies that DFI by developed countries in the periphery is secondary. Instead, the argument is that an understanding of the role of MNC's in modern capitalism's imperialist expansion requires analysis of both interpenetration of capital between developed countries, as well as developed countries' capital penetration of the underdeveloped peripheral areas. Only an integrated view can expose the full operation of imperialism in modern capitalism. It is, however, beyond the scope of this paper to present such an integrated framework. The goal is more modest. This work seeks simply to show the extent of the interpenetration of capital between developed countries and the impact of the growing interpenetration on
the fractions of capital within the United States. In this
it is recognized that the analysis is of a partial nature.

THE CIRCUITS OF CAPITAL AND THE
INTERNATIONALIZATION OF CAPITAL

A number of radical economists (C. Palloix, B. Fine and
L. Harris, E. Mandel, W. Semmler, M. Herold) have argued
that the conception of imperialism developed by Lenin was
historically specific to the particular social formations
that existed at the turn of the century. These theorists
contend that a periodisation of capitalist development is
possible at two levels of abstraction. At one level it is
conceived through an analysis of transformations in social
relations and class struggle which develop as accumulation
proceeds. This analysis generally corresponds with an
investigation of the reproduction of particular social
formations within a given nation-state. A second conceptual
periodisation of the capitalist mode of production based on
the reproduction of the world economy views the process of
capital accumulation producing a tendency of capital to tran
of capital has existed since the inception of the
capitalist system. The expansion of capital produces both
its internationalization and international competition which
assume different forms in different periods of capitalism's
development. An analysis at this level focuses on these
transformations of the internationalization of capital and
competition which provide the basis for conceptualizing
distinct stages in the development of the world capitalist
This group of traditional Marxists contends that an adequate understanding of the internationalization of capital and its modern expression, the MNC, can only be achieved through an analysis of the circuits of capital and the process of their progressive and successive internationalization as capital accumulation and reproduction occur. This viewpoint focuses on the concept of the circuits of capital developed by Marx in Volume II of *Capital*.

At the highest level of abstraction capital is seen as self-expanding (valorizing) value in motion through the spheres of circulation and production.

Capital, as self-valorizing value, does not just comprise class relations, a definite social character that depends on the existence of labour as wage-labor. It is a movement, a circulatory process through different stages, which itself in turn includes three different forms of the circulatory process. Hence it can only be grasped as a movement, and not as a static thing.11

The functional forms that industrial capital alternatively assumes and discards in its movement through the spheres (stages) of production and circulation are: commodity capital (C), money capital (M), and productive capital (P). Marx focused on the movement of industrial capital since in his view (labor theory of value) industrial capital dominates over the other types (merchant capital and interest-bearing capital) by virtue of its unique status as
the source of surplus value.

Industrial capital is the only mode of existence of capital in which not only the appropriation of surplus-value or surplus product, but also its creation, is a function of capital. It thus requires production to be capitalist in character; its existence includes that of the class antagonism between capitalists and wage-labourers... The other varieties of capital which appeared previously, within past or declining conditions of social production, are not only subordinated to it and correspondingly altered in the mechanism of their functioning, but they now move only on its basis, thus live and die, stand and fall together with this basis. Money capital and commodity capital, in so far as they appear and function as bearers of their own peculiar branches of business alongside industrial capital, are now only modes of existence of the various functional forms that industrial capital constantly assumes and discards within the circulation sphere, forms which have been rendered independent and one-sidedly extended through the social division of labour.12

Figure 2-1 illustrates the movement of industrial capital through its three circuits.

Figure 2-1. The Circuits of Capital

In its movement, the reproduction of each form of capital comprises a circuit; M-M' the money circuit, P-P' the production circuit, and C-C' the commodity circuit. In its movement capital in the money form is advanced to
acquire the commodities labor power (L) and means of production (mp). These are then put into production from which a new commodity emerges whose destination is the market. The commodity that results from production, (C'), possesses the surplus value extracted from the workers in production. The produced commodities must then be sold (realized) as capital reassumes the money capital form. Expanded reproduction requires the accumulation of surplus value in the money form which is then advanced again (C') to resume production on an expanded scale (P'). (For simplicity this example assumes that all of the accumulated surplus is reinvested in expanded production. In Volume II of *Capital*, Marx undertakes an in-depth analysis of the circuits of capital under many different assumed conditions of capital's circulation in order to investigate the conditions which influence the intertwining of different capitals and to analyze the reproduction of the capitalist economy and bourgeois society in its totality.)

The recent application of the analysis of the circuits of social capital to the internationalization of capital views the historical development of capitalism as the unfolding of the progressive internationalization of capital. This development can be delineated into stages based on which of the circuits of capital dominate the international intertwining of the accumulation process. The transition from one stage to another can be recognized
quantitatively in data that reflect (imperfectly) capital's changing form of movement. The internationalization of the circuit of commodity capital is reflected in the internationalization of the purchase and sale of commodities (i.e., rising imports and exports between countries). The internationalization of the circuit of money capital appears in the growing movement of portfolio and direct investment, though there is some debate whether this movement is to be seen primarily in portfolio form. The internationalization of the circuit of productive capital is reflected in the increasing internationalization of production though, again, there is some question whether this movement is empirically visible in the establishment of production bases abroad (DFI) or in the growth of intra-firm trade between the MNC's internationally-based subsidiaries. Fine, Harris and Mandel view the key criterion to be the establishment of production bases while Palloix and Herold emphasize inter-subsidiary trade. Supporting the latter position Gryorgy Adam, the late Hungarian economist, writes:

The optimal international redistribution of firms' resources, is conceived of not as an objective projected into a more or less distant future, but rather as an effective concentration of production in zones where costs are lower, and sales on the most lucrative markets. From this vantage point, production series which previously were justified (rational) by national cost considerations, lose their justification at the world level, once there can be international displacement of production. This implies that MNE's (now) establish a rising number of affiliates abroad within a
recognized schema of not supplying all or even a part of the host country market, but rather to export to third countries as well as to the parent firm's home country.\[13\]

Palloix presents a similar view.

The internationalization of production indicates in effect the internationalization of the act of value itself, outside of the internationalization of circulation. The multinational industrial firm, with an internal circulation of products among its subsidiaries in place of a circulation of commodities, in a way expresses this internationalization of production.\[14\]

Though this paper does not intend to address all aspects of disagreement noted above, it should be remembered that in Marx's view the unity of the circuits ensures that the internationalization of any circuit transforms the movement (internationally) of all the circuits.

The total circuit presents itself for each functional form of capital as its own specific circuit, and indeed each of these circuits conditions the continuity of the overall process; the circular course of one functional form determines that of the others. It is a necessary condition for the overall production process, in other words for the social capital, that this is at the same time a process of reproduction, and hence the circuit of each of its moments....

As a whole, then, the capital is simultaneously present, and spatially coexistent, in its various phases. But each part is constantly passing from one phase or functional form into another, and thus functions in all of them in turn. The forms are therefore fluid forms, and their simultaneity is mediated by their succession. Each form both follows and precedes the others, so that the return of one part of the capital to one form is determined by the return of another part to another form. Each part continuously describes its own course, but it is always another part of capital that
finds itself in this form, and these particular circuits simply constitute simultaneous and successive moments of the overall process. It is only in the unity of the three circuits that the continuity of the overall process is realized....The total social capital always possesses this continuity, and its process always contains the unity of the three circuits. 15

Therefore, while each stage in the development of the world capitalist system (self-expanding value) can be characterized by the form of capital that dominates its internationalization, the progressive internationalization of one of the circuits leads to accommodating changes in the other circuits. (Even in the case of the circuit of commodity capital which, chronologically, was the first to dominate the international expansion of capital, the progressive internationalization of the commodity circuit produced changes in the other circuits which could be viewed as the beginnings of their international "movement".)

In his analysis of the effect of the internationalization of capital on capital accumulation in Iran and Iraq, Patrick Clawson acknowledged the "simultaneous and successive moments of the overall process". Clawson noted that,

[Industrial components, manufactured in several different countries are assembled in another country; the finished product is then shipped to many countries. This international production, which up until now has been under the domination of the MNC, marks the start of the period of the internationalization of the circuit of productive-capital....(L)ocal and imperialist capital seek integration of the
Third World economy into a world production system. For Iran and Iraq, the form this integration takes is primarily the integration of the petroleum industry into a petrochemical industry....(The internationalization of the circuit of productive-capital reinforces in a qualitatively higher fashion the internationalization of the other circuits (just as the internationalization of the circuit of money capital qualitatively reinforced the internationalization of the circuit of commodity-capital).)

From this viewpoint, the growth of DFI both generally, and in the U.S. in particular, is seen as a significant transition from the stage of monopoly imperialism, so characterized by Lenin. In that stage the dominant type of internationalization was money capital in the form of loans (portfolio capital) and a growing world credit market. The transition to direct investment, while still representing an altered path of money capital's internationalization, lays the foundation for the internationalization of the circuit of productive capital. By establishing production and distribution bases in numerous countries (whether originally destined for the home market or third countries via intrafirm transfers), the MNC creates a world network of capital that changes the plane of capital's operation in all its circuits. The transition to DFI qualitatively and quantitatively increases the degree to which capital, moving through its circuits, becomes internationally intertwined with the circuits of other capitals. In this view, then, while the act of DFI itself is not seen as the internationalization of productive capital, DFI remains an
indicator of its internationalization, since its result, the progressive creation of an international network of production and distribution bases, lays the foundation for expanded internationalization of the productive capital circuit, P-P'.

Herold has noted the apparent contradiction between the two views of this internationalization, but stresses that, in fact, the two views reinforce one another.

Some authors (R. Vernon, C-A Michalet, etc.) have noted the tendency for a centralisation of U.S. investments in Center nations, near the market, Europe—the implantation of MNEs' affiliates in Center markets—which might appear, at first, to contradict Gyorgy Adam's point (above)....Others have reported on the basis of surveys that the main inducement to set up foreign affiliates, is to be present "in the market". Adam is referring to the articulation which operates in the realisation of dominant capital on the base of dominated capitals through the "absorbing" of their products in its circulation of commodities; whereas Vernon, et al., are emphasizing the valorisation process of dominant capital (namely the producing subsidiary), leading to a commodity ultimately sold/realised on Center markets. In fact, the two views are complementary.

THE PERIODISATION OF CAPITALISM

As noted in the previous section, the concept of two periodisations of capitalism has been advanced, one, at the level of the social formation and the other at the level of the reproduction of the world capitalist system. B. Fine and L. Harris provide a framework for the periodisations which is summarized in Table 2-2 below:
Table 2-2: Stages in Development of the Capitalist Mode of Production

<table>
<thead>
<tr>
<th>Stage Social Formation</th>
<th>International form of Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Laissez-faire Commodity</td>
</tr>
<tr>
<td>2</td>
<td>Monopoly Money</td>
</tr>
<tr>
<td>3</td>
<td>State-monopoly Productive</td>
</tr>
</tbody>
</table>

Source: B. Fine and L. Harris, *Rethinking Capital*

Fine and Harris point out that one could argue (as E. Mandel does in *Late Capitalism*) that,

....the periodisations simply coincide with each other. However, even if this could correspond to the historical development of capitalism as a world system, it could not render the dual principles of periodization redundant. For the two sets of stages through which capitalism progresses are not united in a simple fashion in which the characteristics of each are added together or necessarily reinforce one another.18

Indeed, their viewpoint is that concepts such as imperialism, the state and the MNC, which involve a more complex (lower) level of abstraction than that of periodisation, require an integration of the two processes of periodisation. They believe that Lenin successfully integrated these two processes in his development of the concept of imperialism,

....which was not a theoretical tract....It was not concerned with highly abstract concepts but with the complexities of concrete social formations....Lenin identified the characteristics of the stages of monopoly capital and the export of capital, the latter
primarily in the form of money capital. It was the articulation of these two highly abstract stages in a world made up of social formations of Britain, France, etc., with their concrete histories, interrelations and, most importantly, relations with social formations dominated by pre-capitalist modes of production - it was this articulation which Lenin named imperialism.19

Fine and Harris conclude that modern capitalism has undergone a transition to what they call the stage of state monopoly capitalism (SMC) which, like Lenin's monopoly stage, integrates the two processes of periodisation, taking into account two tendencies which are specific to the current stage of capitalist development. These tendencies are (1) increasing state intervention in economic reproduction and (2) increasing internationalization of productive capital. The first tendency results from an intensification of crises and the class struggle that accompanies them, while the second tendency is a product of the competitive expansion of capital internationally, which is itself intensified by crises.

In Lenin's treatment, inter-imperialist rivalry as an economic struggle took the form of the division of the world among competing blocks of capital ("capital associations"). . . . The "capital associations" with which Lenin was concerned were cartels and trusts which, corresponding to the predominance of the internationalization of commodity and financial capital, divided the world into markets and spheres for lending. Today also "capital associations" exist, but as multinational corporations competing for the division of the world into markets, financial areas, and production bases. This corresponds to the dominance of productive capital as the form which is
internationalized. These blocks of capital...and today's national states are again the agents in inter-imperialist rivalry. But,...the respective elements around which cooperation and rivalry occur in the present period are transformed. It follows that a general assertion of inter-imperialist rivalry is sterile: analysis requires examination of the particular antagonism and cooperation which arise when the mode of production is at the SMC stage and capital is internationalized as productive capital.20

Finally, if it is recognized that the post-war period has witnessed a change in the form of the internationalization of capital, then it becomes necessary to investigate the impact of the growing international expansion of productive capital on: (1) imperialist rivalry, including the debate over the question of super-imperialism versus ultra-imperialism; (2) the general competitive environment in which separate units of capital become increasingly intertwined; (3) the operation of the other two circuits of capital; (4) the relationship between the nation-state and both domestic and foreign capital; and (5) the overall operation of the circuit of social capital, including an investigation of the impact on the cyclical and fluctuating nature of capitalist accumulation as well as the renewed potential for disruptions and crisis.

It should be obvious that it is not possible to address all of these questions in this thesis. The rest of this chapter will focus on the overall quantitative dimensions of the internationalization of productive capital in reference to the growth of DFI in the United States. This analysis
will highlight the macroeconomic characteristics of this process in terms of the historical trend by country of origin and broad industrial classification of the area of investment. In addition, a measurement of the relative interpenetration of productive capital will be presented.

As was pointed out in Chapter I, the intention of Chapter IV is to investigate some of the implications of the internationalization of productive capital for the cycle of production and accumulation in reference to the long-run concept of waves of relative expansion and contraction of economic activity. As was also indicated, Chapters V and VI will return to an investigation of the concrete (at the level of the firm) penetration of foreign productive capital in the U.S. social formation. This will reopen the unity-rivalry debate, by analyzing how the process of DFI in U.S. manufacturing is altering the general competitive environment of capitalist accumulation, and the effects of this growing intertwining of capital on the structure of the bourgeoisie within the U.S.

**DFI IN THE U.S. AND THE INTERPENETRATION OF CAPITAL**

In this section the quantitative dimension of DFI in the U.S. will be explored. The data used in this section, covering the period from 1950 to 1985, come from various issues of the *Survey of Current Business*, a publication of the United States Commerce Department.\(^{21}\) The data are not perfect due (in part) to reliance on the firm's response to
survey questions, yet they serve as a starting point. Moreover, there are three inconsistencies in the data which should be noted at the outset.

First, the Commerce Department's definition of what constitutes DFI was changed in 1974. Before 1974, direct investment was defined as the ownership, direct or indirect, by a single foreign person (including an associated group of foreign persons) of at least 25 percent of the voting stock of an incorporated U.S. business enterprise, or an equivalent interest in an unincorporated U.S. business enterprise. Beginning with 1974, the ownership criterion was lowered to ten percent. The Commerce Department estimates that this change resulted in a (paper) DFI increase of about five percent.

Second, also in 1974, the Commerce Department changed the method for reporting the ownership of U.S. affiliates by country. The foreign parent is the first foreign person (firm), in the ownership chain of the U.S. affiliate. The person in the ownership chain that is not owned more than 50 percent by another person is deemed the ultimate beneficial owner (UBO). Before 1974, estimates for some affiliates, particularly those whose foreign parents were holding companies, were classified by country of UBO; beginning with 1974, estimates were classified consistently by country of foreign parent. As will be seen in Tables 2-4 and 2-5, the geographical effects of this change were significant.
Third, the data published by the Commerce Department are derived from three benchmark surveys or censuses, taken in 1959, 1974 and 1980. The 1959 benchmark data were used by the Commerce Department to derive estimates for 1950-58 (by extrapolating backward) and for 1960-73 (by extrapolating forward). The 1974 benchmark data were used to derive estimates for 1975-79. The 1980 benchmark data were used to derive estimates for 1980-85. This method thus produces incongruencies which are due to the changing size of the universe caused by more detailed survey techniques as well any changes in concepts or definitions introduced in a specific benchmark year, such as those discussed above.
Table 2-3, below, is supplemented by pre-1950 data supplied by D. McClain.22

Table 2-3: Direct foreign investment position in the United States at year-end, 1914-1985, selected years, billions of current dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>All Areas</th>
<th>Rate of Growth</th>
<th>% Manufacture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>1.3</td>
<td>---</td>
<td>15</td>
</tr>
<tr>
<td>1915</td>
<td>0.9</td>
<td>-7.1</td>
<td>10</td>
</tr>
<tr>
<td>1934</td>
<td>1.5</td>
<td>3.5</td>
<td>37</td>
</tr>
<tr>
<td>1937</td>
<td>1.9</td>
<td>8.2</td>
<td>39</td>
</tr>
<tr>
<td>1941</td>
<td>2.3</td>
<td>4.9</td>
<td>31</td>
</tr>
<tr>
<td>1950</td>
<td>3.4</td>
<td>4.4</td>
<td>34</td>
</tr>
<tr>
<td>1960</td>
<td>6.9</td>
<td>7.3</td>
<td>30</td>
</tr>
<tr>
<td>1965</td>
<td>8.8</td>
<td>5.0</td>
<td>40</td>
</tr>
<tr>
<td>1970</td>
<td>13.3</td>
<td>6.6</td>
<td>46</td>
</tr>
<tr>
<td>1975</td>
<td>27.7</td>
<td>15.0</td>
<td>41</td>
</tr>
<tr>
<td>1980</td>
<td>83.0</td>
<td>24.5</td>
<td>40</td>
</tr>
<tr>
<td>1985</td>
<td>182.9</td>
<td>17.1</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business
What is most evident from this table is the explosive overall growth of DFI in the U.S. since the late 1960s. The last column shows manufacturing DFI as a percent of total DFI in the U.S. This indicates that in the post-war period, manufacturing DFI was gaining an increasing share, reaching a peak in 1970 and declining thereafter.

Table 2-4 gives a country breakdown of the dollar-value of the DFI position in the U.S. for the major investing countries. Table 2-5 shows the breakdown in terms of share of total for the same countries and time period.

**Table 2-4: Direct foreign investment position in the U.S. at yearend by selected country, 1950-1985, five year intervals, millions of current dollars**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe: (total)</td>
<td>2227</td>
<td>3369</td>
<td>4707</td>
<td>6075</td>
<td>9554</td>
<td>11854</td>
<td>54688</td>
<td>120906</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1160</td>
<td>1749</td>
<td>2248</td>
<td>2852</td>
<td>4127</td>
<td>6331</td>
<td>14185</td>
<td>43766</td>
</tr>
<tr>
<td>Netherlands</td>
<td>324</td>
<td>613</td>
<td>947</td>
<td>1304</td>
<td>2151</td>
<td>5347</td>
<td>19140</td>
<td>36124</td>
</tr>
<tr>
<td>Switzerland</td>
<td>348</td>
<td>522</td>
<td>773</td>
<td>940</td>
<td>1545</td>
<td>2130</td>
<td>5070</td>
<td>11040</td>
</tr>
<tr>
<td>Germany</td>
<td>nss</td>
<td>nss</td>
<td>103</td>
<td>209</td>
<td>680</td>
<td>1400</td>
<td>7596</td>
<td>14417</td>
</tr>
<tr>
<td>France</td>
<td>nss</td>
<td>nss</td>
<td>168</td>
<td>200</td>
<td>206</td>
<td>1369</td>
<td>3731</td>
<td>6295</td>
</tr>
<tr>
<td>Canada</td>
<td>1029</td>
<td>1542</td>
<td>1934</td>
<td>2300</td>
<td>3117</td>
<td>5352</td>
<td>12162</td>
<td>16670</td>
</tr>
<tr>
<td>Japan</td>
<td>nss</td>
<td>nss</td>
<td>48</td>
<td>118</td>
<td>229</td>
<td>591</td>
<td>4723</td>
<td>19116</td>
</tr>
<tr>
<td>Latin America</td>
<td>nss</td>
<td>nss</td>
<td>nss</td>
<td>161</td>
<td>240</td>
<td>2774</td>
<td>9698</td>
<td>17050</td>
</tr>
<tr>
<td>Other</td>
<td>135</td>
<td>165</td>
<td>181</td>
<td>54</td>
<td>122</td>
<td>361</td>
<td>1795</td>
<td>12081</td>
</tr>
<tr>
<td>All Areas</td>
<td>3391</td>
<td>5076</td>
<td>6910</td>
<td>8797</td>
<td>13270</td>
<td>27662</td>
<td>83046</td>
<td>182951</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business
Table 2-5: Direct foreign investment position in the U.S. at yearend by selected country, 1950-1985, five year intervals, percent of total

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe: (total)</td>
<td>65.7</td>
<td>66.4</td>
<td>68.1</td>
<td>69.1</td>
<td>72.0</td>
<td>67.2</td>
<td>65.9</td>
<td>66.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>34.4</td>
<td>34.6</td>
<td>32.5</td>
<td>32.4</td>
<td>31.1</td>
<td>22.9</td>
<td>17.0</td>
<td>23.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>9.9</td>
<td>12.1</td>
<td>14.1</td>
<td>14.8</td>
<td>16.2</td>
<td>19.3</td>
<td>23.0</td>
<td>19.7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>10.3</td>
<td>10.3</td>
<td>11.2</td>
<td>10.7</td>
<td>11.6</td>
<td>7.7</td>
<td>6.1</td>
<td>6.0</td>
</tr>
<tr>
<td>Germany</td>
<td>nss</td>
<td>nss</td>
<td>2.4</td>
<td>2.3</td>
<td>2.2</td>
<td>4.9</td>
<td>4.5</td>
<td>3.4</td>
</tr>
<tr>
<td>France</td>
<td>nss</td>
<td>nss</td>
<td>1.5</td>
<td>2.4</td>
<td>5.1</td>
<td>5.6</td>
<td>5.1</td>
<td>7.9</td>
</tr>
<tr>
<td>Canada</td>
<td>30.3</td>
<td>30.4</td>
<td>28.0</td>
<td>27.2</td>
<td>23.5</td>
<td>19.3</td>
<td>14.6</td>
<td>9.1</td>
</tr>
<tr>
<td>Japan</td>
<td>nss</td>
<td>nss</td>
<td>1.3</td>
<td>1.3</td>
<td>1.7</td>
<td>2.1</td>
<td>5.7</td>
<td>10.4</td>
</tr>
<tr>
<td>Latin America</td>
<td>nss</td>
<td>nss</td>
<td>nss</td>
<td>1.8</td>
<td>1.9</td>
<td>10.0</td>
<td>11.6</td>
<td>9.3</td>
</tr>
<tr>
<td>Other</td>
<td>4.0</td>
<td>3.2</td>
<td>1.6</td>
<td>0.6</td>
<td>0.9</td>
<td>1.4</td>
<td>2.2</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business

The data reflect a change in the positions of the major investing countries during the post war period. Canada, the United Kingdom and Switzerland have all experienced a significant decline in share as other countries have accelerated their growth of direct investment in the U.S., particularly since 1970. While the growth of share for the Netherlands was stable from 1950-80, significant penetration by the Germans and Japanese occurred after 1975. One interesting aspect is that although the major investors experienced relatively large changes in share, the total for all of Europe has had only a slight variation, trending up until 1970 and down thereafter.
Finally it should be pointed out that the large increase for Latin America from 1970-75 is due to the definitional change that accompanied the 1974 benchmark revision. The change in classification from UBO (holding companies) to first foreign parent led to the (paper) growth of DFI in, primarily, just one country in Latin America: Netherlands Antilles. This classification change was reflected by a proportionate (paper) reduction in the reported position of the United Kingdom.
Table 2-6: Direct Foreign Investment position in the U.S. at yearend, by expanded country listing, 1980-1985, millions of dollars, percent of total and annual growth rate

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All countries</td>
<td>83046</td>
<td>---</td>
<td>102951</td>
<td>---</td>
<td>---</td>
<td>17.11</td>
</tr>
<tr>
<td>Canada</td>
<td>12162</td>
<td>14.6</td>
<td>16679</td>
<td>9.1</td>
<td>(5.5)</td>
<td>6.52</td>
</tr>
<tr>
<td>Belgium</td>
<td>1554</td>
<td>1.9</td>
<td>2280</td>
<td>1.1</td>
<td>(1.0)</td>
<td>8.04</td>
</tr>
<tr>
<td>France</td>
<td>3731</td>
<td>4.5</td>
<td>6295</td>
<td>3.4</td>
<td>(1.1)</td>
<td>11.03</td>
</tr>
<tr>
<td>Germany</td>
<td>7596</td>
<td>9.1</td>
<td>14417</td>
<td>7.9</td>
<td>(1.2)</td>
<td>13.67</td>
</tr>
<tr>
<td>Italy</td>
<td>400</td>
<td>0.5</td>
<td>1401</td>
<td>0.8</td>
<td>3</td>
<td>27.98</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>261</td>
<td>0.3</td>
<td>504</td>
<td>0.3</td>
<td>0</td>
<td>17.48</td>
</tr>
<tr>
<td>Netherlands</td>
<td>19140</td>
<td>23.0</td>
<td>36124</td>
<td>19.7</td>
<td>(3.3)</td>
<td>13.55</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>14105</td>
<td>17.0</td>
<td>43766</td>
<td>23.9</td>
<td>6.9</td>
<td>25.42</td>
</tr>
<tr>
<td>Denmark, Greece, &amp; Ireland</td>
<td>311</td>
<td>0.4</td>
<td>1129</td>
<td>0.6</td>
<td>2</td>
<td>29.42</td>
</tr>
<tr>
<td>Sweden</td>
<td>1670</td>
<td>2.0</td>
<td>2304</td>
<td>1.3</td>
<td>(.7)</td>
<td>7.34</td>
</tr>
<tr>
<td>Switzerland</td>
<td>5070</td>
<td>6.1</td>
<td>11040</td>
<td>6.0</td>
<td>(.1)</td>
<td>16.84</td>
</tr>
<tr>
<td>Other Europe</td>
<td>842</td>
<td>1.0</td>
<td>1474</td>
<td>0.8</td>
<td>(.2)</td>
<td>11.91</td>
</tr>
<tr>
<td>Japan</td>
<td>4723</td>
<td>5.7</td>
<td>19116</td>
<td>10.4</td>
<td>4.7</td>
<td>32.26</td>
</tr>
<tr>
<td>Australia, New Zealand, S. Africa</td>
<td>428</td>
<td>.5</td>
<td>2702</td>
<td>1.5</td>
<td>1.0</td>
<td>44.56</td>
</tr>
<tr>
<td>Latin America</td>
<td>6730</td>
<td>11.6</td>
<td>17050</td>
<td>9.3</td>
<td>(2.3)</td>
<td>11.99</td>
</tr>
<tr>
<td>Middle East</td>
<td>916</td>
<td>1.1</td>
<td>4961</td>
<td>2.7</td>
<td>1.6</td>
<td>40.20</td>
</tr>
<tr>
<td>Other Africa, Asia, Pacific</td>
<td>450</td>
<td>.5</td>
<td>1530</td>
<td>.8</td>
<td>.3</td>
<td>27.86</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business
Table 2-6 provides an expanded country picture for the period from 1980 to 1985. These data show that the high rate of growth of the United Kingdom and Japan led to significant share gains which were mirrored by share losses for almost all of Europe as well as Canada and Latin America. The large rates of growth of DFI in the U.S. for the countries of Australia, New Zealand, S. Africa and the Middle East were based on an originally low level of investment by these countries and hence did not lead to significant changes in their percentage share.

Tables 2-7 and 2-8 give a further breakdown of DFI in the U.S. by broad industry category for the 1950-1985 period in the form of both dollar values and percent of total investment.
Table 2-7: Direct Foreign Investment position in the U.S. at yearend by industry classification 1950-1985, five year intervals, millions of dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>All Areas</th>
<th>Petro.</th>
<th>Mfg.</th>
<th>Wholesale Trade</th>
<th>Banking/Insurance/Finance/Real Estate</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>3391</td>
<td>405</td>
<td>1130</td>
<td>---</td>
<td>1065</td>
<td>784</td>
</tr>
<tr>
<td>1955</td>
<td>5076</td>
<td>853</td>
<td>1759</td>
<td>---</td>
<td>1499</td>
<td>965</td>
</tr>
<tr>
<td>1960</td>
<td>6910</td>
<td>1238</td>
<td>2611</td>
<td>---</td>
<td>1810</td>
<td>1251</td>
</tr>
<tr>
<td>1965</td>
<td>8797</td>
<td>1710</td>
<td>3474</td>
<td>---</td>
<td>2169</td>
<td>1441</td>
</tr>
<tr>
<td>1970</td>
<td>12270</td>
<td>2992</td>
<td>6140</td>
<td>994</td>
<td>2256</td>
<td>880</td>
</tr>
<tr>
<td>1975</td>
<td>27662</td>
<td>6213</td>
<td>11306</td>
<td>4044</td>
<td>3929</td>
<td>1290</td>
</tr>
<tr>
<td>1980</td>
<td>83046</td>
<td>12200</td>
<td>32993</td>
<td>11560</td>
<td>19147</td>
<td>8146</td>
</tr>
<tr>
<td>1985</td>
<td>102951</td>
<td>28123</td>
<td>60798</td>
<td>27514</td>
<td>65837</td>
<td>20679</td>
</tr>
</tbody>
</table>

a. Prior to 1970, Wholesale Trade is included with Other DFI.

Source: Survey of Current Business

Table 2-8: Direct Foreign Investment position in the U.S. at yearend by industry classification 1950-1985, five year intervals, percent of total

<table>
<thead>
<tr>
<th>Year</th>
<th>Petro.</th>
<th>Mfg.</th>
<th>Wholesale Trade</th>
<th>Banking/Insurance/Finance/Real Estate</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>11.9</td>
<td>33.6</td>
<td>---</td>
<td>31.4</td>
<td>23.1</td>
</tr>
<tr>
<td>1955</td>
<td>16.0</td>
<td>34.7</td>
<td>---</td>
<td>29.5</td>
<td>19.0</td>
</tr>
<tr>
<td>1960</td>
<td>17.9</td>
<td>37.0</td>
<td>---</td>
<td>26.2</td>
<td>10.1</td>
</tr>
<tr>
<td>1965</td>
<td>19.4</td>
<td>39.5</td>
<td>---</td>
<td>24.7</td>
<td>16.4</td>
</tr>
<tr>
<td>1970</td>
<td>22.5</td>
<td>46.3</td>
<td>7.5</td>
<td>17.0</td>
<td>6.7</td>
</tr>
<tr>
<td>1975</td>
<td>22.5</td>
<td>41.2</td>
<td>17.5</td>
<td>14.2</td>
<td>4.6</td>
</tr>
<tr>
<td>1980</td>
<td>14.7</td>
<td>39.7</td>
<td>13.9</td>
<td>21.9</td>
<td>9.8</td>
</tr>
<tr>
<td>1985</td>
<td>15.4</td>
<td>33.2</td>
<td>15.0</td>
<td>25.1</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business

77
These tables show that during the post-war period, petroleum and manufacturing increased their share of the total penetration until the early 1970s and declined thereafter. Trade, Financial and other industries reached a trough in their shares in the early 1970s and have increased their relative penetration since then. Table 2-9 gives a more detailed breakdown for the period from 1980-1985.
Table 2-9: Direct foreign investment position in the U.S. at year-end by expanded industry listing, 1980-1985, millions of current dollars, percent of total and annual rate of growth

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Industries</td>
<td>83046</td>
<td>---</td>
<td>102951</td>
<td>---</td>
<td>17.11</td>
</tr>
<tr>
<td>Mining</td>
<td>1320</td>
<td>1.6</td>
<td>4070</td>
<td>2.2</td>
<td>25.03</td>
</tr>
<tr>
<td>Petroleum</td>
<td>12200</td>
<td>14.7</td>
<td>20123</td>
<td>15.4</td>
<td>10.19</td>
</tr>
<tr>
<td>Total Manufacturing</td>
<td>32993</td>
<td>39.7</td>
<td>60790</td>
<td>33.2</td>
<td>13.00</td>
</tr>
<tr>
<td>Food</td>
<td>4869</td>
<td>5.9</td>
<td>11172</td>
<td>6.1</td>
<td>18.07</td>
</tr>
<tr>
<td>Chemicals</td>
<td>10439</td>
<td>12.6</td>
<td>19502</td>
<td>10.6</td>
<td>13.31</td>
</tr>
<tr>
<td>Metals</td>
<td>3576</td>
<td>4.3</td>
<td>7462</td>
<td>4.1</td>
<td>15.85</td>
</tr>
<tr>
<td>Machinery</td>
<td>6988</td>
<td>8.4</td>
<td>9447</td>
<td>5.2</td>
<td>6.22</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>7121</td>
<td>8.5</td>
<td>13215</td>
<td>7.2</td>
<td>13.16</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>11560</td>
<td>13.9</td>
<td>27514</td>
<td>15.0</td>
<td>18.94</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>3650</td>
<td>4.4</td>
<td>6698</td>
<td>3.7</td>
<td>12.91</td>
</tr>
<tr>
<td>Banking</td>
<td>4617</td>
<td>5.6</td>
<td>11503</td>
<td>6.3</td>
<td>20.83</td>
</tr>
<tr>
<td>Finance</td>
<td>1319</td>
<td>1.6</td>
<td>4708</td>
<td>2.6</td>
<td>20.98</td>
</tr>
<tr>
<td>Insurance</td>
<td>6091</td>
<td>7.3</td>
<td>11069</td>
<td>6.1</td>
<td>12.69</td>
</tr>
<tr>
<td>Real Estate</td>
<td>6120</td>
<td>7.4</td>
<td>18557</td>
<td>10.1</td>
<td>24.84</td>
</tr>
<tr>
<td>Other Industries</td>
<td>3176</td>
<td>3.8</td>
<td>9912</td>
<td>5.4</td>
<td>25.56</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business
The penetration index calculated in Table 2-10 shows the ratio of European DFI in the U.S. versus U.S. DFI in Europe. A value greater than one signifies relatively greater European penetration of the U.S., while a value of less than one shows larger relative U.S. penetration. Immediately following the Second World War, European firms had a greater presence in the U.S. than U.S. firms had in Europe when considering total DFI. This position of dominance declined steadily in the period after 1950, reaching a trough (italicized) in the early 1970s as U.S. corporations expanded direct investment more rapidly than did their European counterparts. This trend was reversed after 1975 and, in the span of one decade, Europe regained its overall penetration advantage.

Table 2-10: European-United States DFI Interpenetration, 1950-85

<table>
<thead>
<tr>
<th>Year</th>
<th>US DFI in Europe</th>
<th>Europe DFI in US</th>
<th>Penetration Index (Column 3 Divided by Column 2)</th>
<th>Manufacturing Penetration Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>1733</td>
<td>2227</td>
<td>1.205</td>
<td>.297</td>
</tr>
<tr>
<td>1955</td>
<td>3004</td>
<td>3369</td>
<td>1.122</td>
<td>.277</td>
</tr>
<tr>
<td>1960</td>
<td>6681</td>
<td>4707</td>
<td>.705</td>
<td>.236</td>
</tr>
<tr>
<td>1965</td>
<td>13985</td>
<td>6076</td>
<td>.434</td>
<td>.180</td>
</tr>
<tr>
<td>1970</td>
<td>25255</td>
<td>9554</td>
<td>.378</td>
<td>.191</td>
</tr>
<tr>
<td>1975</td>
<td>49305</td>
<td>10864</td>
<td>.377</td>
<td>.204</td>
</tr>
<tr>
<td>1980</td>
<td>96539</td>
<td>54688</td>
<td>.566</td>
<td>.370</td>
</tr>
<tr>
<td>1985</td>
<td>186762</td>
<td>120986</td>
<td>1.132</td>
<td>.636</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business
The last column in Table 2-10 shows the relative interpenetration of European and United States manufacturing. Here it is indicated that European direct investment in U.S. manufacturing lagged behind U.S. penetration of Europe throughout the post-war period, the index reaching a trough in the late 1960s and trending up since then.

Table 2-11 presents the penetration indices for the largest foreign investing countries (excluding Netherland Antilles). The data by country reflect the same pattern as Table 2-10. All countries exhibit a declining trend in the early post-war period (with six countries reaching a trough in 1970, two in 1975 and one in 1965), followed by a growing penetration in the 1970s and early 1980s.

Table 2-11: Direct foreign investment penetration index by selected country, 1950-1985

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>1.379</td>
<td>1.227</td>
<td>.696</td>
<td>.557</td>
<td>.516</td>
<td>.455</td>
<td>.493</td>
<td>1.209</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.976</td>
<td>3.784</td>
<td>3.346</td>
<td>1.901</td>
<td>1.426</td>
<td>1.608</td>
<td>2.352</td>
<td>5.114</td>
</tr>
<tr>
<td>Switzerland</td>
<td>13.920</td>
<td>12.732</td>
<td>3.043</td>
<td>.839</td>
<td>.669</td>
<td>.415</td>
<td>.450</td>
<td>.680</td>
</tr>
<tr>
<td>Germany</td>
<td>---</td>
<td>---</td>
<td>.102</td>
<td>.086</td>
<td>.148</td>
<td>.161</td>
<td>.493</td>
<td>.061</td>
</tr>
<tr>
<td>France</td>
<td>---</td>
<td>---</td>
<td>.227</td>
<td>.124</td>
<td>.110</td>
<td>.230</td>
<td>.410</td>
<td>.803</td>
</tr>
<tr>
<td>Sweden</td>
<td>---</td>
<td>---</td>
<td>1.431</td>
<td>.683</td>
<td>.335</td>
<td>.493</td>
<td>1.131</td>
<td>2.566</td>
</tr>
<tr>
<td>Belgium &amp; Luxembourg</td>
<td>---</td>
<td>---</td>
<td>.600</td>
<td>.294</td>
<td>.221</td>
<td>.239</td>
<td>.296</td>
<td>.516</td>
</tr>
<tr>
<td>Canada</td>
<td>.288</td>
<td>.237</td>
<td>.173</td>
<td>.156</td>
<td>.140</td>
<td>.172</td>
<td>.270</td>
<td>.359</td>
</tr>
<tr>
<td>Japan</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>.239</td>
<td>.167</td>
<td>.031</td>
<td>1.550</td>
<td>1.875</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business
CONCLUSION

The data presented in this chapter can be summarized in the following four general categories:

(1) **Overall Trend**: Total DFI in the U.S. during the post-war period can be divided in two periods. From 1950 to 1970 DFI grew relatively slowly, averaging 7.06 percent annually. Since then, the pace of DFI in the U.S. has quickened considerably, growing at an annual rate of 19.06 percent.

(2) **Regional Distribution**: DFI in the U.S. originates primarily from the other developed capitalist countries. Within the developed countries, major gains were made during the period by the Netherlands, Germany and Japan at the expense, primarily, of the United Kingdom, Canada and Switzerland. During the early 1980s the United Kingdom appears to have reversed its downward trend. If, in fact, a large part of Latin American DFI is by subsidiaries of British holding companies, then the United Kingdom's DFI share in 1985 is not significantly different from what it was in 1950. Despite the shifting of the relative positions of some countries, the stability of the overall European share (in the range of 65 to 70 percent) indicates that DFI in the U.S. is largely a European affair.

(3) **Sectoral Distribution**: The separation of the post-war period into two time frames, 1950-1970 and 1970-1985, is supported in the analysis of broad industrial
sectors. From 1950 to 1970 manufacturing DFI gained in share of total, while trade and financial DFI diminished in share. In the period from 1970 to 1985, the trends have been reversed, with banking and other financial services experiencing particularly rapid growth in the early 1980s.

(4) **DFI Interpenetration:** Using the relative penetration of DFI as an indicator of U.S. economic and hegemonic strength, the data clearly suggest that U.S. imperial power versus its major rivals has declined since 1970.

Three of the most frequently used indices of a country's international economic strength are its trade balance, the valuation of its currency on the world market, and its foreign investment position (or balance of payments). The declining trade balance of the U.S. since the early seventies has been well-documented, while the decline in the value of the dollar has been particularly dramatic in recent years (currently hovering at post-war lows against most other major currencies). This chapter has shown that in the area of direct investment, U.S. imperialist dominance is also being eroded, a development forecast by Ernest Mandel in the early 1970s:

(t)he law of uneven development has continued to prevail, shifting the international relationship of forces in inter-imperialist competition. American imperialism....slowly losing its productivity lead over its European and Japanese rivals....is currently attempting to reverse this secular development by stepping up capital exports to its imperialist
rivals and increasing the international centralization of capital by acquiring substantial capital ownership within the economies of its competitors. But the long-run faster accumulation of capital in Western Europe and Japan inevitably means—in conditions of accelerated dollar devaluation—greater opportunities for West European and Japanese capital exports to the USA than for American capital exports in the opposite direction. American imperialism has tried to rescue itself from its dilemmas by hitherto successful pressure on its rivals to revalue their currencies, but this in the end can only lead to a further acceleration of European and Japanese capital exports as compared with American.23

Fine and Harris, who are critical of the misuse of indices (trade balance, ownership of foreign capital, balance of payments, international currency value, etc.) in attempting to determine a country's international economic power, point out that

Significantly, all these indices, whatever their economic merits, remain aloof from the role of political power and working-class struggle.24

This thesis recognizes the limits of such aggregated indices, which ignore political power and working-class struggle as well as the concrete conditions of intercapitalist competition within and between countries. While it is beyond the scope of this paper to integrate the state and class struggle into the analysis, the concrete conditions of DFI on international capitalist competition will be returned to in Chapter V through an analysis of data from a sample of 200 firms with sizable investment positions in the U.S. Before proceeding to the firm level data,
Chapter III will review the literature on DFI in the U.S., while Chapter IV will further examine the internationalization of productive capital in terms of the potential relationship between direct investment flows and long-run fluctuations (waves) in economic growth.
CHAPTER NOTES


5. Ibid.


7. A detailed discussion of the trade relations between the United States and its major trading partners is not possible within the current framework.

8. V. Lenin, "Imperialism, the Highest Stage of Capitalism", p. 239.


12. Ibid., pp. 135-36.


19. Ibid., pp. 150-51.

20. Ibid., pp. 152-53.


CHAPTER III

REVIEW OF THE LITERATURE: DIRECT FOREIGN INVESTMENT IN UNITED STATES MANUFACTURING

INTRODUCTION

Direct foreign investment (DFI) has not been an historically predominant feature of capitalism. From 1864 to 1913, total international investment grew from $4 billion to $44 billion. As of 1913, 90 percent of this international investment was portfolio capital flows (purchases of securities and bonds), with the United Kingdom supplying 75 percent of the total. During the 1920s the United States surpassed the United Kingdom as the world's largest international lender while Europe became an international debtor. Yet, while the positions of the major nations underwent a significant change, the volume of international investment remained fairly stable during that decade. The total amount of international debt in 1929 was about the same as it was in 1913. During the 1920s, DFI grew in importance, accounting for 25 percent of all foreign investment. In the 1930s, DFI's share of total foreign investment increased further. This, however, was due to the collapse of the international financial capital market as a result of the depression rather than a significant expansion of DFI itself. As observed in Chapter II, the major
expansion of DFI began after World War II. United States' corporations dominated this growth in the 1950s and 1960s, while they were increasingly joined by non-U.S. corporations in the 1970s and early 1980s. As a significant movement, then, DFI is primarily a post-World War II development.

The growth of U.S. multinational corporations (MNCs) and their progressive penetration into Europe in the early post-war period led to the publication of *The American Challenge* in 1967. In this book, Frenchman J.J. Servan-Schreiber argued that U.S. direct investment penetration in Europe was threatening the survival of (weaker) European firms in an increasing number of industries. To overcome this threat and prevent Europe from becoming a colony of the United States, Servan-Schreiber proclaimed that the appropriate remedy required positive policy action rather than negative responses. Instead of placing restrictions on inward DFI or attempting to disenclave the U.S. corporations, the governments in Europe should promote mergers and consolidations of European firms in order to help European capital attain a size that would make it internationally competitive as well as provide subsidies to those corporations to aid research and development in advanced technologies.

As noted in Chapter II, Servan-Schreiber's book was outdated by the time it was published. Positive action (primarily the European merger movement) in the 1950s and
the early 1960s had produced corporations that were increasingly using DFI to penetrate the U.S. market by the end of the latter decade. The growing DFI penetration of the American economy at that time to the beginning of extensive research into what has been called the non-American challenge (i.e., attempts to explain the growth of European, Canadian and Japanese MNCs).

One of the first economists to emphasize this development was John Leontiades. He believed that the merger of British Petroleum and Standard Oil of Ohio in 1969, giving British Petroleum control of Sohio, marked a significant turning point in the historical role of direct investment in the capitalist world economy.

It may be a portent of things to come that the largest overseas investment commitment of 1969 was made not by a U.S. firm abroad but by a British company investing in the United States....The presence in increasing numbers of astute and affluent European firms in the U.S. market is a new competitive element....The real counter to the U.S. investment initiative may well be an increase of European direct investment abroad, particularly in the United States.

Corresponding to the continued growth of DFI in the United States in the 1970s and early 1980s, there has been a blossoming of the literature on this subject. This chapter shall present a review of the major studies of DFI in the United States during this period. It will focus on the method of analysis employed, the variables studied and the major conclusions reached by the various authors. In order

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to provide a framework to interpret the results of these studies, first there will be a review of the applicability of traditional (neo-classical) trade and investment theory to the concept of direct investment, followed by a short coverage of the general literature on DFI theory after which the specific literature on DFI in the United States will be presented.

DFI AND TRADITIONAL INTERNATIONAL ECONOMIC THEORY

Neoclassical international economic theory has not been of great assistance in explaining the growth of DFI and the MNC (U.S. or otherwise). Traditional theory divides its examination of international economic activity into two areas of specialization: trade relations between nation-states, and finance and investment relations, again between nation-states. Of course, the theoretical framework which has served as the foundation for both areas is one of perfectly competitive markets, free commodity trade based on national factor endowments, internationally mobile financial capital and stable world welfare growth.

Within this framework trade theory focused on explaining commodity trade relations (imports and exports) between countries. Thus, the development of this perspective concentrated the analysis on such questions as: the factors that determine the observed trade patterns; the conditions that establish equilibrium in trade relations; the effect of international trade on a country's terms of
trade with other countries; the acquisition of the welfare gains from trade; and the impact of trade policy (tariffs, subsidies, quantitative restrictions, common markets, preferential trading partners, etc.) on international trade relations.

As Franklin Root has noted, it is not surprising that traditional trade theory has been weakened by the growth of international production.

By concentrating on trade only at the national level, economists until recently have left to marketing and management scholars the task of explaining the behavior of the international firm. As long as international trade was largely carried on by intermediaries while producers remained at home, this neglect was not serious. But today international firms have burst the confines of the individual nation-state to carry on their operations throughout the world. It has become meaningful to talk about the comparative advantages of such firms as they bring to bear on world markets a mix of productive factors, technological innovation, and entrepreneurial drive. It is no longer possible to understand the trade of the industrial countries (notably the United States) unless full account is taken of the behavior of international firms. The theory of international trade must become part of a broader theory of international economic relations if we are to understand the forces now shaping the world economy.

Meanwhile, international finance and investment theory were primarily concerned with the monetary aspects of international trade and portfolio capital movements between separate nation-states. From this perspective, neoclassical theory sought to: identify the factors that determine (influence) the international exchange rate of a country's
currency; expose the forces that cause disequilibrium in a country's balance-of-payments; explain the national processes of adjustment that are likely to follow balance-of-payments disequilibrium; and illustrate the need to promote international liquidity in order to grease the wheels of commerce. Long-term capital movements between nations were explained through the use of a model of portfolio investment. The dominant explanatory variable in the movement was hypothesized to be the existence of interest rate differences among countries.6

THEORIES OF DFI IN GENERAL

Since traditional international economic theory proved incapable of providing any reasonable explanation of the growth of DFI and the progressive spread of the MNC, the 1960s and 1970s saw new theories advanced to explain these developments. As F. Root has pointed out,

....the contemporary scope of direct foreign investment and multinational enterprise is mainly owing to developments of the last quarter century. Although economists are now busily engaged in theory building, as yet, no single dominant theory of direct foreign investment has emerged to match the Heckscher-Ohlin model of international trade. Instead we have several theories, but....for the most part, they are complementary rather than rival explanations of direct foreign investment.7

Market Imperfection Theories Of DFI

In contradiction to neoclassical international trade and investment theory, with its emphasis on perfect competition and world welfare gains derived from free
mobility (trade) of commodities and financial capital, mainstream theories of DFI focus on the existence of market imperfections and the firm's ability to exploit these imperfections across national boundaries. The market imperfections that confront the firm in its international operations derive from either non-firm specific (industry or country variables) or firm specific factors (knowledge, technology, organization, economies of scale). While many of the studies conducted in this manner combine both non-firm and firm specific factors in the analysis of DFI, this section presents a brief breakdown of this literature based on a division between macroeconomic (non-firm specific) and microeconomic (firm specific) variables.

**Macroeconomic factors.**

Many studies have emphasized the role of industry and country factors in explaining the pattern of DFI. One frequently expressed view is that DFI occurs in response to government intervention into market transactions (e.g., tariff and non-tariff barriers, income and property taxes, regulations, etc.). Since different governments are responsible for the policies of different nations, this view holds that differences in government policy between nations create the incentive for the firm to undertake DFI to service foreign markets. It is hypothesized that without such differences in government policies internationally, the firm would choose to service the foreign market through
exports. This is an important aspect of all market imperfection theories that should be emphasized. All of these theories (both non-firm and firm specific) directly, or implicitly, assume that in the absence of firm, industry or country market imperfections, the firm would prefer to use exports as the instrument to service foreign markets due to the (assumed) inherent disadvantages (cultural, language, coordination, etc.) of operating a production facility on foreign soil. This, of course, exposes the neoclassical roots of this school, since, in the absence of market imperfections, trade relations would become dominant.

Another macro-view holds that DFI occurs as a response to imperfections in international capital markets. Firms from a country whose currency commands a risk-adjusted premium (a high rate of exchange with other currencies on the international market) will have an advantage in investing abroad. This view claims that the country pattern of direct foreign investment over time reflects changes in currency premiums.8

A third view emphasizes the desire of firms to diversify their operations. Thus, it is argued that DFI occurs as a response of the firm (often in terms of the shareholder or individual investor) that is motivated by a desire to reduce the risk to the stability of its earnings over time. If economic fluctuations (business cycles) are less than perfectly correlated between countries, then firms
can reduce the risk to earnings stability through a process of international diversification. This diversification could occur through exports, portfolio investment or direct investment. It is contended, however, that direct investment has distinct advantages over the other two methods of international diversification because it places the firm in a position to take advantage of imperfectly correlated disturbances between separate national factor and product markets. Exports fail to do so, while portfolio investment operates exclusively in the international capital market which tends to be more closely correlated between countries due to the high degree of mobility of financial capital internationally in response to interest rate differentials.  

Another view that is frequently cited by the news media, holds that DFI can be best understood as a behavioral process under conditions of imperfect knowledge and uncertainty. In this context, the timing of DFI depends on chance stimuli, both internal and external to the firm, with the frequency and intensity of the stimuli determining the propensity of the firm to undertake the foreign investment. From such a perspective the motivation of the managers of the firms are the key aspect in explaining DFI. The managers are often seen as possessing a desire to learn, or promote their own prestige (with stockholders), or build their own empire.
Microeconomic factors.

Other studies have emphasized specific monopoly advantages possessed by the firm in the product market, in the factor market (technology, skills, organization, etc.), or due to internal or external economies of scale. The major early (1960s) developments in this theory can be attributed to Stephen Hymer, Charles Kindleberger and Richard Caves.11

According to these authors, DFI is undertaken by firms which possess an advantage that is internationally transferable through such an investment. Since the investing firm confronts a natural (assumed) disadvantage vis-a-vis a local firm, it will only engage in direct investment if that will produce earnings that are greater than the export option. In addition, such earnings must be greater than those of local firms, since the investing firm will be operating at higher costs due to its natural disadvantage. In order to overcome this disadvantage, a firm undertaking DFI must possess some countervailing superiority which can be transferred abroad and not be duplicated by local firms.

This theory is also known as the "industrial organization" or "monopolistic competition" theory of DFI, since most firms that possess internationally transferable advantages are large in size (sales, assets, net worth, etc.) and operate in relatively mature oligopolistic
(concentrated) industries. One variant sees DFI as an instrument in the battle for world market share, where oligopolistic competitors attempt to match rivals move for move, producing a bunching of DFI by industry. Thus, DFI to these analysts is seen as essentially defensive in nature. Direct investment is undertaken in an attempt to maintain market share previously established through export penetration.12

One of the commonly accepted rationales for explaining the timing of DFI is the concept of the product life cycle, first introduced by Raymond Vernon in 1966.13 This approach emphasizes technological innovation as a countervailing advantage that is stimulated by some threat of loss or promise of gain in the domestic market. Vernon hypothesized that once a new innovation occurs, product development goes through three stages. In the new product stage, production is undertaken in the domestic market of the innovator and foreign markets are serviced through exports. In stage two, the export of the now mature product comes under increasing competitive pressures in foreign markets from local producers. This leads to the decision to undertake DFI if the firm calculates that such a step is preferable to either continued exports or licensing as an instrument for maintaining the exploitation of its (dwindling) monopoly advantage.14 The third stage occurs when the product has become standardized and growing competition from other

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producers leads to DFI in low wage countries to service (through exports) both the home market and other developed sales markets.\textsuperscript{15}

As D. McClain has remarked, the firm specific market imperfections theory of direct investment became "the" accepted theory during the 1970s because of its predictive power.

Direct investment tended not to occur in those industries best approximated by the perfectly competitive model for goods and factors. Multinationals did not tend to license their advantages, or enter into joint ventures with local partners. And cross-investments did take place in the same industry, in part because firms possessed differential advantages, but also because of the dynamics of oligopolistic behavior.\textsuperscript{16}

Throughout the 1970s and 1980s research into the market imperfections hypotheses proliferated.\textsuperscript{17} The culmination of this theoretical thrust may be best represented in John Dunning's, \textit{International Production and the Multinational Enterprise},\textsuperscript{18} which presents an "eclectic" theory of DFI that attempts to synthesize traditional trade and location theory (macro variables) with the concepts of monopolistic advantage and the ability of the firm to internalize the externalities produced in imperfect market conditions (micro variables).\textsuperscript{19} Yet, while this theoretical perspective has, in a sense, been filled out by these refinements, the basic theme has remained essentially unchanged. As D. McClain has pointed out, the story remains unaltered,

\(...\) direct investment behavior is a response
to market imperfections. The spatial dispersion of economic activity introduces an imperfection into the frictionless perfectly competitive model, since operating in different locations imposes different costs on a firm; costs of coordination and communication will be higher at a distance. Other frictions are introduced by governmental policies. A firm must possess "ownership endowments sufficient to overcome the costs of producing in a foreign environment". And the market for the sale of these endowments must be imperfect if it is to the firm's advantage to "internalize" them....

Whether or not the words "internalization hypothesis", "eclectic theory" and "appropriability theory" will resonate more and longer than explanations of direct investment behavior labeled "market imperfections", "monopolistic competition" and "industrial organization", only time will tell... However, in my opinion, the recognized essence of the direct investment behavior all these words describe is unchanged from its exposition in Hymer's thesis.

F. Root claims that the principal contribution of the "eclectic" theory is an explanation of the distribution of international production by country.

Both firm and country-specific endowments (natural resources, labor, energy, geographical location, markets, government policies, and so on) are necessary for foreign involvement. When it is most profitable for an MNC to internalize its monopolistic advantage in a foreign country, then the MNC favors investment in that country. Otherwise, it exploits the country market through export or licensing.

Beyond the market imperfections explanation of DFI, the only major theory advanced by mainstream economists relates specifically to Japanese DFI. This view, developed by Kiyoahi Kojima and Terutomo Ozawa, sees a basic distinction between Japanese and United States DFI.
investment is trade-oriented (promotes trade based on comparative advantage between nations), while U.S. DFI is anti-trade oriented (generates trade patterns that violate comparative advantage). United States DFI originates in oligopolistic industries where it replaces exports, while Japanese DFI occurs in competitive industries where, due to domestic resource constraints on growth, DFI promotes trade and world welfare. A further discussion of this approach and its relation to DFI in the U.S. is presented later in this chapter.

Absorption of Surplus Theory.
As seen in Chapter II, one stream of radical thought characterizes DFI as an effort by the monopolistic firm to vent (absorb) its investable surplus outside the domestic economy due to inherent and perpetual stagnation. DFI is considered by adherents of this view as "the imperative of monopolistic business strategy". Beyond this general assertion and the relegation of DFI between developed countries to a secondary status (unimportant aspect of imperialism), the generalized monopoly model offers few insights into the causes of DFI in general (let alone the growing interpenetration of capital between developed countries). Such a perspective, which abandons Marxian value theory as well as the laws of increasing concentration of capital and a tendency of the rate of profit to fall, dismisses the significance of the growing interpenetration

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of productive capital because it is incapable of explaining this development. According to this account, interpenetration represents the simultaneous attempts of firms from different countries to vent their surplus in another country. Even if one were to accept this untenable position (which even Sweezy finds impossible to completely swallow - see Chapter II), it requires an explanation of how the contradictions of this movement are resolved. No such attempt has been made by the monopoly capital theorists because it would require the resurrection of Marx's dialetical view of competition and hence the demise of the general monopoly framework upon which all of their work is built.

**The Internationalization of Capital.**

Before Stephen Hymer's untimely death in 1974, his theoretical interests turned toward a Marxian analysis of the MNC. Based on his interpretation of Marx, Hymer felt that capitalist production was characterized by three cardinal facts: a. that the concentration of capital leads to increasing socialization of capital; b. that the increasing organization of labor produces social labor, and this evolves, through a process of competition into the progressive division of labor and the uniting of the labor to the natural sciences; c. that the expansion of capital and growth of the productive forces leads to the creation and progressive transformation of the world economy.
In Hymer's view, increasing concentration ("The Law of Increasing Firm Size") leads to stages in the development of the organizational structure of production and accumulation. He characterized the five steps in the transition of production as the workshop, the factory, the national corporation, the multidivisional corporation, and the multinational corporation. The evolution from step to step is brought about by the process of capital accumulation itself as growing material production, including technological change, leads to the need for a restructuring of the organization of production. The transition to a new stage brings with it changes in the division of labor (both within the firm and the world economy), changes in market relations, changes in the forms of competition between individual capitals, and changes in the hierarchical structure of organization and control. Each stage in the evolution involves a process of both differentiation (a proliferation of organizational layers) and integration (new forms of hierarchical - top down - control).

Agreeing with Chandler and Redlich, Hymer argued that the organizational structure of the MNC can be analyzed at three levels of tasks: (I) policy; (II) decision-making; and (III) administration. Level III activities involve the day-to-day operations of the line officers. Level II administrators manage and coordinate the activities of Level III managers. Level I represents top management whose
function is one of goal-determination, planning and
direction. Hymer claims that applying this scheme to the
evolving multinationalization of production,

....suggests a correspondence principle
relating centralization of control within the
corporation to centralization of control
within the international economy....
Level III activities would spread themselves
over the globe according to the pull of
manpower, markets and raw materials....
Level II activities, because of their need for
white-collar workers, communication systems,
and information, tend to concentrate in large
cities....
Level I activities, the general offices, tend
to be even more concentrated than Level II
activities, for they must be located close to
the capital market, the media, and the
government.27

In his work with Robert Rowthorn, Hymer undertook an
empirical analysis of MNC's in a direct response to
Servan-Schreiber's warning of the "American challenge".28
Their aim was to analyze the "dialectics of the MNC", the
thrusts and counterthrusts (engaging-disengaging) of MNC's
competing for world markets. Accordingly, DFI was seen as
one of the chief instruments used by the MNC's to defend and
expand world market share.

Hymer and Rowthorn concluded that the "American
challenge" was a myth. U.S. corporations were not
outperforming (based on growth rates) their European rivals.
European corporations grew faster than their U.S. (parent)
counterparts from 1957 to 1967. Europeans, however, felt
threatened (myopically) by the higher rate of growth of U.S.
subsidiaries operating in Europe. The U.S. corporations,
meanwhile, responding to the perceived threat to their world market position from the Common Market and Japanese, expanded DFI in Europe during the 1950s and 1960s in order to take advantage of rapid growth in those markets for American-type goods, to secure cheap labor and to address the fact that they saw their European competitors growing faster (getting a larger share of the foreign market) than they were.

American firms were thus presented with an opportunity and a challenge. Growth of foreign markets and labor supply made it attractive to invest abroad; growth of European and Japanese firms made it necessary. American firms did not invest substantially in continental Europe and Japan in the late forties and early fifties when they had the most political influence. Only after the development of the Common Market did they make their greatest effort, just as it was serious competition from Japanese firms that spurred the great drive to get into Japan. It is more competitive pressure than foresight which guides capitalists to expand. 29

Hymer and Rowthorn proceeded to point out that the U.S. direct investment in Europe produced a countermeasure in the form of a merger movement which resulted in qualitative and quantitative changes in the organizational structure of European capital. These changes included the development of new administrative structures (exhibiting a greater resemblance to U.S. firms) and an increase in corporate size, creating greater financial strength and allowing the consolidation of overseas operations. The increased foreign market share justified the European decision to undertake
DFI, while their growing financial strength increasingly made it possible.

The authors predicted that the European merger movement would, at first, lead to heavy European DFI outside the United States where it was easier (less costly) to enter and experience could be gained. Once the organizational structures were created and operational and financial strength was sufficient, this would be followed by substantial investment in the U.S. U.S. corporations, on the other hand, finding it easier to counterattack abroad than to resist incursions into their own market, were likely to respond by assigning an even greater role to DFI, including an increasing scramble to penetrate and capture markets in the less-developed and communist countries.

We can therefore expect a period of intensified multinationalization (almost amounting to capital flight) over the coming decade (1970s) as both U.S. corporations and non-U.S. corporations try to establish world-wide market positions and protect themselves from each other.30

While Hymer never utilized the concept of the internationalization of the circuits of capital in his analysis, he made it clear that he possessed a dialectical view of competition and concentration similar to that of Marx.

If present trends continue, multinationalization is likely to increase greatly in the next decade as giants from both sides of the Atlantic (though still mainly from the U.S.) strive to penetrate each other's markets and to establish bases in
underdeveloped countries, where there are few indigenous concentrations of capital sufficiently large to operate on a world scale. This rivalry may be intense at first but will probably abate through time and turn into collusion as firms approach some kind of oligopolistic equilibrium. A new structure of international industrial organization and a new international division of labor will have been born.1

Utilizing Hymer's views as a point of departure, John Roemer developed a four-stage theory of competition that attempted to explain DFI by emphasizing the competitive aspects of capital's international movement as opposed to focusing on an individual firm's ability to exploit its monopoly advantages.2 After analyzing trade patterns between the United States and Japan, Roemer presented a model of the stages of international competition that tried to integrate trade and foreign investment flows within a competitive world capitalist system. This model hypothesized that the country pattern of international capital flows could be explained through an analysis that stresses the evolutionary nature of capitalist competitive relations. According to Roemer, calculations which attempt to bring into perspective a country's international competitive position as trader and investor,

...need to be put into a descriptive framework of international interaction, and then into a theory of international hegemony.3

In this view, each nation strives for hegemony of the world capitalist system because, if achieved, it bestows
political power to the hegemonic country that surpasses its economic power.

It is hypothesized that the country in the leading economic position has, in some sense, political power greater than its economic strength seems to warrant. For the U.S. since World War II this power has been evidenced primarily in two ways: (1) the internationalization of the dollar as currency and (2) the reliance of all capitalist countries on the U.S. for military protection from the "Communist threat." The U.S. has been allowed to run a deficit in its international payments in order to (1) create exchange reserves for other countries (for which a deficit was, on the whole, tolerated in the 1950s), and (2) allow for U.S. military expenditures and foreign aid (for which a deficit was tolerated in the 1960s). The country in the leading economic position, then, had the right--unique among all countries--to operate from a position of debt. In this sense its political power is "greater" than its economic power. And the tolerance of its debt position serves to increase its political and economic power through the addition of military strength it makes possible, as well as the right to invest abroad on credit. But because of the debt position, international hegemony is very tenuous, and the turning points in economic strength rather than the absolute magnitudes become critical. If other countries have become competitive, and the leader is operating from a debt position, then the turning point provides an opportunity to foreclose. (Obviously, the process is not this mechanical, but--simply stated--when the leading power's international economic strength begins to wane, the rationale for others tolerating its debt position loses some of its force.)

Roemer's four stages used to describe the development of international competition between developed capitalist countries in the post-World War II period follow:
Stage I: The country's share in the world exports of manufactures starts to rise.
Stage II: The rise in the country's trade share slows (or its trade share becomes stable), and its share in world direct foreign investment in manufactures starts to rise.
Stage III: The country's trade share in manufactures starts to fall, but its investment share continues to rise.
Stage IV: The country's trade share continues to fall and its share in manufacturing foreign investment starts to fall also.

Roemer argued that in stages two and three the instrumental form of international competition changes progressively from trade penetration to direct investment penetration as a country attempts to maintain or improve its place in the hegemonic hierarchy.

...the appropriate instruments of economic competition to be considered in determining international position vary over time. Trade and foreign direct investment appear to have been the most important (in the private sector) for the post-World War II period, but in the past this was not the case....It is suggested that the forms of competition change as a consequence of increased competition. The evolution of the forms of competition occurs in two ways. First, as competition among capital exporters increases, the terms on which investment is made in host countries are bid down. For example, where there is U.S.-Japanese competition, an investment project might be awarded to a Japanese firm in preference to a U.S. firm because the Japanese proposal calls for 51 percent local ownership whereas the Americans have proposed a wholly-owned subsidiary. Second, because of the increased competition accompanying a loss of political hegemony by a leading country, the host countries have more maneuverability, and can dramatically modify the terms on which they import capital, without fear of reprisal.

Thus, Roemer established a link between the evolution
in the forms of capital exports (in Palloix's terminology, the evolution in the forms of the internationalization of capital) and increased competition among the advanced countries during a period of hegemonic decline.37

In order to test his hypothesis, Roemer developed a measurement of a country's internationally-oriented capital (G-share), which is the sum of the country's foreign capital stock (DFI) plus the internationally-oriented domestic capital (domestic capital producing for export), as a percent of the world's total internationally-oriented capital. In his view, the key variable, the G-share, measures the country's share (calculated as capital) in total world trade and foreign investment in manufactures. Roemer's analysis of the G-shares of the four major capitalist countries (the United States, West Germany, Great Britain, and Japan) from 1960 to 1971 led him to conclude that,

...international competition in the 1960s seems consistent with the four-stage hypothesis and the model of international hegemony proposed here. Each of the four major industrial countries examined exemplifies a different stage. The U.S. reached a critical turning point with respect to its share of international capital sometime in the late 1960s, moving from Stage 3 to Stage 4 in 1968. The U.S. still dominates internationally oriented capital in absolute share....but the current international monetary crisis and crisis of international political leadership were to be expected from the U.S. reaching a turning point.38

Roemer further pointed out that the increased
competition and the growing multinationalization of production will likely lead to the development of new forms of capital export. He believed that this change was taking shape in the movement of stage four countries away from direct investment towards instruments that give greater control to the host country, such as, production-sharing agreements, untied technology packages in exchange for manufacturing output or resources, and new forms of bilateral and multilateral aid.39

In conclusion, Roemer's analysis placed oligopolistic corporations in a general worldwide competitive framework which undergoes transformations in the forms of capital exports as the hegemonic power of the leading nation is increasingly challenged under conditions of growing rivalry. While he recognized that his work did not present a developed theory of international imperialism and hegemony nor provide an explanation of the causes of the changing positions of the developed countries studied, his analysis led him to conclude that the growing international competition and relative decline in U.S. hegemony creates the conditions for either: (1) an increase in the host countries (LDC's) strength and control over the DFI package, allowing them a greater ability to "unravel" foreign investment into its components, but maintaining domestic control, or (2) war, because periods of transition in hegemony are highly unstable and, hence, the likelihood of war is greatest.
According to this position, in a period of transition of capitalist hegemony, DFI can be seen as an instrument or weapon (either defensive or offensive or both) in the battle for world markets between corporations from the developed capitalist countries. This battle occurs in both the less-developed periphery (a scramble for resources and production bases for export) as well as between and within the developed countries themselves (a scramble for sales, technological knowledge, and production bases for local sales).

**LITERATURE REVIEW OF DFI IN THE UNITED STATES**

**The Descriptive Investigations**

The growth of DFI in the U.S. in the 1960s and 1970s led to an increase in American interest in this inward flow. Pursuant to a 1974 Congressional Act, requiring the investigation of the extent of DFI in America, the U.S. Commerce Department published a nine volume study on the subject in 1976. This study, utilizing a quantitative sample of 7200 replies to questionnaires, attempted to establish the scope and magnitude of DFI in the United States, as well as the degree of foreign control of American industry, land and real estate. The report is divided into sections that focus on specific industries, state and federal regulations, taxation, land law and the policies and laws of other countries.

The report concluded that, while DFI in the U.S.
economy was relatively small, it was an instrument that provided jobs and other benefits to the host area and should not be discouraged. It further reported that the concern over OPEC direct investment was unsubstantiated, though the need to improve data collection was noted. Regarding the cause of DFI in the U.S., the study stated (in the market imperfections tradition) that DFI originates from both "pull" (mainly macroeconomic factors specific to the U.S.) and "push" (mainly firm specific microeconomic factors) variables.

The Commerce Department's (on-going) efforts to determine the extent of DFI in the United States has been supplemented by the work of J.S. Arpan and D.A. Ricks. These authors published a Directory of Foreign Manufacturers in the United States in 1974 that was subsequently updated in 1979. The directory was established by mailing questionnaires to 1900 corporations, supposedly U.S. affiliates of non-U.S. firms. This survey yielded 1246 U.S. manufacturing firms controlled by foreign parents. Arpan and Ricks reported that the majority of these firms were wholly-owned (100%) subsidiaries of foreign parents who usually (5 out of 6) directly financed the initial entry which most often was in the form of new construction (90%) rather than through the acquisition of an existing firm.

In another study, Mira Wilkens (and others) also investigated the scope of DFI in the United States, placing
particular focus on the early history (pre-World War II) of inward direct investment. Wilkens utilized official government documents as well as Cleona Lewis' 1938 publication, *America's Stake in International Investments,* to provide a detailed analysis of both the U.S. and non-U.S. international business pioneers since the 1850s. In this work, Wilkens admits that the perspective remains incomplete due to the fragmented and partial nature of the available data on early direct investments.

In addition to these nation-wide surveys, a number of studies have investigated the extent of DFI by non-U.S. corporations in particular American states. An example of this work is M. Wilkens' 1977 report to the Secretary of the State of Florida on the magnitude of DFI in that state. She was commissioned to determine nationality of investor, industry involved and the region of Florida selected in order to identify the State's options and aid in the implementation of appropriate policies. Wilkens reported that, while it was impossible (given voluntary survey methods) to determine the exact extent of DFI in Floridian manufacturing, 111 foreign manufacturing facilities were identified in a broad range of industries. Firms from Canada and Latin America were disclosed to possess the majority of these operations. She concluded that the benefits of DFI in Florida outweighed the costs and that the state should actively promote further foreign involvement in
Florida.

Other studies have attempted to establish the magnitude of DFI and foreign control in particular (competitive) industries (real estate, banking, farming, fishing and publishing and printing). An example is J.J. Sullivan and P.O. Hegelund's investigation of Japanese expansion into the U.S. fishing industry. The authors presented a listing of Japanese corporate involvement by date of entry, dollar value of investment and percentage of equity at entry. They concluded that, though Japanese investment penetration in U.S. fishing was still small, it was growing due to Japanese desires for supplies, stimulus from the Japanese government and the appreciation of the yen.

**Market Imperfections Theories**

Most research into DFI in the U.S. utilizes some aspect of the market imperfections model discussed previously. Though these generally mainstream studies use the same conceptual framework, they can be divided and categorized based on the focus of the particular analysis. The categorization used in this section divides the studies into three groups, including: (a) general non-empirical studies of DFI in the U.S.; (b) studies of developed country patterns of DFI in the U.S.; and (c) studies of developing (less developed) country patterns of DFI in the U.S.
Some writers on DFI in the U.S. have taken an approach that might best be called journalistic impressionism. These authors, like the popular news media and the business journals, frequently produce a laundry list of factors (derived from a casual observation of partial data) that are used to explain the recent growth of DFI in the U.S. These listings usually include some combination of the following items: (1) depreciation of the dollar; (2) undervaluation of the U.S. stock market; (3) availability of raw materials; (4) lower U.S. labor costs; (5) greater U.S. labor productivity; (6) political stability of the U.S.; (7) sheer size of the U.S. market; (8) greater rate of return on investment in the U.S.; (9) U.S. protectionist policies; (10) fear of future U.S. protectionist policies; (11) need to be close to the market to service customers; (12) desire to be close to the market to gain knowledge and technological expertise; and (13) exploitation of investing firm's technological advantages—often leading to the creation of a listing of the characteristics of these advantages.

The conclusion that either this or that factor (or some given combination of factors) is responsible for the current direct investment "invasion" of the United States is invariably based on either limited analysis of aggregate data or a selective number of arbitrary case studies. An
example of the former is Earl Fry who listed just about all conceivable macroeconomic variables, including the desire of the firm for the freedom offered by the U.S., as factors determining the growth of DFI in America.50 The latter case is illustrated by J.J. McAttee who, after conducting an analysis of case studies of foreign tender offers for four U.S. corporations, concluded that acquisition activity in the U.S. is increasing because of (1) the relative decline in labor and raw materials cost in the U.S.; (2) the potential for growth in the U.S. market; (3) the depreciation of the dollar; and (4) the political safety offered by the U.S.51 The result of this approach is consistent. A grab-bag of country, industry, firm and politically specific factors is advanced to "explain" the increased foreign penetration, frequently accompanied by general assertions that restricting DFI in the U.S. would be detrimental to America's national interest.

Studies of Particular Developed Countries/Areas

The publication of three books in the early 1970s marked the beginning of an expanding analysis of the growing presence of foreign producers in the United States. These books, by Nicolas Faith, Christopher Tugenhat and J.D. Daniels, created the framework for debate and future research into the causes of this "reverse" investment flow.52

1. DFI from Europe. These early studies tended to
focus on European DFI, since Japanese DFI was virtually non-existent and Canadian DFI was historically seen as unique due to Canada's proximity and economic ties with the U.S. Faith argued that though the Europeans were coming for a variety of reasons, they could best be viewed as explorers who have come with desires to learn about market conditions, by-pass middlemen in the distribution of their goods, adapt their operations to the local conditions (pressures) and take advantage of the large size of the U.S. market. These non-firm specific factors were obtained through analysis of a few case studies of both large and small foreign corporations, as well as private interviews with a few foreign investors. Tugenhat employed a similarly skimpy review of selective aggregate data to conclude that the increased pace of European direct investment was caused by the European merger movement and expanded international capital markets which created the conditions to take advantage of the size of the U.S. market and a greater proximity to the customer. To be successful in this attempted penetration, Tugenhat argued that the firm must have the necessary resources and skills (managerial, technical, administrative) to be competitive. Daniels, seeking to explain why foreign firms are investing in the U.S., made use of interviews with a sample population of forty European firms, soliciting replies that indicated the operation of both macroeconomic and microeconomic market
imperfections were responsible for the growing European manufacturing presence.54

Further research into European DFI in the U.S. continued in the ensuing years. James Ward investigated the extent that European firms adapt their product and promotion strategies to the U.S. environment.55 Utilizing a survey questionnaire of 53 manufacturing and sales subsidiaries of foreign parents (and follow-up interviews with five firms), he reported that while 65 percent of the products were adapted, most of the changes required little cost. The causes of this adaptation were either the desire to meet consumer needs or to address competitive pressures from other firms. In addition, 71 percent of the surveyed firms reported promotional changes due to cultural factors.

Analysis of the historical development of European multinationals has been published by Laurence Franko. In these studies, firm level data gathered from company interviews and individual company histories published in Europe, were employed as well as aggregate data from the Survey of Current Business and the Harvard Comparative Multinational Enterprise Project. Franko's work on the pioneer European multinationals (dates of entry, dollar size of investment, number of foreign subsidiaries created annually) led him to conclude that, while the existence of European MNC's actually predated the development of U.S. MNC's, the process of European multinationalization had not

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been constant, going through spurts of expansion (during the 1920s and between the end of World War II and 1952) as well as phases of stagnation (during World War I, World War II and 1953 to 1958).  

In studying the timing of European corporate penetration of the U.S. market, Franko surmised that U.S. government trade barriers were the most common cause of European direct investment, followed by European technological superiority operating through the product life cycle. In 1978, Franko concluded that the growth of non-American DFI was leading to the creation of a new economic order. The three factors that were responsible for this were: (1) the decline of U.S. exports and the growth of European exports (where DFI is viewed as being positively related to exports); (2) the closing of the technology gap and the development of internationally oriented management structures by the Europeans; and (3) the push toward energy saving and pollution control technologies in which the Europeans (due to historically differing national conditions) possessed natural advantages.

2. DFI from the United Kingdom. In his 1972 book, Phillip Colebrook claimed that the historical analysis of British foreign investment yielded three timeframes, dating from pre-1914, 1914-1945 and 1945-1970. Unfortunately, this assertion is quite arbitrary and Colebrook demonstrated little empirical evidence to support the contention.
Nevertheless, he concluded that the growth of British DFI in the U.S. since World War II has been caused by both macroeconomic and microeconomic imperfections. Colebrook placed particular emphasis on: (1) a counterattack on U.S. DFI in Britain; (2) the circumvention of American trade barriers; (3) the ability to gain access to raw materials; (4) the need to defend and retain export markets, and (5) the desire to recoup rising research and development costs.

Direct foreign investment by British firms has been more substantially investigated by J.M. Stopford. His examination of early (pre-1914) British foreign investment divides British firms into two groups. One group consists of 14 large British multinational pioneers, all leaders of domestic oligopolies, and the other group includes the rest of British industry. Stopford, using data from Harvard's Comparative Multinational Corporation Project, notes that the latter group tended to focus its early DFI within the British Commonwealth due to macroeconomic (favorable tariffs, favorable political climate, acquisition of raw materials, etc.) factors, while the pioneers undertook a major commitment to the development of international manufacturing outside the Commonwealth before 1914, mainly in Europe and the U.S.

All these companies pioneering the development of international manufacturing had the energy and ability to take advantage of their special skills. These skills were either technological, or marketing, or, in the case of Shell, logistical. Many other companies
might have done the same but chose not to. In the cotton trade, for example, very few manufacturers entered into foreign trade directly - at least three-quarters of the exports were handled by foreign merchants resident in Manchester - and were not therefore intimately exposed to the pressures to invest abroad. This attitude, amounting in some instances almost to a casual disdain of foreign markets and foreigners, was to be observed in many other industries. The fourteen pioneers did not suffer from this lethargy. That they did not is attributable, at least in part, to the influence of foreigners within the firms or, in five of them, the influence of foreign capital.

...[T]hese firms chose to establish factories abroad on the basis of economic advantage or cartel considerations, not Empire loyalty. With few exceptions, the investments were in the high-income countries with the greatest demand for the products in question. Investments in the Empire were almost exclusively restricted to the "white" dominions, where the burgeoning populations had income levels comparable to or higher than those in Europe.62

Stopford went on to point out that the British have historically exhibited a high propensity for capital exports, classified as either portfolio, direct or "expatriate". From 1820-1913, portfolio and expatriate capital exports dominated, while, after the First World War, direct investment began to grow in significance. Stopford provides the following breakdown of British foreign investment in 191363:

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio</td>
<td>68%</td>
</tr>
<tr>
<td>Expatriate</td>
<td>22%</td>
</tr>
<tr>
<td>Direct</td>
<td>10%</td>
</tr>
</tbody>
</table>

He estimated that the share of direct in the total
British foreign investment position increased to about 20 percent in 1927 and to over 40 percent in 1939. During the inter-war years and continuing until the 1960s, many British firms followed the pioneers in establishing production facilities abroad. These direct investments remained concentrated within the Commonwealth empire and frequently occurred only when the British firm was threatened by the loss of the market to local manufacturers in the dominions.

In 1976 Stopford further analyzed the reasons for the changing pattern of aggregate British DFI which, since 1965, had increasingly shifted away from Commonwealth countries toward the high income countries in Europe and the U.S. Using data from the Multinational Enterprise Project, he studied 83 large British multinationals. Sixteen of these firms were identified as global in scope (defined by foreign investment share as percent of total), while the rest were categorized as Commonwealth firms. The study revealed that the 16 global firms illustrated a significantly smaller propensity to invest in the Commonwealth from 1900 to 1970 even though almost all 83 firms made their first DFI within the Commonwealth. In addition, the global firms tended to use new construction to establish production while the Commonwealth firms most often acquired existing facilities in the host country.

The attractiveness of Commonwealth markets for investment was principally a function both of the British firms being stronger than the local competition, and of the absence of any
determined effort being made there by the large international firms of non-British origin. Such investment decisions have elements of the standard comparative advantage. But advantage is measured only relative to, say, the Australian competitor and not to the world industry leader. It is not the oligopoly game of thrust and counterthrust and of exchanging hostages on a global basis. The game is almost one of hide-and-seek....

By contrast, the global investors from early in their international expansion have had to develop systems for transferring knowledge among countries. Reliance on good men acting independently in their territories is not an adequate prescription for competing on a worldwide basis. The tendency among those firms has been to develop organizational systems and procedures for assessing each new market in a manner resembling those of the Americans.

3. DFI from West Germany. Both Bernhard Klinner and Vassilis Droucopoulis have investigated German direct investment abroad, since World War II, using German aggregate government data. Klinner divided the analysis into three time periods. From 1962 - 1966, German investment flowed to other European countries. From 1967 - 1971, German investment penetration focused on the less-developed countries and the U.S.; while, from 1972 - 1976, direct investment going to other European countries began to decline. Klinner deduced that during this period (1962 - 1976) the changing pattern of German DFI was caused by both macroeconomic factors (desire for safety, the appreciation of the deutsche mark, the need to secure raw materials, the desire to improve market coverage and overcome import restrictions) and microeconomic factors
(cost advantages of German firms in production and transportation). Klinner concluded that,

The principal motives for German investments in other countries - improved market coverage from a location nearer at hand, cost advantages in production and transportation, avoidance of import restrictions by consumer countries - are likely to retain their stimulating effect in the future.

V. Droucopolis examined the expansion of West German DFI from 1955 to 1975, concluding that its increasing pace, concentrated in manufacturing in the developed countries, was narrowing the penetration gap between West German and United States multinationals. He saw the causes of Germany's growing U.S. investment as the rising international value of the deutschmark, improving German domestic wages, German government regulation of pollution and the progressive saturation of the German market. In Droucopolis' view, non-firm specific factors are responsible for the expansion of German penetration as German firms have been forced to venture overseas.

Until now, the West German and Japanese economies have been contrasted to the U.S. and U.K. ones. The former showed a much higher rate of internal investment and their international success rested upon the export of their own manufactures. The two major "Anglo-Saxon" economies, by contrast, are dominated by banking and finance capital that invests abroad directly, and by large international firms which also export their investments rather than finished products. It now seems, however, that West Germany is moving closer to the "Anglo-Saxon" model, if it can be called that; partly because the strength of its currency allows it to, but also because this very strength obliges West
German companies to protect their overseas markets by making use of the now often much cheaper labour to be found outside the borders of the Bundesrepublik. 69

J.M. Stopford's 1980 analysis of West German DFI sought to explain the cause of the change from asymmetry (U.S. penetration of Germany greater than German penetration of the U.S.) to a position of balance between U.S. and German DFI flows. 70 Stopford presented aggregate direct investment data from the Survey of Current Business, a sampling of export/foreign output ratios gathered from corporate reports of nine German firms and relative hourly wage rates between the U.S. and Germany for the period from 1970 to 1976. He noted that Germany's post-World War II export-led strategy for growth was a necessity brought about by Allied restrictions until 1952 and the memory of confiscated properties in the U.S. during both World Wars. Stopford concluded that four major macroeconomic causes were "shaping changes" in German DFI. These were: (1) the decline in the value of the dollar and the relative increase in European production costs; (2) the undervaluation of the New York stock exchange; (3) the fear of the leftward political movement in Europe; and (4) energy shortages and rising raw material prices.

The stage now seems set for a long-run correction of the existing asymmetry in the transatlantic balance of investment. With German investors setting the pace, the nature of international competition among most of the world's leading industrial nations will change fundamentally during the 1980s. 71
4. **DFI from Canada.** The analysis of Canadian DFI has been performed by two Canadian economists, I.A. Litvak and C.F. Maule. These authors used aggregate Canadian government data for the period from 1971 to 1976, a survey of 25 small to medium sized Canadian firms with at least one affiliate in the United States, and the presentation of five case studies of large Canadian firms with significant DFI in the U.S. Their investigation leads them to make the following points about Canadian DFI.

Four key observations can be made with respect to CDIA (Canadian Direct Investment Abroad): first, most of it is located in the developed world; second, the United States with more than one-half of the total is the major geographical area of concentration; third, the manufacturing sector is the prime area for such investment, much of it centered in the United States; and fourth, most of the investment is held in subsidiaries which are 100% owned by the Canadian parent company.

Their research indicated that the smaller Canadian firms undertook DFI as a strategy to defend markets previously established through exports as well as the deteriorating political-economic conditions in the domestic Canadian economy, primarily, the slower growth of that economy. These firms generally believed that they possessed superior technology (21 out of 25) and most of the firms (24 out of 25) possessed 100% control of the U.S. affiliate.

In their analysis of the impact of Canadian DFI on the domestic Canadian economy, Litvak and Maule claimed that, while DFI in the 1960s was a result of positive factors (the
firm's drive for growth, diversification and the acquisition of raw materials), in the 1970s, Canadian firms increasingly invested abroad for negative reasons (high domestic inflation, Canadian government wage and price controls, union strikes, Federal-provincial government disputes and corporate tax purposes). In spite of these reservations, the authors concluded that, in most cases, since foreign markets and domestic jobs would have been lost without direct investment abroad, foreign investment by Canadian firms was not detrimental to the Canadian national interest.

5. **DFI from Japan.** In the 1970s, Yoshi Tsurumi applied a variant of the product life cycle hypothesis to explain exports to the U.S.  

The logical conclusion of this hypothesis provided a rationale for increasing direct investment in the U.S. Tsurumi noted that, in an increasing number of industries, Japanese technology had advanced enough to produce, for the U.S. market, products not yet demanded by the (lower income) consumers in Japan. The empirical basis of Tsurumi's analysis is case studies of two Japanese companies (Sony and Nippon Miniature Bearing) and aggregate data of Japanese DFI in the late 1960s and early 1970s.

Tsurumi claimed that Japanese producers had passed through the first stage of their foreign expansion in which domestic labor and land shortages, a rising value of the yen and growing competition from producers in the developing
countries led Japanese firms to undertake DFI in those countries. He felt that the second stage of Japanese investment expansion would focus on DFI in the developed countries, particularly the United States.

...[If] Japanese firms desire additional sources of managerial and engineering skills at reasonable costs, they will have to look to the United States, where these talents are relatively abundant. The costs of plant site development and building in the United States are approximately one-half to one-third of those in Japan. Suitable plant sites are nearly impossible to locate in crowded Japan and, when taken into consideration with the strategy of riding the international cycle of product and technology into the United States, many Japanese manufacturers will contemplate obtaining manufacturing and marketing bases in that country.

In a 1979 "Special Survey", the editors of The Oriental Economist pointed out that most (70%) of the direct investment by Japanese manufacturing industries was concentrated in the developing (less-developed) countries. It was only since 1975 that Japanese investment in U.S. manufacturing operations had become significant. As of 1979, 80 percent of total Japanese investment in the developed countries was still accounted for by the non-manufacturing sector (sales agents and branch offices of Japanese trading firms and banks). The editors predicted that a continuation of the yen's appreciation against the dollar, the likely rise in American tariff rates and the expansion of non-tariff barriers in the United States was certain to increase Japanese investments in U.S.
manufacturing at an accelerating pace in the 1980s.

Mira Wilkens has studied the direct investment relationship between Japan and the United States from 1930 to 1952. In a paper published in 1982, she points out that while the data on Japanese direct investments in the U.S. prior to the Second World War is spotty, her studies revealed that the vast majority of this investment was concentrated in finance and distribution. In her view, the character of this early investment helps to explain the slow pace of Japanese manufacturing investments in the U.S. after the war. Since the Japanese lacked a base of productive properties to return to after the war, their penetration of the U.S. market was retarded.

6. Less-Developed and Smaller Developed Countries. A number of economists have investigated direct investment in America from the smaller developed and less-developed countries. In his 1974 dissertation, David McClain postulated a "small country product cycle" to explain direct investment in the U.S. by firms headquartered in small, open economies in the post-World War II period. McClain argued that, except for the special relationship of the U.K. and Canada to the United States, the small country product cycle explained the relative ranking of countries responsible for the stock of direct investment in the U.S. (the Netherlands and Switzerland ahead of Germany, France and Japan). From this view, the small country firm would be forced into
exporting before the large country firm in order to achieve economies of scale for efficient production. Maintaining these exports in the competitive U.S. economy would be difficult due to the emergence (or counterattack) of U.S. producers; hence, based on the product cycle logic, firms from small, open economies would make direct investments in the U.S. before the firms from the large countries.

McClain's small country hypothesis was supported by the work of T. Agmon and C.P. Kindleberger and the other contributing authors in their 1977 analysis, *Multinationals from Small Countries*. This basically descriptive work contains essays on the activities of MNC's from Switzerland, Australia and five less-developed countries. In all cases the assertion is made that small country MNC's have passed through a product life cycle or "establishment chain" that explains their relatively early direct investments.

D.E. Kaplan, delivered the results of his research on South African DFI from 1977 to 1981 to the American Allied Social Sciences Association conference in December of 1981. He indicated that South African DFI was distinctly different from other developing capitalist countries. Drawing on previous studies of India and Argentina, Kaplan noted that these non-advanced countries concentrated their direct investments within other developing countries (usually lower in the pecking order of the world capitalist hierarchy) located "close to home". These investments most
often took the form of joint ventures where the investing firm, frequently in a minority position, horizontally duplicated existing technological and production processes adapted to conditions that prevailed in the developing world.

Kaplan's investigation of the available data (published press and business reports and public documents of companies listed on the Johannesburg Stock Exchange) recognized that, while the data were incomplete, a number of broad trends emerged which allowed the characterization of South African direct investment abroad. These characteristics are reproduced below:

(1) A tendency to invest in the advanced capitalist countries - particularly in the U.S. and U.K.
(2) Most South African DFI involves purchase of, or partnership with, already existent foreign firms. In only a minority of cases has a totally new operation been set up.
(3) Joint ventures are common and while the terms vary, it would appear that in a number of cases South African firms have a majority holding.
(4) For some South African firms, foreign investment is not a simple extension of domestic activity but involves operations in fields which are quite distinct from, or only marginally related to, existent domestic operations. This is particularly true of the larger firms - Rembrandt and Anglo American.
(5) The technological component in South African DFI is complex but by no means confined to an adaptation of existent imported technology.
(6) ...[The increase in South African DFI, particularly to the advanced capitalist countries, has been primarily a post-1976 phenomenon and particularly of the last few years.]

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Kaplan surmised that South African DFI flowed to the advanced countries in order to allow the firm to: (1) protect or advance exports to its principal markets; (2) acquire needed technology; and (3) avoid the political risks of investing in black African countries. In addition, the acquisition of existing firms or the establishment of joint ventures appeared to reflect the inherently high barriers to penetration of advanced country markets by new entrants.

Kaplan concluded that the uniqueness of South Africa's DFI patterns relative to other developing countries resulted from the extremely high degree of monopoly in the South African economy which, in turn, is explained by the particular historical development of capitalism in South Africa. This high degree of monopoly has produced a market saturation that limits the South African firms to the size and growth of the domestic economy. In this connection, increases in South African export prices, primarily gold, after 1977 produced higher profits, which fueled both further domestic concentration and centralization of capital, as well as investment abroad by its firms. In addition, South Africa's massive balance of payments surplus from 1978 to 1980 allowed a relaxation of government controls over capital exports. Kaplan's analysis, therefore, combined a mainstream market imperfections explanation of DFI with a radical monopoly capital theory of the MNC (capital exports as vent of surplus) to attempt to
clarify the characteristics of South African international expansion in the late 1970s.

In 1986, Y.D. Euh and S.H. Min examined direct investment in the U.S. by Korean corporations. Their analysis, based on a case study of 432 Korean direct foreign investments, illustrated that, except for trade and mining, these investments tended to be concentrated in other developing countries, lower in the socio-economic pecking order. This was particularly true in manufacturing where investments in the North America accounted for only twenty two percent of the total foreign activity in this sector. From these observations they conclude that the Koreans are following their comparative advantage in adapting standardized, small-scale, labor intensive manufacturing first to their home market and then, eventually, applying it to other developing countries. They predict that Korean direct investment penetration of the developed countries will hinge on the ability of Korean firms to overcome their inherent disadvantages (lack of managers with global strategic experience and insufficient domestic capital) in the developed manufacturing markets.

The Japanese Macroeconomic Model

Another group of economists, led by K. Kojima and T. Osawa, have argued that the monopoly advantage theory (firm-specific market imperfections) which is applicable to the oligopolistic markets and firms of the United States, is
unacceptable as an explanation of Japanese DFI. Instead, this viewpoint, which appears to have become the official doctrine of the Japanese government, claims that Japanese DFI is best understood by applying neoclassical international trade theory. They called their theory the "factor-endowments analytic approach"; emphasized its macroeconomic determinants; and combined it with a limits to domestic growth thesis ("the Ricardo-Hicksian trap").

These theorists claimed that Japanese DFI was distinguished from that of other developed country DFI by seven unique features. It was characterized by the facts that it was: (1) relatively recent (post-1968); (2) clustered in Asia; (3) concentrated in competitive industries; (4) concentrated in small and medium-sized manufacturers; (5) extensively used in the extractive industries; (6) more willing (anxious) to accept minority ownership positions; and (7) reliant on external sources of funding. These characteristics were illustrated with aggregate DFI data from Japan's Ministry of International Trade and Industry for the selected years 1969 and 1973. These data are broken down into resource-oriented, labor and market-oriented, and financial services direct investment.

Kojima and Ozawa reasoned that the major thrust of recent Japanese direct investment, clustered in Asia, by small and medium-sized firms in competitive domestic industries (e.g., textiles, electrical appliances, shoes,
etc.) represented investment going from a comparatively disadvantageous industry (based on national factor endowments) in the investing country to an advantageous industry in the host country. This view held that it was the marginal firms in an industry that, threatened by competition from the developing countries, were forced to invest overseas in order to survive (remain competitive in world markets). The Japanese government helped this process (as did the yen's appreciation) by providing financial aid to the investing firms, who,

....will harmoniously promote an upgrading of industrial structure on both sides and thus accelerate trade.86

These theorists went on to explain that the reason pro-trade direct investment accelerated after the late 1960s was the constraint to further growth encountered in the domestic Japanese economy. In this view, the rapid industrialization in Japan after World War II led (in the 1960s) to increasing shortages and, hence, rising prices of domestic labor and land as well as growing pollution, congestion and ecological destruction. These factors stimulated an internal structural shift of production that, taking into account national factor endowments and international comparative advantage, forced marginal firms in competitive industries to seek production sites abroad or go bankrupt. Ozawa concluded that:

The Western explanation of multinationalism is clearly not appropriate for the recent
Japanese experience; it does not elucidate why Japanese national enterprises, small as well as large, suddenly and simultaneously took on multinational characteristics in the late 1960s, although most of them had not yet, by Western criteria, quite reached the stage at which they evolved naturally into multinational corporations....They had been driven overseas by the scarcity of production factors at home and the growing environmental constraints on further industrialization of their economy, rather than by the growth of their individual internal capacities to operate on a global scale. Indeed, the very weakness of their capacity to invest overseas on their own led to Japan's unique pattern of government-supported and group-oriented multi-firm investments overseas and to the heavy use of external funds to finance the overseas ventures of individual enterprises.87

This view has been supplemented in a 1984 study by the Keizai Koho Center, which is a private, nonprofit organization that works in cooperation with the Japan Federation of Economic Organizations to provide corporate views on the Japanese economy.88 It was emphasized that Japanese direct investment in the U.S. was different than that in the developing nations in a number of respects. Whereas the latter occurred because of the reasons advanced by Kojima and Ozawa discussed above, direct investment in America resulted from the draw of U.S. supplies of resources, goods, funds and information plus the desire to be better able to respond to customer needs. In addition, Japanese direct investments in the U.S. were characterized by a higher percentage of equity ownership and a larger relative size of investment than those made in the developing countries. The study concluded that increasing

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cross penetration of investments between Japan and the United States will produce a period of "mutually equitable investment exchange".

**Empirical Studies**

Here, the results of empirical investigations of DFI in the U.S. will be detailed. The authors base their work either on surveys of sample firms or on reported aggregate data in an attempt to quantitatively measure, through regression analysis or other statistical techniques, the significance of some of the variables that have been used to explain the direct investment flows analyzed above. This section divides these empirical works based on the area of investigation (country variables, firm specific rates of return and capital allocation, oligoplistic reaction and exchange of threat, locational preferences and the financial health of U.S. firms acquired by foreigners.)

**Studies of Country Variables**

In a 1973 article published in the *Survey of Current Business*, Robert Leftwich attempted to establish the significant variables determining DFI in the U.S. during the period from 1962 to 1971. He utilized linear regression to test the statistical significance of three explanatory variables of direct investment in the United States. These country variables were: (1) the size of the U.S. market; (2) the rate of growth of the U.S. market; and (3) the average level of U.S. tariffs. Although Leftwich anticipated that
all three variables would be positively correlated with DFI in the U.S., his results indicated that the size of the U.S. market was the only statistically correlated one. The author did point out, however, that there were many other variables (that weren't tested) whose movement may have influenced foreign investment in the U.S. during the period.

T.R. Emch used a similar approach in his 1981 examination of Japanese direct investment in the U.S. from 1962 to 1976. In this study, he attempted to correlate it with: (1) the size of the U.S. market - measured by cumulative Japanese exports; (2) the declining competitiveness of Japanese domestic production - measured by the yen/dollar ratio; and (3) the relative factor input costs between the two nations - measured by the ratio of Japan's wholesale price index to the United States wholesale price index. The results of his statistical analysis, which transformed the variables into logarithmic form, indicated that all of the variables were statistically significant, with direct investment in manufacturing revealing a particular sensitivity to the relative factor input cost between the two countries.

D.S. McClain, in his 1982 paper, tested the significance of exchange rate variations in explaining the pattern of DFI in the U.S. In this work, he examined the correlations, for eight countries (the U.K., the Netherlands, Sweden, Canada, Switzerland, Germany, Japan and
France), of the percentage difference in real exchange rates against the dollar from 1970 to 1980 and three separate measures of each country's direct investment in the U.S. during the period. In all of the regression tests, none of these correlations was significantly different from zero at even the 20 percent level of significance. The use of lags or percentage changes in real exchange rates did not change the results. McClain concluded that, while the test was not conclusive, it provided weak evidence that exchange rate fluctuations have less impact on direct investment flows than previously surmised in the literature.

**Firm Specific Rates of Return and the Optimal International Allocation of Capital**

In 1972, M.F.J. Prachowny analyzed DFI in the U.S. from a firm specific portfolio perspective. In his regression analysis, covering the period from 1953 to 1964, he found that variations in differential expected rates of return on investment were significant in explaining variations in the ratio of Canadian and British direct investment in the U.S. relative to the total value of equities in Canada and the U.K.

D.S. McClain, in his 1974 thesis, complemented Prachowny's portfolio analysis approach with a further regression study. Investigating the investment decisions of British and Canadian firms in the period from 1952 to 1971, McClain calculated the correlative significance of:
(1) liquidity — or competition for project funding; (2) portfolio interdependencies — represented via a Tobin-Brainard general disequilibrium framework; (3) tariff rates in the U.S.; and (4) capital controls in the U.K. McClain reported that,

My results for the U.K. suggested that direct investment in the U.S. by British firms was related significantly to the desired stock of capital in both locations, and to subsidiary cash flow in the U.S., but not to cash flow in the U.K. Tariffs and the Interest Equalization Tax had no direct effect, though U.K. capital controls did....

In the Canadian case, a supply model obtained as Canadian cash flow proved most important in explaining the flow of direct investment into the U.S.

Studies of Oligopolistic Reaction and Exchange of Threat Behavior

David Graham, in his 1974 dissertation (and subsequent work), investigated the relationship between European direct investment in the U.S. and previous U.S. direct investment in the same European industries during the post-World War period. To study this "exchange of hostage" behavior, Graham regressed (for instance) the percentage change in British subsidiaries entering the U.S. in time period t, on a measure of the percentage change in U.S. subsidiaries entering the U.K. in time period t-n. Supplied with data from Harvard's Comparative Multinational Enterprise Project, Graham's regression analysis led him to the conclusion that the exchange of hostage response was strongest in industries that were characterized by a high degree of concentration,
widespread product differentiation and significant expenditures on research and development.

In 1976, E.B. Flowers tested the theory of oligopolistic reaction which Knickerbocker had used to explain the "bunching" of U.S. direct investment abroad by firms from a particular industry. This concentrated entry pattern is produced by a "bandwagon effect" on the part of firms who scramble, in response to an initial foreign investment by a firm in the industry, to establish their own foreign operations in order to match their oligopolistic rival and maintain foreign market share.

Flowers' data were taken from Arpan and Rick's publication of the Directory of Foreign Owned Firms in the United States. From this, he established a list of 1219 addresses of foreign-owned subsidiaries which were mailed survey questionnaires plus two successive rounds of follow-up mailings. This survey yielded responses from about 50 percent of the firms listed. From these, a sample of 372 interactions was established. With these data Flowers regressed an entry concentration index (= the number of subsidiaries entering in a 3 year period) on the standard four- and eight-firm industry concentration indices for European and Canadian direct investment.

This study, supporting the theory of oligopolistic reaction, was able to explain about half of all European and Canadian direct investment within three years of the first
investment. Flowers also found that direct investment in the U.S. from the U.K. tended to appear in a reactive cluster to previous U.S. penetration of the U.K. He concluded that, within three years of the clustering of U.S. investment in the U.K., a reverse clustering of British direct investment in the U.S. tended to occur.

In his 1974 thesis, D.S. McClain also analyzed DFI in the U.S. at the firm level for the period from 1914 to 1970. His data were supplied by Harvard's Multinational Enterprise Project which yielded 2051 direct investments in the U.S. from 114 non-U.S. multinational firms. McClain used logistic discrimination analysis on these data to isolate the characteristics of U.S. subsidiaries which distinguished them from subsidiaries located elsewhere. This analysis was able to calculate the likelihood that a subsidiary, once formed, would be located in the U.S. McClain examined characteristics relating to the subsidiary, the parent firm, the industry and the country of origin of direct investors in the U.S.

The results of this analysis showed that U.S. subsidiaries were more likely to be young (recent), to be greater than 50 percent controlled by the parent and to have less than 50 percent of their sales derived from exports. Parent firms were characterized by being more diversified (at 3-digit SIC level) and likely to devote relatively large research and development expenditures as a percent of total
sales.

In analyzing industry characteristics, McClain found no evidence of either Knickerbocker's "follow the leader" or Graham's "exchange of hostage" strategies. In addition, U.S. subsidiaries were less likely to be in industries classified as "high technology", with investments in instruments and chemicals more likely, while those in textiles were less likely. At the country level, U.S. subsidiaries were calculated as being inclined to belong to parents with headquarters in small open economies.

Locational Preferences of Foreign Investors

In 1978, J.S. Little examined the locational decisions of foreign investors in the United States. Using aggregate data from the U.S. Commerce Department, she regressed a measure of a given state's share of inward direct investment on five locational variables. These macroeconomic variables were the following ratios of a state to U.S.: (1) fuel costs; (2) hourly wage rates; (3) unemployment rates; (4) personal income levels; and (5) port commerce volume. Little's regression results lead her to conclude that:

Contrary to prevailing assumptions, the Mideast and New England remain the areas attracting the greatest concentration of foreign plants. Foreign and U.S. investors do not focus their investments in the same areas even within the same industries, because they appear to accord different weights to various locational characteristics. In particular, foreign investors seem to give relatively heavy weight
to state wage differentials and to the availability of port facilities while U.S. investors are comparatively more concerned about regional differences in fuel and power costs. Contrary to popular opinion, foreign investors do not appear to lay any greater emphasis than their U.S. counterparts on avoiding labor unions.

Financial Health of U.S. Firms Acquired By Foreigners

J.S. Little, in the early 1980s, also analyzed the financial health of U.S. firms acquired by foreigners. In her 1981 article, she investigated whether foreign firms were acquiring U.S. firms of above average or below average financial strength. Drawing on an annual List of Foreign Investments in the United States prepared by the U.S. Commerce Department, Little developed a sample of 78 public firms from 350 manufacturing acquisitions made from the second quarter of 1977 to the first quarter of 1980. In this study, financial strength was measured by the standard financial ratios of the acquired firm (liquidity, leverage, debt serviceability) as well as the firm's profitability three years before acquisition and market assessments.

Little concluded that there was no tendency for foreigners to acquire financially above-average firms. In addition, she pointed out that foreigners tend to concentrate on growth industries for their acquisitions. In her view, DFI was seen as beneficial to the U.S. because it brought new capital, new technology and new management talent to the U.S.

In 1982, Little published the results of a more
rigorous study concerned with determining whether foreign acquisition strengthened or weakened the acquired U.S. manufacturing company. Here she reduced the sample to 65 non-financial U.S. firms acquired between 1972 and 1978. Standard financial ratios were calculated (liquidity, leverage, profitability, growth and fixed investment) for the sample group which were then compared to a control group (industry average) for three years prior to acquisition and two to three years after acquisition. In these measurements Little calculated the percent by which each sample firm's financial ratios exceeded or fell short of industry averages. Next, she calculated the average (median) of these percentage differences between the strength of the sample firms and their industry standards for each pre- and post-acquisition year examined. Finally, the financial ratios of both the control group and the sample population were tested to determine statistical differences between the two groups.

This study led Little to conclude that before acquisition, firms had above average rates of growth in sales and assets, as well as above average leverage. After the merger these firms became less profitable, expanded more rapidly and increased net worth more rapidly than the industry standard. Finally, she noted the irony that the weakest firms before acquisition got stronger, while the strongest firms became weaker after the acquisitions.
SUMMARY

Most of the authors who have analyzed direct foreign investment in the United States have utilized a market imperfections framework which sees the growing penetration of the U.S. as the result of microeconomic or macroeconomic imperfections which make the firm's production advantages internationally transferable. These advantages allow the firm to overcome what are viewed as the inherent competitive disadvantages of operating a foreign investment (as compared to simply exporting their comparatively advantageous products). This development, which has been gaining momentum since the late 1960s, is primarily seen as an advanced country phenomenon since the developing countries (with the possible exception of South Africa) lack the ability to overcome the inherently larger competitive disadvantages in the developed countries.

Further, it can be noted that the theory of the internationalization of capital, with which Hymer and Rowthorn predicted growing direct investment penetration of the U.S., has received little attention to empirical research since their original work was published in 1969. One of the objectives of Chapter V will be a modest attempt to present an empirical update of this position.

Finally, one observes that the monopoly capital theorists with their surplus absorption theory are virtually silent on the question of the direct investment penetration
of the U.S. No doubt this can be traced to the fact that they continue to cling to a stagnant monopoly model which, incapable of analyzing the forces of change, preaches the increasing irrationality of the capitalist system as a whole.
CHAPTER NOTES


2. Direct investment is commonly distinguished from portfolio investment in that it offers the investor power of control and requires of the investor the contribution of additional factor inputs. In addition, DFI can be accomplished without a major change of ownership if new construction is used to establish the subsidiary.


6. The present value of any asset \( C \) depends on the expected future income stream \( y \) discounted by the interest rate \( 1 \)

\[ C = \frac{y}{1} \]

As Kindleberger has noted, one common distinction between direct and portfolio investment is that the former occurs in response to international differences in \( y \) which derive, not from a firm's nationality but, from some firm specific imperfection (Kindleberger stresses the effect of firm size on cash flow and credit rating); while portfolio investment occurs in response to international differences in \( 1 \). See C. P. Kindleberger, American Business Abroad: Six Essays on Direct Investment, New Haven: Yale University Press, 1969, pp. 24-25.


In his 1975 article, Rugman makes the following point:
...If a corporation produces at home and exports some of its output then the firm will benefit from increased stability of its total sales (domestic and foreign) rather than by selling all its output in the domestic market. This is because the firm is able to avoid some of the specific domestic risk of trade cycle fluctuations, natural disasters and domestic political policies.
When a corporation engages in foreign direct investment it makes a physical contract with a foreign country. Foreign production transforms the subsidiary of the parent corporation into a new entity, subject to localized conditions in the host economy. The subsidiary is therefore operating under a different set of parameters than the domestic producer. These parameters may be affected in a truly exogenous manner. There may be changes in host economy taxation policies, in weather conditions, in union and labour policy, etc. These exogenous factors indicate the world is not perfectly interdependent for direct investment. Yet for portfolio investment there is more interdependence because of the international capital market which mobilizes financial assets in response to interest rate differentials. (See page 572).


Although not essential to the product cycle hypothesis, it is commonly assumed that a triggering event is likely to be required before the producer will seriously make the calculations that could lead to the creation of a foreign producing facility. The triggering event ordinarily occurs when the innovator is threatened with losing its monopoly position. In the usual case, rival producers appear, prepared to manufacture the product from locations that could undersell the original innovator.

These conditions change, however, as the threat begins to crystallize. Eventually, it may be clear that the innovator is threatened with the loss of its business in a given foreign market. At that point, the areas to be investigated as possible production sites have been narrowed while the size of the risk has been more explicitly defined. Accordingly, the decision whether to invest in added information is more readily made. Once having felt compelled to focus on the issue, the innovator will decide in some cases to set up a local producing unit in order to prolong some of the advantages that were created by its original monopoly. (See Vernon, 1985, p.410)

15. Given the two decades of intense research on the subject, Vernon (1985 - see footnote 14) claims that the product cycle theory has been weakened by two major factors. First, the process of expanding DFI has led to the formation of a network of facilities around the world (innovating firm no longer assumed myopic) which has altered the operation of
the firm. In analyzing the changing operation of U.S.
multinationals Vernon reports that,
...firms that had experienced a considerable
number of prior transfers to their foreign
producing subsidiaries were quite consistently
quicker off the mark with any new product than
were firms with fewer prior transfers.
Besides, as firms introduced one product after
another into a given country, the lapse of
time between the introduction of successive
products in that country steadily declined.
All told, therefore, the picture is one of an
organic change in the overseas networks of
large US-based firms....[It seems reasonable
to assume that we confront a basic change in
the institutional structure of the MNC's
concerned. (pp. 412-13).

The second factor is a change in the international
environment which has produced a narrowing or obliteration
of the income gap between the U.S. and the other developed
countries which,
.....weakened a critical assumption of the
product cycle hypothesis, namely, that the
entrepreneurs of large enterprises confronted
markedly different conditions in their
respective home markets. As European and
Japanese incomes approached those of the
United States, these differences were reduced.
(p. 413).

Vernon concluded that while the growth of the MNC network
and the reduction in differences between the developed
countries have weakened product cycle theory, it may still
be applicable to: (1) smaller innovating firms; (2) non-U.S.
innovating firms; (3) direct investment in developing
countries; and (4) direct investments by the "more rapidly
industrializing countries" (e.g. Mexico, Brazil, India and
Korea).

16. David McClain, "Foreign Direct Investment in the United
States: Old Currents, New Waves and the Theory of Direct
Investment", Unpublished paper presented at the Fourth
Annual Middlebury College Conference on Economic Issues,
"The Multinational Corporation in the 1980s", April, 1982,
p. 20.

17. A brief listing of some of the work in the area of
product and industry cycle theories and the market
imperfection hypothesis is presented below:
Harry Johnson, "Multinational Corporations and International
Oligopoly: The Non-American Challenge", in The International
Corporation, (Ed.) C.P. Kindleberger, 1970; L.T. Wells Jr.,

19. The externalities that escape market pricing (and hence, provide an incentive for the firm to internalize the transaction) have been classified as either natural or artificial. Natural externalities include (1) ownership, (2) technical, and (3) public good externalities. Artificial externalities include all government actions which interfere with the market and cause a divergence between private and social benefits and costs (e.g., tariffs, subsidies, taxes, price controls, exchange rate restrictions, investment performance requirements, etc.). For a further discussion of these developments see Peter Buckley and Mark Casson, *The Future of the Multinational Enterprise*, 1976; Jean-Francois Hennart, *A Theory of Multinational Enterprise*, University of Michigan Press, Ann Arbor, 1980; and Alan Rugman, *Inside the Multinationals*, 1981.


21. F. Root, *International Trade and Investment*, p. 467. As will be seen later in this chapter, the numerous refinements to the market imperfections approach to DFI have undoubtedly added to the depth of our understanding of how a firm acts (internationally) on its perceived advantages. This, however, does not constitute the development of a theory. The categorization of the instances of the numerous advantages (monopoly positions) possessed by firms and an explanation of the rationale and methods of exploiting these...
advantages internationally without a framework that places this development within the operation of the system's dynamic, remains trapped in a process of continual refinement as DFI penetration historically unfolds. These developments confirm the market imperfections approach to DFI as mere history, not theory. A theory which must explain why DFI is the most profitable form of penetration since the 1960s concludes that such investment occurs "when it is most profitable for an MNE to internalize its monopolistic advantage in a foreign country." The "theory" thus resolves into the tautological idiocy that it is most profitable when it is most profitable.


24. For a further discussion of Stephan Hymer's contributions as well as a personal biography which contrasts the early vs. late Hymer, see his collected papers in Stephan Hebert Hymer, The Multinational Corporation: A radical approach, Edited by R.B. Cohen, N. Felton, M. Nkosi, and J. van Liere, Cambridge University Press, New York, 1979.


33. Ibid., p. 131.

34. Ibid., pp. 138-39.

35. Ibid., p. 131.

36. Ibid., p. 211. It is important to note that this remains true today. For instance, witness the cessation of interest payments by Brazil in 1987. The decline in U.S. hegemony left Brazil free of reprisal. Further witness the efforts of individual states to attract direct investment which eventually led to the Federal Government's investigation of this development. Finally, one could note the growing controversy in the Mideast between Iran and Iraq and the difficulty of asserting American interests in the Gulf for political reasons related to declining U.S. hegemony.

37. See, for instance, C. Palloix, "Internationalization of the Circuits of Capital", in H. Radice, (ed.), *International Firms and Modern Imperialism*, Harmondsworth, U.K., Penguin Books, 1975; and C. Palloix, "The Self-Expansion of Capital on a World Scale", *Review of Radical Political Economy*, IX, 2, Summer, 1977. As seen in the above quote Roemer emphasizes the competitive battle for third markets as opposed to competitive thrusts in each other's markets. Most likely this is due to the influence of the monopoly capital theorists in the U.S. and the early stage of the reverse flow of direct investments to the U.S. at the time of Roemer's investigation.


39. Ibid., Roemer portrays the transition in the form of capital exports as follows:

Under Great Britain's hegemony, portfolio
investment was the predominant form of capital export, and it is generally agreed that direct investment—the form into which capital penetration "evolved" under U.S. hegemony—provides more control to the investor (home) country or firm. However, "portfolio investment" is a narrow definition of the form of capital export predominant under British hegemony. Rather than being simply portfolio investment, it is better characterized as "colonialism." That is, the economic penetration by the British was much deeper than the purely financial form of investment suggested; it comprised, rather, total political and economic control by the "mother country." Viewed in this way, the instrument of direct foreign investment as used by the U.S. constituted an unravelling of the British type of capital package: total political control was reduced to control of discrete economic enterprises. The unravelling was nominal, at least, whether the U.S. succeeded in maintaining political control through forms of neo-colonialism, tied aid, deleterious terms of trade against the hosts, and so on, is another question.

Indeed the process may be somewhat more evolutionary, employing natural selection—i.e., the country which succeeds in establishing a new hegemony may be the one which offers capital to the host countries in its most unravelled form. Although in the present transition period it appears that the hosts are taking considerable initiative (Bergsten's documentation is convincing), in the Great Britain-U.S. transition this may not have been the case. The U.S. may have succeeded in establishing hegemony with relative ease because it adopted an "advanced"form of capital export, while Britain stuck to its old ways....Similarly, some combination of Japan, the EEC, and the Soviet Union may forge ahead of the U.S. in capital exports if they adopt new, more advanced forms which further unravel the capital package, while the U.S.--out of inertia and because of vested interests—continues to rely on direct investment. As previously noted, such new forms could be production-sharing agreements, multilateral aid, or other types of relatively untied technological assistance.
40. While Roemer's analysis is unique in its attempt to focus on competitive forces to explain DFI flows from a radical perspective, the investigation suffers from an overemphasis on competition between nation states. In addition, the failure to integrate the analysis with a framework of the internationalization of the circuits of capital limits Roemer's ability to understand and explain the transition periods of international hegemony. Surely, growing multinationalisation and increasing investment interpenetration means more than either a greater "unraveling" of the investment package even if war is avoided.


45. C. Lewis, America's Stake in International Investments, The Brookings Institute, Washington D.C., 1938

46. The concerns of data deficiencies also led Harvard (with Ford Foundation financial support) to establish the Comparative Multinational Enterprise Research Project. Many of the works cited later in this chapter were developed by the authors as doctoral students at Harvard in the 1970s under the tutelage of Raymond Vernon, Louis Wells and others.

47. Mira Wilkens, Foreign Enterprise in Florida, Report to the Secretary of the State of Florida, 1979. For further


54. John Daniels, Recent Foreign Direct Manufacturing Investment in the United States, p. 93.


61. Ibid., pp. 316-17. The fourteen firms that Stopford identifies as pioneers were: British American Tobacco; British Match; Coats Patons; Courtaulds; Dunlop; Tootal; EMI; Unilever; Brooke Bond Liebig; ICI; Pilkington; Reckitt and Colman; Royal Dutch Shell; and Vickers.

62. Ibid., pp. 322-23.

63. Ibid., p. 310. Stopford defined expatriate investment as the simultaneous migration of people and liquid capital. He noted,

For example, an entrepreneur who emigrates, starts a firm in his new homeland, and finances the venture with money raised in his old homeland creates what can be labelled an "expatriate investment.... Their importance is two-fold: they provided a convenient means of entry by acquisition for the British manufacturing firms that were later to extend their reach abroad; and some later created UK operations and developed into multinationals. (See pp.305-06).


65. These sixteen global firms include the 14 pioneers from the other study plus two other firms not identified.


68. B. Kliner, "German Investments Abroad and Foreign Investment in the Federal Republic", p. 221.

69. V. Droucopoulos, "West German Expansionism", p. 92.

70. Vassilis Droucopoulos, "West German Expansionism", p.92.


82. Ibid. p. 4.


87. T. Ozawa, "Japan's Multinational Enterprise: The Political Economy of Outward Dependency", World Politics, 1978, p. 525. While the Japanese model advanced by these authors is basically a simplistic and apologetic macroeconomic market imperfections theory, it has been presented separately because of its unique (though misguided) attempt to blend macroeconomic market imperfections with the perfectly competitive world of neo-classical trade theory based on comparative advantage.


99. Ibid. p. 58.


CHAPTER IV

DIRECT FOREIGN INVESTMENT AND THE LONG RUN DYNAMIC OF CAPITALIST ACCUMULATION

DFI AND THE LONG WAVE OF STAGNATION

Chapter III reviewed the many factors, both at the level of the firm and the national economy, that have been advanced to explain the growth of direct foreign investment (DFI) in the United States since the late 1960s. The main deficiency of almost all of these explanations, however, is that DFI is seen as an alternative to exporting or licensing, which is only undertaken when such investment is the cheapest form of market penetration. This commonly held view leads the investigation into an attempt to expose both the firm-specific and macroeconomic factors that allow the firm to overcome the (supposedly) inherent disadvantages of conducting operations in a distant and unfamiliar environment. As was shown in the last chapter, the result of this approach is most often the selective presentation of a laundry list of variables which are then uniquely blended into an explanation of DFI in the United States. The major debates end up centered around whether it is micro or macro factors which are most important in the explanation.

This chapter will investigate the possibility of a connection between DFI in the U.S. and long-run fluctuations
in the pace of world capitalist accumulation. Specifically, it is argued that the growth of DFI in the U.S. in the last 15 years has been caused by (related to) a transition to a long wave of relative stagnation in the world capitalist system. The analysis is based on a world system view that sees DFI as one of many methods available for market penetration and the expansion of accumulation. In this context one does not see DFI as naturally disadvantageous compared to the export option. Recognizing the evolutionary nature of capitalist production and accumulation on a global scale, it stresses the necessity of using DFI as the dominant method for penetrating foreign markets at this particular historical juncture of the world capitalist system.

(The stage which the world capitalist system has now reached contains a tendency which is forcing companies, regardless of their size, to undertake a global reorganization of their manufacturing processes on pain of extinction....It is the historically unique combination of innovations in site, products and processes in a phase of world economic stagnation which constitutes the substance of the reorganization of the world economy over the last ten years. 1

Thus, the decline in the pace of world accumulation has produced a necessity to restructure the capitalist system in order to redevelop the criteria necessary for a further advance of capitalist production and accumulation. DFI in the U.S. is one aspect of this global reorganization. As the current phase of stagnation deepens, the international
cross-penetration of capital, in general, and DFI in the U.S., in particular, is likely to continue. Furthermore, the progressive internationalization of productive capital is producing a heightening of competitive forces for world markets that is an important variable in explaining the direction and operational processes of the current reorganization, as well as the potential for renewed and expanded capitalist accumulation in the long-run.

The present chapter will present a brief historical review of the early literature on long-run alterations in the rate of capitalist production and accumulation. This will be followed by an expanded discussion of modern long wave theorists, focusing on the time frames discerned, the explanatory (causal) variables advanced, and the major areas of criticism and debate. The final part of the chapter will summarize and illustrate the proposed relationship between the long wave of stagnation and DFI in the U.S. in succession, Chapter V will present firm-level sample data to support this position. Chapter VI will conclude the investigation by providing a formal statement of the relationships between stages of capitalist accumulation, long waves of capitalist development and the internationalization of productive capital as it applies to direct investment in the United States.
EARLY LONG WAVE THEORISTS

In the first two decades of the 1900s a number of economists in Europe explored the possible existence of long-run swings in the pace of capitalist production and accumulation. The most commonly cited of these theorists was the Russian economist, Nikolai Dmitrievich Kondratieff. His early work stressed the structural aspects of the long wave of capitalist accumulation, holding that the economic data, reflecting the long wave pattern of alternating expansion and crisis, were the economic expression of capitalism's continual movement between phases of equilibrium and phases of disequilibrium.

In its most general form the essence of an economic crisis lies in the fact that the national economies of separate countries and the world economy as a whole, taken as a moving system of elements, loses its equilibrium and experiences an acute, painful process of transition to the condition of a new moving equilibrium. From the economic point of view a crisis is always only an acute and painful process of liquidating the disparities which have arisen in the structure of a national economy, and which destroy the equilibrium of its elements. [A crisis] is the process of establishing a new equilibrium among these elements in place of the one which has broken down.

For Kondratieff, the reorganization in the structure of the national economies of the world capitalist system during periods of crisis, set the stage for a renewed period of expansion (within capitalist limits), just as the progressive growth of contradictions during periods of
expansion created the conditions for renewed crisis. Recognizing that the investigation of long waves posed problems due to the very extended period of observation and the limitations of available data, in his later work, Kondratieff chose data relating (primarily) to England and France as the basis for his inquiry. It is interesting to note that the time series he analyzed comprised both monetary variables (prices, interest rates, savings, wages) as well as real variables (imports, exports and various production series). In his work he made no attempt to explain the relation between movements of prices and those of production. A summary of the long waves Kondratieff discerned is presented in Table 4-1 below.5
In his 1926 paper, Kondratieff advanced the idea that there are three types of cyclical activity which influence economic aggregates. He surmised that the short waves (3-4 years), the intermediate business cycles (7-11 years), and the long waves of an average length of 50 years, interacted with each other giving the capitalist system of production a complex dynamic.

The idea that the dynamics of economic life in the capitalist social order is not of a simple and linear but rather complex and cyclical character is nowadays generally recognized. Science, however, has fallen far short of clarifying the nature and the types of these cyclical, wave-like movements.

While he did not develop a complete theory about the relationship between these three time frames, Kondratieff did believe that the long waves influenced the shorter cycles.

These intermediate cycles, however, secure a certain stamp from the very existence of the long waves. Our investigation demonstrates that during the rise of the long waves, years of prosperity are more numerous whereas years of depression predominate during the downswing.
This relationship, which Kondratieff identified as an empirical characteristic of dynamic capitalism, is illustrated in Figure 4-1 below.

Figure 4-1: Diagram of the long wave

Kondratieff identified four other empirical characteristics of the secular movement of the capitalist economy. During long wave downturns, (1) agriculture suffers severe depression and (2) many new technological discoveries occur but are only applied on a large scale in the next long wave upswing. In addition, at the beginning of a long upswing, (3) gold production generally increases and new markets are created by the assimilation of new territory into the system. Finally, Kondratieff noted that (4) the most severe wars and revolutions tended to occur
during the rising phase of the long wave. He emphasized, however, that these factors did not constitute an explanation of the long wave pattern.

In 1928, before the abrupt end of his career, Kondratieff did attempt to outline a theoretical explanation of long waves. This presentation, which he emphasized was a rough and incomplete sketch, combined a theory of reinvestment of structurally-oriented capital with a loanable funds theory to explain the cyclical nature of the long wave.

(I)t can be suggested that the material basis of long cycles is the wearing out, replacement and expansion of fixed capital goods which require a long period of time and enormous expenditures to produce. The replacement and expansion of these goods does not proceed smoothly, but in spurts, another expression of which are the long waves of the conjuncture....Thus the long cycles of the conjuncture constitute the processes of the deviation of the real level of the elements of the capitalist system from the equilibrium level of this system; processes, in the course of which the level of equilibrium itself changes.

The bunching of these structurally-oriented capital investments (railways, canals, land improvement projects, large plants, etc.) was related to the financial markets through the supply and demand for loanable funds. During the long wave downswing, a growing pool of loanable funds, a rising propensity to save and a low (or declining) price level acted to (eventually) trigger an expansion of investment in basic capital goods. As this long-run
expansion proceeded, prices rose, the loanable funds available become depleted and interest rates rose acting to (eventually) produce a cut-off of these investments and a long wave of decline. Thus, Kondratieff's explanation has been characterized as a 'periodic reinvestment cycle of long-lived capital' or as a 'monetary over-investment theory', (by Eklund and vanDuijn, respectively).

During the 1920s, Kondratieff's long wave thesis was strongly criticized in the Soviet Union by Leon Trotsky and others. While they agreed that the pace of capitalist accumulation and growth was not constant, they did not believe that these long-run fluctuations were periodic. From their perspective, factors such as wars, revolutions, new territories, and gold discoveries were seen as external/exogenous variables. And, if they were exogenous and random, then there was no reason to see the fluctuations in accumulation that they produce as a cycle. While these critics agreed with Marx that the intermediate (business) cycles resulted from the internal operation of the capitalist system, they foresaw the long-run trend as being determined by external (random) events that could not be explained by the system's internal dynamic. Kondratieff was thus accused of mistakenly identifying distinct epochs or stages of capitalism's development as long-run cycles.

Kondratieff responded that these considerations were important but, nevertheless, invalid objections. He
regarded the aforementioned factors as internally dependent ones instead of externally conditioned, independent, extra-economic ones. Events such as technological change, wars and revolutions, international expansion and gold discoveries were generated by the operation of forces inherent to the capitalist system. As such, they required an explanation that encapsulated this aspect of the capitalist system.

Their (the critics) weakness lies in the fact that they reverse the causal connections and take the consequence to be the cause, or see an accident where we have really to deal with a law governing the events.11

Kondratieff was further criticized for the statistical methods he employed, the apparently arbitrary manner by which the turning points of the long wave were identified and his characterization of the capitalist dynamic as a smoothly evolving process of equilibrium adjustment. This characterization was particularly unacceptable to the critics because it implied that periods of capitalist crises were transitory and that the system was able to create the conditions for a renewed expansion of accumulation. This contradicted the official Soviet view that the capitalist system had entered a crisis phase which would culminate in the eventual overthrow of a decadent system. It is not surprising, then, under these conditions, that the discussion of long waves of capitalist development came to an end in the Soviet Union.
In the United States, however, the idea of the long wave was incorporated into Joseph Schumpeter's work on business cycle theory during the 1930s. Schumpeter believed that the evolution of economic history revealed the operation of three distinct types of cycles which he named after their primary originators: the Kondratieff (40 to 60 years); the Jugular (7 to 10 years); and the Kitchin (3 to 4 years). He argued that these cycles were interrelated. Thus, he stated that

barring very few cases in which difficulties arise, it is possible to count off, historically as well as statistically, six Juglars to a Kondratieff and three Kitchins to a Jugular - not as an average, but in every individual case.

Starting with the long price cycles derived by Kondratieff, Schumpeter attempted to forge a theoretical link between these price movements and technological innovation in the dynamic leading sectors of the economy. A chronological summary of these long price cycles in accordance with Schumpeter's four-phase business cycle has been provided by Kuznets with Schumpeter's approval. This summary is shown in Table 4-2 along with Schumpeter's scheme for the designation of these waves. The dates for the first and second Kondratieff were for Great Britain while the third was for the U.S.
Table 4-2: Schumpeter's Long Cycles (Prices)

<table>
<thead>
<tr>
<th>Prosperity</th>
<th>Recession</th>
<th>Depression</th>
<th>Revival</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Industrial Revolution Kondratieff, 1707-1842: Cotton, Textiles, Iron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1707-1800</td>
<td>1801-1813</td>
<td>1814-1827</td>
<td>1828-1842</td>
</tr>
<tr>
<td>(2) Bourgeois Kondratieff, 1842-1097: Railroadization, Steam Power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1843-1857</td>
<td>1858-1869</td>
<td>1870-1884/5</td>
<td>1886-1897</td>
</tr>
<tr>
<td>(3) Neo-Merchantilist Kondratieff, 1857 to 1939: Electricity, Automobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1889-1911</td>
<td>1912-1924/25</td>
<td>1925/6-1939</td>
<td></td>
</tr>
</tbody>
</table>


Schumpeter hypothesized that technological innovation in the leading sectors of the economy occurred in a bunched fashion, as opposed to a continuously smooth sequence. Though invention may be viewed as a continuous process, the actual incorporation of new technologies into the production function through innovation by entrepreneurs occurs in a "herd-like" manner. The connection between the cyclical variations of price and the bunching of innovations was established through Schumpeter's assumption that the early phases of experimental innovation would be financed by an expansion of credit for the necessary investment. In the early stages of the transformation, however, the expansion of credit would outstrip any cost reductions achieved through innovation, thus bringing about inflation of prices. Once a new leading sector was firmly established and its technology generalized, the resultant cost reductions would
lead to a deflation of prices which also coincided with a reduction in credit financing. This is followed by depression and an eventual revival.

In Schumpeter's system, then, all three cycles were related to the same fundamental causes: the herd-like movement of entrepreneurial innovation; the initial expansion of credit-financed investment; and the subsequent cost reductions achieved as the innovating sector matured. According to Schumpeter, this sequence of events led to cyclical fluctuations in prices in reference to both the Kondratieffs and the shorter cycles. Throughout this analysis he placed primary importance on the role of fundamental technological change. Schumpeter's work after the Second World War continued to emphasize this position.

These revolutions periodically reshape the existing structure of industry by introducing new methods of production - the mechanized factory, the electrified factory, chemical synthesis and the like; new commodities, such as railroad service, motorcars, electrical appliances; new forms of organization - the merger movement; new sources of routes and markets to sell in and so on. This process of industrial change gives the general tone to business: while these things are being initiated we have brisk expenditure and predominating "prosperity" - interrupted, no doubt, by the negative phases of the shorter cycles that are superimposed on that ground swell - and while those things are being completed and their results pour forth we have elimination of antiquated elements of the industrial structure and predominating "depression". Thus there are prolonged periods of rising and of falling prices, interest rates, employment and so on, which phenomena constitute parts of the mechanism of this process of recurrent rejuvenation of the
productive apparatus.15

THE LONG SWING BACKLASH IN THE UNITED STATES

Following the Second World War, Schumpeter's analysis of the long wave came under severe criticism from a group of economists, headed by Simon Kuznets, who could loosely be called "long swing theorists." These economists criticized Schumpeter's statistical methods, his inability to adequately explain the factors that caused a long run periodic bunching of innovation and investment, and the rigid nature of his three cycle schema. In his 1953 analysis of business cycles Kuznets concluded that:

The prevalence of such fifty-year cycles in volumes of production, either total or for important branches of activity, in employment, in physical volume of trade, has not been demonstrated, nor has the presumed existence of these cycles been reconciled with those of a duration from 18 to 25 years established for a number of production series in this and other countries. Nor has a satisfactory theory been advanced as to why these 50-year swings should recur: the explanations tend to emphasize external factors (inventions, wars, etc.) without demonstrating their cyclical character in their tendency to recur as a result of an underlying mechanism or as effects of another group of external factors of proven "cyclicity"....The core of the difficulty seems to lie in the failure to forge the necessary links between the primary factors and concepts (entrepreneur, innovation, equilibrium line) and the observable cyclical fluctuations in economic activity.16

Kuznets thus questioned the existence of long waves, primarily due to the lack of statistical evidence and "the absence of factors that would explain their periodicity."17
In this way, he was repeating the arguments made by the Russian critics of Kondratieff regarding his dependence on external causes to explain the operation of the long wave. And, if the cause of the long wave was external random shocks, then obviously there was no reason to view them as cycles.

In place of the long wave, Kuznets advanced the concept of long swings (which he called secondary secular variation) in the rate of economic activity. Basing his analysis on his 1930 publication, *Secular Movements in Production and Prices*, in which he subjected some 65 production and 35 price series from five countries (U.S., U.K., Belgium, Germany and France) to trend analysis, Kuznets concluded that the data revealed long-run cycles that lasted 18 to 25 years. Further statistical analysis appeared to confirm Kuznets' results. In the U.S., the end result of this theoretical assault was that the Kondratieff cycle fell into disfavor as American mainstream economists concerned with the long-term trend shifted their focus to explaining Kuznets' cycle (the long swing) while non-traditional American economists emphasized how the development of monopoly capitalism was creating the conditions of permanent stagnation.

A thorough review of the long swing literature, as it developed in the three decades after World War II, is beyond the scope of this chapter. A brief summary of these
investigations would highlight both the on-going debate over the ability of econometric techniques to separate long-run variations from short-run fluctuations, as well as the controversy over the factors causing the (supposedly) observed long swing movements. Regarding the latter point, most of these economists gradually accepted the notion that international movements of labor and/or capital were related to the long swing phenomena. The major debate centered on whether the waves of migrating capital and labor caused the long swings in the U.S. (via a 20 year building cycle that also produced inverse long swing movements in the nations supplying the capital and labor - in this case Europe), or did the long swings in the U.S. cause the waves of immigrating labor and imported (portfolio) capital.

While it doesn't appear that this question was ever decided, the interest in the long swing has waned among some economists due to the general recognition of the historically specific conditions (waves of labor and capital migration from Europe to North America, South America and Australia) that produced these lengthy patterns.

The Kuznets' cycle in America lived, it flourished, it had its day, but its day is past. Departed, it leaves to us who survive to study its works, many insights into the kinds of connections and responses which go together to make for spurts and retardations in development.

Thus, in the prolonged post-World War II expansion, which saw a relative decline in the prestige of business
cycle theorists in general, the long swing was relegated to
a previous (and no longer relevant) period of the system's
development while the long wave was (by most all economists)
simply dismissed.

THE MODERN LONG WAVE THEORISTS

The return of economic stagnation and crisis periods
since the late 1960s, and the rising tide of economic
insecurity, tension and conflict in the 1970s and 1980s have
rekindled an interest in long waves among some academic
economists which has been mirrored in the popular press.23
These economists span the spectrum from the far right
(Rostow) to the far left (Mandel), so it should not be
suprising that a good deal of disagreement has surfaced.
The major areas of contention center on: (1) the variables
that illustrate the long wave movement; (2) the historical
time-dimension of the long wave; and (3) the theoretical
framework and explanation of the variables that produce the
long wave pattern (especially the turning points). These
questions will be addressed in this section.

Many of the authors discussed below build eclectic
(multi-causal) models/conceptions of the long wave by
selectively combining various factors into their
explanations. To facilitate this review, the authors have
been placed in the following classification scheme, based on
the major area of emphasis in their work:

(1) Disequilibrium in agriculture and raw materials
markets;

(2) Monetary and credit cycles;

(3) Technology, innovation and investment;

(4) Human psychology and demographic trends;

(5) Global politics, international hegemony and conflict;

(6) The social structure of accumulation.

In addition, it should be noted that the majority of economists on both the left and the right continue to deny the existence of long waves in economic activity. While both sides question the statistical verifiability of the long wave, the mainstream economists emphasize that there is no reason why a prolonged period of expansion must be followed by a long wave of (relative) contraction. On the other hand, most radical economists stress that, once the long wave of contraction has started, there is nothing in capitalism's internal logic that can explain a transition to a phase of expansion.²⁴

Disequilibrium in Agriculture and Raw Materials Production

One of the few authors who continued to use the concept of the Kondratieff long wave in the 1950s and 1960s was the eminent, eclectic economic historian, W. W. Rostow. Over an extended period he had sought to develop a synthesis between the work of the economic theorist and the economic historian. His interest in developing a model for the analysis of long-run trends developed out of his rejection
of Marx's analysis of the laws governing relations among the sectors of society as harsh and simplistic. On the other hand, Rostow felt that the theoretical growth models (advanced by the likes of R. F. Harrod, J. Robinson, N. Kaldor, E. D. Domar and others) were too restricted in their approach to the long-run dynamic problem. Rostow's early analysis took particular offense in the assumptions built into Harrod's dynamic model of the advanced countries which took population growth, the flow of innovations and the institutional framework of these countries as exogenously determined. Rostow concluded that it is precisely these factors which must be endogenously included in an analysis of the process of growth.

Having thus rejected both Marx's formulation of the laws of motion of capitalist development as well as the approach of the modern mainstream growth theorists, Rostow set out to develop an analysis which could answer the question: what determines the rate of economic growth? To answer this question, Rostow claimed that the appropriate model must endogenously include the determinants of (1) the size and quality of the work force, (2) the productivity of investment outlays, and (3) the character and scale of innovations and their degree of diffusion through the economy. In his system the process of innovation was viewed as a continuous (even) flow of possibilities for investment. Investment took various forms which were directly related to
the pressure of growth against productive resources.

The course of investment emerges as a race between diminishing returns, the flow of innovational possibilities and two fundamentally sociological characteristics of society — namely, its response to opportunities for profit (including profit to be derived from fundamental and applied science) and the extent to which it is prepared to accept and apply the innovational possibilities offered.

Rostow did not believe, however, that a boom in the business cycle came to an end because investment had exhausted all of its objective possibilities. Instead of general over-investment, the end of the boom was characterized by an overshooting of investment in particular directions or sectors. The boom took a downturn because

....in the leading lines of new investment the market has come to appreciate that expansion in certain sectors has proceeded beyond the optimum level, or that the decisions already taken would lead to such disproportionate expansion in terms of the optimum sectoral levels of capacity and output.

Thus, he rejected outright the possibility of the occurrence of a realization crisis due to generalized over-investment and, hence, overproduction. For Rostow, over-investment occurred only in particular sectors which created disproportionalities but not generalized over-investment. In this view of the business cycle there was no necessity for the boom to end; the full employment volume of investment could be sustained if the composition of investment were appropriate. In addition, Rostow claimed that this view of the cycle allowed for the possibility that
business cycles of different length are essentially of the same nature, but are to be distinguished mainly with respect to the period of gestation of the leading forms of investment which dominated their course.\footnote{29}

It is not surprising, then, that when Rostow proceeded to an analysis of Kuznets' secondary secular variations and Kondratieff's long waves, the same methodology and variables were employed.

In his investigations in the early 1950s, Rostow sought to blend long swings and long waves, yet his analysis focused on the Kuznets cycle. Rostow accepted and supported the existence of these secular variations but he did not believe that they constituted a cyclical phenomenon. He claimed that these trend periods, defined in terms of fluctuations in prices not output, were caused by a prolonged overshooting of investment and production in particular sectors of the economy, and "by the reaction from such excessive distortions in the sectoral pattern of growth." The two possible forces responsible for this overshooting were viewed to be wars and the "lumpy forms" of investment in agriculture and raw materials which possessed long periods of gestation. His explanation tied these factors to the opening and exploitation of new regions in the world. The dating of Rostow's trend periods (in regard to agricultural prices) is given in Table 4-3 below.
Table 4-3: Rostow's Trend Prices

<table>
<thead>
<tr>
<th>Rising relative agriculture prices</th>
<th>Falling relative agriculture prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1793-1815</td>
<td>1815-1846</td>
</tr>
<tr>
<td>1844-1873</td>
<td>1873-1896</td>
</tr>
<tr>
<td>1896-1920</td>
<td>1920-1935</td>
</tr>
<tr>
<td>1935-Present (1953)</td>
<td></td>
</tr>
</tbody>
</table>

Rostow believed that his conception of these trends was distinct from Schumpeter's since the analysis did not require the 50 year period to be cyclical. In addition, Rostow claimed that it:

is also to be distinguished with respect to its judgment on the causes of the periods of rising prices. Schumpeter would associate these with major industrial innovations, the present argument with periods of war and extensive expansion, of long gestation period....Historical evidence does not appear to support the view that the periods of rising trends in general prices were caused primarily by the coming of major new industries....The aim of this dangerously stylized rendering of modern economic history is to underline the existence in history of powerful distortions in agricultural and raw material capacity, away from realistic optimum levels which gave a special character in both expansion and contraction phases to relative price movements, to income distribution, and to the type of investment expected to be profitable. The great phases of large international and inter-regional capital movements were essentially a consequence of this process.

Rostow concluded his early analysis of trends by noting that it was similar to Schumpeter's in the importance given to the gestation period and in the association of a trend upswing with an abundance of investment opportunities offering high yield. This work represented a generalized extension of earlier work he had done on the British economy.
from 1790-1914, focused this time on the world economy as a whole, rather than on a national economy.\textsuperscript{32} He concluded that,

in general, the author would emphasize his belief that the character and causes of trend period, both when they are related to the development of new resources in response to the pressures of growth against existing capacity and when they are judged to have been initiated by distortions in capacity and requirements caused by wars, are significantly clarified by placing them against the background of a systematic conception of the process of growth in relation to sectors of the economy.\textsuperscript{33}

In his early post-war work, Rostow applied his analysis of sectoral growth to the "stages of economic growth" as a way of "generalizing the sweep of modern economic history." As is well known, Rostow designated these stages as follows:

1. traditional society;
2. the preconditions for take-off;
3. the take-off;
4. the drive to maturity;
5. the age of high mass consumption;
6. the age beyond mass consumption.

Rostow believed that it was useful to characterize an economy according to the roles played by its leading sectors with these stages viewed as efforts by societies to reach their optimum sectoral paths. By using what he claimed to be a dynamic "disaggregated theory" of production, Rostow asserted that

we are examining, then, not merely the sectoral structure of economies, as they transformed themselves for growth, and grew; we are also examining a succession of strategic choices made by various societies concerning the disposition of their resources which include but transcend the income
elasticities of demand. 34

Rostow returned to this disaggregated theory of sectoral production and its relation to trends and overall economic growth some twenty years later in a series of further publications during the 1970s.35 In these writings, Rostow maintained that it was now advantageous to move away from Kuznets' conception of secondary secular movements (long swings) towards the Kondratieff conception of long waves. It was time to return to the questions first posed by Kondratieff which were not dealt with either by the growth theorists or by Kuznets and his disciples. "I conclude, then, that the phenomena identified but not explained by Kondratieff have still not been brought within the framework of 'an appropriate theory of long waves'."36

In setting aside the 20 year Kuznets cycle in favor of the analysis of long waves, Rostow advocated the use of a tripartite mechanism which focused on the forces set in motion by: (1) the changing sequence of leading growth sectors; (2) changes in the supply of and demand for foodstuffs and raw materials, which, due to shifts in profitability, induce an altered pattern of investment; and (3) internal and external migration and their echo effects which affect the rate of family formation, housing demand and the relative size of the working force. In using this mechanism Rostow placed particular emphasis on the profitability of foodstuff and raw materials production
which he believed provided the missing link required to return to the Kondratieff approach.

....the flow of capital to Argentina and Australia, Canada, New Zealand, and (I would add) pre-1860 United States cannot be understood outside the context of the changing profitability of foodstuff and raw material production as decreed, on the one hand, by price movements of their export products, on the other, by major developments in transportation and other technology related to agriculture.37

Rostow stated that there are three factors which could set in motion an expansion of raw material or foodstuff production, all of which were related to profitability. First, if demand grew more swiftly than supply (which may be stable), prices and profits would rise causing an expansion of production in response. Second, a new technique may become available (such as breakthroughs in transportation or refrigeration) which could lead to higher profits. Last, new resources may be discovered that could be profitably extracted. In Rostow's schema, the expansion of foodstuff and raw materials production after the American Civil War, in response to prices and profit potential, led to a downward trend in prices after 1881. After 1899 raw materials and foodstuff prices slackened their rate of descent and between 1906 and 1913 again began to rise. By surveying the historical experiences of a few of the less advanced countries (Canada, Australia, Argentina, and the USSR) Rostow surmized that these fluctuations in foodstuff and raw materials prices (using wheat prices as a proxy)
were related to international capital flows to Australia, Argentina and Canada, respectively, between 1883 and 1913. He claimed that these international capital movements

....helped prepare the way for and, in some cases, mightily reinforced but did not cause the process (price fluctuations) to take place. The scale of capital exports did, of course, have consequences for the character and pace of evolution in the capital-exporting nations...In a rough-and-ready way the world economy was responding in these years to profit possibilities created by price movements and technological developments: a dynamic stock adjustment principle was at work on a grand scale. This balancing process, however, including the capital flows it induced, reinforced the effect of industrial deceleration on real wages in the more advanced industrial nations of the Western world.38

Rostow's third factor, immigration, was viewed as a response to different levels of expansion in various states. In the case of the new countries, he argued that,

The combination of railroad technology, the lowering of shipping freight rates, and price movements made profitable the opening of new fertile, hitherto unexploited acreage; immigrants flowed to these regions; the whole process, erratically reinforced by international capital movements, set in motion a rapid generalized expansion, transcending agriculture, permitting the large-scale flow of immigrants to be productively absorbed in the new economies.39

In his work during the 1970s Rostow applied this tripartite mechanism to an analysis of long run trends since the First World War. In dating these trend periods (placing primary emphasis on the prices of foodstuffs and raw materials) Rostow arrived at the following schedule:
TREND PERIODS SINCE WWI

1920-1937: Downward trend
1938-1951: Upward trend
1952-1972: Downward trend
1973-?: Upward trend

Using the United States as an example, Rostow saw the period from 1920 to 1937 as marked by falling agricultural prices due to the expansion of production, coinciding with high rates of immigration (at least until 1925 when the enactment of new legislation in the U.S. restricted the amount of immigration). The downward trend in the prices of foodstuffs and raw materials was reversed in the later 1930s due to cutbacks in acreage and the expansion of incomes at the close of the Great Depression. From 1938 until 1951 there was thus an upward trend followed again by its opposite from 1952 until 1972.

Rostow claimed that during this latter downtrend the U.S. was in the midst of a transition from one stage to another of economic growth. In the United States, after 1951,

a shift began towards a new set of leading sectors, as high mass-consumption no longer had the power to drive the economy forward....Operating through political as well as economic markets, the income elasticity of demand asserted itself towards the end of the 1950s, in the form of rapid increases in outlays for education, health services, travel, recreation and welfare....While Western Europe and Japan enjoyed a last decade's fling at high mass-consumption in the 1960s, the United States was experimenting
with the complexities of what I have called
the search for quality.40

A turning point was reached in 1972-73 that Rostow
believed was as sharp as those of the 1790s, 1840s, 1890s
and 1930s. He attributed the latest turning point to the ad
hoc events of bad harvests and a growth in the perception of
power by the OPEC members. Given Rostow's emphasis on the
prices of foodstuffs and raw materials, it is not surprising
that he concluded that the world had entered a new period
with an upward trend.

....the global pace of population increase and
industrialization suggest that the pressure of
demand on the supply of foodstuffs and raw
materials will not prove to be a short-term
phenomenon. I am inclined to believe that the
fifth Kondratieff upswing is upon us. In
different ways each of the previous
Kondratieff upswings generated anxieties about
the long-run balance between population, land
and natural resources - from Malthus to the
Paley commission report....Much is, of course,
unique about the world economy of the 1970s.
But the counterpoint between leading sector
complexes and the constraining forces set in
motion by relative shortages of foodstuffs and
raw materials - and the investment
requirements for their connection - is an old
story in economic history, as old, in fact, as
the British take-off of 1783-1802.41

Immanuel Wallerstein has noted that it is somewhat
ironic that Rostow's assertion of a downward trend from 1952
to 1972 corresponded to a period of unprecedented growth of
output and incomes in the U.S. and the world economy.42
Equally surprising was Rostow's characterization of the
period from 1973 to 1980 as the beginning of an upward
trend, since this period has generally been recognized as
one of world-wide stagnation. The irony of this situation can be understood by realizing Rostow's misplaced emphasis on changes in the general price level and shifts in the terms of trade (relative price fluctuations between manufactured goods and primary goods - foodstuffs and raw materials) as the discriminating elements of the long wave. Rostow maintained that the current (1970s) stagnation in production and trade occurred within the context of a general inflation of prices and a radical shift in prices in favor of foodstuffs and raw materials. Fundamentally, Rostow believed (as he did some thirty years ago) that these price trends, as well as business cycles themselves, were the result of errors in the proper level and composition of investment spending (particularly in the primary goods and leading industrial sectors). 43

In the case of both trends and cycles, however, irregularity in the pattern of growth derives from lags and from distortions in the process of investment away from optimal sectoral paths....These distortions rise from three factors: investment decisions tend to be determined by current indicators of profitability rather than by rational long-range assessments; these indicators tend to make many investors act in the same direction, without taking into account the total volume of investment in particular sectors that is being induced by current profit expectations; and, beyond these technical characteristics of the investment process, there is, psychologically, a follow-the-leader tendency, as waves of optimism and pessimism about the profits to be earned in particular sectors sweep the capital market and industries where profits are (or are not) being plowed back into the expansion of plant. In both trend periods and business
cycles the result is phases where capacity exceeds current requirements or falls short of them.44

Rostow felt that secular trends in production and prices could be explained by the use of a disaggregated sector model (focused on leading sector complexes, agriculture, inputs into the industrial system, housing and infrastructure), as long as four assumptions were made. These conditions were: (1) total capital formation is limited by savings (Kuznets' competition for funds between population-sensitive and insensitive investment); (2) the dynamic system of adjustment is not instantaneous, but subject to variable lags (Schumpeter's periods of gestation of investment); (3) investment decisions are made on a microbasis under the influence of a follow-the-leader strategy (Keynes' conception of over-optimism and over-pessimism resulting in successive periods of excessive and deficient capacity); and, finally, (4) the system is international allowing for migration and capital flows between nations. Rostow concluded that:

What Kondratieff, Schumpeter, and the early and late Kuznets were getting at were the forces set in motion by the imperfect efforts of the world economy to approximate under these four conditions, an optimal pattern of investment and output in these four kinds of sectors. Thus, we are not examining different theories of secular movements in prices and production, but aspects of the dynamic adjustment process in particular national economies within a more or less interconnected world economic system.45

Another economist, who also places heavy emphasis on
agriculture and raw materials disequilibrium in explaining the relationship between long-run growth and cyclical economic activity is Angus Maddison. He, however, reaches very different conclusions about the long-run trend since the Second World War. In his studies, he did not refer to Kondratieff or the long wave literature and, hence, avoided questions concerning the cyclical nature of long-run trends and their periodicity. Instead, Maddison's analysis of growth was expressed in terms of phases (stages) of capitalist development.

In two articles published in the late 1970s, Maddison attempted to establish the historical existence of distinct phases in the development of the capitalist world economy.46 His analysis was limited to the period from 1870-1970 due to data limitations prior to 1870. The data were taken from 16 "capitalist" countries and analyzed both as a whole and individually.47 The data analyzed included eight macroeconomic indicators, five "system characteristics" and three "intangible" conditions. These are explained in Table 4-4 below.
Table 4-4: Variables Used by A. Maddison to Identify Phases of Capitalist Development

A. Quantifiable Macroeconomic Indicators

1. Rate of growth of output
2. Output per head
3. Capital stock volume
4. Export volume
5. Cyclical variations in output
6. Cyclical variations in exports
7. Levels of unemployment
8. Rate of price increase

B. Non-quantifiable System Characteristics

1. Government approach to demand management
2. Bargaining power and expectations of labor
3. Degree of freedom for international trade
4. Degree of freedom for international factor movements
5. Character of international payments mechanism

C. Fundamental Intangible Forces Determining Economic Performance

1. Incentive to invest
2. Degree of technological dynamism
3. Factors affecting resource allocation

Source: Angus Maddison, "Phases of Capitalist Development"

Maddison used these variables in an attempt to show the existence of separate phases of capitalist development, each with its own "distinct momentum." His analysis identified four separate phases. These periods are shown by the seven variables in Table 4-5.
In Maddison's view the major factor determining the rate of economic growth was the pace of productivity advance. Productivity growth is, in turn, mainly influenced by: (1) the conditions of demand; (2) the rate of capital formation; (3) conditions (efficiency) of resource utilization; (4) technological change and international diffusion of technology; and (5) structural changes.

Maddison contended that the post-war acceleration in productivity growth developed in the context of high and stable rates of demand growth.

The impact of demand conditions on employment was at the heart of prewar 'Keynesian' business cycle analysis. In the post-war period, it has become clear that the buoyancy and stability of demand can also be a major factor determining productivity growth. There was a backlog of opportunity on the 'supply' side which enabled productivity in these economies to respond very favorably once the right climate of demand and expectations of future demand had been created.

This condition of buoyant demand induced an
acceleration of growth in the capital stock which, for Maddison, was the dominant variable influencing the post-war growth in productivity.

The main instrument by which high demand created high productivity growth was by raising the rate of investment and the growth of the capital stock....High demand (also) flushed surplus labor out of low productivity occupations, both within countries and by promoting international migration, it improved efficiency, and induced economies of scale...(But) the fundamental instrument (on the supply side) for faster postwar productivity growth, has been the acceleration in growth of the capital stock per hour worked.\(^{51}\)

Thus, the conditions of demand in the 16 capitalist countries led to an acceleration of capital formation within these countries, which in turn, was the main cause of higher productivity and, hence, growth. Secondary importance was given to improvement in resource use (also induced by demand) which occurred through the elimination of underemployment in agriculture and other structural shifts in the employment of labor.\(^{52}\)

Additionally, Maddison stated that there was no evidence to support the contention that the post-war acceleration was due to a greater pace of technological innovation.

I assume that the pace of technical progress is closely related to the rate of advance of best practice productivity. This is not measurable directly, but as a rough proxy, I use the rate of growth of the average productivity level in the lead country - the U.S.A. In fact, U.S. productivity growth has been much steadier than that in other
countries. Most importantly, the U.S.A. has not had the post-war acceleration in productivity growth which has occurred in all other countries. I conclude from this that the technical frontier has moved forward rather steadily. The productivity acceleration in most countries in the post-war period has, however, brought them much closer to the frontier.53

Maddison concluded that the decline of productivity growth in the 1970s and, hence, the decline in the rate of economic growth, was due to the following reasons: (1) the European countries and Japan were operating closer to the best practice technology, which made productivity gains somewhat more difficult to obtain; (2) the importance of the structural shift from agriculture and gains from trade waned in importance; (3) various types of regulation and the increase in energy prices imposed structural constraints of a temporary character; and (4) cyclical slack constrained productivity growth in two main ways - it reduced the growth of the capital stock somewhat and it reduced efficiency of resource allocation. It seemed likely, to that analysts, that most of the productivity slowdown in the seventies was due to the first three causes, and that the influence of the cyclical factors was rather modest.54

Philip Ehrensaft tried to reconcile the apparent contradiction between Rostow and Maddison (and just about everybody else) over the characterization of the 1970s as either a period of long wave expansion or one of long wave stagnation.55 He pointed out that before World War I, the
agricultural and industrial sectors of the economy moved in unison due to the high proportion of society engaged in agricultural endeavors. Citing, however, the changing nature of society (growth of industry and secular decline of farm population), Ehrensaft asserted that, in the current long wave, agriculture entered a phase of stagnation (B-phase) while the economy as a whole has entered a phase of relative expansion (A-phase). While he does not present a complete explanation of this separation, he indicated that the growth of oligopolistic industries in the period since World War II, in conjunction with a competitive and rapidly expanding (due to increasing productivity from techniques of production based on petroleum and hybridization) agriculture sector, produced a long period of relative decline in agricultural prices (1951-early 1970s). Since the early 1970s, agriculture has entered an A-phase of expansion and rising prices brought about by diminishing returns from the further application of petroleum and hybridization techniques which produced a flattening out of productivity increases. Thus, in the face of declining productivity advances, the growth in demand for foodstuffs, induced by rising world population and rising incomes in Europe and Japan, has produced an A-phase of expansion for agriculture.

These forces have raised agricultural prices to the extent that, for at least some years, farmers receive real increases for production despite the capacity of agribusiness oligopolies to capture much of the generated surplus. Furthermore, some groups of farmers
in North America, especially in the dairy sector, have been able to organize themselves politically such that their prices are indexed to input costs, i.e., these farmers can collectively behave like other oligopolies.

While Ehrensaft made no attempt to explain the B-phase of stagnation for the economy as a whole in the 1970s, or its relation to the agriculture expansion phase, he did predict that the transition to an A-phase will produce a clustering of new technological innovations in the agricultural sector.

If the long wave conception holds up, then we ought to observe another set of innovations which was searched for and brought to fruition during the last B-phase in response to squeezed profits, and we should also be observing their initial adoption by "top farmers" at the present time. It seems that there is such a new cluster of innovations.

And, if past patterns held, Ehrensaft predicted that a new B-phase of stagnation in agriculture would begin in the late 1990s which would further reduce the farm population and harden the dualistic nature of the agricultural sector.

Money and Credit Factors

Another long wave theorist of long standing is Leon H. Dupriez, who conducted a statistical and theoretical analysis of that phenomenon in his book, Des movements economiques generaux, published in 1947. His approach was very similar to that of Schumpeter's. Dupriez recognized the contribution of Kondratieff, but he felt that:

....Kondratieff's analysis was too simplified, mechanistic and deterministic....(R)eferece
to the long wave in English literature pertains largely to the original Kondratieff theory relating long waves to gold production or to the concurring Cassel-Kitchin explanation relating long waves to gold stocks. It is largely due to the reference to such simplistic and circumstantial models that English and American economists looked askance at the long wave itself and dismissed it. Dupriez claimed that it was a mistake to "throw away the baby with the bath."

Writing in 1978, Dupriez set out to reexamine the long wave. In the article, "1974: A Downturn of the Long Wave?", he asserted that there were two possible intellectual attitudes concerning long waves. The first accepted their existence as being embedded in monetary and real economic conditions, and tried to incorporate these waves into the analysis of growth and current economic trends. The second was that long waves were historically specific phenomena that ceased to exit with the rise of Keynesian policies that provided an autonomous and new form of economic development, and, therefore, their analysis should be abandoned. Dupriez had always been "suspicious" of this latter attitude, and the course of economic events after the Second World War (especially in the 1970s) have served to reinforce his suspicions.

It is obvious from the title that Dupriez felt 1974 marked the turning point of the long wave from a phase of expansion into a phase of stagnation. Thus, in direct opposition to Rostow, Dupriez saw the period from the Second
World War to 1974 as an upward sustained movement and the period since 1974 as one with a downward trend. Dupriez believed that an explanation of the "severe conjunctural crisis" in 1974 should rely on the traditional tools of business cycle analysis. For him, the timing of the current long wave downturn (as well as the previous ones of 1818, 1872, and 1920), was associated with severe and abrupt declines in economic activity and prices. These declines were due to the synchronization of a downward thrust in the business cycle with a similar thrust in the long wave of development, producing a severe crisis.

The long wave is an underlying complex of trends working through ordinary business cycles. This means that the upward movement breaks precisely with and through an ordinary conjunctural crisis, while the lower turning point is associated with a severe and protracted depression. We must reject any temptation to search for a mechanistic and special explanation of the downturn of the long wave: everything is in underlying trends.60

According to Dupriez, the common characteristics that marked the onset of a downward trend in 1974 could be summarized as follows: (1) overproduction; (2) increasing excess capacity; (3) declining investment spending; (4) increasing rationalizations in business organization; (5) increasing worries over raw material scarcity; (6) increasing technology aimed at higher rates of labor productivity; (7) the destruction of the international dollar standard; and (8) high interest rates due to the
overextension of credit. In his analysis a primary role was assigned to the importance of money, credit and prices in the transition to a downward long wave. He maintained that historically these severe slumps have corresponded to changes in the international monetary system.

Money has always been involved in the downturns of the long waves, very seriously indeed: whereas the monetary system as it stood worked smoothly in the upswings up to a point where tensions developed, the downturn stood in the center of monetary crises and reforms. Indeed, the institutional set up of the monetary system was transformed at these very moments: but every time, the process spanned a few years, before and after the crucial dates of the downturn in the pricing system. The gold standard system was introduced in England in 1818; the gold-silver bimetallism crashed in 1874; a general upheaval of currency parities was introduced after 1920.61

Dupriez went on to point out that a unique feature of the current long wave downturn was the continued persistence of rising prices in the 1970s. He believed that, in the downturn, a general fall in prices was prevented by persistent monetary stimulation which has reinforced an overexpansion of credit despite relatively high nominal rates of interest. He connected this to the particular type of international monetary reform adopted after 1974; i.e., a system of unstable floating exchange rates. In his view, high interest rates have hurt the business sector more than the public sector and households who may anticipate an easing of their debts through monetary depreciation.

But the rates are definitely restrictive for
business concerns, whose interest rates must match a marginal efficiency of capital from the very first year.

All commercial business, generally conducted on the basis of short-term bank indebtedness, must also meet the cost of such high rates. This reacts, of course, on capital development: for, as diminishing and low rates of return on short capital show, borrowing rates should be lower to match the marginal efficiency of capital in new developments.62

In terms of real developments, Dupriez saw the long wave downturn as a period where depressions were protracted, while phases of prosperity spent themselves rapidly. Thus, Dupriez foresaw a lower rate of growth in the future than had been experienced in the past. In addition, the maintenance of high wages due to union action would force firms to "press for rationalization" as they attempted to combat lower rates of profit. As a result, he believed that unemployment would prove rather untractable, thereby remaining a major social concern.

Dupriez concluded that it was too early to tell the future course of the downward long wave due to the uncertainty caused by inflation and the instability of the international monetary system.

The causes and consequences of melting money should be analyzed very urgently. Previously, the monetary institution was in askance: nowadays the very concept of a standard of value is involved, in all its numerous consequences. It is not yet possible to predict what the outcome will be; a breaking away of the standard in accelerated inflation or efficient measures to restore it. Sheer extrapolation of existing price trends is the most unlikely hypothesis.63
Technology, Innovation and the Bunching of Investment

The Schumpeterian view of the relationship between the bunching of investments in new technologies and the rate of growth for the economy as a whole has been further investigated by another group of economists. Most of this literature stands in distinction to the perspective of traditional (neo-classical) economics which postulates the rate of innovation to be autonomously determined. The latter theorists have not, generally, incorporated the rate of technological innovation into their models of the economy as an endogenous variable, preferring instead to treat it as exogenously determined (the residual of productivity advances) by the pace of scientific development (which for exposition is generally assumed to be constant over time).

In contrast, all of the innovation long wave theories, emphasizing the discontinuous nature of technological change and product development, hypothesize that long-run cycles of growth are related to the bunching of innovation. The major disagreements between these theorists center on three questions: (1) Does the bunching of technological investment produce the long wave pattern of growth or does the causation run in reverse?; (2) Which factors produce the bunching of investment?; and (3) What determines the periodicity of the bunching of investment?

Most of these theorists utilize the concept of growth as an S-shaped (logistic curve) phenomenon, whereby an
initially increasing rate of growth is followed by a phase of a declining rate which is then proceeded by an end of growth (and frequently, eventual decline). This view of growth, illustrated in Figure 4-2, below, was first advanced by the French sociologist Gabriel Tarde in the 1890s (published in English in 1903) to explain the process of innovation. During the 1930s both Simon Kuznets and Arthur F. Burns applied this concept to the analysis of industrial trends. In the 1950s this pattern of growth was adapted to the field of marketing which yielded the model of the product life cycle that hypothesized separate stages in the development of new products. In the 1960s and 1970s the product life cycle model was applied by economists to an explanation of the pattern of a country's international trade and investment flows. Figure 4-2 also illustrates the three possible courses of an industry's (or product's) growth after the initial S-shaped phase of accelerating and then decelerating expansion.
The innovation long wave theorists, beginning from this framework of industry and product life cycles, hypothesize that if a large number of (or the major) industries were to undertake this process at the same time (a possibility specifically doubted by the traditional analysis), a bunching of investments and a wave of growth would be generated. One economist, G. Mensch, has argued that the economy's transition from expansion to stagnation is caused by a lack of basic innovation. The reason for this is that the old technologies are still profitable in the early
stages of depression while the risk (uncertainty) of the new technologies is too great for them to be embraced. In Mensch's words, "Only in the trough of the cycle, when profits of used-up technologies are unbearably low, will capital overcome its aversion to risk-taking and throw itself upon the possibilities of available innovations." 69

To support this view, Mensch presented time series data on the number of basic innovations from 1740 to 1850. His analysis indicated that the frequency of such innovations reached four peaks which corresponded to the depression periods of the 1760s, 1830s, 1880s and the 1930s. The search for innovations ends the depression and brings about a recovery based on these new engines of growth. The cycle is repeated as these industries eventually reach a point of saturation and a new "stalemate in technology" is encountered which produces the transition to stagnation and eventual depression.

Three British long wave economists, C. Clark, C. Freeman, and L. Soete, accept Mensch's framework, but criticize his data regarding the choice of what constituted basic innovations (as opposed to improvements or pseudo-innovations), as well as his time-dimension or dating for a number of agreed-upon critical technological changes. 70 In their view the corrected data revealed that the bunching of innovations occurred in the early stages of the long wave upswing when the economic outlook was
favorable, not during the depression. In addition, they believed that Mensch's view of innovation swarms, whereby a set of basic innovations find increasing applications in many field, was too limited. They emphasized that the push to innovation occurred in many sets of fundamental changes that were all picked up at once.

Further work by Luc Soete in the 1980s has attempted to clarify the timeframe of the bunching of innovations in the early stages of the long wave expansion. He proposed what he called a "probit or threshold level diffusion model" which hypothesized that new technological discoveries will, at first, experience resistance to their adoption. The causes of this retardation in the acceptance and diffusion (through innovations) of these new technology systems related to the firm's behavior under conditions of uncertainty. The factors that were deemed to be decisive were the firm's aversion to risky unproven technologies; its possible lack of size and/or financial resources to embrace the new technologies; and the firm's sizeable investment in the existing (older) technology system. Soete placed particular emphasis on inter-technology competition between the existing system and the new innovation cluster, arguing that the older technologies would counterattack by embarking on a series of improvements intended to retard, if not defeat, the new system. (Soete cited the Wankel engine, the electric car, and the Concorde as examples of defeated
technologies.)

Thus, while the innovation cluster might provide a radical improvement as compared to existing technology, past investment outlays in the latter - both in terms of capital and skills, and one could add in terms of research and development oriented towards incremental improvements to existing technologies - will provide a powerful retardation factor in the diffusion of the innovation both from the supply and the demand point of view.\(^3\)

In Soete's view, a set of closely related clusters of innovation is accumulated through time due to the retardation hypothesis. At some critical point, however, the growth in the firm's size and income produces an increasing receptiveness to the new technology system which leads the largest firms to undertake its adoption. As information spreads and imitators develop, the new system is gradually embraced, across the board, by firms of all sizes.

In our diffusion terminology, this could be viewed as an envelope of diffusion curves of a set of closely inter-related clusters of innovations, which occurring within a limited time span, might tilt the economy in the early diffusion phase to a higher rate of economic growth, and thus provide an explanation for both the overall long-term S-shaped development pattern of new industries and overall long-term growth accelerations and decelerations.\(^4\)

Soete expanded his analysis to the international level through a discussion of the less developed countries' (LDCs) current ability to compete during the latest phase of inter-technology competition. He utilized Rostow's concept of stages of economic growth to conclude that the present
long wave of stagnation was creating the conditions for LDCs, who are at or near the stage of take-off, to import the most sophisticated system of technologies, thereby leapfrogging over older technology systems. 75

Research by F. M. Smith, in 1982, supported Mensch's view in this debate.76 Smith, basing his study on Schumpeter, Kuznets, and Mensch, argued that,

The fourth cycle derived from a cluster of basic innovations in the 1930s, namely television, color films, communications, jet engines, radar and modern transport, plastics and artificial fibres. We are, of course, still in the fourth Kondratieff cycle and looking for the basic innovations to pull us out of the depression. 77

Choosing 1954 as the beginning of the prosperity phase of the fourth Kondratieff, Smith claimed that the recession phase began in 1965, followed by depression in 1979 with the revival scheduled for 1994. The revival will usher in a renewed phase of prosperity in 2009. Smith predicted that this new period of prosperity will be founded on technological advances in such areas as electronics, biochemistry, alternative energy sources, and deep seabed mining.

Raphael Kaplinsky used this same methodology to argue that the post-World War II wave of expansion produced a narrowing of the technological gap between the developed countries (DCs) and the less developed countries (LDCs)78. Kaplinsky contended that each long wave cycle was characterized by the initiation, development, and eventual
diffusion of what he termed, 'a heartland technology'. In his view the role of heartland technology in the current long wave is played by microelectronics. He predicted that "as the world economy becomes engulfed in the downswing, so LDC export-led growth is threatened with the diffusion of microelectronics to DC industry reopening the gap in technology."79

Kaplinsky believed that by the 1920s (sic) three different spheres of production began to emerge as separate (yet still connected) operations. One sphere was devoted to research and design while another focused on production and distribution. The function of the third sphere was control and its activities included such items as purchasing, production planning, sales planning, and financial budgeting. This sphere was, therefore, mainly involved in the gathering, processing, evaluation, storage, transmission, manipulation and/or presentation of information.

From the perspective of these three spheres of production, Kaplinsky identified three major forms of automation as: (1) intra-activity automation; (2) intra-sphere automation; and (3) inter-sphere automation. The intra-activity type would occur if some activity, such as purchasing, was automated. The intra-sphere kind would involve the linking in automated processes of activities within a given sphere, while inter-sphere would automate
linkage of separate spheres. Kaplinsky claimed that previous eras of automation were largely of an intra-industry nature.

The introduction of electronics into each of the individual spheres has really been a phenomenon of the 1970s and it provides the potential for a quantum leap in the degree of intra-sphere and inter-sphere automation. This is largely because of the fact that the control algorithm in all of these various, individual activities is reduced by the same binary building blocks that are the currency of electronics-based devices. The real potential of the equipment will emerge when the downstream synergies with other sets of electronic equipment could be realized. These include parts-listing, inventory controls, estimating, billing, machine-setting and mechanical control. When word-processors are linked to electronic filing systems, intelligent copiers and other word processors, then productivity gains realized will increase significantly.

Kaplinsky saw the stagnation since the early 1970s as a period of using up the old information processing automation and rationalizing its operations, while the individual components of the new 'electronic jigsaw' are being set in place.

To be implemented, intra-sphere and inter-sphere automation necessitates two major preconditions: the first is the wide-spread existence of individual components of this electronic jigsaw; the second is the ability to reorganize enterprises in such a way as to take advantage of these system gains.

He concluded his analysis by pointing out two developments in the current long wave of stagnation that will have a negative impact on the continued technological development in the LDCs. First, growing protectionism is
making many companies from LDCs and developing countries undertake direct investment as an option for servicing and expanding their foreign markets. Second, the changes in technology will significantly reduce the demand for labor, thereby undermining the lower wage costs in LDC export processing zones.

Another perspective that has been advanced placed less emphasis on the role of innovation bunching and focused on infrastructural reinvestment cycles as the cause of the long wave. This view which can be traced to Kondratieff (and, before him, DeWolff) related the long wave to the useful life of basic capital goods. In the 1940s, Colin Clark adopted this conception, arguing that the long wave was characterized by the alternating passage from phases of capital shortage (hunger) to capital-satiated (excess) phases. More recently, a similar framework has been applied to an explanation of the long wave by Jay Forrester.

At the Massachusetts Institute of Technology in the 1970s, Forrester constructed a computer model - 'The System Dynamics National Model' - to illustrate the operation of the consumer durables and capital goods sectors and, to his surprise, found that it exhibited strong fluctuating growth and collapse of capital goods, with about 50 years between the peaks of capital output and expansion. Forrester believed that this model provided a "theory" with which it

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was possible to explain how these 45 to 60 year long waves in the rate of economic activity were generated. The process involves an overbuilding of the capital sectors in which they grow beyond the capital output rate needed for long-term equilibrium. In the process, capital plant throughout the economy is overbuilt beyond the level justified by the marginal productivity of capital. Finally, the overexpansion is ended by the hiatus of a great depression during which excess capital plant is physically worn out and financially depreciated on the account books until the stage has been cleared for a new era of rebuilding.

Technology and innovation are related to this process since they are incorporated into the products of these sectors, and, therefore, the long wave "strongly influences the climate for innovation." He even agreed that each long wave upswing began with a new set of technologies. Forrester, however, proposed to reverse the relationship, advanced by Schumpeter and others, that the process of innovation is a determinant factor in the generation of the long waves. For Forrester, the long waves determined innovation and technical change as they did in Ehrensaft's model.

Forrester stated that every new expansion grew around a highly integrated and mutually supporting combination of technologies. Each long wave established an integrated pattern of economic development (Forrester gave examples in energy, transportation and communication) which rejected innovations that were incompatible with this pattern. Thus,
no major changes in technology occurred. Instead, during the expansion innovation was limited to the "step-by-step" routine improvements of ideas that had been around for a number of years.

Having dismissed innovation and technological change as a cause of long waves, Forrested concluded that business policies and institutional structures were the determinant factors in their generation.

People often question the idea that a long wave economic mode could persist for nearly 200 years, in spite of the major changes that have occurred in society and technology. But the policies and structures that generate the long wave have changed very little. The long wave depends on production methods that use capital equipment, on the life of capital equipment and buildings, and on the sluggish pace with which people move between sectors of an economy. The long wave is accentuated by how far ahead people plan and the length of their memories of past economic disasters - both of which are substantially determined by the length of a human lifetime. None of these factors...depends significantly on faster communications or details of technological change. The policies and industrial structure that generate the long wave capital construction cycle have changed very little since 1800.86

At the end of the long wave expansion the industrial structure was mature and management shifted its attention from technical to legal and financial aspects of the business as research remained geared to past technology. The transition to a downturn of the long wave led to an increase in bankruptcies, mergers, consolidations, and takeovers, all of which Forrester viewed as forms of
"managerial innovation." In addition, unemployment grew as jobs dependent on the old technology were eliminated more rapidly than new ones were created.

The long wave of depression lasted a decade or more during which time the climate for innovation and investment remained unfavorable. Corporate profits were low and "the social structure is in disarray." Fundamentally new inventions occurred, but they were left dormant and unused. The stage was set for a renewal of expansion when the "process of using up and wearing out of the old technology runs its course." This new expansion would not incorporate the old technology but instead would draw on a reservoir of innovations stored up during the previous 30 years. These accumulated new ideas would be explored and developed during the ensuing expansion.

Forrester alleged that there had been three long waves since 1800, with severe depressions in the 1830s, 1890s, and 1930s. He further believed that the United States was currently at a "late-stage in the long-wave expansion" and thus faced a transition period which would be characterized by: a decrease in new capital investment; an increase in unemployment; a leveling out of growth in labor productivity; high interest rates; rising prices; a falling return on investment; an increase in the amplitude of the business cycle; and reduced technical innovation. Forrester declared that it was time for business to liquidate in an
attempt to recover investment on existing product lines. Business firms should look beyond the "20-year gap" and begin to rebuild investment along new patterns that will become the technological wave of the year 2000.

Forrester concluded that the biggest threat to a smooth transition is the "possibility of social and economic breakdown." Since massive investments in new technology are ruled out, he maintained that business should focus on managerial, economic, social and political innovations to counter this threat.

Corporate executives who confine their attention to technical innovation are exposing themselves to disaster arising from the social and economic environment. There is little competence in government for seeking better understanding of social and economic affairs. That better understanding must come from the private sector. The next ten years will be a time for managerial innovation, economic innovation, social innovation and political innovation. I believe growing stresses will, whether we like it or not, lead to new social experiments. Without successful innovation, the risks may be greater than in the 1930s.87

While Forrester's analysis of the bunching of investment focused on the role of the capital goods sector in general, some economists have argued that the long wave is produced by a simultaneity of investments in certain key leading sectors of the economy. Robert Cherry, for instance, related long waves to reinvestment cycles in the transportation sector.88 In this view, focused on the U.S., four long waves of expansion have been founded on massive
investments in transportation infrastructure. In the period after 1812, these investments occurred in harbor and canal development. The second wave of investment, after the Civil War, was centered on the building of the national railroad system. After the First World War a third extensive wave of investment was state road systems for automobiles. The most recent expansion after the Second World War focused on suburbanization investments and the interstate highway system. While Cherry presented no data to support these contentions, he concluded that "(n)ow with the completion of the new highway system and the great expansion of per capita automobile ownership ended, a strong decline in transportation industry investment can be predicted according to the Kondratieff theory." Cherry's analysis recognized the importance of technological change in each wave of expansion but, emphasizing a Marxist perspective, argued that the long waves were caused by the sustained competitive movement of capital in response to the tendency of the rate of profit to fall in the face of a rising organic composition of capital. Such a position, which sees the pace of technological change as one effect of the long wave, stands in sharp contrast to that of theorists such as Mensch and Kaplinsky who focus on the succession of technological innovations as the cause of the secular economic movements. (This distinction will be further addressed in the discussion of Ernest Mandel and the social 219
structure of accumulation (SSA)).

Finally, it should be pointed out that some theorists, Van Duijn for example (as well as some of the authors discussed above) regard the innovation theory and the infrastructure reinvestment theory as complementary. Indeed, in his work, Van Duijn proposed an explanation of the long waves which sought to unite these two aspects. His analysis, which consisted of chronological lists of innovations as well as growth rates of industrial production for the major industrial countries, argued that long wave upswings would be characterized by rapid growth of investment in both leading industrial sectors as well as in transportation and communication infrastructure. The growth and generalization of these investments would, eventually, lead to a situation of market saturation and overproduction. "As far as the role of infrastructural investment is concerned, therefore, the seeds of depression are sown during prosperity." Van Duijn did not believe that this gradual process of market saturation was sufficient to explain the timing of the collapse.

The immediate cause of the long-wave downturn should be sought in the volatility of investment behavior rather than in the saturation of markets. Saturation is a gradual process. It explains why economies, once in depression, do not recover quickly. But it cannot by itself explain a downturn. A complete explanation of the long wave therefore has to rely on the interplay of innovation life cycles and infrastructural investment. The ensuing depression will tend to prolong itself. Initially, it may seem...
that the economy will be able to work itself out of it very quickly, but gradually it will become evident that time is necessary in which to dispose of excess capacity. It will also become obvious that the former bunch of growth industries has too limited a potential for the future. In such an unfavorable economic environment the propensity to innovate will be low.92

During the long wave recession, excess capacity is eliminated, new growth industries pile up and the old infrastructure begins to be run down. Eventually a point will be reached when the infrastructure needs to be rebuilt and new capacity is desired. He concluded that:

The basic industries may then take the lead, giving rise to what might be called a "technical" recovery. In itself, this cannot sustain prolonged macroeconomic growth, but the important function of the investment surge is that it will change the overall economic outlook, thus removing hindrances to innovation, and paving the way for a new cluster of growth industries. A full explanation of the long wave therefore has to include an assessment of the important role of infrastructural investment, but it must also include recognition of the role of major innovations. The long-lasting prosperity of the past would not have been possible without leading sectors to carry the expansion; depression would have been less drastic and severe if the traditional large falls in investment had not occurred.93

Psychology and Demographic Trends

A very different interpretation of the bunching of investment was provided by R. W. Kaiser, who saw the dominant causes as human psychology and demographic trends.94 Kaiser hypothesized a four phase long wave cycle based on his analysis of U.S. wholesale prices from
1880-1976. His research indicated a pattern of a prolonged growth phase (lasting an average of 25-27 years), followed by a brief primary depression (1-2 years), which was quickly replaced by a plateau stage (4-8 years), and then an eventual secondary depression or extended period of stagnation (lasting 19-25 years), illustrated in Figure 4-3 below:

According to Kaiser, this pattern is reflected in both price (wholesale, consumer, stocks, bonds) and production (GNP) data through the course of three complete long waves - from the 1780s to 1843, 1843 to 1896, and 1896 to 1940. The last complete cycle, broken down into its phases, yields the following schedule: growth from 1896-1920; primary
depression from 1921-1922; plateau from 1922-1929; and secondary depression from 1929-1940.

Since World War II, the U.S. has entered a fourth long wave where growth lasted from 1940 to 1973. The primary depression of 1974-75 was followed by the plateau phase from 1975 until the time of his publication in 1979. Kaiser predicted that the plateau would give way to the stagnation phase sometime in the mid-1980s and that this depression would continue until the late 1990s.

Kaiser proceeded to note that a number of sociopolitical events and factors appeared to be related to a particular phase of the long wave. He argued, that during the growth phase, the political mood of the nation is passive as efforts are focused on the creation of wealth. As the peak is approached, the growing unequal division of wealth leads to an increase in political activity by the have-nots (civil and women's rights movements, etc.) as well as a massive real estate boom and a greater tendency for political scandals and the outbreak of war. During the plateau, political quiet is again the norm since "people have become frustrated and disillusioned with the preceding ten years of reform and return to looking out for themselves." In the ensuing secondary depression political activism again increases as people cry for the government to do something to end the stagnation, restore profits and move the economy forward. The actions undertaken by the government during
this phase usually entail either legislation (to stimulate
the economy, to save the "little man", to punish the
perceived "bad" guys), or war.

After noting Forrester's capital goods reinvestment
model of the long wave, Kaiser presented an alternative
explanation based on psychological conditioning during
adolescence and demographic trends. Specifically, he
asserted that:

(E)ach individual is deeply affected by the
state of the economy during his adolescence
and early working years. Thus a person's
influence on the economy, whether as
businessman, laborer, consumer, banker, voter
or elected representative, is a lifelong
reflection of his early experience.98

Thus, Kaiser hypothesized the development of general
attitudes whereby people raised during depressions develop
conservative traits while people brought up during growth
phases acquire an aggressive growth mentality. He further
surmised that demographic trends reinforced the impact of
generational trends as the declining births during
depressions and the expansion baby booms interact to produce
a psychological framework for the population that is
oriented toward expansion until the reality of the next
depression catches up. He concluded that

....it seems possible that the cycles' 50-55
year periodicity corresponds to a two
generation cycle in which each generation, in
reacting to the economic conditions created by
its fathers, repeats the mistakes of its
grandfathers...The current cycle may also turn
out to be longer than earlier ones, because of
our greatly increased life expectancy.99
Global Politics and International Hegemony

As was seen in our earlier discussion, Kondratieff believed that the worst wars and revolutions occurred during long wave expansions when the strains of rapid expansion (and possibly the growing recognition of an impending transition) produced increased tension, uncertainty and friction. Thus, for him, wars were seen as a result of the long wave, not a cause.

An American economist, E. M. Bernstein, in 1940, held a similar position. In this non-empirical article, he argued that three factors were the source of the long waves pattern which he felt were most apparent in the movement of prices, interest rates and other monetary series. These factors were gold production, innovation and investment, and war. He believed that increased gold production and a period of rapid innovation leading to enlarged investment were the causes of the long wave upswing. In addition, the upswing was characterized by more frequent outbreaks of war. He rejected the idea that the increased frequency of wars was caused by an intensified search for foreign markets. Rather, wars occurred more often due to the greater ability to conduct war campaigns during the (prosperous) long wave of expansion.

Gold production and innovations are consistent and mutually reinforcing causes of a long wave. Thus innovations in technique or in the development of new countries may facilitate increased gold production by proving superior methods of production or by opening new ore...
fields. Similarly, enlarged gold production, through rising prices and easier credit, makes investment more profitable and facilitates the undertaking of new enterprises. On the other hand, great wars are not favorable to enlarged production of gold or to new types of investment. The conclusion must be that it is not the war that causes the upswing. Rather it is the long wave upswing that produced favorable conditions for the waging of war. Although war cannot be regarded as the cause of the long wave, it may contribute to the termination of the upswing....(I)t cannot be denied that war intensifies the rise in prices and in interest rates during the upswing. To this extent, the monetary problems and readjustments in the downswing of the long wave are made more difficult. No doubt, even without war there would still be severe depressions in the downswing of the long wave; but it is reasonable to believe that the severity of these deep depressions is intensified by the difficult monetary problems growing out of war.101

Some modern writers have continued this tradition of incorporating international political, economic and military conflict into their analysis. They have, however, shifted the focus from the role of wars to either changes in the global political perspective, or cycles of international competition and hegemony. An example of the former is R. P. Weber’s article on the cyclical nature of crises.102 Published in 1983, he contended that the inclusion of both endogenous and exogenous factors made the long wave (K-cycle) "more satisfactory than purely endogenous theories."103 In order to provide an adequate explanation of K-cycles, one had to take into account the structure and dynamics of the evolving world system. He believed that the existing theories (especially innovational investment
theory) of K-cycles lacked an explanation of how the process of structural change occurred. Weber reasoned that the innovation theory was able to explain the expansion and eventual decline (the S-curve), once expansion was underway; it was unable to explain the transition from a declining phase to an expansionary phase of the long wave.104

To rectify this situation, Weber advanced what he called a "cybernetic-dialectical" model. "The explanation is cybernetic in that the processing of information concerning the crisis is a central component of the model. It is dialectical in that the structural reorganization that resolves a given crisis eventually generates the next crisis."105 This model was based on previous work by J. Z. Namenwirth whose historical study (1844-1964) of US government party platforms led him to identify a four phase political theme cycle lasting, on average, 48 years. 106 The first phase, at the low point of the depression, corresponded to the Parochial phase where the nation's sole occupation was the creation of wealth. As the expansion began a Progressive phase ensued which focused on social reform. The Cosmopolitan phase occurred at the height of the upswing as the country's attentions shift to the international arena. During the Conservative phase, as the economy began to decline, conservative values were resurrected.

Weber applied this framework to a content analysis of
British "Speeches From the Throne" for the period from 1795-1972. His research of this material led him to conclude that the K-cycles were related to specific changes in political economy that are developed in response to the growing constraints placed on the accumulation of capital. The constraints and the changes in political economy that allowed the process of accumulation to be renewed are listed for the four upswings identified in Table 4-6 below, which is reproduced directly from Weber's article.

<table>
<thead>
<tr>
<th>Period of Upswing</th>
<th>Change in Political Economy</th>
<th>Constraint on Capital Accumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1790-1825</td>
<td>Introduction of hand-made machinery</td>
<td>Low level of productivity</td>
</tr>
<tr>
<td>1840-1873</td>
<td>Transition to machine-made machinery</td>
<td>Rising organic composition of capital</td>
</tr>
<tr>
<td>1894-1913</td>
<td>Generalization of monopoly capital</td>
<td>Underconsumption</td>
</tr>
<tr>
<td>1932-1966</td>
<td>Government management of the economy</td>
<td>Unproductive state expenditures</td>
</tr>
</tbody>
</table>

Source: Robert P. Weber, "Cyclical Theories of Crisis in the World-System"

While this chronology recognized the importance of technological change in the restructuring process, Weber argued that the choice of which technologies would serve as the new engines for expansion was a political question that "allowed a good deal of flexibility in how each crisis is resolved." He concluded that, from the perspective of
The 50-year cycle constitutes a series of debates within society about specific problems. The debate and its outcome are weighted according to the unequal distribution of power and wealth. During each depression the debate addresses alternative courses of action for restoring profitability and economic growth. The Parochial theme reflects this discussion. First, the realization occurs that the present situation differs from normal business cycles and thus requires strong action. Second, some action is chosen. Third, the decision must be justified. As the economy begins to expand, a part of the ills are ameliorated. This occurs in such a way that inequities in the distribution of power and wealth are not seriously jeopardized. These actions are discussed in the Progressive theme.

Following two decades of increasing output and, real but, limited gains for workers, the Cosmopolitan theme reflects increased attention to relations between the political center and periphery. This is a period of increasing concern with foreign affairs. There are calls for greater political and economic activity in the international arena, partly justified by the promise of additional benefits to workers and capitalists alike. However, as new contradictions build and profits decline, the restoration of profits and capital accumulation is the central issue of the conservative period. Believing that the current economic problems can be resolved within the present economic structure, there is an emphasis within society on tradition and fiscal austerity. Nevertheless, faced with a major depression and ineffectual solutions within the old framework, it is soon realized that nothing short of structural change will resolve the crisis. Hence the cycle begins again with the next Parochial theme.

While Weber claims to be writing from a Marxist perspective, the emphasis appears to be totally misplaced. He ends up mistaking a consequence of the long wave for its cause. Surely, the onset of economic depression leads to a
restructuring of the processes of capital accumulation. Indeed, the choices of which technologies are embraced offer some degree of latitude (flexibility). However, the actual course of the restructuring and the actual choices over alternative technologies do not depend on "a series of debates within society about specific problems."110 It is, instead, the competitive movement of capital and intensified class struggle that determines the direction of change. The reorganization of trucking and airline travel in the early 1980s, the ongoing restructuring of the banking sector (interstate banking, uniting of commercial banking and investment banking, the elimination of restrictions on thrifts, etc.) and the consolidation of capital through mergers, acquisitions, and hostile takeovers in a number of industries have been propelled by the movement of capital as it attempts to transcend the constraints which increasingly act to retard the process of continued accumulation. (When one descends to the level of abstraction of many capitals operating in a world system, it becomes clear that this movement of capital is necessarily a competitive one. See Chapter I.)

Weber, therefore, by focusing his analysis at the level of the nation-state (and political ideas) fails to see that the political debates, which reflect the changing conditions of accumulation, do not determine the transition from one long wave phase to another. The reflection (the debates)
does not explain the reality of the accumulation waves or the process of restructuring during stagnation. Thus, despite his intention to supplement the technology theories with a theory that explains the process of restructuring, he remains, not suprisingly, unable to do so. This is seen in his conclusion that "although the general process of resolution can be specified, the particular resolution of future crises cannot be predicted." 111

Other authors, such as Nicole Bousquet, have argued that long waves are related to alternating cycles of hegemony and international competition at the center of the world-economy. 112 In her 1980 article, she hypothesized that, at a certain time, within one particular national economic area (the future hegemonic power), further growth from continued emulation of the current hegemonic power becomes increasingly difficult, producing a crisis of capitalist accumulation. The crisis brings about a radical transformation of production in the future hegemonic power.

Thanks to these major innovations, the entity wherein they occur first finds itself in a position of production supremacy within the world economy, and eventually obtains other dimensions characteristic of authentic hegemony, namely, commercial and financial supremacy, and political leadership coupled with military supremacy. 113

During the expansion phase of the long wave, the rapid growth and increasing strength of the rising hegemonic power creates increasingly uneven development within the center (core or developed) countries. This can be measured by the
widening gap, between the hegemonic power and the other center countries, in the areas of technological change, productivity advances and demand growth. Two factors, however, operate eventually to stop this growing disparity, and usher in a period of competition where the "non-hegemonic core powers strive to regain or increase their share of the world market." In the first place, the latter countries embark on a course of emulation which eventually helps them to catch up with the leader's technological advantages. (One of these emulators is also about to embark on the course of the future hegemonic power.) Even more important is a second factor, operating in the hegemonic power that causes it increasingly to protect what has worked in the past while rejecting the rising alternative technologies.

(T)he hypothesis we find most attractive from our world-system perspective is that of overspecialization of the hegemonic power. Precisely that which made it so successful at first in the world-economy acts as a deterrent to drastic innovative changes later. It is as though the hegemony carries the seeds of its own destruction. In our view, the very success of the hegemonic power's advanced sectors within the world-economy contributes, at some half-way stage in its hegemonic life, to shifting the innovative process away from major changes in the methods of production, and toward merely repeating and improving what had been so successful.

These processes lead to a long wave phase of stagnation during which the trend toward growing unequal development is reversed. "We are here confronted with what some would call
a law: at the core of the world-economy, uneven development does not last forever; the tendency toward inequality always comes to an end; and eventually inequalities themselves will always disappear."116

T. K. Hopkins and Immanuel Wallerstein have also argued that long waves of expansion correspond to periods of political hegemony where a single state attains commercial, financial, productive and military supremacy. 117 These authors utilized a world system view that saw the drive for capital accumulation producing a cyclical pattern of expansion and contraction. Expansion contains the seeds of stagnation and stagnation lays the foundation for renewed expansion (within capitalist limits).

The self-expansion of capital has built-in contradictions which cause it to be self-limiting, so that a phase of stagnation theoretically must follow expansion. They derive in part from the non-coordination of production decisions (the "anarchy" of production), combined with the relative stability of social distribution in times of prosperity (creating a relatively "fixed" world effective demand) leading to socially defined over-production.

Stagnation must theoretically precede expansion, in that it provides the occasion for centralization of capital (one factor in expansion), class struggles leading to the redistribution of income that in turn increases demand (a second factor in expansion), compensated for by the creation of new groups of low-wage workers in peripheral zones (a third factor),118

Hopkins and Wallerstein suggested that the development of hegemony was founded on the appearance of technological advantage which gradually disappeared as the original
advantage was diffused and new innovations occurred. They further argued that the long waves arose in pairs. During the first expansionary long wave ($A_1$), a battle between rivals for succession as the new hegemonic power takes place. In the ensuing long wave of stagnation ($B_1$) one of the rising nations achieves hegemonic victory. This is then followed by another long wave of expansion ($A_2$) during which this nation achieves hegemonic maturity (true hegemony). In the ensuing phase of stagnation ($B_2$) the declining hegemonic power battles the rising successors to its throne. Hopkins and Wallerstein presented the following chronology to support this view.

Table 4-7: Hopkins and Wallerstein's Paired Kondratieffs and Hegemony/Rivalry

<table>
<thead>
<tr>
<th>Hegemonic I: Dorse spine</th>
<th>Hegemonic II: Netherlands</th>
<th>Hegemonic III: Great power (United Provinces)</th>
<th>Hegemonic IV: USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>$A_1$ (ascending hegemony)</td>
<td>1450-1575</td>
<td>1575-1590</td>
<td>1790-1815</td>
</tr>
<tr>
<td>$B_1$ (hegemonic victory)</td>
<td>1590-1620</td>
<td>1815-1850</td>
<td>1913/20-1945</td>
</tr>
<tr>
<td>$A_2$ (hegemonic maturity)</td>
<td>-1559</td>
<td>1620-1650</td>
<td>1850-1873</td>
</tr>
<tr>
<td>$B_2$ (declining hegemony)</td>
<td>1559-1575</td>
<td>1650-1672</td>
<td>1873-1897</td>
</tr>
</tbody>
</table>


In their view then, there have been four periods of true
hegemony: The Hapsburgs (1450-1559), the Netherlands (1620-1650), Great Britain (1850-1873), and the United States (1945-1967).

**Social Structure of Accumulation (SSA)**

Two authors, David Gordon and Ernest Mandel, attempting to base their analysis of long waves on Marxian value theory, have argued that long cycles of expansion and stagnation are "fundamentally caused by the logic of capital accumulation and its movement through stages of accumulation." This view differs from those who stress the importance of hegemony-rivalry cycles, in that the examination of the structural requirement of capital accumulation is not limited to the question of national political hegemony.

Gordon and Mandel claimed that industrial capitalism has passed through various stages in the course of its development. Each stage is centered around a particular accumulation model or SSA, while the transition from one stage to another is caused by a structural crisis (and its eventual resolution). Each stage also corresponds to a long wave, in which a period of expansion is followed by a period of stagnation. Basing his analysis on industrial output and world trade, Mandel suggested that there have been four stages of capitalism since 1800. His results are presented in Table 4-8.
In order to accumulate, capitalists need a certain amount of structural stability. Thus, structures, which set the rules, define the limits, enforce punishment on violators, and create the necessary institutions must be erected. Each stage begins with a structure which allows profitable accumulation to proceed. The very process of accumulation, however, creates growing contradictions and conflicts which begin to suppress profitability and increasingly undermine the legitimacy of the previous accumulation model.

Gordon, in turn, proposed that the individual institutions, categorized in Table 4-9, are interdependent and this composite creates a unified internal structure of its own. "(W)e can further hypothesize that the social composite of these individual structures must exist and function reliably in order for capital accumulation to proceed smoothly....I call this composite the social structure of accumulation."
Table 4-9: Gordon's Social Structure of Accumulation Requirements

A. Agents of Accumulation
   1. Corporate structure

B. Motors of Accumulation
   1. Structure of competition
   2. Structure of class relations

C. Systemic Requirements for Accumulation
   1. Structure of international and national monetary systems
   2. Structure of the state

D. Requirements of Individual Capital Accumulation
   1. Access to means of production
      a. Structure of national resource supply
      b. Structure of intermediate goods supply
      c. Social family structure
      d. Labor market structure
   2. The production of surplus value
      a. Structure of labor management
      b. Structure of technological reproduction (SLW)
   3. The realization of surplus value
      a. Structure of final consumer demand
      b. Structure of market competition (SLW)
   4. Turnover of capital
      a. Financial structure
      b. Structure of administrative management

Source: David Gordon, "Stages of Accumulation and Long Economic Cycles"

In analyzing the relationship between economic crisis and changes in the SSA, Gordon argued that the crisis, defined as a reduction in the pace of accumulation, threatens the integrity and viability of the current SSA which creates corresponding crisis tendencies in the structure. The growing instability in the SSA leads to a rising possibility of a further breakdown of the old modes of capital accumulation. "When either the economy begins to stagnate or institutional contradictions within the social structure of accumulation begin to "erupt", accumulation in general and the social structure of accumulation are both
Gordon believed that these concepts allowed him to derive a formal Marxian definition of economic crisis, or what Marx termed, "universal crisis".

If a stable social structure of accumulation is necessary for rapid accumulation and if tendencies toward economic stagnation tend to erode the stability of a social structure of accumulation, then an economic crisis can be defined as a period of economic instability in capitalist economies whose resolution depends upon the reconstruction of a social structure of accumulation. This permits a formal definition of the difference between an economic crisis and a periodic business cycle. While the capitalist economy tends endogenously to generate both business cycles and economic crises, normal economic activity, within the context of prevailing social relationships, is sufficient to restore prosperity during a business cycle recession. Normal economic activity is not sufficient, on the other hand, to generate a resolution of an economic crisis and a restoration of a rapid rate of accumulation: changes in the prevailing social relationships with the ultimate effect of reconstituting the environmental stability necessary for rapid and sustained accumulation are necessary for crisis to come to an end.

The resolution of the crisis, then, requires the development of a new SSA. During the crisis the capitalist class increasingly directs policies toward accomplishing structural change as a power struggle ensues within the class structure to determine the course of the restructuring.

It seems fairly clear, therefore, the trajectory of the class struggle during an economic crisis will play a fundamentally determinate role in shaping the internal content of the new social structure of
accumulation. The content of a new social structure of accumulation, in short, will not fall from the sky but will be generated, to a substantial degree, by forces endogenous to the general process of capital accumulation.126

Thus, endogenous forces will determine such factors as the altered forms of competition, the organization of corporate and class structures and the other features of the SSA.

Gordon proceeded to outline a theory of stages in which each stage goes through five phases. The establishment of a SSA is followed by the phase in which capitalist accumulation takes off in a process of expanded reproduction. In the third phase, the rate of accumulation begins to decelerate, which leads to a fourth phase of growing instability in the SSA. In the final phase, the economic crisis unfolds which sets the stage for the development of a new SSA. This process leads to a succession of stages of accumulation.

As long as the capitalist mode of production continues to dominate a society and as long as tendencies toward economic crisis constitute an intrinsic contradiction of the general process of capital accumulation, then we can hypothesize that the alternating rhythm of rapid accumulation and economic stagnation will require a succession of qualitatively differentiable social structures of accumulation....The succession of stages of accumulation is a logically necessary feature of capitalist development because of the fundamental contradiction in capitalist societies between the social character of accumulation and its dependence upon essentially "private" activities. When this contradiction erupts and crisis results, individual accumulation cannot resume until the social basis for accumulation is
He concluded that this succession of stages of accumulation produced a bunching of infrastructural investment which caused the long waves.

These hypotheses jointly suggest that the dynamics of accumulation in general, mediated by successive stages of accumulation, "cause" long economic cycles and that the particular character of the infrastructural investment required at the beginning of a new stage of accumulation influences the specific length of the periods of expansion and contraction associated with that long economic cycle.

In his view, the cycle was likely to last roughly 50 years due to the relationship between the scale of investment required at the beginning of the long wave and the limited supply of potentially investable funds available to finance that investment. Gordon further pointed out that this theory of long waves was compatible with the world-market control dynamic of Hopkins, Wallerstein and others discussed previously. He predicted that as the crisis developed the power of the hegemonic nation would decline. This produced, in the hegemonic contenders, toward the end of the crisis, a period of intense national investment in the infrastructure necessary for increases in relative world-market control. This would, of course, be part of a broader restructuring of the SSA occurring in all countries.

Ernest Mandel, who has long held a world capitalist system perspective, has made many contributions to the
modern long wave debate. In his analysis, he applied Marxian value and crisis theory to the study of long cycles in order to explain their operation. He has frequently been classified as a technology theorist since his early work in this area (Late Capitalism) stressed the process of technological revolution. A thorough review of his research, however, reveals this to be a misrepresentation and he has been placed with Gordon (who also recognized the similarity between their views) in the SSA group.

In Mandel's view, Marx's conceptions of the rising organic composition of capital and the tendency of the rate of profit to fall, are more appropriately applied to the long run development of capitalism than they are to the normal industrial (Juglar) cycle. This has become particularly true since the Second World War as the capitalist nation states have increasingly reverted to the use of credit to compensate for the normal downturns in the industrial cycle.

The principal technique for curbing the scope of periodic over-production crises during the past 25 years, then, has been to extend credit and the money supply....Thus, from the standpoint of the functioning of the international capitalist economy as a whole, the major characteristic of the long phase of post-war expansion was the emergence of credit cycles partially independent of the industrial cycle, the former attempting to 'compensate for' the latter.130

Yet, despite these attempts, capitalist governments have only succeeded in reducing the scope of the crises; they
remain incapable of preventing their outbreak. This is because the inherent logic of the expansion provokes a trend towards a declining rate of profit, creating the conditions for a crisis. "The objective function of the crisis is to constitute a mechanism though (sic) which the law of value asserts itself." 131

Mandel insisted that the relationship between the decline in the rate of profit, overproduction and the outbreak of crises was not one of a mechanistic "linear causal chain of the type: fall in the rate of profit - reduction of investment - reduction of employment - reduction of incomes - overproduction crisis." 132 Instead, an explanation of crisis required the incorporation of a series of "mediating factors which are located both in the sphere of production and in the sphere of circulation of commodities, both in the sphere of competition and in that of class struggle." 133

For Mandel, the long wave of expansion, which is fueled by technological progress and the creation of surplus profits (technological rents) is the "honeymoon" phase of capitalist development where the rising organic composition of capital is accompanied by an even stronger rise in the rate of surplus-value. "But the very logic of the expansion undermines the conditions of this honeymoon." 134 As the expansion accelerates, the industrial reserve army shrinks which shifts power in the labor markets to the wage earners;
the declining trend of raw material prices is reversed due to the less elastic nature of production in this sector; and, the capitalists experience a growing inability to find sectors (countries) where the organic composition of capital is lower than in the leading industrial sectors of the advanced countries due to the general diffusion of the technological revolution.

The ensuing fall in the rate of profit accentuates competition as the largest, most technologically advanced firms "seek to hold off the "moment of truth" as long as possible - in other words - to maintain the old rate of profit, and even the superprofits they enjoyed at the peak of the boom, for as long as possible." But, eventually these large industrial firms find that an increasing fraction of the newly accumulated capital cannot find productive investments at the old rate of profit. This leads the firms to turn to speculation and other less profitable investments. During this period of over-expansion and increasing speculation, the downward pressure on the rate of profit leads to both growing excess production capacity (potential over-production) and constantly greater recourse to credit.

Schematically, then, it may be said that "over-investment" provokes "over-accumulation" which in turn brings on "under-investment" and a massive devalorization of capital. Only if this devalorization of capital is sufficiently ample and if unemployment and the many measures of rationalization vigorously boost the rate of exploitation of the working class
can the fall in the rate of profit be checked and a new cycle of increased accumulation of capital be touched off. 136

Supplementing this perspective with Gordon's view of the declining SSA (which was erected to accommodate the now increasingly less profitable channels of accumulation) strengthens the contention that for a prolonged period of time capitalism will be unable to check the fall in the rate of profit. Gradually pieces of a new social SSA will be assembled and put into place as the process of devalorization and rationalization progresses. The interaction of these processes, then, create the conditions for a long-run renewal of capital accumulation within the new social structure.

This is where Mandel assigned a significant role to technological revolutions and innovational change. During the phase of stagnation, scientific advance continues, but, due to the conditions of valorization, the new technologies (which frequently are incompatible with the 'old' system of machines) pile up as untested or experimental ideas. Once the new SSA is erected and the process of capital devalorization has run its course, then the stockpile of accumulated ideas will be embraced and a new set of interrelated technologies will condition/determine the new channels of capital accumulation. Mandel concluded that his own contributions to a solution of the problem of long waves has been to relate the diverse combinations of
factors that may influence the rate of profit (such as a radical fall in the cost of raw materials; a sudden expansion of the world market or of new fields for investment for capital; a rapid increase or decline in the rate of surplus-value; wars and revolutions) to the inner logic of the process of long-term accumulation and valorization of capital, based upon spurts of radical renewal or reproduction of fundamental productive technology. It explains these movements by the inner logic of the process of accumulation and self-expansion of capital itself. Even if we assume that the activity of invention and discovery is continuous, the long-term development of capital accumulation must still remain discontinuous, for conditions promoting the valorization of capital (and resulting in a rise or stabilization at a high level of the rate of profit) must in time turn into conditions determining a deterioration in this valorization (in other words, a fall in the average rate of profit). The concrete mechanisms of this conversion must be analyzed by reference to the concrete historical conditions of the development of the capitalist mode of production at the time of these major turning points.37

Perhaps more than other long wave theorists, Mandel and Gordon have attempted to explain the concrete mechanisms for the conversion from capital valorization, to deterioration of that valorization, and back to renewed valorization in particular (evolving) concrete historical conditions. Both authors take the social context of capital accumulation as the starting point of their analysis and incorporate both endogenous and (supposedly) exogenous factors into their explanations of the long wave's operation. Mandel's analysis focused on the factors that produce changes in the long-run profitability trend, while Gordon emphasized the institutional framework required for profitable accumulation.
Taken together both perspectives reinforce the argument that the prolonged period of expansion, must, by the very logic of the accumulation process, give way to a long wave with an undertone of stagnation. And, during this phase of stagnation, the processes of capital devalorization, rationalization, and structural (institutional) change, create the conditions for renewed (within capitalist limits) expansion. 138

In the specific historical conditions after the Second World War, the long-run phase of expansion was based on the hegemony of the United States which allowed it to create the institutional framework (both domestic and international) of the post-war SSA. 139 Mandel's research emphasized that this accumulation model was founded on factors that lead to an increase in the mass and rate of surplus value such as: the international defeat of the working class in the 1930s and 1940s; a dramatic fall in the cost of raw materials produced by a growth in capital exports to the resource rich LDCs; an extension of the market through the incorporation of new territories and the innovational opportunities of new technologies; and the reduction in the turnover time of fixed capital due to the acceleration of technological innovation.

The late capitalist phase began when fascism and the Second World War generated a significant increase in the rate of surplus-value, which was prolonged by a substantial reduction in the price of important elements of constant capital. This
allowed "capital in general" to overcome the long-term decline or stagnation of the average rate of profit. The result was an acceleration in the accumulation of capital (further favoured by the permanent arms economy) which now seized on the discoveries and innovations that had been maturing over the previous decade, and thereby unleashed a third technological revolution. 40

He further related the development of new technologies to the changes in corporate organization which have made the multinational company "the determinant organizational firm of big capital". 41 The growth of the that organizational form coupled with the search for technological surplus-profits (technological rents) and the growing centralization of capital on a national scale worked to promote a movement toward direct investment abroad.

In the past there was only marginal internationalization of the production of surplus-value in actual manufacturing industry, outside the domain of raw materials. Today it constitutes the really new and specific aspect of the internationalization of capital in the late capitalist epoch...This development started immediately after the Second World War, especially in the U.S. oil, automobile and electrical apparatus industries, and has today become a world-wide phenomenon which for the first time actually provides an immediately international framework for the competition of capital. 42

As the long wave phase of expansion gave way to a phase of stagnation, the growing difficulty in maintaining the old rate of accumulation produced a heightening of conflict between capital and labor (intensified class struggle), an expansion of capitalist competition (especially international imperialist rivalry), and growing crisis in
the SSA. Within this theoretical framework, the "cause" and significance of growing direct investment in the U.S. during the 1970s and 1980s can be understood.

The law of uneven development has continued to prevail, shifting the international relationship of forces in inter-imperialist competition. American imperialism is slowly losing its productivity lead over its European and Japanese rivals. Its share in the world market is falling. It is currently attempting to reverse this secular development by stepping up capital exports to its imperialist rivals and increasing the international centralization of capital by acquiring substantial capital ownership within the economies of its competitors. But the long-run faster accumulation of capital in Western Europe and Japan inevitably means - in conditions of accelerated dollar devaluation - greater opportunities for West European and Japanese capital exports to the U.S. than for American capital exports in the opposite direction. American imperialism has tried to rescue itself from its dilemmas by hitherto successful pressure on its rivals to revalue their currencies, but this in the end can only lead to a further acceleration of European and Japanese capital exports as compared with American. 143

This prediction, expressed by Mandel in the early 1970s, has proven relevant today. As Figure 4-4 illustrates, U.S. direct foreign investment penetration of Europe (for example) reached its peak in the early 1970s and has since declined.
As we saw in Chapter II, the relative decline of the U.S. foreign investment position has occurred despite a continued expansion of U.S. direct investment abroad. The true cause of the relative U.S. decline has been the explosive growth of direct investment in the U.S. by, primarily, European, Canadian, and Japanese corporations. The concrete historical dimensions of this penetration will be explored in Chapter five.

CONCLUSION

A world system view of long waves as cycles in the SSA provides an explanation of the growth of direct investment in the U.S. which focuses on the development of a generalized crisis of overproduction, a falling rate
of profit, and a spreading threat of structural breakdown. The development of these factors in conjunction with a transition to a phase of stagnation has produced a heightening of the forces of capitalist competition which increasingly takes the form of the direct investment or the internationalization of productive capital.

The growth of direct investment in the U.S., in the 1970s and 1980s, is thus a reflection of the transition to a phase of stagnation in the long wave. Additionally, the process and course of development of the internationalization of capital has a significant bearing on the future development of the capitalist world system. A complete statement of the relation between the internationalization of productive capital and the factors operating to restore a basis for profitable accumulation, however, is beyond the scope of this thesis.

The analysis of long waves, presented in this chapter, would not be complete without a few concluding remarks regarding some of the frequently cited criticisms of that presumed phenomenon. These comments will focus on: (1) the data problem and statistical verification of long waves; (2) the scope or universality of the long waves; (3) the question of whether the process of capital accumulation is continuous or discontinuous; and (4) the
question of whether exogenous or endogenous forces produce the phases of transition.

Many economists have criticized long wave theorists concerning the quality and handling of the data series presented. The quality of the data is obviously hampered by the lengthy time span of each long wave cycle (50 to 60 years) which means that any attempt to track the historical record prior to the early 1800s is likely to be open to debate. Yet, while the ability to "prove" the existence of these cycles (as one goes farther back in history), will never materialize, a recognition that these long waves are cycles of accumulation serves to shift the analysis away from price cycles (such as Rostow's) towards an investigation of value and surplus value creation (output and investment cycles). This position is similar to that of Mandel's who argued that the real problem of long waves is not one of empirical proof, but their theoretical justification.

We, on the contrary, regard the main problem not as one of statistical verification, but of theoretical explanation, although it goes without saying that, if the theory of "long waves" could not be confirmed empirically, it would be an unfounded working hypothesis, and ultimately a mystification. Methods of empirical verification must themselves, however, be appropriate to the specific problem to be explained. Price movements, which may be provoked by inflationary development - including, in the context of a gold standard, a greater reduction in the commodity value of precious metals than in the average value of other commodities - are definitely not a reliable indicator. Output
figures for individual commodities, which may be heavily influenced in certain periods by the role of particular branches of production as 'growth sectors' should likewise be treated with caution. Income curves, which may also be co-determined by inflationary price movements, are also derivative indices and can only be used after fundamental historical analysis. The most convincing indicators consequently appear to be those of industrial output as a whole and the development of the volume of world trade (or of per capita world trade); the former will express the long-term tendency of capitalist production and the latter the rhythm of expansion of the world market. Precisely where these two indicators are concerned, it is quite possible to provide empirical verification for "long waves" after the crisis of the year 1847.145

Mandel's view, which firmly establishes the scope of the long wave patterns at the world level fails, however, to include foreign investment as an indicator of them along with total industrial production and the volume of world trade. This thesis argues that, particularly since the Second World War, the exclusion of direct foreign investment data as an indicator is not warranted. Indeed, in the current stage of growing internationalization of productive capital, the inclusion of the volume of such investment, as well as measurements of relative penetration, may be more significant indications of the long wave than the volume of world trade. Regardless, direct investment can no longer be justifiably ignored.

In turning to the question of endogenous versus exogenous theories of long waves, this thesis agrees with Gordon's perspective that the evolution of the SSA during
the phase of stagnation is not an external determination. During the extended phase of stagnation the disruption and potential breakdown of the old channels of accumulation produce a heightening of competition and conflict whose objective function is to bring about a restructuring of the channels of accumulation. But, the resulting SSA erected, as well as the technological basis of renewed accumulation, is the consequence of many determinations, and the direction of this restructuring is not pre-ordained. It is dependent on the respective power of the combatants both within and between classes. What remains certain is that the resolution of the crisis conditions requires a massive devalorization of capital that, through competition, will produce an increase in the concentration and centralization of capital at the international level.

The major criticism of long waves by modern economists continues to be, as it was for Trotsky, that these fluctuations

are not manifestations of some kind of long wave or long cycle, but that they are specific historical occurrences, different, separate segments of the capitalist curve of development, each one characterized by its own specific features. 146

Thus, Eklund argued that the goal of modern social science should be to explain the specific, unique combination of factors operating at different periods to produce different succeeding stages of capitalist evolution, "without trying to squeeze it into a general pattern of
secular cyclical swings." In a similar vein, J. Krieger and J. Lewis have criticized Mandel for exclusive reliance on concepts of the rising organic composition of capital and the tendency of the rate of profit to fall. They believed that Mandel's singular focus led him to misinterpret the changes that made the current stage of capitalism distinctive. In their view, Mandel overemphasized the role of industrial capital, failing to address the implications of the expansion of service sector employment. In addition, he consistently presented a reactive and unified state which systematically (and successfully) engaged in simple crisis prevention. Krieger and Lewis concluded that

Mandel's failure to examine new areas of struggle - particularly in the state and service sectors which are particular to post-war capitalism - highlights the strategic emptiness of Late Capitalism. Confining his analysis to the traditional features of capitalist development, Mandel effectively depoliticizes a Marxist method that he had hoped to revitalize as a tool for revolutionary practice. Mandel remains bound to a tradition that asserts that with the right organization all crises become part of a chain reaction leading to the breakdown of capitalist relations.

This view, that Mandel's interpretation of the long wave led him to conclude that the world capitalist system was on the verge of an irreparable breakdown (and, therefore, a transition to socialism), was previously expressed by Athar Hussain. He stated that, for Mandel,

Once the possibility of the breakdown of
capitalism acquires political significance, the tendencies attributed to capitalism are put beyond the range of question. And then it becomes necessary to show that the observed events are realizations of the laws of motion of capitalism. The point, however, is that the primary interest is not the analysis of events and episodes but in repeating the thesis that capitalism will break down one day and give way to socialism.150

Mandel has responded to his critics by claiming that it is they who possess the misunderstanding. The relevance of long wave theory, in general, and the SSA, in particular, is that they provide a framework to explain how the possibility of a breakdown of capitalist relations can be avoided through a structural transformation of those relations as well as the channels of accumulation. Thus, it is precisely within the long wave framework that the factors operating to create the necessary preconditions for renewed expansion are highlighted, not denied. Mandel concluded that

The "rationalization" function of the long wave of slower growth which we are witnessing since the late sixties and the early seventies would have to create the necessary economic preconditions for such a long-term sharp increase in the average rate of profit. This would essentially require: chronic mass unemployment tending in the long run both to erode real wages, workers' self-confidence, militancy and level of organization and to significantly increase the intensity of labor, leading towards a sharp upwards shift of the rate of surplus-value; massive devalorization of capital through an increasing elimination of inefficient firms (not only small and medium-sized ones but also large ones, including many "multinationals"), i.e., through a new leap forward not only of national but especially of international concentration and centralization of capital; new radical ways to cheapen, at least
relatively, the costs of equipment, raw material and energy; massive applications of new innovations; a new revolutionary acceleration in the rate of turnover of capital, etc.

It is sufficient to enumerate these technical conditions to understand that they cannot be fulfilled by technical means alone. They will not come about as automatic products of certain economic changes, of current economic developments. Their realization, at least on a scale sufficient to unleash a new process of long-term accelerated growth of the international capitalist economy, would require momentuous changes in the socio-political relationship of class forces, both within a whole series of key capitalist countries themselves, as well as on an international scale. 151

Finally, it should be noted that while a renewed long wave of expansion is not guaranteed, intelligent discourse requires that it be established as a possibility. The monopoly theory of perpetual stagnation and increasing system irrationality must be challenged and reintegrated into a generally competitive world capitalist system framework. A framework that recognizes the dualistic and contradictory nature of the competition-monopoly dialectic as well as the ebb and flow of capitalist production and accumulation in the long run.
CHAPTER NOTES


3. Joseph Schumpeter later coined the phrase 'Kondratieff cycles' to describe these long waves. Kondratieff was a Russian economist who served as a deputy minister before founding the *Moscow Business Conditions Institute*. He functioned as its director from 1920 to 1928 when it was disbanded. In 1930 he was arrested and soon disappeared. The work most often referred to in the United States was first published in Russian in 1925. In 1926 it was translated into German. N.D. Kondratieff, "Die langen Wellen der Konjunktur," *Archiv fur Sozialwissenschaft und Sozialpolitik*, Vol. 56, no 3., 1926, pp. 573-609. Reprinted, translated and summarized in "Long Waves in Economic Life," *The Review of Economic Statistics* Vol. 17, no. 6, November, 1935, pp. 105-115. Reprinted in complete translation *Review*, Vol II, no. 4, Spring, 1979, pp. 519-62. (Kondratieff's earlier hypothesis on the long wave were advanced in his 1922 book on the world economy cited below. See chapter note #4.)


5. N. D. Kondratieff, "The Long Waves in Economic Life", *Review of Economic Statistics*, 1935, p. 110. Table 4-1 is the author's stylized version of Kondratieff's long wave time frame. The Russian economist was not precise in characterizing the turning points, preferring instead to view the transition from one phase to the next as a process.
involving a span of years. The many time series investigated by Kondratieff most frequently yielded the dates shown in Table 4-1. For further discussion and summary of Kondratieff's results, see George Garvey 'Kondratieff's Theory of Long Cycles', The Review of Economic Statistics, Vol. XXV, no. 4, November, 1943, pp. 203-220.


7. Ibid., p. 111.


9. The criticism (and eventual rejection of Kondratieff's views) was completed by 1929 when the official Soviet Encyclopedia declared 'This theory is wrong and reactionary'. Quoted in G. Garvey, 'Kondratieff's Theory of Long Cycles', 1943, p. 204.

10. Day has pointed out that Trotsky wrote:
One can reject in advance the attempts by Professor Kondratiev to assign to the epochs which he calls long cycles, the same "strict rhythm" which is observed in short cycles. This attempt is a clearly mistaken generalization on the basis of a formal analogy. The periodicity of short cycles is conditioned by the internal dynamic of capitalist forces, which manifests itself whenever and wherever there is a market. As for those long (50 year) intervals of the capitalist curve, which Professor Kondratiev hastily proposes also to call cycles, their character and duration is determined not by the internal play of capitalist forces, but by the external conditions in which capitalist development occurs. The absorption by capitalism of new countries and continents, the discovery of new natural resources, and, in addition, significant factors of a "superstructural" order, such as wars and revolutions, determine the character and alteration of expansive, stagnating or declining epochs in capitalist development.

15. J. A. Schumpeter, Capitalism, Socialism and Democracy, Unwin, 1974, p. 68.
20. The reason for this continuing debate is that the traditional tools of applied econometric analysis used by Kuznets and his early followers were inappropriately applied to the investigation of long swings. The moving-average technique employed by Kuznets, in order to smooth away the short run effects of business cycle variations in the long run time series, introduced a bias to the results. This came to be known as the "Slutzky problem". In 1937 Slutzky showed that the moving-average technique resulted in the generation of cyclical fluctuations when applied to a non-cyclical random series of numbers. Thus, the possibility existed that Kuznets' methods of filtering (manipulating) the data may have resulted in the appearance of spurious cycles. See E. Slutzky, "The Summation of Random Causes as the Source of Cyclic Processes," Econometrica, April 1937, p. 105-46. In 1965, a group of graduate students at Princeton used Slutzky's observation in concluding that Kuznets' methods biased the manipulated data in favor of the existence of long cycles: see, R. C. Bird, M. J. Desai, J. J. Enzler and P. J. Taubman, "Kuznets Cycles in Growth Rates: The Meaning." International Economic Review, June 1965, pp. 229-39. The orthodox Kuznets school has pursued this question using more sophisticated econometric techniques but the debate persists.

The most common technique is that of spectral analysis in which the data are transformed from the time domain to the frequency domain. Soper points out that "in the time domain the basic datum is the time series viewed from the standpoint of its periodicity - the number of time units needed to complete a full cycle (peak-to-peak or trough-to-trough). In the frequency domain, the inverse of the periodic representation is the basic datum - the percentage of total variance ("power") contributed by each frequency bank in the spectrum. The major advantage of
spectral techniques over the classical methods is that random and short-cycle components need not be 'removed' from the original series in order to uncover long-period fluctuations." The disadvantage of this approach is "the requirement that the analyzed time series be covariance stationary, i.e., trend free in both mean and variance. In other words, high frequency disturbances (business cycles) pose no problem...but ultra low [long-run?] frequency variations must be filtered out." Soper also points out that the method needs longer data series than have been used due to the required number of lags that must be estimated and that the method poses the question of the "appropriate level of significance for long-swing spectral peaks? ...Moreover, does a confidence interval have meaning in this case?" Soper's conclusion as to the existence of long swings using this approach is agnostic. "Alternative possibilities are either that the data are simply too poor to test the hypothesis at all, or that spectral methods are actually inappropriate for dealing with the problem." See J. C. Soper, "Myth and Reality in Economic Time Series: The Long Swing Revisited," Southern Economic Journal, Vol. 41, no. 4, April 1975, pp. 570-579. Dowling and Paulson agree. Thus, they begin their article with the following agnostic rejoinder: "The results of spectral analytic tests of the long swings hypothesis do not provide a basis for categorically rejecting or accepting the thesis that long swings exist in U.S. data." See, J. M. Dowling, and B. W. Paulson, "Long Swings in the U.S. Economy: A Spectral Analysis of 19th and 20th Century Data," Southern Economic Journal, Vol. 40, no. 4., January 1974, pp. 473-480.

21. The conclusion of Thomas' work, which is some of the better research in this area, stated (in 1953) the following "tentative propositions":

(1) The outstanding waves of immigration coincided with minor secular upswings in the rate of economic growth in the United States;
(2) The timing of these waves was determined by the births cycle in Europe together with the impact of disturbing innovations (particularly on agriculture); (3) Building activity in the United States always lagged after inflow of population (except in the seventies); (4) The great injection of cheap labor from Southeastern Europe after the turn of the century induced a 'widening' of the capital structure of the United States, enabled the country to take maximum advantage of the technical innovations of that time, and established the basis for its modern economic power; and (5) There were minor secular swings in induced investment in fixed equipment, and

Thomas thus claimed that the underlying cause of the long swings in production and prices that Kuznets had discovered was to be found in the international flows of labor and capital within the Atlantic community. During the period prior to World War I these flows produced an inverse relation between the rates of economic growth in Europe (Great Britain) and the United States.

22. M. Abramovitz, 'The Passing of the Kuznets' Cycle", *Econonia*, Vol. 35, no. 140, November, 1968, p. 367. It should be noted that some of these economists (Thomas and Kelly for instance) believe that the continued echo effects in demographic patterns left over from the migration waves are likely to persist in producing long swings in the U.S. economy.


24. Mike Urquhart illustrated this commonly held perspective in his article, "Three Theories of Economic Crisis", *Changes*, Vol. 3, no. 2, March, 1981, pp. 19-23. His analysis led him to conclude that:

While stagnation results from the inner laws of capitalism and the tendency of the rate of profit to fall, there is no inevitable basis for a new expansion, though of course such an expansion cannot logically be ruled out. It would depend on as yet unforeseen events. (p.
23) Of course, this is also the perspective of the monopoly capital theorists. See, for instance, the editors (Sweezy) of *Monthly Review*, May, 1983, p. 13.

As MR readers know, we regard the 50 year cycle as ideology in the bad sense of the term, i.e., a myth which serves to rationalize capitalist interests. The norm of mature capitalism is stagnation, not vigorous growth. In the absence of powerful extraneous stimuli, of which there are no present signs anywhere on the horizon, the stagnation drags on and, except for occasional zigs and zags, feeds on itself.


It is the author's judgment that Marx's framework for relating economic, social, and political factors has found its way much more deeply into Western academic thought than most practitioners are aware. Its harshness and oversimplicity is, of course, often softened by ad hoc references to moral idealistic and individualistic 'factors' that operate in history in particular situations (p. 9). . . . From the Communist Manifesto forward the practitioners of Marxism have written as if societies were determined by their economic techniques and the composition of output; and that it is via economic changes that changes elsewhere in society are brought about (pp. 42-43). . . . The basic error in Marxism is, then, not a technical error in his economics; although such errors can be identified. In building on the western intellectual and moral tradition he failed to perceive that the body of thought about society, of which classical economics was a part, was a spacious, complex, and essentially paradoxical creed (p. 331). . . . I was drawn into this later area (the application of the modern social science to the interaction among economic, political, social and cultural sectors of whole societies) in part because I was repelled by Marx's economic determination without, however, finding a satisfactory answer to the questions he posed. (p. 333)

It is the old story in the history of economic thought that the variables assumed as fixed or given, for purposes of formal exposition or convenience, tend to disappear from consideration among the objects of policy...with respect to under-developed countries the determinants of the size and quality of the working force and the quality of capital investment are highly relevant objects of policy...It is the author's contention that, on balance, the great problems confronting the most advanced countries, and likely to confront them over the next decades, are more nearly like those of the under-developed countries than the formal preoccupation of economists would suggest. It is for that reason (as well as to meet the requirements of historical analysis) that the present structure is more classical than Harrod's, seeking to raise explicitly and to organize formally the old questions of the determination of population and the working force and the productivity of capital (pp. 89-91).

27. Ibid., p. 95.
28. Ibid., p. 122.
29. Ibid., p. 125.
30. Ibid., pp. 128-37.
31. Ibid.
34. Ibid., p. 311.
36. W. W. Rostow, "Kondratieff, Schumpeter and Kuznets: Trend Periods Revisited", p. 729. By the 1970s Rostow had reached the commonly held view (see #22 above) that Kuznets' long swing turned out to be more restricted in time and limited in meaning than first thought. (p. 729)

37. Ibid., p. 727. An example of Rostow's vision of the way in which these factors historically operate and interrelate to one another could be given for the long wave from approximately 1886 to 1914, focusing, as Rostow does, primarily on the United States. Rostow claimed that this period could be subdivided into two phases with the period 1865 to 1895 being a period of expansion (rising prices) followed by a period (trend) of stagnation (falling prices) from 1896 to 1914. These trends were influenced in part (but were not caused) by a "shift in the leading sectors of the more advanced economies of the time (U.K., Germany, U.S., France)". The shift Rostow referred to encompassed the transition from railroads and steel to electricity, chemical and automobile production. The predominance of railroads and steel as the leading sector of growth was increasingly usurped by the emergence of the strong growth after 1895 (1899-1914 in the U.S.) of the "automobile sectoral complex (embracing automobiles, petroleum, rubber production and so on); canned foods and ice; cigarettes, chemicals, (including notably fertilizers, paints and varnishes); phonographs and electrical machinery" in the advanced countries. Rostow claimed that Great Britain fell behind in this process of transition, especially in industrial chemistry and the manufacture of electrical equipment due to the greater pace of deceleration of the old industries in the U.K. coinciding with a rise in British capital exports and a consequently lowered level of domestic investment. This growth of capital exports was related to Rostow's second factor, foodstuff and raw material production.

38. Ibid., p. 739-41.

39. Ibid., p. 743. Thus, Rostow supported Kuznets' analysis of the period from 1865 to the First World War. Capital and labor flowed on an international scale to the "new economies" in response to the "pull" of the opening of new territories, the discovery of new sources of raw materials and the generally higher rate of industrial expansion. This conclusion runs counter to Thomas' analysis which stressed the push factors responsible in Europe for the international flow of labor and capital to the new world. Rostow did, however, possess a more world-wide view than Kuznets in his analysis of dynamic change and its relation to international migration and investment. Though Rostow's analysis led him
to the conclusion that the "Kuznets' cycle is less of a uniform cycle" than previously thought, Rostow claimed that the hard core of Kuznets' proposition...stands: large flows of immigration did set in motion demands for housing and infrastructure which yielded powerful business expansions which transcended in their scope the sectors whose expansion made immigration attractive in the first place...there is thus a significant place in the mechanism of growth and cyclical analysis for migration and all its secondary and tertiary consequences, so long as they are linked to the dynamics of leading sector analysis and the underlying forces that made attractive the opening of new areas. (p. 745)

40. Ibid., p. 749.
41. Ibid., p. 750.

43. Wallerstein contended that Rostow employed a "gimmick" in order to produce a consistent appraisal of these trend periods. Wallerstein believed that the period from 1938 to 1951, which Rostow classifies as an upward trend due to the relative price increases of foodstuffs and raw materials, should not properly be regarded as a turning point in the long wave/swing/trend. He argued that this shift...occurred to be sure, although an inspection of his (Rostow's) tables...show the shift was not all that great. But this shift was the temporary result of wartime transport difficulties for raw materials. In fact, as a whole literature attests, there has been a steady decline in the terms of trade of primary goods from 1920 to 1973.

See E. Wallerstein, op. cit., p. 668

47. Maddison claimed that by 1870 these sixteen developed capitalist economies, (U.S., U.K., France, Germany, Italy, Japan, Belgium, Netherlands, Canada, Australia, Switzerland, Austria, Sweden, Denmark, Norway and Finland) had already "embarked on what Kuznets calls 'modern economic growth' (in which per capita income moves in a sustained upward direction with only temporary interruptions)." (See "Phases of Capitalist Development", pp. 114-15.) In addition, Maddison believed that it is more important to focus on the group's performance rather than individual country deviations since, the aggregate stability in the collective output of the group in peacetime has been quite impressive....individual countries have been much more unstable than the group as a whole....The cyclical experience of individual countries has not normally been synchronized but compensatory....cyclical experience has been synchronized only when these economies have been subjected to system-shock. (See pp. 109-10).

48. Ibid., p. 113.

49. A. Maddison, "Long-Run Dynamics of Productivity Growth". Summarized from various tables presented by Maddison.

50. Ibid., p. 7.

51. Ibid., p. 8 and p.18.

52. Maddison surmised that:
The acceleration of productivity growth within sectors and the switch of employment between sectors are interrelated phenomena, which reflect the operation of deeper causal factors which have accelerated productivity growth, i.e., higher and more stable demand, an increase in the pace of capital formation, and the impact of accelerated world trade on industrialization. The main respect in which structural change of the type discussed above has had an independent causal role in growth is the degree to which countries were able to exploit a reserve of labor underutilized in agriculture. (Ibid., p. 11.)

53. Ibid., p. 10.

54. Ibid., p. 39.

56. Ibid., p. 77.

57. Ibid., pp. 77-78.


60. Ibid., p. 204.

61. Ibid., p. 206.

62. Ibid., p. 208.

63. Ibid., p. 209.

64. Gabriel Tarde, The Laws of Imitation, Henry Holt, 1903. A slow advance in the beginning, followed by rapid and uniformly accelerated progress, followed again by progress that continues to slacken until it finally stops: These, then, are the three ages of those real social beings which I call inventions or discoveries. (p. 127)

65. Simon Kuznets, Secular Movements in Production and Prices: Their Nature and Their Bearing Upon Cyclical Fluctuations, Houghton Mifflin, 1930; and A.F. Burns, Production trends in the U.S. since 1870, National Bureau of Economic Research, 1934. See also the discussion of long swings (Kuznets cycles) presented earlier in this chapter.


67. This perspective was previously discussed under the heading of firm specific market imperfections in chapter III. Further development of this application of the life

An interesting forerunner of this literature can be found in Kaname Akamatsu's, "A Historical Pattern of Economic Growth in Developing Countries", The Developing Economies, Institute of Asian Economic Affairs, March, 1962, pp. 3-25. Akamatsu advanced an S-shaped growth model that he called the "wild geese flying pattern". He argued that this model could be used to explain the pattern of growth of manufactured consumer goods in developing countries (India and Japan) that would pass through four stages of: (1) imports, (2) domestic production, (3) exports, (4) foreign (direct) investment.

A characteristic phenomenon of this (fourth) stage is that the export of consumer goods begins to decline. This is attributable to the fact that consumer goods are put into production in other less-advanced countries and development in a wild-geese flying pattern is under way. Another feature is that in this stage, capital goods domestically produced in the third stage begin to be exported. (p. 15).


69. Ibid. This passage is from the original German edition. It was dropped in the English edition. The quote and its translation is taken from J. J. van Duljn, The Long Wave in Economic Life, George Allen & Unwin, 1983, p. 108.


72. Ibid., p. 411.
73. Ibid., p. 413.
74. Ibid., p. 411.
75. Soete wrote:
Far from developing factor-proportions appropriate (to) industries and technologies both for the domestic and export world market, the opportunities offered by the international diffusion of technology to jump particular technological paradigms and import the more, if not most, sophisticated technologies that will neither displace the capital invested nor the skilled labor of the previous technological paradigm, constitute one of the most crucial advantages of newly industrializing countries in their bid for rapid industrialization. Ibid., p. 416.
77. Ibid., p. 24.
79. Ibid., p. 141.
80. Ibid., p. 148-49.
81. Ibid., p. 149.
84. According to Forrester, MIT's System Dynamics Model is, a computer simulation model of industrial economies...a simulation model...constructed from policies, organizational structure, and physical processes that would be familiar to
any person in business....The National Model is built up from the operating structure within corporations, rather than macroeconomic theory. It is derived from management policies as observed in the detailed, practical, working world rather than from statistical correlations derived from broad time series representing aggregate economic behavior. ("Innovation and the Economic Long Wave", p. 19.)

85. Ibid., p. 18.
86. Ibid., p. 20.
87. Ibid., p. 24.

89. Ibid., p. 258.

91. Ibid., p. 139.
92. Ibid., p. 139.
93. Ibid., p. 140.

95. Ibid., reproduced from p. 58.
96. Ibid., p. 59
97. Ibid., pp. 62-63.
98. Ibid., pp. 63-64.
99. Ibid., pp. 64-66.

101. Ibid., p. 535.

102. Robert P. Weber, "Cyclical Theories of Crisis in the

103. Ibid., p. 38.

104. "(M)any explanations fail to specify the process by which change comes about. For example, if there is a structural reorganization of the economy, who or what determines or guides the reorganization? What are the limits of reorganization and what are the countervailing forces? How are reorganizations legitimated?" Ibid., p. 39.

105. Ibid., p. 48.


108. Ibid., p. 49.

109. Ibid., pp. 48-49.

110. Ibid., p. 48.

111. Ibid., p. 49.


113. Ibid., p. 79.

114. Ibid., p. 50.

115. Ibid., p. 68.

116. Ibid., p. 69.

104-120.

118. Ibid., p. 112.

119. Ibid., p. 118.


122. D. M. Gordon, *op. cit.*, Table 4-10 represents a summary of the structural requirements discussed by Gordon on pages 12-17. The author has taken the liberty to add two additional structural requirements to the fourth category in the table. These are 2(b) and 3(b), which, I believe, Gordon has overlooked. The requirements for an individual capital to produce surplus value include both norms and methods of labor management and technical conditions of production (and reproduction, i.e., expanded production) determined by the level of development of technology. In addition, the methods and norms of surplus value's realization require both a final consumer demand structure (sets limits of the market) and a structure of market competition which sets the limits on an individual capital's realization and, hence, self-valorization.

123. Ibid., p. 17.

124. Ibid., p. 20.

125. Ibid.

126. Ibid., p. 21.

127. Ibid., p. 22.

128. Ibid., p. 31.

129. Gordon stated that,

The assumption of the inelasticity of available funds is obviously critical to this model. A dynamic version would obviously incorporate the growth of savings with the growth of the economy (fueled by growing investment), but the basic premise that there are determinate limits to the flow of funds available for investment would not be affected. In this sense, a Marxian approach
to theories of investment would begin to depart dramatically from theories in the Keynesian tradition which view effective demand as the ultimate determinant of the rate of growth and investment demand as an exogenous determinant of the level of economic activity. Within the Marxian perspective, the funds available for investment are ultimately limited by total (produced and realized) aggregate surplus value (and its distribution): the process which determines the limits to that aggregate magnitude cannot easily be reduced to an "exogenous" process and we cannot easily assume that sufficient funds will be available to finance any warranted or desired level of investment demand. (See endnote #63, pp. 41-42).

While Gordon is not wrong in claiming that this approach, therefore, rejects an "effective demand" theory of long waves, he apparently fails to see the real financial (liquid capital) problem during the crisis phase. The capitalist is confronted with a dialectical dilemma. He possesses both too much and too little available funds for investment. In the trough, the individual capitalist increasingly finds that he has too much liquid capital for it to be absorbed in his old activities within the declining social structure of accumulation. Yet, when considered individually the capitalist possesses too little funds to create new paths of accumulation due to the lack of a (completely erected) new social structure of accumulation.

It is precisely this "dilemma" which leads to the proliferation of new financial instruments and the exotic financial maneuverings so commonly associated with the crisis phase.

(A) fraction of newly accumulated capital can no longer be invested productively at the "normally anticipated" conditions of profitability. This capital is then increasingly directed to speculation, risky activity which is less profitable...."super-abundance" of capital and "shortage" of profits coexist and determine each other.


131. Ibid., p. 170. Mandel argued that it was important to "distinguish the phenomena of appearance of the crisis, the detonators of the crisis, their deeper cause, and their
function in the framework of the intrinsic logic of the capitalist mode of production." (p. 168). In Mandel's view, the crisis is always one of overproduction of commodities (exchange values) which can assume such forms as the overaccumulation of capital, under-consumption of the masses, disproportionalities among the various branches of production, and a falling rate of profit.

132. Ibid., p. 168.

133. Ibid., p. 171-72. For a further discussion of the role of competition, see Chapter I, especially, pp. 8-10.

134. Ibid., p. 172.

135. Ibid., p. 173. Mandel has argued that during the long wave of expansion there is a temporary increase in the size and opportunities in the non-monopolized sectors of the economy.

In the closing phase of such a wave, and especially in the long wave with an undertone of stagnation which succeeds it, there is by contrast an increase in the tempo of concentration and centralization of capital. The sphere of activity of the non-monopolized sectors contracts. There is hence a reduction in the mass of surplus-value produced in these sectors and a corresponding decline in the source of surplus-profits. The monopoly profit thus comes nearer the average.

See Ernest Mandel, *Late Capitalism*, p. 545.


138. Apparently Mandel is more reluctant than Gordon to claim that the period of stagnation must give way to renewed expansion. In his Marshall lectures, given in the U.K., Mandel wrote that:

There is no symmetry between the unavoidable long-term results of accelerated capitalist economic growth - which is precisely a long-term decline in the average rate of profit! - and the sudden long-term upturn of the average rate of profit after a consistent decline for a quarter of a century. This upturn cannot be deduced from the laws of motion of the capitalist mode of production in and by themselves. It cannot be deduced from the operations of "capital in general". It can
only be understood if all the concrete forms of capitalist development in a given environment — all the concrete forms and contradictions of "many capitals" — are brought into play. And these imply a whole series of non-economic factors like wars of conquest, extension or contraction of the area of capitalist operation, inter-capitalist competition, class struggle, revolutions and counter-revolutions, etc. These radical changes in the overall environment in which the capitalist mode of production operates, in turn, detonate so to speak radical upheavals in the basic variable of capitalist growth, i.e., lead to upheavals in the average rate of profit.


Gordon, however, felt that Mandel, like Schumpeter, Baran and Sweezy, overstressed the exogeneity of the sources of stimuli to restored capital accumulation; all emphasize, in one way or another, the critical importance of exogenous technical innovations. I think that stress derives from a common failure to appreciate the critical importance of the increasingly structural orientation of economic struggles as economic crisis deepens. Because the stages of accumulation framework emphasizes the endogenous process through which capitalists, workers, and others begin to contest the terms of resolution of crisis, I am also led to emphasize the endogenous determinants of the specific "innovations" which seem to permit the restoration of the rate of accumulation. Just as I do not believe that new social structures of accumulation fall from the sky, my analysis of the dynamics of economic crisis leads me to doubt the celestial origins of technical innovation as well. I think that others' emphasis on exogenous technical innovation derives in part from technological determinism. (See, D. Gordon, "Stages of Accumulation and Long Economic Cycles", p. 34.)

139. A partial listing of the institutional structures would include: active government manipulation of aggregate demand; the "cold war" and the U.S. as free-world defender; the Bretton Woods agreement and the dollar-gold exchange standard; the reorganization of international credit
mechanisms through the creation of the International Monetary Fund and the World Bank; the reconstruction of a 'common' European market and a strong Japanese economy; the suburbanization movement; and the labor-management bargaining relationship. This listing does not purport to exhaust the requisite institutional structures and is presented only by way of example.


144. Calculated from Table 2-10 in Chapter II. See also Table 2-11 for a country breakdown of the penetration index.


CHAPTER V

A SAMPLE OF 135 FOREIGN MANUFACTURING FIRMS
AND THEIR INVESTMENTS IN THE UNITED STATES

THE ANALYSIS OF THE FIRM AND THE INVESTMENT DECISION

This chapter summarizes the results of a microeconomic investigation of direct foreign investment (DFI) in the United States by non-U.S. enterprises. The analysis assumes that a firm's effort to penetrate the U.S. is seldom whimsical or opportunistic (though such cases do indeed exist). Instead, the firm's decision to invest in the U.S. revolves around a cohesive global strategy for survival (continued long-run accumulation) in an increasingly competitive world. Paul R. Sullivan, a senior vice president of Harbridge House Inc., has claimed that

The strategy required to gain a global perspective starts with executive vision and commitment for long-term strategic positioning. It entails risk taking. It requires perseverance while subordinating short-term profits for a long-term global position. It is this longer perspective that has enabled European and Asian companies to penetrate global markets so rapidly.¹

And yet, while the development of a global outlook is a necessary prerequisite of the investment decision, successful penetration is not guaranteed. Even the largest, most
successful foreign firms have experienced set-backs in their DFI strategy.

In its corporate autobiography, Unilever Group concedes that it "has certainly found North American success elusive, sometimes grasped only to be snatched away."

History, unfortunately for Unilever, seems to repeat itself. The company's boldest move ever in the U.S.—a hostile takeover offer for Richardson-Vicks Inc.—was thwarted last week when Procter & Gamble Co. stepped in with a higher bid. It was the same P&G that, back in the 1940s, introduced Tide and clobbered Unilever's dominant laundry detergents. The fact the Unilever took the offensive this time and started the takeover battle shows that it finally is flexing its muscles....The fact that it lost is a reminder that it still needs to try harder.²

Thus, the interpenetration of capital through DFI can be seen as an inherently competitive process that produces both winners and losers. In addition, the movement of capital encapsulated in the progressive internationalization of the circuit of productive capital requires (in fact, is frequently accomplished by) a further advance in the concentration and centralization of capital.

The development of this firm-level analysis was founded on five hypotheses:

(1) The sample data would reflect a similar country breakdown to that exemplified by the aggregate data presented in Chapter II.

(2) The sample data would reflect a similar industry pattern to that suggested by the aggregate data presented in Chapter II.
(3) The sample data would show that acquisitions predominate as the form of entry into the U.S. As Business Week has pointed out,

'[F]oreigners that come to the U.S. are usually taking on a bigger, more competitive market than anything they have tackled before. So they gain access, most often by acquiring existing U.S. companies even though they may bring in advanced technology of their own.'

Surely this is to be expected from the perspective that sees the progressive internationalization of the circuits of capital as an evolving competitive process of concentration and centralization of capital. It is a dialectical irony completely missed by the monopoly capital theorists, (see Chapter I) that this movement entails both an expansion and a reduction of monopoly. At the level of the nation-state this movement is seen as a growth in the forces of competition and a retreat of the elements of monopoly, while at the level of the world economy, the progressive internationalization of capital must produce (through competitive consolidation) a reduction in the number of participants and, hence, an advance of the monopoly element.

(4) The sample data would illustrate a tendency for the firm to prefer 100% control of its investments in the U.S. A corollary of this hypothesis is that joint-ventures, tending to be unstable due to the conflicting interests of the partners involved, would tend to be avoided (being used only as a last resort, and even then, only for a limited period of time). Such findings would confirm research of
European firms, conducted in the 1970s, by L.G. Franko using Harvard's Multinational Enterprise Data Bank. (See Chapter III). In his view, Competition in America not only obliged Continental firms to allow their U.S. subsidiaries to undertake R&D, but also pushed Continental enterprises to own 100% of their U.S. operations. In 1971, a much greater proportion of Continental companies' American manufacturing subsidiaries were wholly owned than the proportion typical for Continental subsidiaries elsewhere in the world. Two-thirds of the Continentals' U.S. subsidiaries were wholly owned, compared to 46% of all Continental foreign manufacturing operations. Moreover, moves by Continentals to buy out their joint-venture partners following entry into the U.S. were common. 4

(5) Finally, it is hypothesized that the sample firms will exhibit a marked increase in its investment activity since the late 1960s. This corresponds to the argument, presented in Chapter IV, that the transition to a long wave of stagnation after 1965 produced a deterioration of former monopoly advantages through a declining rate of profit and growing competition. And, at this particular historical juncture, the progressive internationalization of the circuit of productive capital is one expression of this intensified competition.

THE SAMPLE DEFINED

Since the focus of this thesis is manufacturing firms, the sample excluded, from the outset, firms engaged in banking and finance, wholesale and retail, and the service sector. A listing of the largest 200 (in terms of sales)
non-U.S. industrial firms was compiled from Fortune magazine for the years 1966, 1976, and 1985. Firms involved in the oil industry were then deleted from this list. From the resulting compilations, firms were picked for the sample population if they met either of the following two criteria:

1. The firm ranked in the top 200 in at least two of the three years (1966, 1976, or 1985), or
2. The firm ranked in the top 100 in any one of the three years.

This selection process resulted in the establishment of an original sample of 167 non-U.S. firms. The original sample firms are presented in Appendix A.

Further research into the 167 firms led to the elimination of twenty entries due to acquisitions, mergers, name changes or the discovery that the firm was controlled by a U.S. parent. These changes reduced the sample population from 167 to 147 non-U.S. manufacturing firms. Of these 147 firms, twelve were found to have no direct U.S. investments (past or present) and were subsequently excised from the sample. This left an updated sample of 135 foreign manufacturing firms with investments in the U.S. The 135 firms include both private and state-run companies.

**AGGREGATED RESULTS OF FIRMS IN SAMPLE**

Table 5-1 presents a country breakdown of the 135 sample firms. It subdivides them into three categories based on the size of the firm's direct investment stake in
the United States. The 28 firms with the largest investment stake (>\$1,000mn) were designated as A-firms. The 44 firms with investments greater than \$300mn but less than \$1,000mn were classified as B-firms. Finally, the 63 firms with the smallest investment commitment (<\$300mn) were placed in the C-firm category.
### Table 5-1: Country Breakdown of Sample Firms, Based on Size of DPI Stake in the U.S. by Investing Firm

<table>
<thead>
<tr>
<th>Countries</th>
<th>TOTAL</th>
<th>A-firms&lt;sup&gt;a&lt;/sup&gt;</th>
<th>B-firms&lt;sup&gt;b&lt;/sup&gt;</th>
<th>C-firms&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Britain</td>
<td>30</td>
<td>6</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Japan</td>
<td>30</td>
<td>3</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Germany</td>
<td>24</td>
<td>4</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>France</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Canada</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Switzerland</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Sweden</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Italy</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>South Korea</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Belgium</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Australia</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neth. Antilles</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neth./Britain</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luxembourg</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Austria</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Britain/Italy</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Non-U.S. Multinational Enterprise Data Bank<sup>3</sup>

- a. Sample firms with DPI in the U.S. >$1,000mn.
- b. Sample firms with DPI in the U.S. between $300 and $1,000mn.
- c. Sample firms with DPI in the U.S. <300mn.

Overall, the country pattern of the sample corresponds with the picture presented by the aggregate data in Chapter II (see Table 2-4 and Table 2-5). The leading investors are the British followed by the Japanese and the Germans. It should be recognized that while the Japanese tie the British for the greatest number, 63% of the Japanese sample firms were categorized as C-firms while only 10% have acquired A-firm status. One anomaly is the small number of firms (four) from the Netherlands, compared to the large aggregate...
dollar value of their investments. This researcher believes that this can be explained (at least in part) by the large size of two entries, Philips and Akzo. If one adds Royal Dutch Shell, then it appears quite likely that the Netherlands' share of DFI in the U.S. is accounted for by just a few extremely globally-minded firms.

Table 5-2 presents an industry breakdown of the sample firms according to the two-digit Standard Industrial Classification (SIC) code. As in Table 5-1, the data are subdivided into large, mid-sized and small investors.
<table>
<thead>
<tr>
<th>SIC</th>
<th>Industry</th>
<th>TOTAL</th>
<th>A-firms</th>
<th>B-firms</th>
<th>C-firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Metal Mining</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>Food &amp; Kindred Pdts.</td>
<td>14</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>21</td>
<td>Tobacco</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td>Textiles</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>23</td>
<td>Apparel &amp; Other Fin. Pdts.</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>24</td>
<td>Lumber &amp; Wood Pdts.</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25</td>
<td>Furniture &amp; Fixtures</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>26</td>
<td>Paper &amp; Allied Pdts.</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>27</td>
<td>Prntg./Publ. &amp; Allied Indus.</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>28</td>
<td>Chemicals (Except Pharma.)</td>
<td>17</td>
<td>7</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>-283</td>
<td>Pharmaceuticals</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>Rubber &amp; Misc. Plastic Pdts.</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>31</td>
<td>Leather &amp; Leather Pdts.</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>33</td>
<td>Primary Metal Industries</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-331-2</td>
<td>Steel &amp; Iron</td>
<td>19</td>
<td>1</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>-333-4</td>
<td>Smelt/Ref. Non-Fer. Mtls.</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>-343-4</td>
<td>Building Materials</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>34</td>
<td>Fabricated Metal Pdts.</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>35</td>
<td>Machinery Except Electrical</td>
<td>13</td>
<td>1</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>-357</td>
<td>Computers &amp; Off. Mach.</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>36</td>
<td>Electrical/Electronic Mach.</td>
<td>18</td>
<td>5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>37</td>
<td>Transportation Equipment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-371</td>
<td>Mtr. Vehicles &amp; Parts</td>
<td>14</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>-372/376</td>
<td>Aircraft &amp; Aerospace</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>-373</td>
<td>Shipbuilding</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>34</td>
<td>Mfg./Analyz./ &amp; Ctrl. Inst.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>39</td>
<td>Misc. Manufacturing Indus.</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Non-U.S. Multinational Enterprise Data Bank
Table 5-2 conforms to the aggregate analysis presented in Chapter II, Table 2-8, with the exception of the primary metals industry (SIC-30). The sample firms showed the greatest representation in six broad categories:

<table>
<thead>
<tr>
<th>SIC</th>
<th>Industry</th>
<th># firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Primary Metal Industries</td>
<td>(24)</td>
</tr>
<tr>
<td>28</td>
<td>Chemicals &amp; Drugs</td>
<td>(21)</td>
</tr>
<tr>
<td>37</td>
<td>Transportation Equip.</td>
<td>(20)</td>
</tr>
<tr>
<td>36</td>
<td>Electrical Machinery</td>
<td>(18)</td>
</tr>
<tr>
<td>35</td>
<td>Non-Elec. Mach. &amp; Computers</td>
<td>(16)</td>
</tr>
<tr>
<td>20</td>
<td>Food &amp; Kindred Products</td>
<td>(14)</td>
</tr>
</tbody>
</table>

The apparently large representation of sample firms in the primary metals classification is explained by the presence of 15 entries in the steel and iron industry (primarily specialty steels) that have relatively small commitments to manufacturing operations in the U.S. Thus, it is not surprising that the aggregate data presented in Table 2-8 show the metals industry accounting for only 4.1% of the total direct investment in the United States in 1985. An additional observation from Table 5-2 is that firms in the chemical and drug industries tend to have the largest commitment to U.S. production (17 out of 21 possessed either an A-level or B-level status). Finally, it should be pointed out that only three sample companies in the automotive industry (Volvo, Toyota and Mitsubishi) have achieved A-firm status. This is likely to change since the sample includes eight automotive organizations that have catapulted to B-firm status only in the past decade, four of whom made their first U.S. investment after 1978.
Table 5-3 presents a breakdown of the methods used by the sample firms in their attempts to penetrate the U.S. market. The results confirm the expectation that acquisitions would be the dominant method of entry.

<table>
<thead>
<tr>
<th>Firm</th>
<th>Acquisition</th>
<th>New Construction</th>
<th>Joint Venture</th>
<th>2 of 3 Types</th>
<th>All 3 Types</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-firms</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>9</td>
<td>28</td>
</tr>
<tr>
<td>B-firms</td>
<td>17</td>
<td>4</td>
<td>1</td>
<td>15</td>
<td>7</td>
<td>44</td>
</tr>
<tr>
<td>C-firms</td>
<td>19</td>
<td>2</td>
<td>11</td>
<td>16</td>
<td>5</td>
<td>63</td>
</tr>
<tr>
<td>TOTAL</td>
<td>47</td>
<td>7</td>
<td>12</td>
<td>30</td>
<td>21</td>
<td>135</td>
</tr>
</tbody>
</table>

Source: Non-U.S. Multinational Enterprise Data Bank
It should be observed that, in listing any firm as using only the acquisition method, the researcher does not wish to imply that said firm has never entered into a joint-venture or constructed a new facility in the United States. Indeed, a number in the sample first entered the U.S. using the joint-venture approach for establishing a toe-hold. Most of these early partnerships were later dissolved or bought out by the foreign or U.S. parent. Also, some of the sample firms with large commitments have ongoing joint-ventures, but are classified under acquisitions only since the joint-ventures represent a miniscule portion of their total investments in the United States.

Recognizing these deviations, the intent of the researcher was to categorize the sample firms according to the dominant method used during their post-World War II period of penetration. For those who had no identifiable period of penetration, the time frame used was the period since their initial entry. If no single dominant method of penetration was discovered, the firm was classified as using either two of the three methods or all three methods simultaneously.
A further observation that can be made from Table 5-3 is that A-firms showed the greatest tendency to use either acquisitions only or all three methods simultaneously, while B-firms tended to employ acquisitions only or two of the three methods. On the other hand, C-firms illustrated a much greater tendency (17.5%) to use only joint-venture arrangements. The logical explanation for this is that the C-firms are still in the early stages of their penetration strategy and have yet to reach a point where they can attempt to break new ground on their own. This conclusion is supported by Table 5-4 which shows a marked tendency for C-firms to be recent entrants into the United States economy.

**Table 5-4: Timeframe of DFI Penetration of the U.S. since 1950**  
*Based on Size of Investment State of Sample Firms*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A-firms</td>
<td>14</td>
<td>-</td>
<td>2</td>
<td>3</td>
<td>11</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>B-firms</td>
<td>11</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>17</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>C-firms</td>
<td>11</td>
<td>15</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>12</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>36</strong></td>
<td><strong>-</strong></td>
<td><strong>2</strong></td>
<td><strong>2</strong></td>
<td><strong>10</strong></td>
<td><strong>16</strong></td>
<td><strong>23</strong></td>
<td><strong>30</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

*Source: Non-U.S. Multinational Enterprise Data Bank*
Table 5-4 shows the temporal pace of the sample firms' penetration of the United States after the Second World War. For the C group, the timeframe was from their initial post-World War II entry until the present. Again, it should be stressed that designating an A-firm's period of penetration (for instance) as 1963+ does not mean that it made no investments in the U.S. from 1950-1962. Instead, an attempt was made to identify the time period where the firm's investment activity appeared to illustrate a cohesive strategy for penetration. The date used to identify the beginning of the period of penetration for such firms usually corresponded to the date of the first of a series of investment actions; or to a corporate restructuring of the U.S. operations by the foreign parent which frequently preceded an escalated commitment of investments in the United States.

While 36 of the 135 sample firms had direct investments prior to the Second World War, it was possible to ascertain the timeframe of their commitments since the War for all but 15 C-firms. (Research of these 15 C-firms did not reveal the timing of their investments, hence, they are listed as post-1950. It is possible that some of these firms made their investments prior to 1940, but, most likely, they were simply unreported in the sources searched. It is anticipated that ongoing research will be able to resolve this question.) After factoring out these 15 firms, the
data revealed three overlapping waves of investment activity in the United States. A-firm penetration was concentrated during the period from 1965-1974, followed by the B-firms in the 1970s and increasingly by the C-firms in years from 1970-1985. These results support the expectation that the timeframe of this movement of capital corresponds with the transition to a long wave of stagnation discussed in Chapter IV.

**DISAGGREGATED RESULTS OF FIRMS IN THE SAMPLE**

Table 5-5 provides a detailed description of the largest 28 investors and their major affiliates in the United States.
Table 5-5: The Largest 20 Foreign Firms in the Sample

<table>
<thead>
<tr>
<th>Company Name &amp; Major</th>
<th>U.S. Affiliates</th>
<th>Nation</th>
<th>Industry-SIC</th>
<th>Intl. Entry</th>
<th>Post-War</th>
<th>Size</th>
<th>Acq.</th>
<th>N.C.</th>
<th>J/V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akzo Group</td>
<td></td>
<td>NE</td>
<td>chemicals, synth. fibers</td>
<td>1929</td>
<td>1969+</td>
<td>A</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Akzo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Akzoa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Stauffer Chemical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Armat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Brand Rex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcan</td>
<td></td>
<td>CA</td>
<td>metal refining-alum.</td>
<td>pr.1940</td>
<td>1969+</td>
<td>A</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Alcan Aluminum Inc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo-American/DeHeers</td>
<td></td>
<td>SA</td>
<td>mining/heavy industry</td>
<td>pr.1919</td>
<td>1969+</td>
<td>A</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Oppenheimer Industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Consolidated Gold Fields:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Arcor Corp., Newmont Mining, American Aggregates Corp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Charter Consolidated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BASF</td>
<td></td>
<td>GR</td>
<td>chemicals</td>
<td>1928</td>
<td>1965+</td>
<td>A</td>
<td>X</td>
<td>X</td>
<td></td>
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<td>-Hills Brothers Coffee Co.</td>
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<td>-MJB Coffee Co.</td>
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<td>Noranda Mines</td>
<td>CA</td>
<td>mgg-cpgr, mtl/wood pdts.</td>
<td>1984</td>
<td>1986+</td>
<td>A</td>
<td>X</td>
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<td>-Norcast Inc.</td>
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<td>-MacMillen-Bloedel</td>
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<td>1934</td>
<td>1959+</td>
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<td>X</td>
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<td>-MGW Records Inc.</td>
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<td></td>
<td>-Westinghouse Lamp Co. (Division)</td>
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<td></td>
<td>-Sylvania &amp; Philco TV (Div. of GTN)</td>
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<td>Schlumberger</td>
<td>NA</td>
<td></td>
<td>meas. &amp; scient. equip</td>
<td>1959</td>
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<td>A</td>
<td>X</td>
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<td></td>
<td>-Applicon Inc.</td>
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<td></td>
<td>-Sedco, Inc.</td>
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<td>Siemens</td>
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<td>pr.1914</td>
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<td>A</td>
<td>X</td>
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<td>-Siemens Communication Systems Inc.</td>
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<td></td>
<td>-Siectr Optical Cables Inc.</td>
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<td></td>
<td>-Siemens-Allis Co.</td>
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<td></td>
<td>-Tel Plus Communications Inc.</td>
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<td>Unilever</td>
<td>M/B</td>
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<td>food pdts, detergents</td>
<td>1847</td>
<td>1957+</td>
<td>A</td>
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<td>-Cheeseborough Foods Inc.</td>
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<td></td>
<td>-Lawry's Foods Inc.</td>
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<td>-Lever Brothers Inc.</td>
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<td></td>
<td>-Lipton Tea Co., Inc.</td>
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<td></td>
<td>-National Starch &amp; Chemical Corp.</td>
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<td>-Good Humor Corp.</td>
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<td></td>
<td>-Morton Food Products Inc.</td>
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<td></td>
<td>-Volvo America Corp.</td>
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<td></td>
<td>-White Motor Corp.</td>
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<td></td>
<td>-Hamilton Oil Corp.</td>
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<tr>
<td></td>
<td>-Clark Michigan Corp.</td>
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<td></td>
<td>-Volvo GM Heavy Truck Inc.</td>
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</table>

Source: Non-U.S. Multinational Enterprise Data Bank
While Table 5-4 illustrated the different timeframes of penetration for A-firms, B-firms and C-firms respectfully, it would be a total misconception to conclude that the largest investors have been idle since they began their assault. Indeed, while most of the C-firms were just beginning their penetration of the U.S. in the late 1970s and early 1980s, the A-firms had entered into a new phase in their penetration strategies marked by an escalation in the size of their acquisitions. In fact, as seen in Table 5-6, the A-firms made the largest acquisitions in the 1980s (just as they did in the 1970s).
Table 5-6: The Largest Acquisitions in the U.S. by A-firms in the Sample, 1977-1987

<table>
<thead>
<tr>
<th>Dollars invested (mms)</th>
<th>Acquired Co.</th>
<th>Parent</th>
<th>Date</th>
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<tr>
<td>3,100</td>
<td>Cheesborough Ponds Inc.</td>
<td>Unilever</td>
<td>1986</td>
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<tr>
<td>3,000</td>
<td>Carnation Co.</td>
<td>Nestle</td>
<td>1985</td>
</tr>
<tr>
<td>2,700</td>
<td>Celanese Corp.</td>
<td>Hoechst</td>
<td>1987</td>
</tr>
<tr>
<td>1,600</td>
<td>Hercules' polypropylene operations</td>
<td>Montedison</td>
<td>1983-7</td>
</tr>
<tr>
<td>1,200</td>
<td>Neublin Inc.</td>
<td>Grand Met.</td>
<td>1987</td>
</tr>
<tr>
<td>1,000</td>
<td>Newmont Mining(49%)</td>
<td>Anglo/DeBeers</td>
<td>1981-7</td>
</tr>
<tr>
<td>1,000</td>
<td>Inmont Corp.</td>
<td>BASF</td>
<td>1985</td>
</tr>
<tr>
<td>1,000</td>
<td>Big Three Industries</td>
<td>L'Air Liquide</td>
<td>1986</td>
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<tr>
<td>967</td>
<td>Sedco Inc.</td>
<td>Schlumberger</td>
<td>1984</td>
</tr>
<tr>
<td>956</td>
<td>Alum. operations Atlantic Richfield</td>
<td>Alcan</td>
<td>1985</td>
</tr>
<tr>
<td>785</td>
<td>Utah International Co.</td>
<td>BHP</td>
<td>1984</td>
</tr>
<tr>
<td>745</td>
<td>Monsanto Oil Co.</td>
<td>BHP</td>
<td>1985</td>
</tr>
<tr>
<td>745</td>
<td>Beatrice Chemicals Division</td>
<td>ICI</td>
<td>1985</td>
</tr>
<tr>
<td>742</td>
<td>White Consolidated Industries Inc.</td>
<td>Electrolux</td>
<td>1986</td>
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<tr>
<td>639</td>
<td>Energy Resources Group</td>
<td>BHP</td>
<td>1984</td>
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<td>625</td>
<td>Stauffer Chemical Co.</td>
<td>Akzo</td>
<td>1987</td>
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<tr>
<td>600</td>
<td>Glidden Paint Co.</td>
<td>ICI</td>
<td>1986</td>
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<tr>
<td>500(est.)</td>
<td>Thomas Tilling Ltd (U.S.)</td>
<td>BAT</td>
<td>1983</td>
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<td>500</td>
<td>National Starch Co.</td>
<td>Unilever</td>
<td>1977</td>
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<tr>
<td>366</td>
<td>People Health Services Inc.</td>
<td>Grand Met.</td>
<td>1985</td>
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<td>310</td>
<td>Hamilton Oil Co.</td>
<td>Volvo</td>
<td>1982-4</td>
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<tr>
<td>320</td>
<td>Peoples Drug Stores</td>
<td>BAT (Imasco)</td>
<td>1984</td>
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<td>310</td>
<td>Giddings &amp; Lewis Co.</td>
<td>Canadian Pacific (ANCA)</td>
<td>1982</td>
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<td>300+</td>
<td>Morecraft Thayer</td>
<td>Beecham</td>
<td>1985</td>
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<tr>
<td>300(est.)</td>
<td>Clark Michigan Corp.</td>
<td>Volvo</td>
<td>1985</td>
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<td>200</td>
<td>Appleton Papers Inc.</td>
<td>BAT</td>
<td>1970</td>
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<tr>
<td>250(est.)</td>
<td>Sylvania &amp; Philco TV (Div. GTE)</td>
<td>Philips</td>
<td>1980</td>
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<td>250</td>
<td>Westinghouse Lamp Co. (Division)</td>
<td>Philips</td>
<td>1983</td>
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<td>250(est.)</td>
<td>Tel Plus Communications Inc.</td>
<td>Siemens</td>
<td>1984-7</td>
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<td>226</td>
<td>Spectra Physics Inc.</td>
<td>Siemens</td>
<td>1985-7</td>
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<tr>
<td>222</td>
<td>Applicon Inc.</td>
<td>Schlumberger</td>
<td>1982</td>
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<tr>
<td>220</td>
<td>Miles Laboratories Inc.</td>
<td>Bayer</td>
<td>1977</td>
</tr>
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</table>

Source: Non-U.S. Multinational Enterprise Data Bank
It should be noted that four A-firms (Mitsubishi, Mitsui, Toyota, and Noranda) have not made acquisitions of this magnitude in the last decade. For Mitsubishi and Mitsui, their attainment of the A-firm status has been through numerous joint ventures and new constructions. Toyota achieved that status through two investments: its joint venture with GM to produce Novas in California and its (still under construction) $800 mn. Camry plant in Kentucky. Meanwhile, Noranda spent $490 mn. expanding and adding new plants to its aluminum rolling and extruding complex in New Madrid Missouri.

Table 5-7 gives a detailed breakdown of the B-firms in the sample. Affiliates of these firms have been omitted due space limitations.
<table>
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<tbody>
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<td>Aktiebolaget SKF</td>
<td>SE</td>
<td>Industrial &amp; farm equip.</td>
<td>1916</td>
<td>1957-65</td>
<td>B</td>
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<td>Allied Breweries</td>
<td>BR</td>
<td>beverages</td>
<td>1969</td>
<td>1972+</td>
<td>B</td>
<td>X</td>
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<td>Alusuisse</td>
<td>SV</td>
<td>Metal refinery-alum.</td>
<td>1940</td>
<td>1971+</td>
<td>B</td>
<td>X</td>
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<td>Assoc. British Foods</td>
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<td>Food products</td>
<td>1939</td>
<td>1979+</td>
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<td>BICC</td>
<td>BR</td>
<td>Industrial equipment</td>
<td>1953</td>
<td>1971+</td>
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<td>Bell Canada Enterprise</td>
<td>CA</td>
<td>Electronics/appliances</td>
<td>po. 1956</td>
<td>1973+</td>
<td>B</td>
<td>X</td>
<td>X</td>
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<td>BOC Group</td>
<td>BR</td>
<td>Chemicals, gases</td>
<td>1967</td>
<td>1973+</td>
<td>B</td>
<td>X</td>
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<td>Bosch</td>
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<td>Electronics, appliances</td>
<td>1906</td>
<td>1965</td>
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<td>X</td>
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<td>Bowater Paper</td>
<td>BR</td>
<td>Paper products</td>
<td>1952</td>
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<td>Cadbury Schweppes</td>
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<td>Food products, beverages</td>
<td>1959</td>
<td>1973-87</td>
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<td>Textiles</td>
<td>1910</td>
<td>1963+</td>
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<td>Chemicals, fertilizers</td>
<td>1964</td>
<td>1964+</td>
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<td>Fiat</td>
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<td>Motor vehicles</td>
<td>pr. 1914</td>
<td>1973+</td>
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<td>Paper products/wood products</td>
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<td>1975-85</td>
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<td>Guest, Keen &amp; Nettlefolds</td>
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<td>Motor vehicle parts</td>
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<td>1970+</td>
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<td>X</td>
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<td>1973+</td>
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<td>Iron, steel &amp; coal</td>
<td>po. 1953</td>
<td>1975+</td>
<td>B</td>
<td>X</td>
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<td>Pharmaceuticals</td>
<td>1920</td>
<td>1966+</td>
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<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Honda Motors</td>
<td>JP</td>
<td>Motor vehicles</td>
<td>1979</td>
<td>1979+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imperial Group</td>
<td>BR</td>
<td>Tobacco, foods</td>
<td>pr. 1914</td>
<td>1979+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inco</td>
<td>CA</td>
<td>Mining, nickel, batteries</td>
<td>1921</td>
<td>1974+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KHD</td>
<td>GR</td>
<td>Industrial &amp; farm equip.</td>
<td>po. 1950</td>
<td>1979+</td>
<td>B</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lucas Industries</td>
<td>BR</td>
<td>Motor vehicle parts</td>
<td>po. 1950</td>
<td>1977+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massey Ferguson</td>
<td>CA</td>
<td>Industrial &amp; farm equip.</td>
<td>1910</td>
<td>1948-65</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matsushita Electric Ind.</td>
<td>JP</td>
<td>Electronics, appliances</td>
<td>1959</td>
<td>1959+</td>
<td>B</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mazda Motors</td>
<td>JP</td>
<td>Motor vehicles</td>
<td>1905</td>
<td>1945+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michelin</td>
<td>FR</td>
<td>Tires, rubber</td>
<td>1973</td>
<td>1973+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reed Int'l</td>
<td>BR</td>
<td>Paper/wood products</td>
<td>1964</td>
<td>1973+</td>
<td>B</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Renault</td>
<td>FR</td>
<td>Motor vehicles</td>
<td>1979</td>
<td>1979+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhone-Poulenc</td>
<td>FR</td>
<td>Chemicals</td>
<td>po. 1950</td>
<td>1971+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rio-Tinto Zinc</td>
<td>BR</td>
<td>Magnesium, copper, iron</td>
<td>1964</td>
<td>1968+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandoz</td>
<td>SV</td>
<td>Pharmaceuticals</td>
<td>1919</td>
<td>1974+</td>
<td>B</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Solvay</td>
<td>BE</td>
<td>Chemicals</td>
<td>1901</td>
<td>1974+</td>
<td>B</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tate &amp; Lyle</td>
<td>BR</td>
<td>Food products</td>
<td>1965</td>
<td>1985+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thorn Electrical Inds.</td>
<td>BR</td>
<td>Electronics/appliances</td>
<td>po. 1950</td>
<td>1970+</td>
<td>B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tube Investments</td>
<td>BR</td>
<td>Metal products</td>
<td>po. 1950</td>
<td>1977+</td>
<td>B</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Source: Non U.S. Multinational Enterprise Data Bank
The investments by the B-firms in the last decade (or since they first entered into production in the U.S.) have been proportionately smaller than those made by the A-firms. While this (generally) applies to all forms of entry, Table 5-8 illustrates the case for acquisitions. It should be pointed out that while Table 5-6 included some estimates of dollar magnitude, Table 5-8 presents only the acquisitions which had a reported dollar value. (Though, of course, depending on the source, there were frequently two or three reported values to choose from.) It is, consequently, quite likely that further research will produce significant changes in Table 5-8.
Table 5-8: The Largest Acquisitions in the U.S. by D-firms in the Sample, 1977-1987

<table>
<thead>
<tr>
<th>Dollars Invested (max)</th>
<th>Acquired Co.</th>
<th>Parent</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>575</td>
<td>Agri. Chem. Div. Union Carbide</td>
<td>Rhone Poulenc</td>
<td>1986</td>
</tr>
<tr>
<td>572</td>
<td>AMC (46.4%)</td>
<td>Renault</td>
<td>1980-7</td>
</tr>
<tr>
<td>292</td>
<td>National Steel Corp (50%)</td>
<td>Nippon Koken</td>
<td>1984</td>
</tr>
<tr>
<td>280</td>
<td>Noudaille Industries Inc.</td>
<td>TI Group</td>
<td>1987</td>
</tr>
<tr>
<td>250</td>
<td>Technical Publishing Co.</td>
<td>Reed Int’l</td>
<td>1986</td>
</tr>
<tr>
<td>238</td>
<td>Budd Co.</td>
<td>Thyssen</td>
<td>1970</td>
</tr>
<tr>
<td>226</td>
<td>Rexham Corp.</td>
<td>Howmet</td>
<td>1987</td>
</tr>
<tr>
<td>190</td>
<td>Master Builders Inc.</td>
<td>Sandoz</td>
<td>1985</td>
</tr>
<tr>
<td>186</td>
<td>Dayton Waith Corp.</td>
<td>Hassey Ferguson</td>
<td>1986</td>
</tr>
<tr>
<td>171</td>
<td>Data 100 Corp.</td>
<td>Bells (Northern Tele.)</td>
<td>1970</td>
</tr>
<tr>
<td>165</td>
<td>General Mills Chemical Inc.</td>
<td>Henkel</td>
<td>1977</td>
</tr>
<tr>
<td>163</td>
<td>Bio Medical Reference Labs Inc.</td>
<td>Hoffman-LaRouche</td>
<td>1982</td>
</tr>
<tr>
<td>144</td>
<td>Bundy Corp.</td>
<td>TI Group</td>
<td>1987</td>
</tr>
<tr>
<td>140</td>
<td>Canada Dry Corp. (U.S. operations)</td>
<td>Cadbury Schweppes</td>
<td>1986</td>
</tr>
<tr>
<td>140</td>
<td>Porter Paint Co.</td>
<td>Courtaulds</td>
<td>1987</td>
</tr>
<tr>
<td>115</td>
<td>Mack Trucks (20%)</td>
<td>Rennet</td>
<td>1979</td>
</tr>
<tr>
<td>107</td>
<td>Allis Chalmers (farm equip./credit)</td>
<td>KHD</td>
<td>1985</td>
</tr>
<tr>
<td>100</td>
<td>Pasco Industries Inc.</td>
<td>Hawker-Siddeley</td>
<td>1980</td>
</tr>
<tr>
<td>99</td>
<td>R. H. Bowker</td>
<td>Reed Int’l</td>
<td>1985</td>
</tr>
<tr>
<td>99</td>
<td>Martin Processing Co.</td>
<td>Courtaulds</td>
<td>1987</td>
</tr>
<tr>
<td>90</td>
<td>Westinghouse Brake &amp; Signal Co.</td>
<td>Hawker-Siddeley</td>
<td>1979</td>
</tr>
<tr>
<td>85</td>
<td>Pennsylvania Glass Sand Corp.</td>
<td>Rio Tinto Zinc</td>
<td>1985</td>
</tr>
<tr>
<td>77</td>
<td>Syco Inc</td>
<td>Bell (Northern Tele.)</td>
<td>1978</td>
</tr>
<tr>
<td>71</td>
<td>Sealecetro Inc.</td>
<td>BICC</td>
<td>1981</td>
</tr>
<tr>
<td>71</td>
<td>Mostek Corp.</td>
<td>Thomson</td>
<td>1985</td>
</tr>
<tr>
<td>65</td>
<td>Great Western Sugar Corp.</td>
<td>Tate &amp; Lyle</td>
<td>1985</td>
</tr>
</tbody>
</table>

Source: Non U.S. Multinational Enterprise Data Bank
Table 5-8 shows that the B-firms were also very active in the last decade, though on a smaller scale. However, the two largest acquisitions need explanation. Rhone-Poulenc's $575 mn. purchase of the agricultural chemicals division of Union Carbide included all plants worldwide, except Carbide's plant in Bhopal. Further research is underway to determine the share of these assets that are in the U.S. It is anticipated that this purchase, which made Rhone Poulenc the world's third largest agricultural chemicals manufacturer, will shift it into the C-firm category.

Renault's B-firm status is explained by the fact that only two investments (both listed in Table 5-8) account for the bulk of its presence in the U.S. Having entered the U.S. only recently, it seems most plausible that Renault is still in the initial stages of its planned penetration strategy. The analysis presented in this chapter would predict that it is quite likely that Renault will either acquire control (100%, or at least a majority) of their U.S. investments, or abandon them to strike out on its own. In Renault's case one anticipates the former to be most probable.

**SETBACKS ON THE PENETRATION TRAIL**

The competitive nature of the movement of capital through DFI is seen most clearly in the setbacks and defeats suffered by some of the firms in the sample population. The
Wall Street Journal, in a 1984 article, claimed that there are four main reasons why foreign firms fail or experience difficulty in their U.S. investments. These reasons include: (1) the failure to develop a cohesive strategy for penetration, often acquiring a series of unrelated companies, or simply extending domestic methods to the United States; (2) the failure to understand and adapt to the U.S. market; (3) the failure to adequately finance the investment strategy resulting in an inability to withstand a downturn; and (4) the failure to establish strong management links between the subsidiary and the parent. While no A-firms have lost the war, two of the firms have experienced severe setbacks in their attempts to expand their U.S. production base. Both cases were related to what could be seen as a fifth reason for an investment's failure, namely; (5) the unsuccessful attempts to diversify (branch out into new business) the firm's asset base by expanding into new areas in the U.S.

In 1973, BAT acquired Gimbels Department Stores for $205 mn. in an effort to diversify from tobacco. BAT was committed to this strategy of expanding into retail, following up its original purchase with the acquisition of Marshal Field in 1982, Fredrick Nelson in 1982, and J.B. Ivey & Co. in 1983. The purchase of Gimbels, however, never lived up to expectations despite an additional investment of more than $100 mn. over the next twelve years. Finally in
1986, Gimbels was sold to Allied Department Stores (now controlled by a Canadian investor, Robert Campeau, who also recently acquired Federated Department Stores) for approximately $200 mn. In the sale, BAT kept Saks Fifth Ave Co. (part of Gimbels), embarking on a $300 mn. five year expansion program in 1987.

Schlumberger acquired 100% of the fourth largest semiconductor company in the U.S., Fairchild Camera & Instrument Corporation, in 1979 for $425 mn. This marked an attempt to diversify (from oil industry machinery and instruments) into the semiconductor business. Eight years later, in 1987, Fairchild was sold to the National Semiconductor Corp. for $122 mn. While surely the retention of the original U.S. management may have led to inadequate links between the subsidiary and the parent, it seems more likely that Schlumberger's lack of experience in the highly competitive semiconductor field was responsible for this disaster. Unlike BAT, Schlumberger seems to have decided to abandon the failed diversification. During the 1980s, Schlumberger made a series of acquisitions (highlighted by the $967 mn. spent for the off-shore drilling equipment manufacturer, Sedco. Inc., in 1984) that signalled a renewed commitment to its traditional business of oil service equipment, and scientific/measuring instruments and machinery.

These results emphasize an important conclusion of this
research. Most of the sample firms who have reached the stage of establishing a significant U.S. presence, have used the strength of their experience in their traditional lines of production in their domestic economy. The firms like BAT and Schlumberger who have experimented with new activities in the U.S. remain the exception, and for good reason. In a competitive foreign environment it is tough enough to succeed in areas that the firm knows something about. Foreign firms may come to the U.S. to learn (see Chapter III), but these investments in new knowledge, or new fields of business tend to be small and often in the form of joint ventures. When, however, the strategy for penetration is hatched; the size of the commitment grows, a tendency to avoid joint ventures and assume 100% control develops, and the penetration itself is usually focused on the acquisition of U.S. firms (or the construction of new facilities by existing 100% controlled subsidiaries) which produce goods included in, or compatible with, the parent firm's existing product lines.

Three B-firms provide further evidence of the difficulty in achieving successful diversification through U.S. investments. In 1979, the Imperial Group (tobacco) acquired the Howard Johnson Co. for $630 mn. Six years later the company was sold for $300 mn. While Imperial retained Howard Johnson's Ground Round Restaurants subsidiary, the transactions resulted in a $182 mn. writeoff
by Imperial in 1985. In 1974, Inco (metal mining) attempted to diversify into the field of battery manufacturing with its 100% acquisition of ESB Corp. for $234 mn. After subsequent investment, ESB was divided into two companies, Exide Inc. and Rayovac Inc. in 1978. But, despite all efforts, the venture remained an albatross. Finally in 1982, all battery operations were sold off or discontinued, resulting in a $292 mn. writeoff. In 1978, Northern Telecom, a telephone switching equipment subsidiary of Bell Canada, attempted to diversify into the computer and data processing fields with its acquisitions of Sycor Inc. and Data 100 Corp. for a combined total investment of $249 mn. The venture then proceeded to wrack-up $220 mn. in losses over the next two years. Then in 1981, Northern Telecom reorganized its entire U.S. operations, collapsing these ventures into Northern Telecom Inc. While its activity since then has been minimal, it appears that Northern Telecom intends to stick to the telephone switching business for the present.

In addition to these three examples, other B-firms have experienced troubles of a different nature. Having begun U.S. production in Pennsylvania in 1976, Volkswagon purchased an unused Chrysler plant in Michigan in 1980. But, production, which was scheduled to commence in 1982, was indefinitely postponed due to the sluggish demand for VW products. At this writing Volkswagon remains dead in the
water, with its penetration strategy on hold. A company in a similar situation is Massey-Ferguson who has been present in the U.S. since its 1910 acquisition of the Johnson Harvester Co. of Batavia, New York. After nearly a decade of large losses, credit extensions and equity dilutions, Massey's tractor and farm equipment business in the U.S. is on the verge of extinction (having closed or sold five plants from 1979 to 1982). Massey's acquisition of the Dayton Walther Corp. in 1986 corresponds with a corporate restructuring and name change to Varity Corp. in the same year. These events may signal a renewed commitment to U.S. production in the future, but, at this point, Massey is just struggling to survive.

Another B-firm that has failed in its attempt to penetrate the U.S. is the Flick Group which, as the result of a domestic political scandal in Germany, liquidated its industrial holdings (creating another sample firm, Feldmule-Dynamit Nobel). Included in the breakup of this industrial empire was the sale of Flick's 26% holding of W. R. Grace Co., to the latter company for $595 mn. in 1985. Moreover, Bowater, sold off most of its U.S. pulp and paper operations (first established in 1952) in 1984 and now appears to be launching a new assault with its $226 mn purchase of Rexham Corp. in 1987.

Two additional B-firms may have fallen victim to the problems of too rapid expansion and not enough capital to
fend off the acquisition of the parent firm. This apparently holds true for J. Lyons who, after ten years of U.S. acquisitions of an A-firm status, was itself acquired by Allied Breweries for $166 mn. in 1981. Meanwhile, Cadbury Schweppes, after acquiring Peter Paul Inc., Duffy-Mott Co., Canada Dry's U.S. operations, Sunkist Soft Drinks Inc. and the Dr. Pepper Co. (1978 to 1986), was itself acquired by the U.S. food producer, Hershey Inc., in 1988.

In the C-firm category, two experienced general financial hardship during the 1980s. AEG Telefunken was divided and sold. In 1983 it (consumer electronic products) was sold to Thomson and in 1985 AEG (machine tools) was acquired by Daimler Benz. During the same time, Dunlop, under the threat of bankruptcy and creditor demands for debt restructuring and corporate reorganization, sold its British and European tire operations to Sumitomo in 1984 and its U.S. subsidiary to BTR in 1985. While Dunlop's reduction to C-firm status is reflected in the data presented, AEG Telefunken has yet to be removed from the updated sample population (even though the value of its few U.S. operations were transferred to Thomson and Daimler Benz, respectfully).

Another company that undertook a substantial reduction in its U.S. position during the 1980s was Pechiney who sold Howmet Corp. (acquired 1962) and other parts of its U.S. aluminum business in 1983 for $200 mn. At the time of the
divestiture the chairman of Pechiney blamed the high energy costs of the operations sold, proclaiming: "Wherever electrical current is too costly we will leave." The proceeds from the sale were reinvested in a 50% stake of a new $1.2 bn. Aluminum Smelting Complex (25% Alumax and 25% the government of Quebec) built in Quebec, Canada in 1985.

The results for Creusot-Loire (C-L), the French steel subsidiary of Schneider, were more costly. C-L's inability to secure further financing of debts from the French government (a part owner of C-L) or its creditors, led to being broken up and sold off piecemeal. Its domestic financial difficulties were transferred to its U.S. operations as well. In 1977, Alan Wood Steel Inc. (acquired 1974) was liquidated; in 1979, Yale Steel (acquired 1976) was sold; in 1983, Ag-Met Inc. (acquired 1976) was sold; and in 1985 C-L received virtually nothing for its $100 mn. 56% interest in Phoenix Steel (acquired 1976) when the latter was reorganized under bankruptcy in 1985.

Two other C-firms were forced to withdraw from investments made after the Second World War. Saint Gobain, one of the early post-World War II entrants, withdrew from its 51% joint venture to produce plate glass in Tennessee, after twelve years of losses, in 1970. Even though investing more than $100 mn. over that time, Saint Gobain sold its share of American Saint Gobain Corp. for $2.3 mn. And, finally, Saab-Scania withdrew from its joint venture
(established 1980) with Fairchild Industries Inc. in 1985 when the Federal Aviation Authority ordered the Saab-Fairchild 340 propeller planes removed from service due to engine failure under icing conditions. The retreat left Saab-Scania with an estimated writeoff in 1985 exceeding $100 mn.

CONCLUSION

This chapter has attempted to reveal the competitive nature and wave-like pattern of DFI in the United States. The results support the position taken by Ernest Mandel (see Chapter I) who has stated that

As the forces of production out-grow the national state, they likewise gradually out-grow the State's role in controlling the industrial cycle and promoting economic upswing and growth. The more the monopolies think they have withdrawn from the law of value nationally, the more they become subject to it internationally.

It is not "the monopolies" themselves that believe they have withdrawn from the pressures of competition and the operation of the law of value. It is only the monopoly capital theorists who (in their recoll from the folly of the neoclassical views of the firm, competition and value formation) have created a theoretical structure divorced from the real-world capitalist social structure of accumulation in the late twentieth century. The results of this misconception will be explored in Chapter VI.

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CHAPTER NOTES


2. Lawrence Ingrassia and Mark M. Nelson, "Unilever-Despite Failed Bid for Vicks-Shows Signs That the Giant Is Awakening", The Wall Street Journal, October 10, 1985, p.37. The authors were certainly correct. Undaunted by this setback, Unilever successfully acquired Cheesbrough Ponds for $3.1 bn. in 1986


5. See Appendix C for oil companies excluded from analysis which otherwise meet the sample criteria.

6. 1985 was used instead of 1986 for two reasons: 1. This corresponds with macroeconomic data presented in Chapter II; 2. It was the original intention of this researcher to conclude this study with 1985. However, data for 1986 (and some 1987) have been included for the sample population. Further updating for 1987 is planned.

7. The changes to the original sample firms (Appendix A) are listed below:
   a. One German firm, Opel, was found to be a subsidiary of General Motors and was dropped from the sample.
   b. Three Japanese firms (Sumitomo Chemicals, Sumitomo Electric and Sumitomo Metal) in the original sample are listed under the Sumitomo Group in the updated sample. The new effect was a loss of two entries from the sample list.
   c. Two Japanese firms (Toray and Toshiba) in the original sample are listed under the Mitsui Group (not in original sample) in the updated sample. The net effect was a loss of one from the sample list.
   d. Three Japanese firms (Mitsubishi Chemicals, Mitsubishi Electric and Mitsubishi Heavy Industries) in the original sample are listed under the Mitsubishi Group in the updated sample. The net effect was a loss of two from the sample list.
   e. Two Italian firms (FINSIDER and ITALSIDER) in the original sample were found to be subsidiaries of another firm in the original sample, IRI. In the updated sample these two firms are incorporated under IRI resulting in a net loss of two from the original population.
f. One British firm (George Weston) was found to be a subsidiary of Associated British Foods, another firm in the original sample. In the updated sample, George Weston was consolidated under Associated British Foods leading to the net loss of one firm from the sample group.

g. Four firms in the original sample were acquired by other firms in the sample during the period from 1966-1986. These were:
   1. Associated Electrical Industries (acquired by GEC in 1967).
   2. English Electric (acquired by GEC in 1968).

In the updated sample these acquisitions were consolidated under the parent firm resulting in a net loss of four firms from the sample listing.

h. Three firms in the original sample merged with three other firms in the sample during the period from 1965-1986.
   1. In 1978, Allied Breweries merged with J. Lyons creating Allied Lyons.
   2. In 1979, EMI merged creating Thorn-EMI.
   3. In 1986, USINOR merged with SACILOR creating USINOR/SACILOR.

In all three cases, the updated sample lists the merged companies under the new name resulting in a net loss of three from the original sample list.

i. In 1971, two Japanese firms (Fuji Iron & Steel and Yawata Iron & Steel) in the original sample were merged creating Nippon Steel, another company in the original sample. The activities of these two were consolidated under Nippon Steel resulting in a net loss of two from the original sample listing.

j. Two Japanese firms in the original sample changed their names during the period from 1965 to 1986. In both cases, the new and the old name were in the original sample. The activities of the two firms were consolidated under their new names creating a net loss of two from the original sample.

In addition to these ten changes which reduced the size of the sample, there were also four changes which altered the composition, but not the size, of the sample. These were:

   1. Northern Telcom was found to be a subsidiary (52%) of Bell Canada Enterprises which was not in the original sample listing. In the updated sample, Northern Telecom is listed under Bell.

   2. DeBeers, which is a subsidiary of Anglo-American (not in the original sample) is listed under
Anglo-American/DeBeers in the updated sample.

3. In 1979, Dalgety PLC (not in original sample) acquired Spillars Ltd. In the updated sample, Spillers is consolidated under Dalgety.

4. In 1985, BTR PLC (in the original sample) acquired Dunlop Tire and Rubber Co. (U.S.), a subsidiary of Dunlop PLC. Since Dunlop (U.K.) still exists, both companies remained in the sample.

8. The twelve firms excluded from the updated sample because of no U.S. presence are listed below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Firm Name</th>
<th>Country</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Barlow Rand SA</td>
<td>SA</td>
<td>food products</td>
</tr>
<tr>
<td>b</td>
<td>British Leyland BR</td>
<td>BR</td>
<td>motor vehicles</td>
</tr>
<tr>
<td>c</td>
<td>Charbonnages de France PR</td>
<td>FR</td>
<td>mining-coal</td>
</tr>
<tr>
<td>d</td>
<td>CSR AA</td>
<td>AA</td>
<td>food products</td>
</tr>
<tr>
<td>e</td>
<td>Hibernia GR</td>
<td>GR</td>
<td>coal, chemicals</td>
</tr>
<tr>
<td>f</td>
<td>Hindustan Steel IA</td>
<td>IA</td>
<td>iron &amp; steel</td>
</tr>
<tr>
<td>g</td>
<td>Kawasaki Steel JP</td>
<td>JP</td>
<td>met. ref., steel</td>
</tr>
<tr>
<td>h</td>
<td>Kobe Steel JP</td>
<td>JP</td>
<td>met. ref., steel</td>
</tr>
<tr>
<td>i</td>
<td>National Coal Board BR</td>
<td>BR</td>
<td>mining-coal</td>
</tr>
<tr>
<td>j</td>
<td>Peugot-Citroen FR</td>
<td>FR</td>
<td>motor vehicles</td>
</tr>
<tr>
<td>k</td>
<td>Ruhr Kole GR</td>
<td>GR</td>
<td>mining-coal</td>
</tr>
<tr>
<td>l</td>
<td>Snow Brand Milk Pdts. JP</td>
<td>JP</td>
<td>food &amp; beverages</td>
</tr>
</tbody>
</table>

Should continuing research discover investments by any of these firms, they will be added to the sample later.

9. There are numerous sources of the information provided in this chapter. A partial listing would include:

<table>
<thead>
<tr>
<th>No.</th>
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<tbody>
<tr>
<td>a</td>
<td>Corporate Annual Reports of Sample Firms</td>
</tr>
<tr>
<td>d</td>
<td>Book on non-U.S. multinationals, See Chapter III.</td>
</tr>
<tr>
<td>e</td>
<td>Articles on non-U.S. multinationals, See Chapter III.</td>
</tr>
<tr>
<td>j</td>
<td>Various Business and Industry Journals and Magazines.</td>
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</table>

When I began this project I had (naively) hoped to make use of Harvard's Multinational Enterprise Databank (see Chapter III) since they had begun to accumulate much of this information in the early 1970s under Raymond Vernon and H. G. Wells. Unfortunately, Harvard has chosen to view their information in a proprietary light, refusing to release any
company specific information. As my initial investigations commenced I began to realize the difficulty of the task due to (1) the large size of the universe; (2) the time limitations on the research efforts; and (3) the lack of reported data.

Reducing the sample size to 135 reduced the first problem significantly, but it also raises the distinct possibility that the sample is not a perfect representation of the universe, i.e., sample bias. It is hoped that post-doctoral research can reduce this possibility by expanding the sample size. As a starting point, a second data file has been created which includes the 26 firms listed in Appendix B and all companies from Fortune's largest 200 list in any one year.

The second problem was alleviated by the extensions graciously awarded by the Graduate School as well as the perseverance of my dissertation advisor in helping me acquire them.

The last problem is the most difficult. The lack of reporting requirements by the Federal Government means that the researcher is dependent upon the private media and its own research efforts that get published. The difficulties this creates is evidenced by the publication of numerous conflicting reports in the sources consulted, as well as informational gaps in the reported activity. State-wide studies have filled some of the gap, but it remains a fact that much of the DFI activity goes unreported. This is especially true if the foreign investing firm tries to "hide" its presence through holding companies, dummy corporations, etc., as well as for smaller firms who operate further from the limelight. This lack of data also concerns some U.S. Senators who have debated (in committee during the summer of 1988) the need to establish reporting requirements for foreign investors in the U.S.

In order to provide the information included in this Chapter, every effort was made (through public sources) to establish the timeframe of penetration, the size of the commitment, the location of the investments, the type of production undertaken, the form of the investment, the percentage of parent ownership and the withdrawal from the investment (where applicable). Where necessary, careful estimates (primarily of the dollar size of the smaller investment) were made by comparing similar investments of known value. Finally, while the researcher has attempted to accurately portray the commitment to U.S. production by the sample firms, it must be recognized that this is an ongoing research effort, and hence, the results should be viewed as preliminary.

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11. The sample needs to be adjusted (as it will be) to reflect Flick's new non-investor status, yet this change (and some of the others discussed in this section) has not been made. This comment serves only to stress the evolutionary nature of this research project.


### APPENDIX A: THE ORIGINAL SAMPLE OF FOREIGN FIRMS

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Nation</th>
<th>Industry</th>
<th>R-1966</th>
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<td>FR</td>
<td>tires, rubber</td>
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<td>chemicals/aluminum</td>
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<td>97</td>
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<td>19</td>
<td>27</td>
<td>24</td>
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<tr>
<td>Montedison</td>
<td>IT</td>
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<td>56</td>
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<td>mining-coal</td>
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<td>157</td>
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<td>syn fibers/plastic</td>
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<td>-</td>
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<td>JP</td>
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<td>168</td>
<td>182</td>
<td>207</td>
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<tr>
<td>Ueagte</td>
<td>BR</td>
<td>food products</td>
<td>67</td>
<td>140</td>
<td>200</td>
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<td>4</td>
<td>6</td>
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<td>USINOR</td>
<td>FR</td>
<td>iron and steel</td>
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<td>-</td>
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<td>VORST-Alpine</td>
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<td>iron and steel</td>
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</table>

Source: Non-U.S. Multinational Enterprise Data Bank
Country Abbreviations:

AA - Australia
AU - Austria
BE - Belgium
B/I - British/Italy
BR - Britain
CA - Canada
FI - Finland
FR - France
GE - Germany
IA - India
IN - Indonesia
IT - Italy
JP - Japan
LI - Luxembourg
MA - Netherlands Antilles
N/B - Netherlands/Britain
NK - Netherlands
NO - Norway
SA - South Africa
SE - Sweden
SK - South Korea
SP - Spain
SW - Switzerland

Other Abbreviations

P - Purchased

MLC- No longer classified as an industrial company
## Appendix B: Mufti Cos. on FORBES (1996) 100 Largest Foreign Investors in U.S. Not in Sample

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company Name</th>
<th>Country</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Seagram Co., Ltd.</td>
<td>CA</td>
<td>chem., energy, alc. bev. (23% Dupont, J.R. Seagram &amp; Sons)</td>
</tr>
<tr>
<td>2.</td>
<td>Yenelmans Group</td>
<td>GR</td>
<td>supermarkets (A&amp;P)</td>
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<tr>
<td>3.</td>
<td>Hanson Trust PLC</td>
<td>BR</td>
<td>consumer goods (Hanson Industries, SCM)</td>
</tr>
<tr>
<td>4.</td>
<td>Generale Occidentale</td>
<td>FR</td>
<td>sprmchts., timber, containers (Grand Union Crown Tellerbach)</td>
</tr>
<tr>
<td>5.</td>
<td>Franz Hanbel &amp; Cie</td>
<td>GR</td>
<td>food distributors (Scribaer Inc.)</td>
</tr>
<tr>
<td>6.</td>
<td>Elf Aquitaine Group</td>
<td>FR</td>
<td>chems. drugs, bldg. materials (Elf Acquitaine Inc.)</td>
</tr>
<tr>
<td>7.</td>
<td>Delhaize &quot;Le Lion&quot; SA</td>
<td>BE</td>
<td>supermarkets (Food Lion, Food Giant)</td>
</tr>
<tr>
<td>8.</td>
<td>Vendex International</td>
<td>NE</td>
<td>retailing (Dilliard Dept. Stores)</td>
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<tr>
<td>9.</td>
<td>Ahold NV</td>
<td>NE</td>
<td>supermarkets (BI-LO, Giant Food Stores)</td>
</tr>
<tr>
<td>10.</td>
<td>Moore Corp. Ltd.</td>
<td>NE</td>
<td>business forms (Moore Business Forms)</td>
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<tr>
<td>11.</td>
<td>Genstar Corp.</td>
<td>CA</td>
<td>bldg. mats., KE dev., finance services, (Genstar USA)</td>
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<tr>
<td>12.</td>
<td>First City Financial Corp.</td>
<td>CA</td>
<td>constr., bldg. mts., applcs. (H.H. Robertson Scovill, Inc.)</td>
</tr>
<tr>
<td>13.</td>
<td>United Biscuit PLC</td>
<td>BR</td>
<td>bakery, food products (Keebler, Specialty Brands)</td>
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<tr>
<td>14.</td>
<td>SNBCHNA</td>
<td>FR</td>
<td>aviation (CFM International, Inc.)</td>
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<tr>
<td>15.</td>
<td>Canadian Dev. Corp.</td>
<td>CA</td>
<td>office equipment, energy (Savia Corp.)</td>
</tr>
<tr>
<td>16.</td>
<td>TGB Holdings NV</td>
<td>NE</td>
<td>elec. &amp; mtl. pds., containers, pumps, (Etc. Sciences Inc., InCon</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Packaging Inc., Info Tech. Group, Metalink, Sterling Fluid Pdts.)</td>
</tr>
<tr>
<td>17.</td>
<td>Olympia &amp; York Dev. Ltd.</td>
<td>CA</td>
<td>recr., dev., bmk., forest pds., (Landmark Land, House, Aibitibi-Price)</td>
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<tr>
<td>18.</td>
<td>Otto Versand</td>
<td>GR</td>
<td>catalog retailing (Speigel Inc.)</td>
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<td>19.</td>
<td>News Corp. Ltd.</td>
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<td>media (News America)</td>
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<td>22.</td>
<td>J. Sainsbury PLC</td>
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<td>supermarkets (Shaw's Supermarkets)</td>
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<td>23.</td>
<td>Sobey Parties</td>
<td>CA</td>
<td>food distributors (Hannaford Brothers)</td>
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<tr>
<td>24.</td>
<td>Pilkington Brothers PLC</td>
<td>BR</td>
<td>glass, electro-optics (LOF Glass)</td>
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<td>25.</td>
<td>Johnson Matthey PLC</td>
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<td>printing, refining (Johnson Matthey Inc.)</td>
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<td>26.</td>
<td>Promodes</td>
<td>FR</td>
<td>supermarkets (Red Food Stores, Houchens, Prairie)</td>
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Source: Non-U.S. Multinational Enterprise Data Bank
### Appendix C: Oil Firms Excluded From Analysis

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<td>ENI</td>
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<td>ENPETROL</td>
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Source: Non-U.S. Multinational Enterprise Data Bank
CHAPTER VI
SUMMARY: ACCUMULATION, COMPETITION AND DIRECT INVESTMENT IN THE UNITED STATES

THE WORLD SYSTEM PERSPECTIVE

It has been argued that the current wave of direct foreign investment (DFI) in the United States can be viewed as the logical outcome of the competitive drive of capitalist accumulation and reproduction on a world scale. At this particular historical juncture (the period since the Second World War), the imperative of expanded reproduction has established the internationalization of productive capital (DFI) as the dominant moment in capital's movement through its three circuits of accumulation. This view was seen, in Chapter II, to be Marxist in its origin, drawing on the works of such modern authors as Christian Palloix, Ben Fine, Lawrence Harris, Ernest Mandel, Gregory Adams and Marc Herold.¹ As Mandel has pointed out, the imperative of expanded accumulation has turned the multinational enterprise into the determinant organizational form in capital's reproduction. Thus, he was quoted in Chapter IV that,

\[\text{In the past there was only marginal internationalization of the production of surplus-value in actual manufacturing industry, outside the domain of raw materials. Today it constitutes the really new and specific aspect of the internationalization of capital in the late capitalist epoch....This}\]

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development started immediately after the Second World War, especially in the U.S. oil, automobile and electrical apparatus industries, and has today become a world-wide phenomenon which for the first time actually provides an immediately international framework for the competition of capital.2

This conception stands in distinction from and is opposed to the perspective that DFI in the U.S. (and in general) can be explained through either a market imperfections model or a generalized monopoly framework.3 The current wave of DFI in the U.S. cannot be explained by the mainstream position that seeks to expose the cause through a listing of either firm-specific monopoly advantages or macroeconomic market imperfections fostered within specific countries or industries. These theories have consistently confused the enabling and motivating factors with the underlying cause of the international flows of productive capital. As argued in Chapter III, these theories have evolved from a misplaced retention of the neo-classical paradigm which holds that any firm would choose to service foreign markets through exports unless it was able, or required, to overcome the inherent disadvantages (which, though stated are never proven) of foreign production. This neo-classical foundation invariably prevents the mainstream researchers from recognizing the basic advantages bestowed on the firm that adopts international production, chief among which is the increased flexibility afforded to the process of a firm's
accumulation.

Firm-specific monopoly advantages, such as superior technology, internal organization, financing or size, do not cause the DFI decision to be made. Instead, they serve as the means or methods which allow the firm to achieve an internationalization of its productive capital in particular instances. Industry or country specific market imperfections (such as tariff and non-tariff barriers, currency premiums, availability of raw materials, undervaluations of the U.S. stock market, etc.) likewise do not cause the decision to undertake DFI in the United States. While all of these specific factors can be seen as motivating ones, in particular cases at particular times, the explanation of the DFI decision resides in the process of competitive accumulation and reproduction of capital itself.

The competitive world system perspective is also denied by the neo-Marxist theory of monopoly capital. The latter sees the cause of the export of capital (both portfolio and direct) in the development of generalized monopoly not competition between capitals. Here the export of capital (in general) is regarded as an attempt to vent the domestically-produced uninvestable surplus. The inability to absorb this ever-growing surplus, which results, it is argued from the development of permanent monopolies, creates permanent stagnation and a growing irrationality of the
capitalist system as a whole. As seen in Chapters I and II, this thesis claims that the monopoly capital theory stands the world on its head, with the DFI decision arising from permanent monopoly and perpetual stagnation, instead of from the process of competitive capitalist accumulation itself. The fundamental cause of the error is the lack of a dialectical view of accumulation which allows for the contradictory nature of competition and monopoly, while resolving this contradiction through the synthesis of capital's movement. Marx noted at the dawn of the age of joint-stock companies,

In practical life we find not only competition, monopoly, and the antagonism between them, but also the synthesis of the two, which is not a new formula, but a movement. Monopoly produces competition, competitors become monopolists....and the more the mass of the proletarians grows as against the monopolists of one nation, the more desperate competition becomes between monopolists of different nations. The synthesis is such that monopoly can only maintain itself by continually entering into the struggle of competition.

This thesis contends in Chapters I and II that the neo-Marxist rejection of the Marxian laws of motion (the increasing concentration and centralization of capital, the tendency for the rate of profit to fall, and the labor theory of value) results both from a failure to understand the dialectical nature of competition and monopoly in the process of accumulation, as well as from an inappropriate focus in the level of abstraction which is applied. While Marx cannot be criticized for concentrating his analysis on
a single nation-state (Great Britain), the neo-Marxist analysis of modern capitalism based on only one nation-state (usually the United States) is both indefensible and the cause of many subsequent errors. Chief among these errors is the claim that the internal logic of the capitalist system has broken down, producing a system that is increasingly illogical and, hence, unintelligible. Inevitably, this leads the monopoly capital theorists to predict that it is only a question of time before the capitalist system collapses under its own weight. What they fail to perceive, however, is that it is not capitalism which is increasingly irrational and crumbling, but the static theory of monopoly capitalism itself.

THE DATA ON DIRECT INVESTMENT IN THE UNITED STATES

The Macroeconomic Data

In Chapter II, macroeconomic time-series data, gathered from The Survey of Current Business, were presented for direct foreign investment in the United States since 1900. These data illustrated that most of such investment has occurred since the end of the Second World War. The pace of this activity averaged an annual growth rate of 7.06% from 1950 to 1970. From 1970 to 1985 the pace of this movement of capital accelerated significantly, averaging an annual growth rate of 19.06%. Additionally, these time-series showed that the source of DFI was almost exclusively other developed capitalist countries. Throughout the post-World
War II period, 65-70% of this investment has originated in Europe (led by Great Britain and the Netherlands). Meanwhile, Canada has seen its share of DFI in the U.S. decline from a high of 30.4% in 1955 to a level of 9.1% in 1985. The declining share for Canada has been matched by a growing share for Japan from 1.3% in 1960 to 10.4% in 1985. Finally, it was noted that the increasing share of Latin America's DFI in the U.S. (from 1.8% in 1965 to 9.3% in 1985) was, at least partly, a statistical aberration owing to a change in the Commerce Department's definition of ownership in its 1974 benchmark survey.  

Even though direct investment abroad by U.S. corporations has grown throughout the post-World War II period, Chapter II presented penetration indices in Tables 2-10 and 2-11 which illustrated that the two-way flow of investment has not been proportional. From 1950 until 1970 U.S. direct investment abroad grew at a more rapid pace than DFI in the U.S. Between 1970 and 1975 a trend reversal occurred as the inward flow of direct investment began to outstrip the outward flow. During the late 1970s this reversal of trend gained strength, culminating (from 1980 to 1985) in the development of penetration supremacy for many of the foreign countries (i.e. Great Britain, the Netherlands, Sweden and Japan).  

The Microeconomic Data  

Chapter V presented the results of an analysis of a
sample of 135 foreign manufacturing firms with direct investments in the U.S. This research indicated that the largest manufacturing investments have occurred in the following industries: Chemicals and Drugs; Transportation Equipment; Electrical Machinery; Non-electrical Machinery and Computers; and Food and Kindred Products. These results conformed to the macroeconomic data obtained from the *The Survey of Current Business* and presented in Chapter II, Table 2-9. An exception to the aggregate data was noted by the existence of a disproportionately large number of firms (in the sample) in the Primary Metals Industries. This anomaly was explained by the fact that most of these sample firms possessed relatively small investment stakes in the United States.

The sample data also revealed a country breakdown similar to aggregate data with a few exceptions. While the firms showing the greatest representation were primarily European (led, of course by Great Britain), the sample contained a disproportionately large number of Japanese firms and a disproportionately small number of firms from the Netherlands when compared to the aggregate data presented in Chapter II. These incongruencies were explained by the fact that most of the Japanese firms were relatively small (designated as C-firms) investors in the U.S. who had only recently (post-1975) made their initial investment there. Thus, these Japanese firms were seen as
being in only the first stage of their penetration strategy and it was predicted that further investment was quite likely. Additionally, the relatively small number of Dutch firms in the sample was explained by the fact that three of them (AKZO, Phillips, and Unilever) were among the very largest investors in the U.S. (designated as A-firms). All three had a massive presence in the United States which had been built up over many years, with initial penetration pre-dating the Second World War.

The timeframe of the sample population's post-World War II direct investment penetration of the U.S. market corresponded with that of the aggregate data presented in Chapter II. The sample results indicated that most firms follow a preconceived strategy of penetration. This is often marked by an initial stage of experimental investment during which small investments and/or joint ventures predominate. Once, the firm decides to fully commit itself to production in the U.S., however, the size of the investment tends to dramatically increase while the use of joint ventures tends to diminish. An attempt was made to identify the timeframe of each sample firm's strategy of penetration since the end of the Second World War. This analysis revealed that the largest investors (A-firms) embarked on their strategy between 1965 and 1975, even if
the firm was found to have investments in the U.S. pre-dating the Second World War. Also, most of the A-firms were shown to have undertaken an expanded (third round) commitment to U.S. production in the 1980s. The middle-sized investors (B-firms) tended to begin their penetration strategy somewhat later, between 1970 and 1980, while the smallest investors (C-firms) illustrated a tendency to embark on their penetration in the late 1970s and early 1980s. Thus, the aggregate data, which showed a marked increase in DFI in the U.S. after the mid-1960s, was revealed to contain three waves of investment as A-firms were followed by B-firms and then by the C-firms.

The results of the analysis of the sample firms also indicated a strong proclivity for acquisitions of existing U.S. companies (as opposed to new constructions or joint-ventures) predominating as the method employed to achieve penetration. This was particularly true for the largest investors. Thirty six percent of the 28 A-firms used acquisitions only in their penetration, while 21% used both acquisitions and new construction and the remainder used acquisitions supplemented by both new construction and joint-venture arrangements. On the other hand the smallest investors (C-firms) in the sample population exhibited a much greater propensity to employ joint-venture arrangements with U.S. firms in their attempts to penetrate U.S. production.
Finally, the inherently competitive nature of this movement of capital was further illustrated through an exploration of the firms who had failed in their penetration efforts. It was seen that failure was primarily due to: (1) unsuccessful efforts to use the U.S. market to diversify the investing firm’s production base; (2) the lack of adequate financing for the U.S. projects by the foreign parent; or (3) a poorly conceived investment strategy tied to an outdated or improper technology. The existence of these failures was seen as further evidence of the bankruptcy of the theory of monopoly capital.

CRISIS IN THE SOCIAL STRUCTURE OF ACCUMULATION, GROWING STAGNATION, INCREASING COMPETITION AND THE INTERNATIONALIZATION OF PRODUCTION

In distinction to the neo-Marxist static model of monopoly capital which forecasts perpetual stagnation and increasing irrationality of the capitalist system, this thesis has advanced the dynamic theory of long waves of capitalist accumulation and reproduction. Conceptually this means that capitalism is seen as a rational system (within its own limits) that develops in an uneven and disproportionate fashion. Most clearly elucidated in the works of David Gordon and Ernest Mandel, the claim is that capitalism, as a world system, is inherently subject to periods of prolonged expansion, followed by periods of
prolonged stagnation. Each long wave of expansion is based on a unified system of social structures that allow profitable capitalist accumulation to proceed. The very process of accumulation, however, creates growing contradictions and conflicts within the system which begin to suppress profitability and increasingly act to undermine the legitimacy of this unified system of social structures. The tendency for the rate of profit to fall (Mandel believes this to be more appropriately related to long waves than the normal industrial cycles), which proceeds from the Marxian notion of a rising organic composition of capital centered around a set of inter-related technologies, produces a period of increasing competition and extended stagnation.

Gordon, who identifies this period of stagnation as one of crisis in the social structure of accumulation, claims that the long wave of stagnation can only be overcome by a restructuring of the social relationships governing accumulation.

While the capitalist economy tends endogenously to generate both business cycles and economic crises, normal economic activity, within the context of prevailing social relationships, is sufficient to restore prosperity during a business cycle recession. Normal economic activity is not sufficient, on the other hand, to generate a resolution of an economic crisis and a restoration of a rapid rate of accumulation: changes in the prevailing social relationships with the ultimate effect of reconstituting the environmental stability necessary for rapid and sustained accumulation, are necessary for crisis to come to an end.
In Gordon's judgment, the only way to resolve this growing crisis in the social structure of accumulation is to replace the current structure with a new one. He further stated that the forces which operate to determine the form of the restructuring are endogenous to the capitalist system. Thus, such factors as the trajectory of class struggle, the organization of corporate structures, the altered forms of competition, the nature of state intervention and control, the social and technological mechanisms of reproduction and other factors (see Chapter IV, Table 4-9) interact in this period of stagnation and crisis to define the path of the restructuring.

The concrete historical conditions existing after the Second World War produced a social structure of accumulation which was based on the hegemony of the United States, allowing it to create the institutional framework (both domestically and internationally) necessary for prolonged expansion. As accumulation proceeded, however, the logic of this social structure began to disintegrate. The long wave of expansion gave way to a phase of prolonged stagnation as the ability of the system to sustain itself weakened. The spreading stagnation produced a heightening of conflict between capital and labor (intensified class struggle), an expansion of capitalist rivalry (especially international imperialist rivalry), and a growing crisis in the social structure of accumulation.
From such a world-system viewpoint this thesis has attempted to provide an explanation of DFI in the United States which focused on the declining hegemony of U.S. imperialism, the development of a generalized crisis of overproduction, a falling rate of profit, increasing international competition and a spreading threat of structural breakdown. At this particular historical juncture, the growth of international competition achieves its most poignant expression in the progressive internationalization of productive capital as corporations of all sizes seek to overcome the limits to their continued accumulation. What has been expressed corresponds with the stance of Olle and Schoeller who have argued that,

the stage which the world capitalist system has now reached contains a tendency which is forcing companies, regardless of their size, to undertake a global reorganization of their manufacturing processes on pain of extinction....It is the historically unique combination of innovations in site, products and processes in a phase of world economic stagnation which constitutes the substance of the reorganization of the world economy.10

While this thesis has exposed the extent of the internationalization of productive capital as it relates to the growth of manufacturing DFI in the United States, no attempt has been made to analyze its impact on the social structure of accumulation in the United States or in the
capitalist world as a whole. Such an investigation will serve as a starting point for further (post-doctoral) research already underway through an expansion of the sample population (both for manufacturing and non-manufacturing firms) in the non-U.S. multinational enterprise data bank. The goal will be to analyze the impact of the growing DFI in the U.S. on the changing forms of competition between separate fractions of capital as well as the effect of these changes on class struggle, the social and technological mechanisms of reproduction and the role of the state in reconstituting a social structure of accumulation that will create the conditions for expanded capitalist production and accumulation. In this regard, what has been elaborated above must be considered a preliminary investigation which serves as a necessary and valuable foundation for further analysis.
CHAPTER NOTES

1. For a further discussion of this perspective see Chapter II, Pp. 49-60.


3. This statement should not, however, be taken to mean that the world system perspective accepts the neo-classical conception of perfect (atomistic) competition in any form. Rather, as discussed in Chapter I, a dialectical view of competition and monopoly sees the resolution of their contradictory existence as a synthesized movement is stressed.

4. For a further discussion of this position, see Chapter I, pp. 10-31.


7. See Chapter II, Tables 2-10 and 2-11, pp. 70-71.

8. See Chapter IV, pp. 207-220.


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