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REGIONAL INTEGRATION AND THE INDUSTRIALIZATION OF DEVELOPING COUNTRIES 1/

Prepared for the Symposium

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1/ The views and opinions expressed in this paper are those of the consultant and do not necessarily reflect the views of the secretariat of UNIDO.

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

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INTRODUCTION

1. The recognition that the basic economic issue of our times is the tremendous international disparity in standards of living has elicited research on a broad front, to discover how the development of the poorer economies of the world (herein referred to as developing countries) may be speeded up. This paper deals with one aspect of this major subject - the possible effects which economic integration among developing countries may have on their industrialization.

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I. THE NEED FOR INDUSTRIALIZATION

2. The narrower subject of this paper fits into the general problem of development via an assumption: that industrialization is a desirable policy for countries trying to speed up their economic development. There are various arguments advanced to support this thesis, and the literature abounds with controversy over this subject. Perhaps the reason that most policy-makers accept this assumption as almost a tenet of faith is the long noted correlation between the level of development, as measured by national income per capita, and the level of industrialization, as measured by the per cent of national income originating in industry or the per cent of labour force employed in industry.[1/] Whatever the merits of this or other reasons for emphasizing the role of industrialization, this study accepts without detailed discussion the assumption that industrialization is the desired objective.

3. Despite what has just been said, one particular argument for industrialization must be spelled out, because its acceptance implies some constraints on and implications for industrialization itself which must be considered later in this paper. This argument is the balance-of-payments approach. Expressed very briefly, the line of reasoning is as follows: Most developing countries face balance-of-payments problems. The process of speeding up development intensifies the balance-of-payments problem. Foreign exchange is needed in rapidly growing quantities to pay for imports of capital goods and raw materials, and for the servicing of foreign debt. As growth takes place and income expands, some of the increased demand, perhaps too much of it, becomes a demand for imports. This additional foreign exchange must come either from capital inflow or from export earnings. Recent experience has led to pessimism concerning the extent to which capital inflow can provide a solution; consequently, emphasis must be placed on export earnings. While it is true that many developing countries have been slow

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1/ Recent empirical studies showing this correlation are: S. Kuznets, "Quantitative Aspects of the Economic Growth of Nations: II. Industrial Distribution of National Product and Labor Force", Economic and Development and Cultural Change, July 1957, Supplement, and H.B. Chenery, "Patterns of Industrial Growth", American Economic Review, Vol. 2 No. 4, September 1960. It should be noted that neither of these authors derives the usually accepted causal relationship from the observed correlation.

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to exploit fully their potential for exports of services, particularly tourism, most must rely primarily on exports of goods. Pessimism concerning the prospects for the expansion of exports of primary commodities[2/] and their future terms of trade[3/] leads directly to placing emphasis on the expansion of exports of industrial goods.[4/] Furthermore, industrialization, even if export oriented, would also provide for considerable import substitution, thus attacking the balance-of-payments problem from two sides.

4. Acceptance of this line of reasoning does not, of course, lead to the conclusion that balance-of-payments considerations apply equally to all developing countries or dictate the same type of solutions. Even if all countries cannot expect to solve balance-of-payments problems by expanding exports of primary commodities, many countries can. Balassa, for example, is not pessimistic concerning the prospects for export of fuel and non-fuel minerals, and thus for the balance-of-payments situation of those developing countries having such resources.[5/]

5. Accepting the need to develop industry for balance-of-payments considerations, there is still room for argument as to orientation of industry: should emphasis be placed on import substitution, on regional specialization, or on exports to other regions?

2/ See for example B. Balassa, Trade Prospects for Developing Countries, 1964, and his more condensed presentation in chapter II of Economic Development and Integration, 1965.

3/ It is interesting to note that whereas a declining trend in the terms of trade of primary producers is widely accepted, particularly by United Nations circles, as proven fact (see e.g. Report by the Secretary-General of UNCTAD, Towards a New Trade Policy for Development, 1964), not all students of the data reach such a conclusion. See, for example, T. Morgan, "Trends in Terms of Trade and their Repercussions on Primary Products", in R. Harrod and D.C. Hague (ed.), International Trade Theory in a Developing World, 1963. Furthermore, the really basic question concerns not commodity terms of trade, but rather factorial terms of trade.

4/ The tendency of developing countries to have export concentration adds the fear of putting too many eggs in one basket. On export concentration and the desire of developing countries to diversify, see M. Michaely, Concentration in International Trade, 1962, particularly chapter 6.

5/ B. Balassa, op. cit.

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II. ECONOMIC INTEGRATION

6. The term "economic integration" is frequently used very loosely, to cover almost all possible forms of economic co-operation between countries. At the other extreme, the term is used to refer to a very specific type of arrangement between countries. Because this paper is concerned with finding means to foster industrialization, a broad approach is warranted. But since there is no limit to the variety of economic co-operation, only several general types of arrangement are considered. The first is the customs union,[6/] the distinctive features of which are that all tariffs and other restrictions on trade between members of the union are abolished, and a common external tariff is adopted by all members. A further step is a common market, where all restrictions on factor movements between members are also eliminated. What is called "total economic integration" is the case where union is accompanied by widespread joint economic policy.[7/] Joint policy may also be a first, rather than a final step. Thus, attention must be paid to the question whether desired results cannot be reached by some joint action without the necessity for the more demanding and complicated arrangements.

The theory of customs unions

7. The theory of customs unions has become a major branch of international trade theory, and has drawn much more attention than other types of economic integration.[8] The reason this is so is that the theoretical treatment has been primarily in the realm of static general (sometimes partial) equilibrium analysis, whereas for other types of integration the need for dynamic analysis is more obvious.

6/ A less demanding union is the free trade area, which allows each member to impose its own external tariff.

7/ An intermediate stage is an economic union, which allows for a lesser degree of joint economic policy than total integration. The extent to which such supporting policy is a necessary condition for successful union is the subject of some debate. See, e.g., B. Balassa, The Theory of Economic Integration, 1961.

8/ Among the more celebrated contributors to this subject in English may be found the names of Viner, Meade, Scitovsky, Lipsey and Vanek. Balassa, in his Theory of Economic Integration, devotes considerable attention to types of economic integration other than the customs union.

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8. In bare outline, the theoretical approach has been as follows. Customs unions and other forms of economic integration have two distinct characteristics. First, barriers restricting the mobility between members of goods or factors, or both, are reduced. Second, barriers against mobility between members of the union and other countries are either imposed or altered, if not absolutely, at least relative to internal mobility. Thus, two types of effects may be expected: trade creation and trade diversion. Trade creation takes place when tariff reduction within the union lays bare to competition a previously protected domestic industry. Instead of being produced domestically, the goods in question are now imported from a member country, that is, from a cheaper source of supply. The primary beneficial welfare effects are both in production - more efficient allocation of factors - and in consumption - lower prices to consumers. Trade diversion takes place when the imposition of a tariff against non-members, but not against members, leads a country to import from a member a good previously imported from a non-member. Here trade is diverted from a cheaper source of supply to a dearer source. Again, the welfare effects are both in production and in consumption.

9. Clearly, the summation of welfare gains from trade creation and losses from trade diversion is conceptually complicated and empirically perhaps impossible, necessitating as it does not only numerous summations but use of elaborate weights for various cost differentials, changes in consumer prices, and effects on substitutes and complements. Despite these difficulties, trade theorists try to judge the desirability of a customs union on the basis of either empirical or intuitive evaluation of "net" trade creation or diversion.

Applicability of theory to developing countries

10. The above approach to the evaluation of customs unions has been criticized as being irrelevant for developing countries.[9/] The static welfare approach deals with the optimum allocation of given resources, but this is not the basic problem for developing countries. Their main concern is with the allocation of scarce resources to achieve a maximum rate of growth. This emphasis on problems of

9/ See, e.g., R.F. Mikesell, "The Theory of Common Markets as Applied to Regional Arrangements among Developing Countries", in International Trade Theory in a Developing World, and B. Balassa, Economic Development and Integration.

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growth and the evaluation of economic integration requires a different set of analytical tools - ones not as sharply honed and as reliable as those of static analysis. This approach might condone trade diversion, if it could be shown that by such means the present value of future benefits would be increased. Expressed another way, the pure trade theorist, working in a static framework, judges unions as a second-best solution from the point of view of world welfare. The dynamic approach also considers world welfare, but looks at future comparative advantage and not just existing conditions.

11. Another objection to the use of the standard criteria in the case of developing countries can be made. Much of welfare economics is limited in applicability due to the reluctance of most economic theorists to make interpersonal welfare comparisons.[10/] But in everyday economic policy such comparisons are made constantly, implicitly or explicitly. The whole approach to the economic growth of developing countries rests in large measure on the idea of transfers of various kinds from developed to developing countries. What the various forms of transfer have in common, be they unilateral grants or subsidized loans or tariff preferences, is a decrease in immediate welfare in richer countries and a gain in welfare in poorer countries. For those who accept this view, and clearly most leaders of the developing countries do, it is only logical to place major emphasis on the effects of economic integration on the welfare of the developing countries, accepting any ensuing decrease in welfare of developed countries as of secondary importance. The problem of determining whether the welfare of all the members of an integrated area will be increased, of course, remains. In line with this approach, this paper considers the effects of integration on industrialization of developing countries, and not what the effects may be on non-member countries.

Integration and regional specialization

12. The basic idea of economic integration is to foster regional specialization - whether it is desired in lieu of world specialization or whether it is viewed as a second-best solution, an improvement over national autarchic tendencies. The idea

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10/ A notable exception to this in the field of customs unions is J. Meade. See his Trade and Welfare, 1955, particularly chapter XXXII.

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of an economic region is quite complicated. The economic concept of a nation assumes that a considerable degree of economic homogeneity exists.11/ Regional science deals with "regions", which are usually parts of countries, that is, the degree of economic homogeneity in a "region" is much greater than in the nation as a whole.12/ What follows from this line of reasoning is that economic homogeneity is relative, decreasing in intensity as one moves from a region to a country (or nation), to a group of countries, and finally to the world as a whole. Underlying the enthusiasm for economic integration must lie two assumptions:

(a) That the countries forming the union have a potential for economic homogeneity greater than any other practical alternative combination;13/

(b) That the act of integration creates a greater degree of homogeneity in the region formed.

Whether or not these assumptions fit particular cases determines to a large extent whether integration will foster development.

11/ C.N. Vakil and P.R. Brahmananda, "The Problems of Developing Countries", in E.A.G. Robinson (ed.) Economic Consequences of the Size of Nations, 1960.

12/ The idea of economic homogeneity is expressed more formally by K. Dziewonski, who defines an economic region as a "subspace of the socio-economic time-space". See his "Theoretical Problems in the Development Regions", Regional Science Association Papers, Vol. VIII, 1962.

13/ Reluctance to accept such an assumption lies at the root of much soul searching regarding the desirability of joining a union; e.g., Great Britain vis-à-vis the EEC, EFTA and the Commonwealth.

III. OBSTACLES TO INDUSTRIALIZATION

13. Some of the major obstacles to industrialization are the same obstacles that impede growth in general. Though a discussion of these cannot be presented here, several of the best-known general obstacles to growth should at least be mentioned. These are:

(a) Social and demographic factors which impede mobility and the introduction of modern methods of production and distribution;

(b) The low level of savings in general, primarily the result of the low level of income;

(c) The host of factors - economic, social and institutional - which hamper the allocation of what saving exists to investment most conducive to economic growth,[14/]

(d) The shortage of other factors of production, such as skilled labour, or natural resources.

14. The specific obstacles to industrialization are to some extent merely the same types of things enumerated above.[15/] The central question with which the following discussion is concerned is simply this: What are the economic factors which make industry relatively unattractive, so that less than the socially desired amounts of existing scarce resources are devoted to manufacturing? The factors are considered under the headings of manpower, raw materials, capital, techniques of production and distributive costs.

Manpower

15. The term manpower includes a mix of skilled and unskilled workers. It is frequently assumed that developing countries have a shortage of skilled labour and a surplus of unskilled labour. Considerable attention has been devoted to the question of disguised unemployment, and the means of diverting it to manufacturing.[16/] However, many developing countries are not endowed with an

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14/ Under this heading is included a balance-of-payments constraint: an inability to transfer domestic saving into the foreign exchange necessary for imports of certain types of capital.

15/ For a concise discussion of the obstacles to industrialization, see United Nations, Department of Economic and Social Affairs, Processes and Problems of Industrialization of Underdeveloped Countries, 1955.

16/ See, e.g., B. Datta, The Economics of Industrialization, 1952.

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abundance of labour. Furthermore, the difficulties of transferring even "surplus" labour to industry may be such that, for all intents and purposes, even unskilled labour is a scarce factor as far as industrialization is concerned.

16. The more general manpower problem is the scarcity of skilled labour. The type of skill which is relatively most scarce and thus acts as a bottle-neck varies from country to country, and may be in skilled technical workers, engineers and other top-level technicians, middle-level management (e.g. foremen), top management, or finally, that elusive quality called entrepreneurship. Some of these scarcities may be a problem not of total quantity but of allocation: tradition or economic incentives attract some of the ablest young people to occupations other than manufacturing. But, primarily, there is a shortage of skills needed for industry. A shortage of private entrepreneurship may be circumvented, for better or for worse, by government initiative in industry, and the highest quality of skills can be imported from abroad. But a general shortage of skilled labour cannot be remedied by short-cut methods; what is needed is a massive and drawn-out programme of investment in human capital.

17. Another aspect of manpower relates to work habits and incentives. The transformation of workers from peasants to an efficient urban proletariat is not an easy one. The social problems involved are outside the scope of this paper, yet they may lie at the heart of the industrialization process.[17/] Translated into economic terms, this means that industrial labour in developing countries, even with the same amounts of other factors of production, may be very inefficient relative to labour in developed countries. This is frequently cited as the reason that industry in developing countries cannot compete with that of developed countries. This is of course only half an argument; competitiveness refers to relative money costs, not to physical productivity. Inefficient labour results in excessive costs only if wages are determined without regard to productivity. This may result not only from pressures by unions, but also from the need to pay compensation for the reluctance of labour to shift to industry.[18/]

17/ B. Datta, op. cit., and P. Sargant Florence, Economics and Sociology of Industry, 1964.

18/ This forms the basis of justifications of protection by Arthur Lewis and E.E. Hagen. For a discussion of these ideas, see H. Myint, "Infant Industry Arguments for Assistance to Industries in the Setting of Dynamic Trade Theory", in International Trade Theory in a Developing World.

Raw materials

18. Manufacturing consists of processing and transforming materials. The cost of the final product is obviously affected by the cost of the raw materials. Countries abundantly endowed with natural resources which supply the raw materials for industry are potentially better off than those who must rely on imports of raw materials. But rich natural resources are not automatically cheap raw materials for industry. Many developing countries lack the basic overhead capital for utilizing and delivering their natural wealth - e.g., power, roads and railroads - at a price competitive with imported raw materials. Furthermore, the basic factors which make manufacturing inefficient may also apply to earlier stages of the productive process. For example, scarcity of capital and small scale of production, factors discussed below for manufacturing, affect the profitability of utilization of domestic natural resources.

Capital

19. Industry is particularly affected by the general shortage of capital in a developing economy. Manufacturing encompasses a wide variety of branches, differing considerably in the degree of capital intensity, but on the whole, industry is a relatively capital-intensive branch of economic activity. Since capital is a scarce factor, it should be used sparingly, i.e., in non-capital-intensive activities.[19/]

20. When a developing country faces balance-of-payments problems, it must take into consideration the foreign exchange component of capital formation. Machinery has a high foreign exchange component; therefore, the balance-of-payments constraint tends to direct investment to other branches; but it should be stressed that this immediate balance-of-payments consideration may be at variance with longer-term considerations.

21. Quite apart from the balance-of-payments problem, the process whereby saving by some members of society makes possible capital formation elsewhere is quite complicated, achieving high levels of sophistication in developed market economies.

19/ The basic economic concept that the marginal product (and thus the price) of a factor varies inversely with the quantity of that factor and directly with the quantity of other factors rests on implicit assumptions regarding mobility of factors and availability of complementary factors. In cases where these assumptions are not valid, a relatively scarce factor may turn out to be very unproductive.

The absence of a developed institutional framework of financial intermediaries tends to direct capital to those branches where the saving-investment process is less complicated (e.g., family farms) and makes the financing of investment more expensive.

22. Finally, the fear of inflation, usually justified in developing countries, tends to attract capital to assets such as land and housing, which are more inflation-proof than industry.

Techniques of production

23. An often cited obstacle to industrialization in developing countries is the limited size of the market for industrial goods, which precludes taking advantage of economies of scale. The existence and importance of economies of scale, by which is meant falling costs per unit of output as the size of plan is increased, have been objects of controversy among economists for several decades.[20/] Whereas emphasis has often been placed on economies which arise from the physical relationship between inputs of materials and the increase of size, volume or power, more recently stress has been placed on different techniques of production which may be economically justified at different levels of output. Economies associated with large-scale production are expressed not only in cost differences. It is alleged that for many industrial products large-scale production techniques are necessary to ensure quality control and guarantee delivery dates, without which international competitive conditions cannot be met. The importance of economies of scale can be ascertained only on the basis of empirical findings, and these, so far, based primarily on a few developed economies, have not been definitive.[21/]

24. The main relevant findings of these studies concerning manufacturing in developed countries are these:

(a) Between industries there are considerable differences as to the importance of economies of scale. In some (e.g. automobiles) they are considerable; in others (e.g. many fruit processing industries) the slope of the plant scale curve is very flat.

20/ For recent expressions of scepticism concerning the importance of scale economies, see the articles by J. Jewkes and C.D. Edwards in The Economic Consequences of the Size of Nations.

21/ The most frequently cited works are Bain's studies on the United States (e.g., Barriers to New Competition, 1956). Bain has recently made some international comparisons; see Joe S. Bain, International Differences in Industrial Structure, 1966.

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(b) In most industries a wide variety of plant sizes coexist. This implies that the minimum efficient size of plant is but a fraction of total output. In fact, Bain's international comparisons show that in Canada, France, India, Italy, Japan, and Sweden (all the countries examined except the United States and the United Kingdom), a large part of output is produced by firms of less than what for the United States appears to be minimal optimum size.22/

25. The obvious conclusion from these findings is that economies of scale are not of major importance for most manufacturing industries, in the sense that industry cannot exist if economies of scale are not gained.

26. To what extent do these findings suggest that the importance of economies of scale are greatly exaggerated as regards developing countries? At first glance it would appear that a cost differential of 20 or even 30 per cent is relatively unimportant; after all, the difference in standards of living expresses itself in hundreds, not just tens, of percentage points. However, since the demand for a product depends both on the population of the market and on income per capita, the developing countries, and particularly the large number of new nations having a population of under 5 million, have an internal market too small to support even one plant of the size considered minimal in an industrialized country. Cost differentials may therefore be considerable. Furthermore, the small size of the market may prevent the attainment of a level of quality which can face international competition. Even so, the importance of economies of scale may be exaggerated; they are undoubtedly important in particular branches, but they cannot be made the sole excuse for a general inability to industrialize.

27. Closely akin to economies of scale of plant are economies of scale of industry; i.e. economies external to the plant but internal to the industry (what the regional scientist calls localization economies). The possibility of use of specialized firms is greatly enhanced as the size of the industry increases, thus lowering costs.23/

22/ Joe S. Bain, International Differences in Industrial Structure, pp. 55-56.

23/ An additional type of scale benefits is called "urbanization economies", wherein the economic enlargement of a region benefits all industries at that location. This, another example of how the process of industrialization helps to overcome obstacles to further industrialization, will be referred to again below.

Distribution costs

28. The lack of efficient marketing and distribution institutions - wholesaling and retailing, credit, storage and transportation - may greatly raise the final cost of a product. Here again, the necessary facilities are more the product of the development of the economy and of the industry than of the particular plant or firm.

IV. INTEGRATION AND THE OBSTACLES TO INDUSTRIALIZATION

General observations

29. Many of the main general obstacles to industrialization, those basic demographic and economic factors which impede development, can be affected by economic integration only indirectly. To the extent that specific obstacles can be overcome and the development of some sector quickened, the process of growth itself helps overcome the more general and basic obstacles.

30. Economic integration, particularly when accompanied by extensive joint economic policy, can perhaps be effective in the field of foreign economic relations. Vigorous joint action to overcome the problem of development may convince foreign investors, private and government, of the economic potential of the region. In this way foreign capital can be attracted, helping to solve both the shortage of capital and the shortage of foreign exchange. At the same time, the formation of a large bargaining unit may be more successful in obtaining concessions from more developed countries. These are economic benefits which can be derived from the political implications of economic union. Joint action by developing countries for such purposes need not of course require economic integration; e.g. the organization and activities of the United Nations Conference on Trade and Development (UNCTAD).

31. Industrialization can, of course, be aided if economic integration leads to more rapid development of other sectors. For example, considerable economies may be achieved in administration, through joint planning, and in overhead investment such as transportation, communication and power; these will make industrialization that much easier.

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Integration and regional specialization

32. The main hope placed in integration is that it will lead to regional specialization, and thus foster industrialization. As suggested in Section II above, the possibilities of specialization depend on the degree of economic homogeneity achieved by integration. Two questions were raised. The first question is whether a particular union is the most homogeneous grouping of countries. The answer will probably be in the negative in the case of a country which fits comfortably into the world economy. Thus, those countries that produce primary commodities for which export prospects are good, might find that international specialization is a more promising policy for growth and eventual industrialization than union with less fortunate neighbours. The answer may also be negative in the case of developing countries retaining strong economic and cultural ties with developed countries. For these, concentrating economic relations with the developed country may provide for faster growth, in accordance with pre-twentieth century developed-underdeveloped country relationships, than cutting such ties in favour of a regional union. Using Myrdal's terminology, here "spread effects" are more important than "backwash effects".

Homogeneity through integration

33. The second question concerns the way in which integration makes the area encompassed more homogeneous. The possibilities vary of course with the form of integration adopted; they also vary in accordance with the type of partners selected. It must be stressed that the concept of developing countries is very broad, including countries small and large, those with annual *per capita* income below $US200 and those with income several times as high, countries with a fairly developed industrial structure and those barely starting to industrialize. A useful differentiation is between unions of developing countries at a similar low level of industrialization, a similar relatively high level, and a dissimilar level, thus:

(a) Union of low-level countries: A basic problem in the least developed countries is the low level of internal specialization and trade - due primarily to the traditional nature of society and poor transportation facilities. The joining of two such countries in a customs union might have very slight immediate effects. Transportation costs alone may be sufficient to keep coastal industry economically closer to overseas markets and suppliers. Economic integration may not lead to greater mobility of factor movements if the cause of immobility is primarily the result of factors other than legal barriers. Probably intensive joint policy activity would be necessary before such different countries could be welded into a community with significant economic homogeneity.

(b) Union of high-level countries: The greater the share of the market sector in a country's economic activity the greater the scope for trade to be encouraged by economic incentives. Thus, trade between the more industrialized developing countries could be expanded by a customs union, subject to two constraints. First, artificial restrictions must actually be removed; yet the developing countries with the higher level of industrialization, usually reached behind high protective walls, have entrenched vested interests eager to thwart true trade creation. Secondly, in many of these countries too geographic barriers severely hamper trade, and industrial enclaves may be on sea-coasts, again economically closer to foreign markets. Thus, there is usually very little trade in industrial commodities between the more advanced developing countries for geographic rather than for administrative reasons. In these countries - usually with a longer history of political independence - national antagonisms have often become quite strong; thus, formation of a common market would not automatically lead to large factor movements. Again, considerable joint policy would be needed, but may not be sufficient.

(c) Union of mixed levels: An interesting problem is posed by a union between more and less industrialized developing countries. Here, lack of economic homogeneity is most extreme. Union between such countries would be most likely to lead to severe problems of sharing of benefits - a subject treated in Section V below. Rather than create an area of greater homogeneity, such a union may simply dissipate the advantages a small country may have in the evolution of institutions.[24]

24/ For a discussion of such advantages, see S. Kuznets, "Economic Growth of Small Nations", in Challenge of Development, reprinted in Economic Consequences of Size of Nations.

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Integration and specific obstacles to industrialization

34. General considerations such as those discussed above often underly much of the arguments for and against integration. It may however be more helpful to consider again the specific obstacles to industrialization, and the way integration may affect each.

(a) Manpower

35. Where to adjacent countries complement each other in unskilled manpower, i.e. one has a surplus and one is underpopulated, a customs union would do little, but a common market would present a framework for favourable factor movements. If the scarcity of labour stems from lack of mobility due to other than the existence of a national frontier, no formal arrangement will suffice to overcome it. A joint manpower policy may be able to attack the problem of lack of mobility. In the case of complementary countries, such joint policy could probably be undertaken without the need for economic integration.

36. As regards skills, a customs union by itself will not be effective,[25] but a common market may lead to mobility. Again, this will help if the member countries are complementary in their skill resources, and if there were previously in existence effective restrictions on migration of skilled workers. Entrepreneurship may prove most mobile. The pooling of skills, and thus a more efficient allocation of the existing stock, can be achieved by joint policy, without the necessity of economic integration. Greater mobility of skilled manpower may be a blessing, but it may also be the most serious problem of economic union: this is considered in Section V below.

37. A joint manpower policy may also be a useful way to attack the problem of shortage of skills. Considerable economies can be gained by jointly undertaken educational activities. However, it is possible that the long-range nature of the remedial process and the large investments involved make fruitful co-operation in this field unlikely unless a great degree of economic integration has been attained.

25/ A possible exception is the oft-cited case for protection, in which a protected industry is given time to train a labour force.

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38. Customs unions and common markets can affect labour efficiency only indirectly. To the extent that work habits are a function of the level of industrialization, then if economic integration increases industrialization for other reasons, it will thus raise the efficiency of labour and of course also the level of skills. There may be some scope for joint manpower policy in this field as well, whether or not integration takes place.

(b) Raw materials

39. Granted that two adjacent areas have more natural resources than either of them alone, what economic advantages can be arrived at from union as regards raw materials? If the countries are complementary, in the sense that the raw materials of one serve the industry of the other, customs duties are rarely an effective barrier to trade between them. In such cases, a customs union would have little direct effect. Where the raw materials are competitive, there may be little need for trade. One important difference may be the case of agricultural raw materials, where protective measures prevent using cheaper neighbouring sources of supply. Theoretically, a customs union would be useful. However, recent experience suggests that agricultural policy tends to be exempted from the automatic clauses of a customs union, and benefits in this sphere must await fuller integration and joint policy, and the indirect influence on demand of the direct effects of integration on other sectors.

40. Joint policy, with or without integration, can be used to gain greater efficiency in the exploration and exploitation of new resources, in power and other overhead investments which are necessary to lower the price of raw materials to industry. Of course, since investments in raw material production, both direct and in overhead investments, are highly capital intensive, potential gains must be compared to those from alternative uses of capital.

(c) Capital

41. The possible increase in capital inflow as a result of integration has already been considered. For particular industries, this may be an important consideration. Specifically, if a customs union or a common market makes investment in a particular industry appear more profitable, foreign investment may be attracted, thus providing both capital and foreign exchange, and perhaps also foreign entrepreneurship and management.

42. More complicated is the allocation of existing domestic capital. If a customs union makes an industry attractive, then the allocation of existing savings will be changed in favour of this industry. Capital from neighbouring countries will also be attracted to this industry unless capital flows are restricted. Even when formal restrictions on capital movements do not exist, more advanced forms of economic integration would facilitate such transfers, and thus make possible more efficient utilization of existing capital.

43. Savings would not be increased by integration, except as integration leads to an increase in the level of income. Yet much can be done to create the institutional framework necessary to insure that what savings exist find their way into productive investment. There is no reason why each country cannot do this on its own, but joint action, e.g. the creation of a single securities market, can certainly lead to greater efficiency. Such action may be easier within a framework of advanced economic integration, requiring as it does considerable co-operation in the field of monetary and fiscal policy, but some such joint action need not be excluded from consideration even without integration.

(d) Techniques of production

44. The most frequently voiced claim for a customs union is that it makes possible exploitation of economies of scale. To the extent that in a particular industry scale is a major factor, a customs union provides a wider protected market, and may make efficient production possible. This is the classical "infant industry" argument for protection, applied to the case where the domestic market by itself is too small to provide economies of scale. The case is for trade diversion.

45. Will a customs union by itself lead to exploitation of economies of scale? The elimination of one specific obstacle to industrialization may not be enough to make industry efficient. This is particularly relevant in those industries where economies of scale are not major factors; e.g. many developing countries have not yet developed the relatively simple consumer goods industries where economies of scale are not important.[26/] Even where economies of scale can be obtained, there is no guarantee that the provision of a larger market is sufficient. Bain, finding that even in industrial countries most plants are sub-optimal,[27/] raises

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26/ See for example, Industrial Growth in Africa, 1963.

27/ See foot-note 22/ above.

doubts as to the efficiency of the market mechanism - even in more developed countries - to provide optimum size plants. For these reasons, an economic union would be more conducive to setting up sufficiently large plants than just a customs union, and joint development planning would be most helpful.

(e) Distribution costs

46. The inadequacy of infrastructure investments and institutions, which results in higher costs of distribution, will not automatically be affected by the formation of either a customs union or a common market. Joint action, including planned investment, may be constructive, but here too, as with overhead investment in general, the allocation of benefits from such joint action poses difficulties.

V. INTEGRATION AND THE PROCESS OF INDUSTRIALIZATION

47. It may be argued that by concentrating on the obstacles to industrialization this essay ignores the broader vision of economic integration as a catalyst which alters the entire order and process of industrialization. A discussion of some aspects of integration and the process of industrialization is certainly in order before tentative conclusions are attempted.

The order of industrialization

48. Not only does industry develop at a different pace in different countries, but within each country the various branches and sub-branches grow in different order and rapidity. If integration is judged by the way if fosters industrialization, a proper evaluation must consider its effects on both the rate of industrialization and the order of industrialization. Three aspects of a "desirable" order of industrial development for developing countries are considered below: use of factors of production, balance-of-payments effects, and inter-industry relations affecting the rate of growth.

(a) Factor combinations

49. Historical studies of industrial countries suggest that despite considerable diversity between countries, there is a discernible pattern of industrial

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development: the first major industrial branches are consumer goods, and at a later stage capital-goods industries develop and gain prominence.[28] From the point of view of developing countries, it may be more useful to classify industries by factor inputs rather than by final product. Thus, a classification of industries based on the factors most scarce in developing countries, capital and skill, gives the following:[29]

(a) Low-skilled with relatively light capital inputs.

(b) Low-skilled with heavy capital inputs.

(c) High-skilled with light capital inputs.

(d) High-skilled with heavy capital inputs.

50. The order which industrialization has traditionally taken is to start with (a) above and end with (d); however, the sequential order of (b) and (c) varies from case to case. It would be reasonable to suggest that developing countries today should plan their industrial development to accord with their basic pattern of factor endowment. For most countries at an early stage of development this would mean concentrating initially on industries requiring primarily a low level of skills and relatively little capital.

51. A true free trader may argue that the logical extension of this approach should lead to avoidance of administrative attempts to speed up industrialization. But this is no excuse for those who believe in an active industrialization policy to throw out the baby with the bathwater, and sponsor an industrialization program that ignores factor endowments.[30] Yet many do, and ample witnesses are

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28/ See e.g., W.G. Hoffman, The Growth of Industrial Economies, 1958.

29/ This is the classification used by A.J. Brown, Industrialization and Trade, 1943.

30/ This statement does not mean that industrial planning must be based on existing comparative advantage alone, an idea challenged by economists evolving criteria for development planning. See, e.g. H.B. Chenery, "Comparative Advantage and Development Policy", American Economic Review, March 1961, and Maurice Byé, "Internal Structural Changes Required by Growth and Changes in International Trade", in International Trade Theory in a Developing World. Nor does it imply that comparative advantage can be inferred from trade flows under protection. See W.P. Travis, The Theory of Trade and Protection, 1964, p. 244.

available in the inefficient heavy industries set up in numerous developing countries.

52. All artificial protective barriers are an impediment to specialization in accordance with factor endowments. Protectionists accept this current loss for the sake of future gain, if not for the world as a whole, then at least for a particular country. Integration between developing countries today, it is argued, must be viewed not as a substitute for free trade, but rather as an alternative to autarchic tendencies. To the extent that this is true, a movement to regional specialization should lead to industrialization along lines of relative factor scarcity within the union.

53. But a union can quite easily lead to the reverse. The reluctance to hurt existing industries and the tendency for quid pro quo industrialization policies may mean a superimposition of a protective wall above an existing autarchic framework. This chance is greatest among the industrialized developing countries. Furthermore, though most developing countries do exhibit autarchic tendencies, it cannot be assumed that they will or can persist; balance of payments problems may not allow this. However, integration may be a substitute for a turn to freer trade.

(b) Balance of payments

54. As mentioned at the outset, balance-of-payments considerations are frequently a basic factor in the argument for industrialization. Yet industrialization itself intensifies the problem. Industrialization creates an initial increase in demand for imports of capital goods. Furthermore, if industrialization is successful and leads to an increase in income per capita, the demand for imports will tend to increase via the marginal propensity to import. The extent to which an investment project will affect adversely the current account of the balance of payments depends on many factors, among them the import component of investment, the subsequent generation of income, the marginal propensity to import, the effects on urbanization and consequent shifts of the propensity to import, subsequent changes in relative prices, and changes in the demand for food and

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resulting changes in exportable primary goods.[31] Clearly, not all industries create the same demand for imports, and even more obviously industries vary greatly in the extent to which their produce can be exported or can replace imports.

55. The theoretical controversy over the questions of whether industrialization should be oriented towards exports or towards import-substitution has usually been resolved in practice in favour of the latter.[32] Many factors account for the relative attractiveness of import substitution, among them natural protection accorded by transport costs and a known internal market which can be guaranteed by administrative measures. The easiest import substitution is obviously by those industrial branches requiring relatively slight capital and skills, i.e. light consumer goods. But as the "easier" import substitution opportunities are filled, further industrialialization can proceed either by expansion, via exports, of existing light industries or turning to more capital- and skill-intensive branches. If the flow of foreign exchange necessary for heavier industry is not made available by exports of non-industrial goods and services, industrial exports must be expanded. For export, industrialization must follow lines of comparative advantage.

56. At first glance, economic integration appears to offer an alternative solution. It enlarges the area for import-substitution. This is obviously true if integration is between countries at differing levels of industrialization, i.e. between a country that has reached the limit of easy import substitution and one that has not.[33] But even if all members have reached the limit of easy

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31/ A classic article on this subject is J.J. Polak, "Balance of Payments Problems of Countries Recovering with the Help of Foreign Loans", Quarterly Journal of Economics, Feb. 1943. For an enumeration of these factors as related to industrialization, see J.H. Adler, The Underdeveloped Areas: their Industrialization, 1949.

32/ Chenery's findings clearly show the importance of import substitution in the expansion of industry. See his "Patterns of Industrial Growth".

33/ Thus, there is perfect accord between Prebisch's statement that in the more industrialized South American economies the limits of easy import substitution have been reached, and the fact that the Economic Commission for Latin America seems to stress the promise of import substitution inherent in the formation of a common market. See The Latin American Common Market.

industrialization, economies of scale created by the enlargement of the market import substitution in more complicated manufacturing possible, e.g., consumer durables and some capital goods. But from where will the foreign exchange necessary for such industry come? Unless an isolated area is contemplated (one which will produce most of its own needs and will rely very little on foreign trade, e.g., the Soviet Union before World War II), or the vision is of a union so attractive to foreign investment that import surpluses can be financed for many years, e.g., the United States in the nineteenth century), a customs union or even an economic union cannot long postpone the need for expansion of exports.

57. If these exports must be industrial goods, why not concentrate directly on exports industries instead of on regional trade? Two answers are usually given. The first is that developed countries discriminate against industrial exports from developing countries, by tariff and other restrictions which bear most heavily on the less sophisticated products which developing countries are able to export.[34/] Granting this contention, its importance may be exaggerated: considering the tremendous disparity in standards of living, some discriminatory price differences cannot be an insurmountable obstacle. A second argument is that industrial exports must be of a quality which only large-scale production methods can achieve; and the vicissitudes of export trade make the risk of large-scale production for export too dangerous for developing countries. Thus, they should better attempt to attain large-scale production by use of enlarged import substitution areas, e.g., common markets.[35/] But will the industrialization promoted by a union be suitable for exports? The experience with domestic market based "spill over" exports from developing countries is not encouraging. The inefficiencies encouraged by high protective walls do not make for international competitiveness. Where economies of scale are important - and it should by no means be conceded that developing countries cannot greatly expand exports of industrial goods using relatively little capital and skill where economies of scale are not important - joint activity can be undertaken, without integration, to set up suitably sized export plants, thereby spreading the risks.

34/ See, e.g., B. Balassa, Economic Development and Integration, chapter III.

35/ See T. Scitovsky, "International Trade and Economic Integration as a Means of Overcoming the Disadvantages of Small Nations", in Economic Consequences of the Size of Nations.

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(c) Inter-industry relations

58. Another basic consideration in the ordering of industrial projects is the relationship between industries. Industries are related on the production side - when they are viewed as buyers from and suppliers to each other, and through a more general demand relationship - where one industry helps another by generating income which creates the demand for the other industries' products. Economists disagree as regards which type of such "external economies" (many of which the regional scientist calls "urbanization economies") is the more important. Different beliefs regarding the more basic "linkages" lead to contrasting policy recommendations for hastening industrialization.[36] In considering the priorities to be assigned to different industries, a development planner would have to attempt some estimate of linkages.[37]

59. To the extent that the economies here considered imply divergence between social and private return, a customs union alone would not necessarily lead to sequential industrial development with greatest linkage effects. Investment planning can do so. Ideally, investment planning on a regional basis can be more fruitful than planning on just a local basis. Therefore full economic integration is called for. But it is an arguable point whether integration will actually lead to more or less investment planning; it may decrease local planning without bringing about real regional planning.

60. A further complication is this: most of the "linkage" economies, as well as external economies from size of industry, arise from the enlargement of economic activity at one location. If industry expands at widely separate locations, these economies are lost. The location of industrial development in a union is thus a major problem of integration.

36/ E.g., the familiar controversy between the Rosenstein-Rodan type "balanced growth" and the Hirshman type "vertical linkages".

37/ Interesting techniques for measuring the economies of agglomeration and spatial juxtaposition for industries that are technically interrelated have been developed by Isard and his associates, and called "industrial complex analysis". See W. Isard, Methods of Regional Analysis, 1960, especially chapter 9, by E.W. Schooler.

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A basic problem: unequal growth

61. Virtually all countries large enough to encompass several economic regions face the problem of unequal growth of the different regions and the accompanying problem of income inequality. Industrialization hastens the problems of polarization - the growth of urban centres where agglomeration economies prevail. The rise in income in particular regions tends to outdistance growth of income elsewhere. But an even worse situation can exist: the agglomeration economies at the centre attract capital and skilled labour from the periphery, thus leaving other regions even worse off than before.38/ This is the extreme example of "backwash effects".

(a) National solutions

62. The problem of backward regions or areas within national boundaries have elicited several types of solution. One solution is to let nature take its course, in the hope that internal mobility of factors of production will both raise absolute incomes in all regions and depopulate (relatively) backward regions so that income per capita is distributed more equally.39/

63. A more active policy is to use economic policy, such as fiscal incentives, of public overhead investment, or even detailed public investment activity, to transfer capital to backward areas. Frequently, a conflict of interests exists between two national goals: the achievement of the most efficient use of the nation's available resources and the equalization of levels of income between regions.40/ Obviously, if the marginal productivity of capital is lower in the backward regions, such policies will lead to a lower rate of average growth.41/

38/ A frequently cited example is the case of southern Italy, actually impoverished by the growth of northern Italy.

39/ R.A. Easterlin has found that a strong factor in the decrease of income inequality in the United States has been labour mobility. However, he does not believe that economic growth will by itself inevitably lead to decreased inequality. "Long Term Regional Income Changes: Some Suggested Findings", Regional Science Association, Papers and Proceedings, Vol. IV, 1958.

40/ This conflict is ably illustrated by A. Dziewonski (op. cit.). He shows how economic considerations forced a shift in Polish plans to more centrally located industrial complexes, and the abandonment of the concept of localized industry, which had previously been adopted for social reasons.

41/ This point is discussed by R. Funck, "Some Aspects of an Optimum Pattern of Industrial Location in the European Economic Community", Regional Science Association, Papers, Vol. XIV, 1965.

64. Finally, most nations use tax policy and public expenditures to make per capita disposable income much more equally distributed than per capita economic income.

(b) Effects of integration

65. The formation of a customs union should lead, initially, to a relative growth of plants which are more efficient for locational or other reasons and a closing of less efficient plants. The fear of regional loss due to closing of plants42/ has led to the acceptance of escape clauses protecting existing industry or of extended transition periods as an inescapable part of customs unions. This in effect means delaying regional specialization of existing industry, to avoid regional decline, and relying on more specialized growth of new industry, though such future growth may be unequally distributed regionally.

66. Common markets of developing countries pose greater dangers. The greater the mobility of factors of production the greater the possibilities of polarization. The more industrialized developing countries offer examples of great intra-country regional disparities in income. In the words of J.R. Lasuén: "It seems that external economies are enormously significant in the already developed zones of an under-developed country."43/ This problem is perhaps accentuated by the greater mobility of capital and skilled labour than of unskilled labour, and it is the mobility of the former that is primarily enhanced by a common market. Thus, there is great danger, not only of unequal growth, but of severe backwash effects even when integration is between countries of a similar advanced stage of industrialization. When the member countries are at an unequal level, this danger is that much greater.

67. It is not surprising, therefore, that developing countries contemplating economic integration should wish to achieve a high degree of joint policy to counteract the tendencies towards polarization. This requires more advanced forms

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42/ Sidney Dell has pointed out that such fears are quite legitimate: lack of flexibility and mobility in developing countries causes the closing of some industries to lead to unemployment rather than to better allocation of labour. Trade Blocs and Common Markets, 1963.

43/ "Regional Income Inequalities and the Problem of Growth in Spain", Regional Science Association, Papers, Vol. VIII, 1962, p. 180.

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of integration. Can an integrated area successfully employ the methods by which regional disparities are dealt with in developed countries? Clearly, doing nothing will not work. The degree of spontaneous labour mobility achieved in a country such as the United States or the forced mobility in an autocratic country cannot be expected in most possible combinations of developing countries.

68. Planned investment seems an obvious solution, especially since more developing countries show an *a priori* preference for investment planning as opposed to reliance on a free-market mechanism. Yet great difficulties exist. The strong nationalistic demands for equal sharing of benefits, often labelled "reciprocity", may degenerate to insistence on an "each gets one plant" approach to the development of an industry. Here there is the danger that neither scale nor localization economies - the strongest single excuse for a union - will be achieved. Even the more reasonable *quid pro quo* setting up of industries sacrifices agglomeration economies, and, considering the amount of wastage of investment funds relative to the scarce total supply available, may lead to an actual slowing down of the average rate of growth of the region as a whole - let alone of the more dynamic areas.[44/] Some of the major benefits of joint investment planning, such as careful studies of resources, avoidance of duplication, and international co-operation in capital-intensive projects such as power, water and transportation, may have the same change of successful achievement without integration.

69. Developing countries lag far behind the developed countries both in the efficiency of the budgetary mechanism and in their readiness and ability to use it for income redistribution. It is hardly to be expected that intra-regional transfer payments can be successfully employed to combat regional income disparity.

44/ The latter problem is less acute in integration of richer developed countries; e.g., the EEC. Such an area can better afford to make provisions for joint efforts to help backward areas.

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VI. CONCLUSIONS

70. Though this survey has been too cursory to suggest definite conclusions, several general tentative conclusions follow from the previous discussion:

(1) The problems of industrialization are complex and deeply rooted; there is no simple formula for instant industrialization. Economic integration may be effective in overcoming certain obstacles to industrialization, but it is certainly no panacea.

(2) Considering these deep-seated problems, it appears that a customs union is the form of integration least likely to be effective. This does not mean that gradualism is ruled out, but rather that the choice should be between economic integration with maximum joint policy, or gradualism via joint policy, without integration. Joint policy is of course a term embracing an almost infinite variety of forms of economic co-operation.

(3) The term "developing countries" is so broad, including as it does such a variety of levels of income, levels of industrialization and sizes and potentials of growth, that all generalizations concerning "developing countries", including those in this essay, must be suspect. Specifically, in considering integration, each case should be judged on its merits. If any broader generalizations are necessary, the least that must be done is to classify potential unions according to the stage of industrialization of their members, thus:

(a) Similar, low-level countries: At first glance, these present the least likely candidates for integration: they have not reached the limits of import substitution, they have the smallest market sectors, and frequently the least infra-structure investment. However, as Sidney Dell has stressed, there is much to be said for the early beginning of regional co-operation.[45] Existing vested interests are slight and it is possible to start industrialization along the most economical lines. Furthermore, there is much to be gained by joint planning and joint activity in infra-structure investment. If the immediate gains may not be great, there is much less to lose as the only way to go is up. Integration is certainly desirable for many new countries, each too small to grant any scale economies, and several of which can be made to form an economic region.

45/ Op. cit., p. 367

(b) Similar, more industrialized countries: Here the immediate gains from scale economies are largest. But there is a danger that increasing the import-substitution area will not lead industrialization into the desired export industries, but will rather divert efforts from attempts to achieve scale economies in exports. There are dangers of vested interests and national animosities bringing to naught the best intentions, and wasting the potential gains from integration while leaving all the ills. These countries may be in an in between stage, i.e. too advanced and not yet advanced enough for integration. But joint policy activity can be very fruitful, not only in infra-structure activities but also in setting up joint firms or commissions to exploit natural resources and to develop export industries.

(c) Mixed-level countries: Except in the case of a very poor country adjacent to a big richer one, i.e. where the small one has really very little to lose,[46] integration of economies at widely differing stages of industrialization is the most dangerous. The poorer one will face the prospect of backwash effects; industrialization may proceed at a faster pace in the more developed country, but perhaps decline in the less developed one. Spread effects are less likely, since unlike the developed underdeveloped country relationship of earlier times, an abundance of skills and capital is not available for transfer to the poorer country. Polarization tendencies are very strong. Furthermore, it is hardly likely that the more developed countries of the union will feel the same obligation towards the less developed ones that they believe the developed areas of the world should feel towards them. Here too there is room for partial schemes to solve mutual problems, as for the other types of combinations of developing countries.

46/ There remains the loss of paying more for industrial imports. The formation of a free trade area theoretically permits trade creation without trade diversion, by setting an external tariff very low on essential imports. It is hardly reasonable to suppose such a free trade area will emerge between more equal partners.

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