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CENTER DISCUSSION PAPER NO. 83

INTERNATIONAL TRADE AND UNEVEN DEVELOPMENT

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International Trade and Uneven Development*

by

Stephen H. Hymer and Stephen A. Resnick

Introduction

In his article "Group Behavior and International Trade," Kindleberger traced the effect of the fall in the world price of wheat after 1870 on the trade and production of several European countries.¹ He found that England, the Netherlands, Belgium and Denmark followed the classical economic model by allowing imports of wheat to substitute for domestic production. Germany, France and Italy, however, raised tariffs to counter the effect of the change in the terms of trade. Because of this difference in response, Kindleberger concluded that it was necessary to analyze group behavior, i.e., class struggle and alliance, in predicting how an economy reacts to changes in price or other economic variables. "For accurate prediction and policy-formation, an adequate theory of the behavior of large groups and their components is needed as an adjunct to the analytical tools of the market."² In technical terms, the usual economic model of international trade is misspecified since it deals only with market relations and omits important social and political equations. It therefore yields biased estimates and wrong predictions. The model, for example, takes into account the effect of tariffs on the distribution of income, but not the feedback of a change in income distribution (real or threatened) on the setting of tariffs.

More recently, Harry Johnson has also stressed the importance of the missing political equations in international trade theory.³ In his

*To appear in Kindleberger Festschrift.

theoretical model of economic nationalism, he argued that many countries have a preference for industry over agriculture, government ownership over private ownership, national ownership over foreign, and import substitution over export expansion. These preferences determine a pattern of behavior quite different from that predicted by international trade theory. Instead of choosing the point on the production possibilities curve that maximizes the value of output at world prices (i.e., a point where the marginal rate of transformation equals the international price ratio), they use tariffs, subsidies, and other instruments to bias production away from Pareto Optimality and to satisfy their given "non economic" preferences, e.g., they sacrifice real income in order to increase the share of manufacturing in national production or the share of nationals in the ownership of the capital stock.

In a similar vein, our recent analysis of government expenditure policy in underdeveloped countries stressed the importance of explicitly introducing government utility functions and tax equation into economic analysis.⁴ We argued that the government is the main provider of a large portion of the capital stock of a country (both physical and human) as well as the sole provider of certain essential support services. Since the government does not usually use market criteria for its production and pricing decisions, the observed level of production and consumption in an economy will depend not only on private tastes, technologies, and factor endowments, as theory suggests, but also on the preferences and decision rules used by the government, i.e., on political as well as economic equations.

Given these considerations, our goal in this paper is to analyze the historic origins of underdevelopment using a framework which includes

political as well as economic factors. Our purpose is to explain why the growth of the international economy over the course of the last few centuries has failed to equalize factor prices but instead has created a dualism between the developed and underdeveloped areas of the world.

Among other things, we want to show the frail base upon which rest so many of the orthodox economists' policy recommendations for development. Since international trade theory tells only a portion of the story of the gains and losses from trade, it is seriously misleading when used by itself in empirical analysis and policy prescription. As the following simple econometric model of supply response demonstrates, the cost of ignoring political factors is an inability to identify economic relations and, therefore, an inability to make policy recommendations.

Equation (1) describes the usual economic supply function. Equation (2) is a political equation relating government policy to world price.

$$1. \quad x_t = a_1 + b_1 P_t (1 - t_t) + u_{1t}$$

$$2. \quad t_t = a_2 + b_2 P_t + u_{2t}$$

where: x_t is exports in real terms, P_t is the world price, t_t is the net tax rate, i.e., taxes less subsidies including expenditures on infrastructure, and u_{it} is the error terms of the i^{th} equation.

Solving these equations yields the reduced form (3):

$$\begin{aligned} 3. \quad x_t &= a_1 + b_1 (1 - a_2) P_t - b_1 b_2 P_t^2 - b_1 P_t u_{2t} + u_{1t} \\ &= a_1 + B_1 P_t + B_2 P_t^2 + u_t \end{aligned}$$

The first problem encountered in any attempt to evaluate the parameters of supply response in this model, is the difficulty of obtaining data on t . One can sometimes measure tariffs and taxes accurately but it is almost never possible to estimate other government instruments, e.g., the value of

subsidies contained in the wide variety of services offered by the government to the private sector at reduced prices. Where t cannot be measured, one cannot estimate the structural equations of the model, but must confine the analysis to the reduced form. This is not adequate for policy. To formulate policy [i.e., to decide how best to alter the decision rule implied by equation (2)], a government must know the value of b_1 and cannot rely merely on the reduced form estimates, B_1 and B_2 , so long as b_2 is not small.

Thus the question of whether "power" relationships should be included in economic models is an empirical one and not a matter of convenience or of specialization between economists and political scientists. Since economists usually ignore political factors, structural estimates are not available and policy is often hampered severely. Empirical work on input/output tables provides an important example of information based only on reduced form estimates. The coefficients of these tables, so frequently used by planners, are derived from the actual flows in a given year and do not reflect technological linkages alone, as they purport to, but also the tastes, interests and limitations of the previous governments' decision rules. Thus there are good econometric reasons for a government interested in overcoming underdevelopment, i.e., changing policy and structure, to be wary of them.

This model also points to another important problem for policy-making even where accurate estimates of t are available. Suppose that a previous government had been characterized by a decision rule which attempted to stabilize price to producers by varying t inversely to P (e.g., through a Marketing Board). This would reduce the observed variance of $P(1 - t)$

and increase the difficulty of estimating the coefficients of equation (1) thus making it difficult to use past experience as a basis for future policy. More generally, when a government attempts to change the structure of an economy (i.e., develop), it often finds the data generated by the previous structure (i.e., the historical facts) to be unhelpful as a basis for policy. Revolution, by definition, implies values of a's and b's outside the historical sample, and only under very special conditions would the statistical estimates of those coefficients apply to non-marginal changes. Ideology supplies the strength to ignore the facts. One of the important purposes of historical analysis is to show how power relations in the past constrained the full development of the productive potential of the economy.

The essay is divided into three parts corresponding to the three major stages of the international economy: Mercantilism (late 15th to 19th century), Colonialism (1870-1939) and The Present. For convenience we call these Mercantilism I, Mercantilism II and Mercantilism III, since they represent successive stages of unequal trade and uneven development. The argument is conducted heuristically, but our hope is to proceed at a later point to theoretical and econometric models using sets of interdependent political and economic equations.

Mercantilism I: 15th Century to 1870

The Mercantilist period created the first truly international economy. The oceans were transformed from a barrier separating Europe from Asia, America and Africa, to a medium of exchange and new dimensions for commercial intercourse were opened up. Ironically, the global integration which created one world, unified by mercantile and political relationships, also

led to the fragmentation of its parts into a small set of developing countries and a large group of stunted and deformed economies which became the underdeveloped areas of the world. It is this historical process of uneven development which we will focus upon in the following analysis.

International trade theory⁵ predicts that in a market system the fall in transport costs created by the age of exploration would lead to an increase in trade and improved welfare for the world as a whole as well as for each of its trading countries. Individuals and groups within a country may, of course, gain or lose depending on their ownership of factors of production. In an egalitarian peasant economy for example, all individuals will be better off since they share equally in the resources of the country. In a more highly developed civilization such as existed in parts of Asia and South America, labor should lose and land gain since imported manufactures would substitute for crafts and services while increased exports of primary products would raise the value of natural resources.

Our model yields different results because it takes into account political as well as market relationships. Mercantilist trade changed the power structure within and between countries and this radical break is of greater importance in explaining the patterns of trade and income distribution than is the market reaction to price focused upon in the orthodox model.

Figure 1 is a device to illustrate the employment structure of the traditional economy and the changes that occurred as a result of Mercantilism I trade. The diagram is based on an equation linking food production (and consumption) per capita \bar{f} to: output per man-hour in agriculture \underline{a} , hours per man in agriculture \underline{h} , and the percentage of

persons engaged in agriculture \underline{n} .

4. $\bar{f} = ahn$

For a given per capita food standard, Equation (4) traces out a rectangular hyperbola, AA, describing possible distributions of the work force of a traditional society. It is assumed that \underline{a} is unaffected by \underline{h} and \underline{n} .⁶ At a

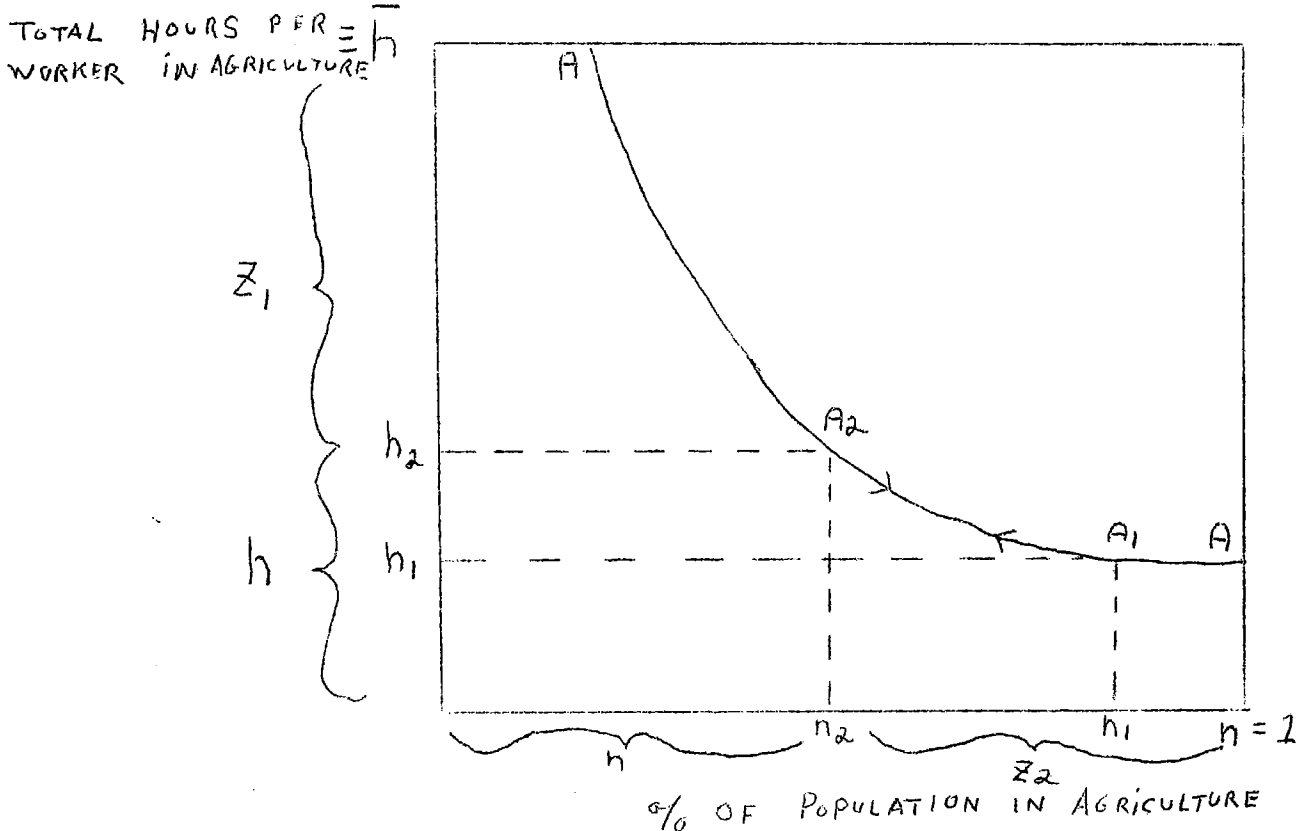


FIGURE 1

point such as A_1 (which we shall argue represents one of the prevalent African modes of production) nearly the entire population is engaged in the agrarian sector (\underline{n} approaches 1), but the hours worked per man in agriculture are low. At a point such as A_2 (Oriental Despotism), a much larger fraction of the population is outside the agrarian sector, while those engaged in agriculture are more fully specialized and work substantially longer hours in farming in order to produce an agricultural surplus for the remainder of the population.

The distribution of time in non-agricultural activities can be illustrated in Figure 1 by dropping perpendiculars to each axis. The vertical distance between the total hours of labor per worker \bar{h} and the actual hours worked in agriculture per worker h represents the time available in the agrarian sector for the production of household goods and services which we have labeled Z goods in a previous paper,⁷ $Z_1 = (\bar{h} - h)n$.

The horizontal distance between the total population ($\underline{n} = 1$) and that fraction engaged in agriculture \underline{n} represents the proportion engaged in what the Physiocrats called the unproductive sector, i.e., the aristocrats, soldiers, servants, officers, clerks, traders and artisans associated with the state sector, $Z_2 = \bar{h}(1 - n)$.

The African case was characterized by a small state sector because its egalitarian political structure inhibited the appropriation of the surplus by a small group. Most families had full rights to land and paid little, if anything, in the way of rents or taxes either in kind or in labor services. The fraction Z_2 was, thus, very small (in many cases even the chief's family grew its own food) while the portion of time spent on Z_1 was large, much of it was devoted to leisure and ceremony.⁸

An opposite pattern is found in the Asian case. Because of the great power of the state to extract a surplus, Z_2 is large and Z_1 is small. A large number of people are engaged in extracting the surplus from agricultural workers, managing the affairs of the bureaucracy, and providing consumption goods and services for the state. In order to meet their taxes, the agricultural population must reduce their consumption of Z_1 and devote their time to producing an agricultural surplus. In addition, the requirements of corvée further reduce the time available for household production.

In the diagram, as we have drawn it, the standard of life for the majority of the population is clearly superior in the African case. Food consumption per capita is the same in both cases by assumption, while Z_1 is much greater in Africa than in Asia. This result depends crucially on the assumption that AA is a rectangular hyperbola. In reality there are several reasons for believing that agricultural labor productivity associated with the Asian mode differs from that found in Africa. The advanced civilization associated with Oriental Despotism was based on a hydraulic society which implied investment of resources in irrigation and other infrastructure to increase agricultural output. If \underline{a} was sufficiently higher as a result of this investment, it would be possible then for \underline{h} (hours per worker in agriculture) to be the same in both cases even though the Asian mode had a larger Z_2 . This would have happened if the state in practice charged a tithe exactly equal to its social productivity so that the agricultural population did not suffer because of its existence. There is no historical reason to believe this was the case. Studies of Oriental Despotism suggest that the state attempted to maximize the surplus and to reduce income in the agricultural sector to the minimum necessary for survival, and sometimes not even that.⁹ Moreover, some of the government infrastructure was needed merely to compensate for diminishing returns resulting from the use of a higher labor/land ratio.¹⁰

The revolutionary impact of the new trading possibilities introduced by Mercantilism I led to the growth of the state in certain African economies and to a movement towards the Asian mode; while in certain Asian economies it led to a decline in state power and a movement away from their original position. This movement is shown by the arrows in Figure 1.

In both cases, there is a dramatic change in the composition of output and its distribution even though national income did not necessarily increase and in some cases fell.

In the African case, the new opportunities for foreign trade provided both an incentive and the means for the growth of a state sector. Economic factors were not the sole cause of state formation but were an important contributing factor. A military group which succeeded in monopolizing coercive power in a given area could establish peace and security for traders, and levy taxes accordingly. The state, in a word, substituted tolls and tariffs for banditry. The larger the area brought under control, the greater the taxes that could be charged, and the more powerful a military and bureaucratic establishment that could be supported. The strength of the state could also be used to capture slaves, to organize slave production of exportables (in gold mining for example) or to meet food requirements. It was thus possible to expropriate a surplus through exploitation of labor as well as through taxation of trade.

The impact of Mercantilism I on income in Africa and its distribution was very complex. The local elites benefited, as did both the plantation owners in the new world and the merchants who organized the elaborate mercantile system based on the slave trade. To the extent that it participated in the upsurge of economic activity on a voluntary basis a certain portion of the population at large also benefited by trading food or manufactures for imported goods. Nonetheless, gains were in no way commensurate with the enormous dead weight loss associated with the capture of slaves and their exploitation in plantations. As regards Africa, therefore, the production possibilities of society shifted inward due to those losses from trade. Amongst those who remained, there was a reallocation of labor

into Z_2 due to the growth of the state (it is assumed that Z_2 includes plantation production) and out of Z_1 as free men substituted imported goods for domestic manufactures. The distribution of employment resembled more closely that of the Asian society but the distribution of income among the living was quite different. The standard of life of slaves were repressed below the preceding levels, but the standard of life of free men was increased because their marketed surplus was compensated by imported goods rather than simply taken away through taxes.

In the Asian case the coming of the West led to the undermining of the power structure in countries or regions characterized by the Asiatic mode of production. The steady penetration of Western traders from the 16th century onwards eroded the political and economic relationships based on Oriental Despotism. In terms of Figure 1, there was a decline in Z_2 and an increase in Z_1 as labor was freed from activities serving the state. Thus the Asian mode moved somewhat in the direction of the African as the influence of the state declined and that of the West increased. The impact of Mercantilism I trade thus at first led to an improvement in welfare as the decline of Z_2 and rise in Z_1 distributed income in favor of the long exploited peasant. The decline of Oriental Despotism with its unproductive class of retainers and its demands for corvée labor meant that the wage-rental ratio for the society as a whole rose contrary to the predictions of the classical model.

In some areas a new Z_2 arose in connection with the expansion of commercial activity as new trading routes to the West replaced the historical trade among China, India, and Southeast Asia. The flourishing of this trade during the 17th and especially the 18th century led to the growth of

Western controlled coastal regions and port areas and the demand for a food surplus to service traders, soldiers and consuls. In these areas, Z_2 (the new sector specializing in commercial activity) rose while Z_1 declined, replaced by imported manufactures, as the hinterland specialized in food or export production.

Through time, the West pushed steadily inward and established a new system of political control. The tendency to improve welfare increasingly came under pressure as the West increased its ability to control the indigenous work force, to enforce tribute, and to levy taxes. As the West's ability to extract a surplus grew, the share of the gains from trade going to the vast majority of the population declined and only a small class of foreign traders and rulers or, in some regions, local elites benefited substantially. The peasant, freed from Oriental Despotism, found himself increasingly bound to a new master, and there was once again a tendency for Z_2 (including plantation labor) to rise and Z_1 to fall.

The Western impact in Latin America (Mexico and Peru) was different in that the existing political structure was quickly taken over and the population exploited at a maximal rate. So ruthless was the appropriation of the surplus in gold and silver mining that a large percentage of the population soon died. The complex pattern of Western rule and colonization which existed in Asia was, therefore, not duplicated in Latin America. There was a total collapse of society and enormous losses from trade.

Our models of trade in Mercantilism I have emphasized shifts in the power structures rather than movements along production possibilities curve and have yielded quite different predictions about changes in production, employment, and distribution of income than those of international

trade theory. Our analysis can be summarized in the following simple balance equation of the Gains and Losses from Trade (providing one is willing to accept, for the sake of argument, the measurability of changes in welfare):

$$\begin{array}{rcl} \text{Gains to Elite} & & \text{Gains (or Losses) to} \\ \text{in Europe} & + & \text{Majority in Europe} & = & \text{Gains from} \\ & & & & \text{Trade} \\ \\ \text{Gains to Elite} & & \text{Losses of Ex-} & & \text{Deadweight} \\ - \text{ in Underdevel-} & + & \text{ploited} & - & \text{Loss} \\ \text{oped Countries} & & & & \end{array}$$

The crucial feature of Mercantilism I is that the overall gains from trade were small and the deadweight loss was large. It is hard to imagine any reasonable set of calculations which would show that the value of the increase in world income during the 16th, 17th and 18th centuries could offset the tremendous costs associated with the murder and enslavement of Africans and Americans. This is true even if one were to argue that there was a net gain in welfare for those Asian countries in which the population was freed from Oriental Despotism.¹¹ Many of the gains accruing to the elites in the underdeveloped world and Europe (and possibly to workers in Europe) arose mainly from the shifts in power and increased exploitation rather than from increased productivity. This slash and burn capitalism was possible only because Mercantilism I was able to use the human capital accumulated over previous centuries and did not worry about maintaining its reproduction.

If Mercantilism I caused an inward shift in the production possibilities curve in parts of Africa and America, it also caused an outward shift in Europe. Again, changes in the distribution of income and power were the crucial factors. It is not necessary to postulate that Europe as a whole (or even England as a whole) gained from Mercantilism I to ex-

plain the phenomenal rise in savings, investment, and income in the 19th century. The important feature is that some groups benefited and that a new class was formed out of the gains from trade. In other words, in place of the usual neoclassical formulation for investment ($I = sY$) we would substitute the equation ($I' = s'Y_c$) where I' refers only to investment in industry Y_c refers to the income of the capitalist class and s' refers to the capitalist savings rate. An increase in industrial capital could then occur even if Y fell as long as Y_c/y rose sufficiently. Empirically, it is difficult to estimate what happened to Y , but it is clear that Mercantilism I led to the growth of capitalist income and power in Europe.

The steps in this process are interesting. At first, the merchant capitalist class had little power and was subjected to discrimination by the feudalistic state. However, the new possibilities of maritime commerce and exploitation led to an alliance between the state and merchants (in some cases pirates). It was highly profitable for the monarch to subsidize international trade and offer it protection because of the profits to be gained. Thus the state and the emerging capitalist class grew in step though much of the increased national power was dissipated in international rivalry. Eventually the capitalist class became sufficiently strong to take power and to switch government expenditure away from the agrarian sector, remove agrarian preferences and protection and to increase agrarian taxes. This further enhanced the industrial capitalist class and led to its further growth. During the 19th century, industrial capital emerged triumphant, dismantled the corn law structure and the rest of the Mercantilist framework and created a new technology based on iron and steam and a new set of government policies (so called laissez-faire) with which it conquered

the world and laid the basis for the second international economy. A total restructuring and reorganization of the hinterland occurred in Mercantilism II as Europe formulated a single strategic conception for the development of the world economy and planned a new division of labor. Many of the mainstays of Mercantilism I were cast away, like the first stage of a rocket, and new enclaves of growth were created. Mercantilism II began as an unequal partnership based on the asymmetrical results of Mercantilism I, and during the course of its lifetime, it further widened the gap between Europeans and non-Europeans.

Mercantilism II: 1870 to World War II

The period from 1870 to the 1920's was characterized by a fall in international transportation costs and an increase in the variety of manufactured goods available for trading. Trade theory predicts these events would cause the hinterlands of Africa, Asia, and America to expand export production and to replace the production of home goods by imported manufactures. The outward shift in the production possibilities curve would imply an increase in national income but not necessarily a corresponding improvement in welfare of every subgroup. The initial impact of this trade could, for example, lower wage rates and the standards of living of large parts of the population as production of labor intensive home-goods declined and the production of land-intensive export goods increased. Through time, however, the level of income would be expected to rise for everyone. Increase income would lead to increased savings and investment, and an outward shift in the production possibilities curve. A rise in wages would occur as the capital/labor ratio increased.

Broadly speaking, this scenario fits a large number of countries. It explains the great expansion of trade, the emergence of surplus labor, the

strengthening of the landowning class, and the growth of mercantile capitalists. Furthermore, it also predicts the eventual investment in industry after the 1930's, the growth of the industrial labor force, and the emergence, in the late 1960's, of manufacturing exports. Even the attraction of foreign investment finds support in the predictive power of the theory because of the increased infrastructure and human capital financed by the export economy.

This scenario, however, should not be used in trade classes to illustrate the benefits of greater integration into the world economy because it omits "power" equations and incorrectly identifies the structure of the system. The fact that so many underdeveloped countries with such diverse backgrounds followed the pattern outlined above indicates common biases in government policy rather than the power of the trade model. Neoclassical theory would predict a much greater variety of growth patterns given the great diversity of initial conditions and is to some extent falsified by this common experience. We suggest **that** the expansion of exports reflected in large part the similar policies of colonial rule, while the growth of manufacturing reflected the growing strength of the indigenous capitalist class associated with the "national independence" movements after World War II.

Colonial strategy squeezed the traditional economy to create an elastic supply of labor and biased infrastructure towards exports in order to transfer the surplus to the center in the form of lower prices. The specific labor policies used conformed to no single pattern, rather a variety of devices emerged to deal with the variety of initial conditions. In some cases the government levied labor taxes or poll taxes to stimulate an exodus from

the "traditional" economy into the "commercial" economy. In other cases, the government seized the land or created a landlord class thus reducing the opportunity cost of wage labor. The fostering of a proletariat for the export sector (including the food surplus to feed it) was also stimulated through land concentration, intensification of tenure arrangements, and the growth of indebtedness. National and international mobility was encouraged as the government helped in recruitment and enforcement of contracts thus making possible vast transferences of population within continents as well as from Asia to Africa and America. In this way, labor and exports were generated in each colony.

The gains from trade generated during Mercantilism II were shared unevenly. Initially, there was a decline (sometimes drastic) in the standard of living for many people as they were coerced into export production. Through time, this decline tended to be reversed as new opportunities were made available in the commercial economy. Increased specialization led to new divisions of labor and created new dependencies as resources were reallocated from the traditional economy to export production and the personalized society of the village was fragmented. The striking feature of Mercantilism II, however, is that the standard of living for the vast majority of the population of Africa, Asia, and America rose very slowly in sharp contrast to the progress at the center.

Although exact statistics are not available, evidence suggests that the real wage for unskilled labor has risen slowly over the last 50 to 100 years, and this wage can be taken as a proxy for the level of income of perhaps two-thirds of the population. Moreover, other evidence suggests that debt peonage and tenure arrangements increased in the agrarian sector as

peasants found themselves increasingly bound to money lenders and absentee landowners. No doubt there was some improvement in consumption patterns as superior European manufactures increasingly replaced native rural industry. However, the displacement of rural industry and traditional activities also led to the fragmentation of the agrarian society, and in many countries, especially those in which export specialization proceeded most rapidly, there was a serious deterioration of the social life of the society.¹²

The gains from trade were partly captured by local elites (some of whom were foreigners from the mother country) who accumulated land, capital, education, or the rights to higher-paying employment in the government bureaucracy or in the commercial economy. Often an alien complex of production was established where the peasant cultivated the soil or worked in the mines, a foreign mercantile class grew in strength (in Asia, Chinese, and in Africa, Indian), and the Europeans controlled the import-export trade as well as determined colonial expenditure and labor policies. The distribution of income reflected the political power of this economic structure. Much of the gains from export growth went to the government (in the form of increased revenues), to the urban centers (where services and industry grew based on export growth), and to local and foreign elites of one type or another.

In part, the gains were passed abroad in the form of lower prices. The division between the metropole and the local elite depended largely on the propensities to import. If surplus receivers had a much higher propensity to import than the population as a whole, the "cheap labor" policies followed would be export biased to the benefit of the mother country. On the other hand, if local elites spent a high proportion of their income on local services, they would divert labor from export production. This would still

involve an international transfer of surplus since a high proportion of this elite income went to foreign settlers and colonial officials from the mother country. The surplus would, however, tend to be consumed locally rather than in the center.

This possible anti-trade bias was offset, at least in the initial phase of colonialism, by a number of other policies designed to specifically encourage exports. Many labor policies directed labor towards particular industries, e.g. mining, whose only function was production for exports. Similarly, infrastructure was heavily biased towards export production and neglected the production of home goods placed it at a disadvantage. In other words, the steps taken to produce cheap labor were combined with steps taken to induce it to flow into exports.

The observed high elasticity of exports in this period thus reflects government policy as well as market response. A high export price resulting from an expansion of demand would induce an increase in private investment because of high profits. It would also provide the government with extra revenue (since trade taxes were the dominant source of funds) and thus lead to the improvement of infrastructure and other support services which would further stimulate international supply because of their export bias. Thus a strong tendency towards immiserizing growth was built into the system, for any rise in price would trigger an expansion of export biased investment until price fell sufficiently.

An alternative development strategy would have allocated a greater share of public investment to home good industries and produced a more balanced investment program. This would have a substitution and an income effect. The substitution effect of removing the export bias in infrastructure might bias production away from exports but this might be offset by the income

effect from growth if importables were highly income elastic. Moreover, the development of the hinterland would have increased the variety of possible exports and provided new opportunities for mutually beneficial trade.

A more forward looking policy would have directed a large flow of funds from the center to the periphery for investment purposes. The dominant feature of Mercantilism II was the global capital market centered in London. For the first time in history investment decisions throughout the world were coordinated in one place and subjected to a single strategic conception. It thus became technically possible to spread capital evenly throughout the world. In other words, capital accumulation after 1870 could have proceeded via capital widening rather than capital deepening, i.e., the capital labor ratio could have remained constant and a far larger number of people activated as industrial workers. This would have soon exhausted the metropolitan labor force and either capital would have had to move to the hinterland or labor move to the center. This, combined with efficient trade, would have produced factor price equalization on a global basis. In other words, had this strategy been followed, industrial capitalism would have reproduced for the entire world population the higher level of living it achieved for Europeans. (The term Europeans is used to include people of European descent in all continents.)

The whole pattern of production and trade would have been quite different in such a system. Manufacturing production would have spread throughout the world, earnings and output per worker employed would have been much lower, but both the work and its fruits would have been shared equally. The structure of manufacturing output would be altered towards the mass production of basic consumption needs rather than towards the high income goods

that account for most of industrial output. Instead of this, capital accumulation proceeded via capital deepening in the industrial countries and led to a widening differential in production and income between the center and the hinterland. Thus, the returns to labor were not equalized despite the great expansion of trade after 1870 and large migrations of Europeans, Asians, and Africans.

Capital per worker was raised and the expansion of the industrial labor force slowed down. This created a radically different structure of demand from the egalitarian one just described, and led to an economy based on continuous "creative destruction" to use Schumpeter's phrase. Because the capital labor ratio increased steadily, the producer good sector had to continuously innovate labor saving machinery. Raising per capita income for a small favored group meant a continuous change in the basket of goods consumed since, according to Engel's law, people tend not to consume more of the same as they get richer, but reallocate their consumption patterns away from old goods towards new goods. Thus, towards the end of the 19th century, product innovation and marketing became the dominant problems of business enterprise rather than the mass production of goods. Instead of applying the achievements of science widely and solving the basic problems of subsistence for the majority of the world's population, attention was focused on creating "new products" and lightening the work load of the privileged under the guise of technological change.

Why was the second path chosen rather than the first? It could have been due to the exogenous factor of technological change or differences in production functions, as many economic models imply, but we would argue that political factors were an important if not dominant determinant. In our view, the ob-

served uneven development represented uneven power and the resulting distribution of income and demand was a social phenomenon rather than a technical one.

The control device was government expenditure. Private capital was highly mobile during this period and flowed to wherever profit could be made. But the rate of profit or the demand for investment in any country depended upon the extent of public investment in infrastructure and human capital. The colonial system centralized power over government expenditure policy and insured a much higher rate of public capital formation in the center than in the hinterland. This biased distribution of public capital provided "external economies" in the center and directed private industrial capital away from the hinterland

That this policy neither maximized world income nor distributed it equally is not surprising. The imperial system did not weigh people equally in its social welfare function. Political power was used to foster the growth of the capital of the mother country (i.e., the capitalists), subject to the constraints of class conflict. Using Kindleberger's group behavior approach, we might analyze the policy of this period in terms of the alliances and coalitions formed between the following groups:

	<u>Center</u>	<u>Hinterland</u>
Capital	C ₁	C ₂
Land	T ₁	T ₂
Labor	L ₁	L ₂

Let us first examine trade between Europe and the areas of European settlement in America, Oceania and Africa. According to the theory of the time, colonization, i.e., the migration of Europeans to other continents, was a method of expanding land and warding off the tendency for profits to fall because of diminishing returns in agriculture. The resulting pattern of inter-

national trade initially involved the exchange of manufactures for raw materials because of two important historical advantages associated with the mother country: (1) a large domestic market giving rise to internal and external economies, (2) a strong capitalist class (or stock of entrepreneurship). Through time, the colony developed its own manufacturing sector (aided perhaps by tariffs or other government instruments) as the internal market expanded and as the indigenous capitalist class acquired the strength and resources to engage in industrial activity. Two-way trade in manufactures could then begin based on differences in comparative advantage and tastes.

As Kindleberger noted, the smooth working of this model would only take place under specific political conditions. Since trade would tend to reduce rents, it could only occur where the resistance of landlords was weak. In England, where the industrial classes had reached a position of dominance, this condition prevailed and free trade allowed the importation of wheat which helped to complete the liquidation of landlords as the most powerful economic group in Britain.¹³ But in Germany, the agricultural class was sufficiently strong to stop this development from taking place. Ironically, growth and development proceeded much more rapidly after 1870 in Germany than in the rest of Europe, perhaps because of the balance struck between agricultural and industrial classes. The fusion of rye and steel created a powerful alliance which could use the state's power to pursue a growth-oriented strategy.

In terms of the above framework, the major conflict was between T_1 and T_2 . The politics of labor were relatively unimportant because it was not yet well organized and, in any case, labor tended to benefit from the cheap wheat. It also could migrate to the hinterland when severely hurt at the center (see Kindleberger's discussion of Italy). The conflict between C_1 and C_2 was also

muted in the early stage because of the low degree of capitalist development in America.

After 1870, this power structure changed drastically. The landed classes became unimportant as a separate interest group (in the center) because they were destroyed or absorbed into industrial capital. The English capitalist class lost its hegemonic position as native bourgeoisies arose on the continent, in America, and in Japan. Rivalry between C's became a dominant element in the foundation of Mercantilism II.

Equally important, labor became a powerful force as it became concentrated in industrial centers. The class-consciousness was accentuated in England because of the shock of the great transformation out of agriculture and into the city as a consequence of wheat imports.

The result of these changes was that the Imperial centers were in no position to embark on a "big push" in the hinterland. Their main concerns were to ward off rivalry from competing centers, and to satisfy the growing demands of labor. Their policies tended to be defensive rather than offensive, mercantilist (i.e. protectionist) rather than free trade, and ironically Edwardian England revived the paraphernalia of the landed aristocracy it had just destroyed.

Many of the policies of Mercantilism II thus slowed down the rate of growth and prevented the full development of the potential created by the scientific revolution. The fact is masked by growth statistics which show what happened instead of what could have happened. Unlike Mercantilism I, where the dead-weight losses exceeded the gains, technological achievements of the 19th century were so great as to overwhelm the inefficiencies and retarding elements of Mercantilism II.

Instead of promoting the growth of enterprise in the hinterland, colonial policy arrested the development of native capitalists by failing to provide positive incentives and by the application of negative measures including, in some cases, outright destruction of burgeoning entrepreneurship. For similar reasons, they preferred low wage/low productivity labor in the hinterland over high wage/high productivity workers because the latter would have been a potential political threat. The dual of this policy was to create a labor aristocracy in the center and to protect it through tariffs and immigration policy. Education programs and expenditures were unequal being biased towards labor in the center. The two parts of the labor force must be seen as one if this period is to be analyzed properly.

Finally, the center had to devote an increased share of government activity to military and other non-productive expenditures and had to rely frequently in the hinterland on an alliance with an inefficient class of landlords, officials, and soldiers, to maintain stability at the cost of development. A great part of the surplus extracted from the population was thus wasted locally.

The ideology of Mercantilism II, as reflected in economic theory, was capitalism triumphant. By the early twentieth century, nearly all of the components needed to solve mankind's material problems had been discovered. The only task left was the systems analysis problem of organizing and applying them. Mercantilism II began with great promise but after a brief time-span became seriously troubled and increasingly characterized by War, Depression, the Breakdown of the International Economy, and War again, rather than by Free Trade, Pax Britannica, and Material Improvement.

Mercantilism III

Political change, i.e., national independence, is clearly at the heart of the policy changes that ushered in Mercantilism III. The depression and World War II weakened the center allowing the national bourgeois class (C_2), born in the colonial export economy, to assert independence and to divert government expenditures to their own ends. Their control was, however, far from complete and the restrictions and biases of the international economic system governed much of their actions. They did not, for example, face perfectly competitive markets in which they could trade freely with other countries. Instead, they frequently encountered large oligopolistic corporations with whom they had to bargain for needed investment goods and technology. Moreover, the governments in the advanced countries, though no longer possessing legal control, continued to exert pressure to keep the hinterland open to capital and manufactured goods from the center. Finally, the tariff structure used by the center effectively closed the rich industrial markets to manufacturing exports from the hinterland.

The set of policy options open to the newly independent countries were thus severely restricted (especially with respect to their control over the export staples and the accompanying network of financial intermediaries) while their targets and search procedures reflected and were limited by their disadvantaged past. The national bourgeois were, in effect, middlemen who did not understand the wider system above them and who could not mobilize the people below them. Given the limited vantage point of their past, they became imitators rather than innovators; they were children of the Europeans, an underdeveloped middle class. Forced industrialization became their strategy and the goal was to create a national capitalist class by using protection and import-

substitution policies. The result was uneven development.

Although there seems to be a variety of experiences in the post-war period, as each country endeavored to formulate a national policy peculiar to its circumstances, a common theme is found in the tendency to reproduce on a national scale the pattern of the international economy evolved during Mercantilism I and II. Capital formation is concentrated in urban centers resulting in rising capital labor ratios, productivity, and per capita income for a small group of people. The neglect of the agrarian sector leads to rural stagnation and an unlimited supply of labor at low wages. An income and class gap emerges parallel to the international gap between European and non-European previously described.

Basically, the import substitution policies result in a rapid growth of manufacturing centered in urban areas with little generation of employment. The economic reasons usually given are the labor-saving nature of foreign technology coupled with imperfections in the factor market which cause the imported price of capital to be too low and lead to a steady increase in the organized manufacturing sector's capital labor ratio.

Although we cannot analyze this system in detail here, we do want to point out, in the spirit of this paper, that the reasons behind this scenario lie as much in the "power" equations as the market equations. The biases in economic structure come from the governments' attempt to favor one sector over another. The devices used to protect the national capitalist class have long been studied by trade economists, i.e., the instruments of tariffs, quotas, exchange controls, import-licensing, and internal subsidies. Less fully analyzed, but equally important, are the biases in government infrastructure towards urban industrial needs, the establishment of a discriminatory educational system, and the use of

the police-power of the state to suppress the rural population and maintain the surplus of labor at the existing wage. It is these policies and the involved political relationships, and not merely the shape of production functions, that help to explain the output mix, factor proportions, and factor prices observed. The symbiosis between the national bourgeois and the state favored capital and a select group of urban labor at the expense of the population as a whole, and this resulted in a rapid growth of manufacturing, an increase in industrial wages rather than employment, and an excess demand for jobs. It also resulted in an output mix aimed at the few, emphasizing import substitution rather than import displacement.¹⁴ In other words, the "independence" strategy accepted foreign tastes and foreign technology and tried to reproduce them on a miniature basis instead of adapting to local needs and local endowments.

There is reason to believe that this strategy is reaching a turning point as it encounters increased imbalance in the labor market and the foreign exchange market. A new solution is therefore needed to deal with the crisis in population, employment and balance of payments which result from growing political pressure from the excluded population and the international economy. The basis for it seems to be an alliance between C_2 and C_1 , the native capitalist class and the Multinational Corporation. This new group-behavior, if it continues to develop, will lead to new economic configurations and a new international division of labor. We cannot analyze it in detail here but we might conclude the essay with a few conjectures about the next round of Mercantilism III.

We argued that Mercantilism I led to the formation of C_1 , while Mercantilism II broke down, in large part, because of rivalries between subgroups of C_1 ,

i.e., the various national capitals of the center. In the first round of Mercantilism III, C_2 succeeded in establishing itself as a minor partner secure but in no way powerful enough to challenge or replace C_1 . Meanwhile, a new relationship has appeared within C_1 in the form of a growing trend towards multinationalization of private enterprise. Mergers and foreign investment by American and European firms are leading to interpenetration of markets and the weakening of links between particular countries and particular firms.¹⁵

Thus the stage is set for a new international industrial structure dominated by 300 to 500 large North Atlantic oligopolistic corporations which operate on a global basis in cooperation with smaller national firms who serve as suppliers, distributors, licensees, and in some ways, as competitors. The trade pattern associated with this international hierarchy of decision-making will lead to an exchange of goods and services based on skill differentials. The center will specialize in complex manufacture and high-level technology, i.e., systems design, research, marketing, finance, while the hinterland will specialize in labor-intensive production. The multinational corporation, if it succeeds, will reproduce on a world-level the centralization of control found in its internal administrative structure.

Three major political questions dominate any attempt to predict the future course of the international economy. First, will there be some sort of alliance of L's to match the alliance of C's? Second, will multinational corporations be able to construct multinational political institutions to replace the nation-states whose power they are eroding? Third, will it be possible to resolve rivalry between the capitalist and socialist block and within the capitalist block itself (e.g., the problem of Japan and Germany)?

The progression from Mercantilism I to Mercantilism II to Mercantilism III has seen an increased complexity of political and economic linkages between countries. Modern communications and the multinational corporations are increasing inter-connectedness to so great an extent that a qualitatively new system is emerging. The greater the interactions between countries, the greater the interdependence, i.e., the higher are international multipliers, the lower are national multipliers. If we were dealing purely with market relationships, this would not be a troublesome factor, since a great deal is known by economists about the self-regulating properties of general equilibrium systems involving many decision units. These stability properties do not hold on the political plane where tariff struggles and "beggar my neighbor" policies, etc., lead away from pareto optimality. International trade theory, because it does not include these political factors, is misleading and costly in analyzing the current world economy.

International Trade and Uneven Development

by

Stephen H. Hymer and Stephen A. Resnick

FOOTNOTES

1. C. P. Kindleberger, "Group Behavior and International Trade," The Journal of Political Economy, Vol. LIX, No. 1, February 1951.

Both of us read this article as graduate students at M.I.T. but only many years later came to realize how deeply it had influenced us.

Another important influence was a conversation one of us had with

Samuelson in which the following question was posed: "What is

there in Marx that is (a) valid and (b) not included in the M.I.T.

Graduate Economics Curriculum. His reply was "The Class Struggle."

2. Kindleberger, Ibid, p. 46.
3. H. G. Johnson, "A Theoretical Model of Economic Nationalism in New and Developing States," Political Science Quarterly, Vol. LXXX, June 1965.
4. S. Hymer and S. Resnick, "Interactions Between the Government and the Private Sector in Underdeveloped Countries: Government Expenditure Policy and the Reflection Ratio," Ian Stewart, ed., Economic Development and Structural Change (Edinburgh: Edinburgh University Press, 1969).
5. By trade theory we mean the classic law of comparative advantage.

Under a system of perfectly free commerce, each country naturally devotes its capital and labour to such employments as are most beneficial to each. This pursuit of individual advantage is admirably connected with the universal good of the whole. By stimulating industry,

by rewarding ingenuity, and by using most efficaciously the peculiar powers bestowed by nature, it distributes labour most effectively and most economically: while, by increasing the general mass of productions, it diffuses general benefit, and binds together, by one common tie of interest and intercourse, the universal society of nations throughout the civilised world. It is this principle which determines that wine shall be made in France and Portugal, that corn shall be grown in America and Poland, and that hardware and other goods shall be manufactured in England.

David Ricardo, The Principles of Political Economy and Taxation. (London: J. M. Dent & Sons Ltd., 1948), p. 81. Since Ricardo's time, numerous qualifications have been added to his statement and now the orthodox model recognizes exceptions to the "gains from trade argument." These qualifications are not the ones we shall be concerned with in this essay.

6. It is unlikely that h and n are independent, but it is convenient to postpone discussion until after the model is presented.
7. S. Hymer and S. Resnick, "A Model of an Agrarian Economy Including the Production of Non-Agricultural Goods," American Economic Review, September 1969.
8. See S. Hymer, "Economic Forms in Pre-Colonial Ghana," The Journal of Economic History, June 1970 for a discussion of the African case.
9. K. A. Wittfogel, Oriental Despotism (New Haven: Yale University Press, 1967).
10. Three men working $1/3$ of the time can nearly always duplicate the work patterns of one man working full time. The opposite is not true. For example, one full-time agriculturalist cannot be in more than one place at one time. If ϵ_1 is the set of activities achievable under part-time work in the African mode, and ϵ_2 is the set possible for full-time specialists in the Asian mode, then $\epsilon_1 \subset \epsilon_2$ but $\epsilon_2 \not\subset \epsilon_1$. The African societies could spread themselves over the land and take advantage of nature, while Asian

societies had to concentrate around the river where it was possible to grow water-crops which allow for more equal spacing of work over time.

11. The Asian case is, however, complex even if, on balance, there was a net improvement in welfare. An interesting example is provided by India. The Indian ruling class began to decline prior to the coming of the West and Indian Society might have been in a state of transition which would have led to the growth of indigenous merchant-capitalism. Although there is some historical evidence supporting this view, colonialism in fact ended the possibility of such a path and created an underdeveloped country.
12. For an historical account of the decline of traditional life and the effects on the distribution of income brought about by the export economy, see S. Resnick, "Decline of Rural Industry under Export Expansion: A comparison Among Burma, Philippines, and Thailand, 1870-1938," Journal of Economic History, June 1970.
13. C. P. Kindleberger, Op. cit., pp. 32-33.
14. We are grateful to Lloyd Best of the University of West Indies for this distinction. See Lloyd Best and Kari Levitt, Externally-Propelled Growth and Industrialization in the Caribbean. Mimeo, September 1969.
15. These issues are discussed more fully in S. Hymer and R. Rowthorn in "The Multinational Corporation and International Oligopoly: The Non-American Challenge" in C. P. Kindleberger, ed., The International Corporation (Cambridge: M.I.T. Press, 1970) and S. Hymer "The Multinational Corporation and the Problem of Uneven Development" in J. Bhagwati, ed., Economics and World Order (New York: World Law Fund, 1970.)