KNOWLEDGE ECONOMY AND WORLD ECONOMY

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Introduction

A rather striking fact about technology in our country is that it has not revolutionized our economic, social and political orders, if not the economic, social and political ways of thinking prevailing among those members of our society who are supposed to be its intelligentsia. Their statements and attitudes not only show that they are unaware of how technological progress is going to change our world but also that they do not know and do not even bother to consider how they would like it to change our world. And when technological progress takes on the appearance of a threat they quickly trump up obsolete twentieth-century "revolutionary" slogans like "neo-capitalism" and/or "neo-imperialism" merely to cover up their own failure to carry out their mission as the educated group of society.

This article intends to demonstrate the dimension and nature of the problem that we are facing as a consequence of both technological development and its application in the economic field, and in so doing hopes to stimulate the search for the right answer. It goes without saying that any given problem may have more than one possible answer and that these answers will each have their specific consequences. Accordingly this article will be divided into two parts: the first discusses the problem being faced and the second attempts to offer an answer which must, however, be regarded only as one among conceivable alternatives.

I. The problem

If technology was responsible for the change of the "industrial economy", which was known long before the first world war, into a "service economy", its rapid development after the second world war has turned the latter into a *knowledge economy*. In this kind of economy, computer and information processing constitute its distinctive industries, knowledge worker its typical employee, research institute at the industrial centres its engine of progress and innovation — a function that used to be fulfilled exclusively by similar institutes in the universities — while the urban metropolis, markedly different from the older industrial-commercial "city", its distinctive human habitat[1].

In the field of exchange of goods and services, technology has gradually converted the older "international economy" into a "world economy" through the change that it has brought about from the older "factors-of-production" economy to the "knowledge" economy. As a consequence of these changes trade among nations is no more a matter of the complementary provision of goods and services in which, as suggested generally by economic textbooks, Britain sends textiles to Portugal and gets Portuguese wine in return. But oddly enough this principle of complementarity is still taught today at economic faculties as being "the rationale" of "the international trade". There seems to be too little awareness that trade grows most vigorously, in volume as well as in value, between nations having more or less the same level of technical civilization and that are converging in their economic and industrial systems. Thus America finds it very difficult, for instance, to trade with the "complementary" economy of India, but very easy to trade with the "parallel" economy of Canada[2]. A similar difficulty would be encountered in the trade relations between the other developed countries like Japan, Australia and the West European countries on the one hand and the developing nations of Africa,

1 Cf. Irving Kristol, "The new era of innovation", *Fortune*, February 1969, p. 189. See also Peter F. Drucker, *The Age of Discontinuity: Guidelines to Our Changing Society* (New York: Harper & Row).

2 Irving Kristol, *op. cit.*, p. 190.

Asia and Latin America on the other[1]. This being the situation it should be clear that the fact that the developing nations are not getting a proper and fair share in the benefits of international trade is merely caused by the instability of the prices of raw materials or the continuous prevalence of unfavorable "terms of trade". These two problems do exist but they are only additional to a problem of more fundamental nature, namely, the fact that the level of technical civilization of the developing countries is still too rudimentary to develop their economies as "parallel" as those of the developed countries.

The world economy did not come into being through the efforts of men of the classical explorer-type such as Columbus, Livingstone and Captain Cook, nor of men of the colonial officer-type like Raffles and Daendels, or the modern industrialist-financier-type like Krupp, Morgan, Rockefeller etc., but through the work of *knowledge workers*. Unlike the manual workers of the 19th century and earlier, the knowledge workers of today are not content with work that merely produces livelihood. They have other ambitions that they try to achieve through their intellectual activities, i.e. to be the leaders in almost all spheres of life. They are in a position to do so since they are all active and working in virtually all branches of productive activities, in government (civilian as well as military), in the private sector (business, journalism, etc.) and in mass organizations (political parties, popular movements, etc.). It is from them that a "new nationalism" has emerged, which is the idea that a nation's prosperity is no longer a function of a limited horizontal factor such as the size of the territory of a state as used to be assumed under the medieval peasant's way of thinking, which in the past often led to wars, but depends upon an unlimited vertical factor, namely, technological development. One of the consequences of the application of this idea in the economic field is the formation of giant enterprises commonly known as "multinational corporations" (MNC). The director of a MNC no longer represents the interests of the country he belongs to but those of the company he works

1 Thus Prof. Kiichi Saeki points out in his paper that "........... the relationship of mutual interdependence between the advanced democratic industrial nations and the developing nations is drastically smaller than the one which exists among the advanced, developed nations.......": this paper entitled *Sense and Nonsense of Economic Interdependence* was presented to the first Japanese-Indonesian Conference, held in Jakarta, 6—10 Dec., 1973.

for, whereas these two kinds of interest are not always in harmony with each other and sometimes are even opposed to each other. It is not surprising therefore that even in the developed countries the existence of MNC's often gives rise to political disputes[1].

On the other hand, it is realized that technology can develop rapidly and the results of its application be enjoyed in a more equitable way if the knowledge workers who are its moving force do not confine themselves to activities within their respective national boundaries, but are also prepared to go out beyond these borders and establish contact with their colleagues from other countries to hold regular and open discussions and exchanges of views. This is how international conferences are born, whether they are called "managers working conferences", "professors' seminars", "research experts' workshops", "colloquium of governments' officials", "scholars' or students' symposiums". The names of such meetings may differ but essentially they are all meetings of "men of analysis", students of problems of their own time, problems arising from the fact that human relations are increasing in frequency and scope though originating from different ways of thinking, cultural patterns and traditions. At meetings like these all problems are discussed openly, every proposed solution talked over methodically and thereafter taken home by the participants either for further consideration and reflection or for eventual application in their respective fields of work or to be sent, directly or indirectly, to their respective governments. By this way the mechanism and practice of diplomacy have in fact grown horizontally, in the sense that more and more people conform to the requirements of the "age of technology" and engage themselves in that branch of activity on their own responsibility, which previously was the exclusive domain of professional diplomats[2].

Thus if we limit our study to the economic aspect of the problem brought about by the progress of technology, we will arrive at

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1 For a more elaborate analysis on MNC see J. Panglaykim, "Western and Japanese multinational corporations", a paper discussed at the first Japanese-Indonesian Conference, Jakarta 6—10 Dec., 1973. Also Judd Polk "The rise of world corporations", *The Saturday Review;* Nov. 22, 1969, and Hamlin Robinson, "The role of multinational corporations in developing states", lecture at symposium of Malaysian student leaders at Cameron Highlands, June 15—17, 1973.

2 For further discussion on this phenomenon see Daoed Joesoef "Perdamaian adalah lanjutan dari peperangan dengan peralatan lain" (Peace is a continuation of war with other means), *Analisa Masalah-Masalah International,* no. 2, February 1973.

the conclusion that what we are facing now is a rapidly growing knowledge and world economy. This world economy is where the action is, and any nation that doesn't expend any effort to get a piece of that action or, in other words, that isolates and contains itself in autarchy, is surely writing a prescription for its own economic decadence.

II. The possible solution

If thus is the problem that we are facing, the solution is not so much to invite MNC's, foreign capital and enterprises as to permit them to enter *with* the necessary relevant preparations on our side so as to make sure that their presence and operations will enable us to get a fair share in the growing international cake. Time is however so short that it is not possible to wait until these preparations have been completed before allowing foreign capital and enterprises to enter. Now invitation is to be issued and preparation made simultaneously. If foreign capital and enterprises are left at present as working to the detriment of the national (economic) interest, this is due to nothing else but *our own fault*: we have not prepared our economy the way we should because we have not understood the problem well enough. Therefore swearing at foreign capital or staging demonstrations in front of foreign companies or embassies does not in any way help to solve the problem. The preparations aimed to benefit to the utmost from the presence of both foreign capital and enterprises must be made in an overall and simultaneous way in various fields and at various stages of the process of production.

At the macro-national level these preparations should consist of the creation of what Dr. Panglaykim calls "Indonesian Incorporation", i.e. a pattern of close cooperation between the government, bureaucrats, technocrats and businessmen so as to facilitate the development of a power entity on a national scale which can serve as a countervailing power against both MNC's and foreign national enterprises[1]. The formation of such a countervailing power should also be done at the same time in the micro-economic

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1 J. Panglaykim, "Struktur domestik dalam interdependensi ekonomi dunia" (Domestic business structure in the context of interdependency with the world economy), *Analisa Masalah-Masalah International*, no. 12, Dec. 1973, pp. 37—44.

sphere. This is essential in view of the fact that ours is a society of atomistic business organizations, in which productive activities are undertaken by thousands of small and medium enterprises that are less than well organized and the relations among which, if these occur at all, are personal rather than businesslike in nature. Though these small and medium enterprises fulfill a certain function and play a role in the growth of national business and entrepreneurship, it must be admitted that as a whole they cannot be made to serve as a countervailing power against the giant foreign corporations. Hence large-scale national participation as a means to derive maximum advantage from the presence of foreign capital should be done through "national integrated units" in the industrial, managerial, commercial and financial fields. Apart from functioning as a countervailing power against giant foreign companies, these national integrated units as big business units are also needed to help the small and medium enterprises, especially as far as supply of raw materials and marketing of finished products are concerned.

The large-scale operations carried out by these national integrated units will consequently require large funds. One, two or three development banks assigned to serve the hundreds or even thousands of investment activities are not enough and therefore will not be in a position to cope with the relatively great increase that will occur in the needs of finance. In fact, even when these needs are still relatively small, as is the case at present, the existing banks have proved themselves unable to meet the demand for credits. It is no wonder therefore that these needs are now largely met by the giant foreign companies, namely, through the so-called "company finance", with all the obviously disadvantageous consequences for the constitution of strong national business community and economy. For in that way the Indonesian partners of the giant foreign enterprises would serve as a mere "extension" of the foreign companies, and their position has been reduced to that of "intermediary", precisely like what happened during the Dutch colonial period. Therefore, besides setting up national integrated units, provisions should also be made to create financing facilities in the form of a national financial consortium. This consortium may be a private body or a joint venture between private and government banks, wherein private foreign exchange banks take an active part, and which has affiliation with financial consortia of international standing with a view to attracting funds circulating in the international money and capital markets. In this way we will make the maximum use of the creditworthiness that our national financial institutions as a whole actually have among international financial circles. Henceforth financial institutions based abroad — like the ones in Hongkong, Singapore, etc. — could be prohibited from channeling funds to Indonesia, if law and order so require, except through the national consortia and merchant banks based in our territory.

The preparations to derive maximum benefit from the activities of foreign business should not be limited to the economic field but must cover the social field as well. Efforts should be made, for instance, to multiply training opportunities for the would-be labour force, especially for the college dropouts, so as to help them to master elementary technical skills and industrial arts. Such training facilities will obviously require enormous funds. As "Educational Foundation" should accordingly be set up whose main function is to find ways to obtain these funds on a regular basis from the large foreign companies operating in Indonesia. Hence it is not a once-for-all contribution but grants that the foreign companies extend to this Foundation and which are deduced from the annual profits of their business operations in the country. That part of profits that is earmarked for this kind of grant could, if necessary, be exempted from company tax. A Foundation that operates this way could accelerate the "spread effects" of the presence of foreign business in the country. The advantages of its presence will thus be enjoyed not only by those working directly for the foreign companies or by the state treasury through the taxes and royalties they pay, but by a far greater number of people in society. Furthermore, with the provision of these training facilities, the principle of social justice, which is one of the aims of our development efforts, will be better assured. Justice will in this context be achieved not through the classical policy toward more equal distribution of income but through increased utilization in the process of development of the sources of energy possessed by virtually every citizen, namely, human labour. Then by raising the technical quality of labour from "unskilled" to at least "fairly skilled" level we will not only help to increase individual earning capacities and by so doing, to give more equal chance in life to the citizens, but also multiply the human capital of this country.

Upon deeper reflection we will find that large-scale training in technical know-how has also great economic significance. One of the fundamental obstacles to the Indonesian development efforts, as a matter of fact, is the shortage of intermediate technical workers, i.e. the technicians who carry out the decisions made by the higher echelon of the hierarchy. However, such middle-level technicians are not produced, in any country whatever, by formal educational institutions. What formal schooling can do at most is to train people to master tools of analysis, either mathematical or verbal. Midlle-level technicians are formed and produced at the centres of productive activities and business. In the developed countries there are plenty of such centres, whether they be factories, ship-building yards, mining and construction companies, insurance firms, banks, or commercial houses. In the developing countries like Indonesia such industrial centres are very scarce whilst the growth of such centres is in turn determined to a great extent by the availability of the middle-level technicians. In order to break this vicious circle which works as a stranglehold on the economy, it is necessary to step up the activities to train people in technical skills and industrial arts and it is to finance these activities that the establishment of an Educational Foundation is considered relevant. In this way we will import *technology itself* into our country and not be content only with importing goods that are products of technology that thrived and was developed in other countries.

Conclusion

It would appear that nobody will contest the saying that no human being is able to predict precisely what is going to happen in the future. Yet, if it is hard to predict the future, it is probably because we are misconstruing it at present. One of the best ways to prepare the days to come is to draw up prospective plans today just as we anticipated the days where we live at present by planning them well yesterday.

Actually we in Indonesia have duly done this kind of methodic preparations about the future through a system of five-year plans. Social restiveness and public furor occurring here and there today prove, however, that we have been misreading and misinterpreting the problems and events that have happened in the past in such a way that the planning we made yesterday in anticipation of today, too, has been totally erroneous. This kind of error should not be repeated in our present efforts to prepare the sort of future that we desire and to avoid the one that we don't want to have. Into this plan must accordingly be integrated preparations for our active participation in the world economy because this is necessary to save the national economy from decadence. But it should be kept in mind that the world economy does not only constitute an "opportunity", but also, and even more so, a "challenge". This means that participation in it will not automatically bring to us the fair and appropriate advantages that we hope for. To obtain these advantages we have make systematic preparations in many spheres of life through our planning system.

The course suggested above is clearly not the only possible solution. It is only one of the many conceivable alternatives to cope with the problem and challenge being faced. But we can be sure of one thing: the planning that we make today should not be considered as correct merely on account of the inclusion of foreign capital investments in terms of aggregates in the input-output table while at the same time the preparations to avert the negative effects of these foreign enterprises are overlooked. It would be more disastrous if our planning neglected both. Perhaps our planners have to take seriously into account the growing need for "reprivatization" and "modernization" of our industrial and business systems. Reprivatization means a process in which the government, through the five-year development plan, defines social economic goals, but encourages nongovernmental institutions to achieve them. To this end it is necessary that these institutions have clearly defined missions so that they can structure themselves in the appropriate fashion. This structuring will in any case be a very difficult task, since the "knowledge workers" of today — including those middle-level technicians that would later be produced by the training centres mentioned above — cannot simply be inserted into the hierarchical slots of yesterday's organization. They won't tolerate it and need to be motivated in quite other ways, totally different from the traditional ones we are familiar with. Hence the need of "modernization" of our industrial and business systems and practices. To find the best solution to this problem it is necessary to seek the views of sociologists, politicians as well as political scientists, psychologists and businessmen themselves. This serve to show that the task of national planning should appropriately be a pluri- and inter-disciplinary one and not just a matter to be handled exclusively with the aid of economic discipline. For even though the economic field is given priority in the present development effort, for whatever reason, this does not recessarily mean that development planning is the concern of the economists only. Moreover economics itself is a relatively young scientific discipline. As such it has yet to reach that level of development at which it can fully explain phenomena, not to speak of that level at which it can provide solutions to the problems. And even if a certain problem can, on the basis of certain assumptions, be declared as being an "economic" one, its correct solution does not merely lie in the economic field, for in reality one field of activity or problem is linked to another in a close interrelationship.

Finally it must be stated that no matter how thoroughly we have thought about the necessary preparations for the future, active participation in the growth of the world economy may well cause us to run certain unexpected risks. But far from taking this as an excuse to refrain from participation, we would rather say: if all risks are knowable beforehand, is there still any fun in doing anything in life on earth ?