



ISLAMIC DEVELOPMENT BANK
ISLAMIC RESEARCH AND TRAINING INSTITUTE

ECONOMIC COOPERATION FOR REGIONAL STABILITY

EMINENT SCHOLARS' LECTURES
SERIES No.17

ISLAMIC RESEARCH AND TRAINING INSTITUTE (IRTI)

Establishment of IRTI

The Islamic Research and Training Institute was established by the Board of Executive Directors of the Islamic Development Bank (IDB) in 1401H (1981). The Executive Directors thus implemented Resolution No.BG/14-99 which the Board of Governors of IDB adopted at its Third Annual Meeting held on 10 Rabi Thani 1399H (14 March 1979). The Institute became operational in 1403H (1983).

Purpose

The purpose of the Institute is to undertake research for enabling the economic, financial and banking activities in Muslim countries to conform to shari'ah, and to extend training facilities to personnel engaged in economic development activities in the Bank's member countries.

Functions

The functions of the Institute are:

- (A) To organize and coordinate basic and applied research with a view to developing models and methods for the application of *Shari'ah* in the field of economics, finance and banking;
- (B) To provide for the training and development of professional personnel in Islamic Economics to meet the needs of research and shari'ah-observing agencies;
- (C) To train personnel engaged in development activities in the Bank's member countries;
- (D) To establish an information center to collect, systematize and disseminate information in fields related to its activities; and
- (E) To undertake any other activities which may advance its purpose.

Organization

The President of the IDB is also the President of the Institute. The IDB's Board of Executive Directors acts as its supreme policy-making body.

The Institute is headed by a Director responsible for its overall management and is selected by the IDB President in consultation with the Board of Executive Directors. The Institute consists of three technical divisions (Research, Training, Information) and one division of Administrative and Financial Services.

Location

The Institute is located within the headquarters of IDB in Jeddah, Saudi Arabia.

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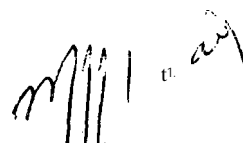
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FOREWORD

The main purpose of Islamic Research and Training Institute is to undertake research for enabling the economic, financial and banking activities in Muslim countries to conform to Shari'ah and to extend training facilities to personnel engaged in economic development activities in the Bank's member countries. Within the research activities, the Institute also pays special attention to studies relating to fostering economic development and social process in Muslim countries and Muslim communities.

It is an honour for Islamic Research and Training Institute to publish this monograph for "Economic Cooperation for Regional Stability" contributed by H.E. Minister of State for Research and Technology, Republic of Indonesia. This lecture was delivered by H.E. The Minister at the International Conference on the Future of Asia which was held in May 1996 in Japan. Given the importance of economic cooperation between the developing countries in general and between the Islamic countries in particular, the Islamic Research and Training Institute found this lecture to be extremely useful for publishing and disseminating it. The lecture highlights significance and implications of economic cooperation for regional stability in the context of Asian countries. It contains a perspective analysis which is also relevant for other regions and countries. It is hoped that the publication of this lecture shall facilitate 'serious and fruitful thinking on the subject.



Dr. M. Fahim Khan
Officer-in-Charge, IRTI

INTRODUCTION

I wish to base my present remarks on the address I delivered to the Third Asia Pacific Defence Conference held in Singapore on February 7, this year ("The Application of a Strong Advanced Technology Policy to Achieve National Security and Economic Development").

In that address, I reiterated my often-stated view that the essence of production as an economic activity is adding value to raw material, components, or whatever the process started out with. This added value process may take place with respect to hardware, software as well as brainware. No added value process can take place without technology.

There is a spectrum of technologies related to the extensiveness of their use and size of their markets. Some advanced technologies have very limited use. Over time, these technologies may have wider application, and therefore larger market and larger economic size of production. They then will be called high technology. If later on, knowledge has advanced to the degree that these technologies can be used by everybody, they will lose exclusivity, and will be called ordinary or even low technology. At one point in time in the beginning of the industrial revolution, textile manufacture was considered high technology. Today it is not. The same is true for photo voltaic technology the use of which was limited to space and military applications but now is incorporated in a great number of consumer items.

I also distinguished between internal threats which arise from within a human society itself, and external threats which originate from outside the society; and identified their respective sources.

Three sources of internal threats were identified, namely:

- the absence of sustained improvements in welfare;
- perceived unfairness of the distribution of accumulated national wealth, and

- wide-spread public opinion that no progress is being made in realizing a shared vision of a better future.

Two sources of external threats to the national security of a country were discussed:

- persistent unresolved national security instability of neighbouring countries because of the three reasons mentioned above, singly or in combination; and
- the attempt of neighboring countries to externalize negative or marginally positive per capita economic growth because of imbalances in human and natural resources by putting pressure on or issuing threats to other countries.

Three examples were mentioned:

- The first concerned a country with no natural resources and whose human resources are saturated and which because of this is having difficulties in its further economic development.
- The second example, involved a country with very advanced and sophisticated human resources but with very marginal natural resources and which because of this has a ratio of economic to population growth rate of just slightly above one. Because in addition, the rate of population growth is zero or negative, this country has the additional problem of a having to carry an increasingly aging population, the burden of which will increasingly have to be born by the increasingly smaller proportion of young people among its population. Because of its already high level of economic welfare, this country will have a very high cost economy with resulting negative impact on its competitive ability.
- The third example was that of an already advanced country with mixed human resources but whose natural resources have become more or less depleted.

According to my observation, two types of responses to external threats are possible: first, conflict, military or economic; and secondly, compromise or consensus to maintain the status quo, again military or economic. Conflict, in turn, may lead to further counter-responses: (1) confrontation, or (2) cooperation.

In military compromise or "cold war", threats are prevented from escalating in war or military conflict by the consensus to preserve military parity without a war. In economic compromise threats are prevented from leading to open conflict by the effort to maintain the balance of power between economic powers. The counter-response to compromise is also either (1) confrontation, or (2) cooperation.

In other words, in my view, both conflicts and compromise may lead either to military or economic confrontation or military or economic cooperation.

Military confrontation as a counter response to conflict causes heavy burdens, not only in terms of the loss of human and natural resources lost in the war effort, but also in terms of the cost of developing and using the weapons and weapons systems needed to engage in military operations. It is true that military confrontation can generate the development of advanced technologies in the sense I have used the term. However, weapons and weapon systems are costly and have no economic benefit because their major objective is destruction. In addition, the diversion of resources to uneconomic uses is a burden to the economic productivity and efficiency of the country. Military confrontation create or aggravate deficits in the balance of payments and the current account, deplete foreign exchange reserves, and may lead to economic stagnation and collapse. For these reasons, military confrontation as a further response to conflicts caused by external threats must be avoided.

The second type of conflict caused by external threats to security is economic conflict. Here again the response may be confrontation; in this case, economic confrontation whereby countries close their markets to the products of other countries. In economic confrontation countries will limit

the economic scale of their industries and thereby sacrifice economic productivity and efficiency. Economic confrontation may lead to high productivity and efficiency. Yet in the long run, economic confrontation will lead to high costs in the economies of the conflicting parties. Therefore, economic confrontation is not the most optimum response to conflict.

Another possible response to conflict is cooperation: economic or military. Economic cooperation under military conflict will be limited to the respective allies of the conflicting parties.

Economic cooperation leads to more optimal use of resources. The reason is that the market created by economic cooperation is far wider than that resulting from economic confrontation. Economic scale under economic cooperation is far larger and resulting unit cost of production far lower than under economic confrontation. This has always been the most compelling reason for multilateral and regional economic cooperation. Economic cooperation permits the fullest opportunity to exploit complementarities and mutually beneficial interdependencies and the creation of synergies. Economic cooperation permits the opportunity of using the strengths of other parties, even that of adversaries, for mutual benefit.

Economic cooperation also enables the establishment of centers of excellence of design, production, distribution, and finance, leading to the creation of competitively superior and competitively reliable products with lower costs which benefit all cooperating parties. Competitively superior products are those that outsell similar products because of higher quality at lower costs. Competitively reliable products are products a country can rely upon in the competition with other countries. The best position to be in is of course to be reliant on competitively superior products and not rely on products which do not have a competitive or comparative advantage. Economic cooperation leads to the development of appropriate technologies including high technologies based on the concept of interdependence, and makes possible the formation of centers of excellence with the lowest cost use of human and natural resources through the sharing of human skills, natural

resources, financial resources and technology, to create the best global product (hardware, software and brainware) with high quality and low cost.

Because of this, economic cooperation, even between enemies, is a far better response to conflict. It leads to a higher degree of economic and political stability on the national, regional and global level.

Also under military or economic compromise can there be a counter response of confrontation. In the scenario of confrontation under military compromise, the opposing parties are also driven to develop advanced technologies oriented towards weapons, weapon systems and military infrastructure to maintain a perceived military balance at ever-higher levels. The consequences of this response are similar to those of military confrontation.

In the scenario of confrontation under economic compromise, that is, the effort to maintain the balance of power between economic powers, the two opposing parties will refuse to widen the market if this is perceived to increase the economic power of the other ' and thereby unbalance the status quo. Again, the better counter response would be economic cooperation.

COOPERATION: SPECTRUM AND MOTIVATION

The over-all conclusion we may draw from the foregoing is that faced by external threats, cooperation, even among adversaries, is the alternative to be preferred over all other options such as conflict, confrontation and compromise.

. Clearly, military and economic cooperation would not be an option for opposing countries in military conflict but would be limited to each party and its allies. The scale and volume of such cooperation would be limited to the resources available to each opposing parties through the war effort.

There could be, however, scope for economic cooperation between parties in economic conflict with each other. There would much scope for cooperation in the production and sale of non-strategic durable and non-durable consumer goods such as textiles, apparel, appliances and other consumer electronics. And although cooperation with respect to strategic consumption goods such as .fuel, foods, and transportation equipment would be more limited, they could in principle be the subject of bilateral negotiations.

Although the scope of cooperation between adversaries is limited, it can be gradually and systematically deepened and widened commensurate with the deepening and the widening of mutual understanding and trust. The parties could start by cooperating in limited areas and in projects using low technology. If, to use a metaphor, cooperation in one product can be called one point of contact, this single point of contact could later on be widened to become a line of contact (cooperation on a group of similar products), which may then broaden into many unrelated lines of contact, (cooperation on may unrelated product groups). Similarly, cooperation could be deepened by gradually increasing the sophistication of the technologies used. In the same way, cooperation between two adversaries could initially be undertaken for a short duration and then extended for longer and longer periods.

Cooperation between allies has of course a much wider spectrum, encompassing both military and economic cooperation, and within economic cooperation, covering both producer and consumer products, including strategic products. Cooperation between allies may include not only points and lines of contacts but also two dimensional planes and three-dimensional spaces. In two-dimensional cooperation, care must be taken to build redundancies in the cooperation. As cooperation deepens and widens, it will be bonded together by their common attitudes, mutual trust and the mutual desire to create "win-win" arrangements.

Whether in actual fact such a desire exists is of course a matter for people themselves to decide. The future of humankind is decided by human beings themselves. It is they themselves who decide whether they want to be a threat to others. It is they themselves who decide to go to war with other, or alternatively decide to prevent war, to live in friendship, and to cooperate.

The point made here is simply that if material welfare and progress is desired, then cooperation even between adversaries, is an alternative to be seriously considered.

TECHNOLOGY AND THE ECONOMY

As I said in Singapore, one can distinguish between two kinds of economic activities.

- The first is manufacturing goods and services from raw material and vendor items, which I call the added value process, and
- The second is delivering the finished goods and services to the final consumer, which we may call the services process.

The objective in manufacturing goods and services is to maximize its added value with minimize cost, while the objective in delivering the goods and services to the consumer is to minimize added cost with minimum spending.

These two types of activities are undertaken in any kind of economic system, whether centrally planned or a market economy or any variation of either.

In order to maximize added value and minimize added cost, one must use increasingly _____ sophisticated _ technology and/or increase productivity and efficiency .

Suppose that to produce a particular item, a manufacturer needs 50 points of material, machine hours and overhead and adds to this 15 points of costs and profits. If the customer is willing to pay 100 points to take delivery of the item directly from the factory shop, we may say that the added value by the manufacturing process is worth 35 points. This value is due to technology.

However, not many people are prepared to take delivery directly from the factory shop and normally expect the manufacturer to undertake other activities to deliver the item, at locations, more convenient to the customer, either by the manufacturer himself or by others. For these activities to be undertaken, one has to incur added costs such as transportation costs, and costs for storage, display, marketing and promotion etc., a various levels of distribution, wholesale or retail, Suppose that for all these added cost plus the profits of the distributors and retailers another 80 points are needed. Then the price which the customer has to pay will be 180 points.

In order to successfully compete, the manufacturer now can define his objective. This is to increase the added value (say from 100 points to 120 points) and to decrease the cost of delivery (say from 80 points to 50 points). By doing so, he will both have increased the value of the product (to 120 points) and lowered the final price the customer has to pay (from 180 points to $(120+50) = 170$ points). The Customer will then pay a lower price for a higher value product. For this to take place, the manufacturer must increase productivity, increase efficiency and use improved technology.

Earlier, I discussed the relationship between the spectrum of technologies related to the extensiveness of their use and size of their markets and distinguished between advanced, high, and low technologies. I would now like to make the point that in my view, there is a strong relationship between the exclusivity of a technology and the ability to compete. With many advanced technologies, exclusivity can be maintained over rather long periods of time whether because of the difficulty of mastering it or because of intellectual property protection. Because of this, in my use of the term, the production of goods and services based on such exclusive advanced technologies is almost always a competitive advantage undertaking. In other words, exclusive advanced technology products are products with a competitive advantage. In contrast, when once-advanced technologies have become widely diffused and become ordinary or low technologies, competition will no longer be based on exclusivity but on cost. Manufacturers who can use them at the lowest cost will have an advantage over others, and will, again in my use of the term, have a comparative advantage over their competitors.

The example I have used here illustrates the point that the ability of the manufacturer to increase his competitiveness (from 180 points to 170 points) consists of two elements: an increase in his competitive advantage (from 100 points to 120 points) and an increase in his comparative (cost) advantage (from 80 points to 50 points).

ECONOMIC DEVELOPMENT

From this simple example one can also derive another very important general statement, and this is that if many producers are as successful as our manufacturer, then progress is being made. The quality of products (and the quality of life of the customers) has improved and costs have decreased.

This means that the problem of achieving sustained economic development is the problem of increasing the total productivity of our economies. This has subjective and objective elements. First, improvements in total productivity depend on improvements in the quality

of human resources. This process cannot take place in isolation from their culture and their philosophy of life which are subjective factors. On the other hand, improvements in total productivity cannot be divorced from science and technology which are objective factors.

Whatever the economic system, the central problem is always to put the economic infrastructure into place, to develop the human resources, and to promote science and technology, so that value is maximized and costs are minimized so that products and services are brought to the final user at the right "market" price. .

Underpinning all this, the functioning as the basis for the stability of the whole process is society's perception as to whether the accumulation of production, income and wealth is fair and equitable. Whatever the system, it will break down when distribution of income and wealth is widely perceived as being grossly unfair or inequitable. The accepted definition or understanding of what constitutes "fairness" or "equity" will differ from country to country and is greatly determined by cultural values which in turn, are a matter of historical evolution.

For people to be able to achieve sustained increases in their total productivity they must have mechanisms which allow them to independently develop science and technology.

The growth of the ability to independently develop science and technology is evolutionary in nature. Excellence in science and technology cannot be achieved overnight. There are no shortcuts in this process: One must take all the necessary steps one by one. One cannot frog leap from technological under development to technological sophistication through some kind of revolution which bypasses some of the necessary steps. I would like to underline this from my own experience and stress that the attempt to achieve science and technology capability through revolutionary means will in many cases be counterproductive. This is because a revolutionary approach will create many hidden constraints which only come to the surface when situations have become complicated.

At the same time, this evolution towards the capability to develop science and technology independently can be accelerated. In this process of "accelerated evolution", one still takes all the necessary steps. But one takes some steps faster, some slower, in a controlled fashion *which* reduces the risks inherent in each and all of the required stages. It is in this way that one can undertake a process of accelerated and controlled evolution towards proficiency in science and technology in a rather short time.

STRUCTURE OF ECONOMIES AND PATHS TO ECONOMIC DEVELOPMENT

Some economies are predominantly oriented towards the production of goods (commodities and manufactures); others are predominantly oriented towards trade and services. In our terminology, one can say that some economies have a relatively high density in added value processes and other a relatively high density in added cost processes. In addition, some economies with the same density in added value processes may have different technological densities. Some may have high technology density, some medium, and some low. The same can be said for economies with a relatively high density in added cost processes.

There is a difference between these two types of economies.

This is firstly due to the differences in the nature of manufacturing as compared to trade. Trading generates profits faster and yields quicker return on capital and shorter pay-back periods. Because of rapid advances in technology, unit costs decline more rapidly. Compared to manufacturing, risks are lower and profit margins higher. In contrast, manufacturing activities have characteristically longer pay-back periods, slower returns on capital, higher risks and lower profit margins.

Trading is relatively less complex than manufacturing. Volume is easier to expand in trade than in manufacturing. Capacity in trade can be expanded linearly or even exponentially while that in manufacturing only stepwise. Sales offices and distribution centers can be constructed more

rapidly than production facilities.

The development of new products is often costlier and takes more time than the development of new ways of selling. It takes much more time and investment to design and manufacture new memory chips, new medicines and new vaccines than to develop new ways of selling them. Manufacturing is therefore relatively less footloose (more difficult to relocate) than trade and services.

The second type of difference arises because of different technology density. Generally speaking, the higher the technology density, the more complex the activity, the longer the lead time required, and the higher the risks.

Societies which produce goods and services very efficiently with high added value and low cost; in other words, societies with high total productivity, normally will have high costs of production because of high cost of human resource. As long as the society does not feel the need to trade internationally and feels comfortable having a closed, self-sufficient economy, and as long as the society is not interested in accumulating foreign currency reserves, nothing would be the matter. However, no society like this exists. No country in the world can afford to be completely closed and self-sufficient. A certain amount of its needs, however small, must be imported simply because it cannot be competitive or not at all produced domestically. This means that the country now must export a certain portion of its total production of goods and services to pay for the goods and services imported. International trade exists because no country in the world is completely self-sufficient. But having to export means having to be internationally competitive. The country could of course (within the limits allowed by GATT) subsidize its exports to enable them compete better in the international market, but in the final analysis, subsidies means that somebody else within the country is paying exporters so that what the country receives in exports revenues is less than that which the exporters receive. And this means that recorded export revenues (and the balance of trade) are artificial or "virtual".

We are led to the conclusion that even for highly developed and mature countries, international trade is necessary for continued economic development; and that to be successful in international trade in terms of more or less positive balances of trade, countries must be internationally competitive. This means that there is an economic logic for these countries to invest financial resources and technology to countries with matching strengths in human resources, existing supporting micro as well as macro economic infrastructure, a good and creditable investment climate, an economic and political stability and a higher sustainable economic growth than at the original country where the investment came from. The invested capital in terms of money, technology and system for human resources development will not only within a relative short time give a good return of the investment money but also guarantee the sales, product support, after sale service of a competitive product in the domestic market of the country where the capital (money, technology and human resources) is being invested.

The local content of the domestic market will even increase but also the high-tech and high-added-value of the home content (original country content) of the product will also increase as well. Man hours in the original country will achieve a sustained increase or at least be kept, and at the end a rational division of labour for production and even for technology development will be established among the original and "new country" to get a high added value product with high quality and low cost, an efficient marketing, sales product support and after sale service network in the new domestic market and also in the global market as well. A new competitive product will be developed, and produced by the original country with the "new country" together and be delivered to the market.

COOPERATION AND ECONOMIC DEVELOPMENT

Many advanced countries with highly developed economies have stable populations with a high percentage of older people and mature, sophisticated buyers, and purchasing in an efficient market with efficient sales organizations. If the domestic market then becomes saturated,

competition will be very severe. It is therefore not unusual for the rates of economic growth in affluent societies to be rather low as compared with developing markets where demand for goods, services and infrastructure is high. Most governments in advanced countries have a high preference for low inflation. Thus interest rates and monetary expansion are also low compared with that in other countries with less developed but more rapidly growing economies.

Faced with a slow growth and severe competition in their domestic markets, it is not surprising that many manufacturing, services, and infrastructure companies in affluent societies are driven to seek other markets abroad where demand is higher and competition not as intense. In this undertaking, they are also driven to go abroad by high production costs because of high wages, high tax rates and/or high social welfare costs at their "home country" or home domestic market. In order to be price-competitive in markets with lower average incomes than in their own domestic markets, it would be logical for these companies to develop cooperative arrangements with matching companies in certain specific less affluent countries to shift capital, in this case, financial resources, technology, and if necessary, mechanisms/systems for human resources development to these countries.

There are at least two major reasons why it should be both profitable for the companies involved and beneficial for both the affluent and the less affluent countries.

First, in less affluent countries, wages for labour with comparable skills are lower: More precisely, real wages for labor with comparable skills are lower with also lower, even with a low total productivity; in some cases, by a significant margin.

Secondly, profit margins in less affluent countries are typically higher in correspondence with higher interest rates to attract capital, and the perception that doing business in less affluent countries also has a higher risk.

If in addition, these less affluent countries are politically stable with a growing demand at their domestic market then a solid foundation exists for realizing the prospects for more sustained and wide-spread growth. The benefits for companies from the more affluent countries would be higher sales volumes and higher profits based on increased price competitiveness in international markets which in turn, would result in higher rates of economic growth of the affluent countries.

The benefits for the people in countries with less-developed or less affluent economies would be rapidly rising total productivity and incomes. A sustained virtuous cycle would be created in which in the pursuit of increased price-competitiveness world wide, capital and technology would flow from affluent into less affluent economies with matching human and natural resources resulting in increased productivity, incomes and demand in both. Because the economies of less affluent countries would grown more rapidly, over time, this would result in equalizing rates of productivity, competitiveness, and levels of incomes and demand over the world.

More realistically, one can at least expect a sustained narrowing of the gaps in productivity and incomes between affluent countries on the one hand, and politically stable countries with large populations and less-developed but rapidly growing economies, on the other. In such a future but possible world, competitiveness between countries would be more or less equal and trade between them more or less in balance. This is already the case today between certain members of the European union.

But this is not all. If no barriers were raised, at some point in time, centers of excellence would emerge in certain lesser developed or less affluent economies which would further develop technologies originally imported from abroad. This would not only generate a flow of financial resources (capital plus profits) back to the affluent countries (at a faster rate than if the capital had been invested in the affluent countries themselves). It would also result in a flow back of further developed technology and advance technology from the less affluent countries to the affluent countries. All countries, affluent and less affluent, would be able

to benefit from technologies developed at lower cost in less affluent countries because of lower real wages.

There is of course a caveat.

Not all less affluent countries would be able to participate in this development. Only selected less affluent countries can share in this experience:

- First, they must have a significantly large and controllable domestic market to generate and assure the profitability of the cooperative business arrangements between the companies involved.
- Secondly, they must have developed a minimum critical mass of the matching human resources, financial resources and technological capability.
- Thirdly, they must have already installed a certain amount of economic and technological infrastructure.
- Fourth, they must have a political, economic and social environment which is stable and predictable.

Only when the domestic market is sufficient and controllable can the eventual flow back of financial capital plus profits be assured. Only when a critical mass of technological manpower and economic infrastructure already exists ' can the imported technology ' be rapidly absorbed. Only when a certain technology infrastructure is already in place can the imported technology further adapted and developed. And only under conditions of political and social stability (continuity of basic political structure, absence of major social disturbances, continuity of legal framework and consistency of policies), and economic stability (balance between savings and investment, low and controlled inflation, controlled levels of balance of payments, etc.), can the required lead time be assured for the investment of financial resources and technology to generate the flow of profits and further developed technology and advanced technology back to the investing affluent country.

But no matter that there are certain preconditions to be fulfilled, the point here is that a real foundation can be created for the creation of a world-wide network of truly global interdependencies where everybody, consumers as well as producers, developed as well as less-developed or less affluent countries, would be able to benefit from technologies developed at lower costs.

But will this development not create lower-cost competitors which will drive higher-cost producers out of the markets? On the contrary, it will force the higher-cost producers to develop new technologies and innovation appropriate to their expertise and their competitive advantage. These should be complementary to the technology developed together with their partners at the less developed or less affluent society for an excellent-end product coming into their domestic market as well as global market. It will ensure the sustainable growth of both economies.

The less affluent society will further develop into an affluent society and it will be their turn to experience the problem of high cost. So in the end, everybody would have to compete at more or less the same cost. At that time, people will no more compete on cost, but on quality, on ideas, on better ways to serve consumers. This will be a much better type of competition in a bigger and more potential domestic, regional and finally, global market.

This possible future does indeed exist. We only have to acknowledge the reality that like money, knowledge, science and technology, knows no national boundary, has no nationality. God has indeed created people equal; at the very least, equal in their capability to learn, equal in their ability to master the laws of science and equal in the ability to further develop technology. God has indeed declared that science and technology belongs to no national but belongs to the whole of the human race.

COOPERATION IN ASIA

The population of Asia (from Japan to India) today is about two-

thirds of that of the world. Its middle class is rapidly growing in size and in the year 2010 is estimated to number between 500 million and 1 billion people. This could constitute a captive market for goods and services produced within the region itself. The production of these goods and services could follow the patters based on the economic rationale I have outlined.

There is no reason to create and maintain visible and invisible constraints to the freer flow of capital, that is, human resources, financial resources, and technology. It is perfectly possible for financial resources and technology to move from one country to another, but to move human resources, one will have to overcome high social, political and economic constraints that contribute to a higher economic cost.

So, to solve this problem of moving human resources as an integrated part of the transferred capital at low cost is only possible by moving or transferring the mechanism of human resources development to the "New Country".

Simultaneously, the increase of the skill and productivity of the human resources in the "New Country" through training and education will make the low cost local human resources at the "New Country" more comparative as well.

All this is of course not new.

The virtues of the freer flow of goods, services, capital and technology have been expressed many times over and embodied in many agreements and codes, of which the recently concluded 1994 General Agreement of Trade and Tariffs (GATT 1994) is the most significant in widening the scope of free trade and in installing a rule based rather than a power-based foundation for trade relations between the signatories of the agreement. Within our own region, many of us have committed ourselves to implement the 1994 Bogor Declaration of the Leaders of the Asia Pacific Economic Cooperation Economies which sets definite targets for free trade in the APEC Region at certain definite future years. Based on

the Bogor Declaration and the Agreements reached in Osaka last year, the implementation of cooperation agreements along the lines indicated in this address, will I believe, create the "win-win" situations within our own region from which millions of people will benefit both in terms of increased welfare for the consumers and increased profits for the producers, and in terms of better prospects for prolonged rapid growth of prosperity within an environment of a dynamic and active information, technology, and money flow and an increasingly high quality of workmanship, productivity, and life, contributing to the formation of many centers of excellence in science and technology development for a sustainable high economic growth with a fair distribution of the accumulated wealth and responsibility among the nations in the region and among the people in the nation resulting in a relaxation of threat, and contributing to a strong sustainable regional stability.

REFERENCES

- Habibie, B. J. 1996. The application of a 'Strong, Advanced Technology Policy to Achieve National Security and Economic Development. Address at the Asia Pacific Defense Conference (APD'96), Westin Stamford, Singapore.
- Habibie, B. J. 1995. Ilmu Pengetahuan, Teknologi & Pembangunan Bangsa: Menuju Dimensi Baru, Pembangunan Indonesia. Edited by Makka, A. M., Shoelhi, M. Dan Latif, Y. Cides, Jakarta....
- Habibie, B.J. 1995: Economic Liberalization, Welfare, Equality and Poverty Elevation. -Panel Discussion, Gadjah, Mada University, Yogyakarta, April 21.
- Habibie, B. J. 1994., 'The Development of Socio-Economic Infrastructure. Keynote Speech, at the International Conference on Human Resources Development within the Framework of International Partnership, an International Conference held by CI.DES, Jakarta, September 14.'
- Habibie, B. J. 1987. Application of Sophisticated Technology in the Developing Countries: Indonesia Case: Keynote Speech at the Centennial Conference, Pacific Rim, 2000, Global Change, Technology, Singapore, November 12.
- Habibie, B. J. 1984. Indonesia at Present, Opportunities and Future Prospects. Address at the Center for Strategic and International Studies, Georgetown University, Washington, D.C. July.
- Habibie, B. J. 1983. Some Thoughts Concerning a Strategy for the Transformation of a Developing Country. Address Delivered to the Deutsche Gesellschaft fur Luft und Raumfahrt, Bonn, Federal Republic of Germany, June 14. Today is about two-

I. Honours and Awards Related to science and Technology:

1. Theodore von Karman Award from the International Council for Aerospace Sciences (ICAS).
2. Edward Warner Award from the International Civil Aviation Organization (ICAO).
3. Doctor Science Honoris Causa, the Technical University, Cranfield, England.
4. Honorary member of the "Gesellschaft fur Luft and Raumfarhrt" Federal Republic of Germany.
5. Honorary fellow of the "Royal Aeronautical Society", London, England.
6. Member of the Fellowship of Engineering of United Kingdom, London.
7. Member of the "National Academy of Engineering", United States of America.
8. Fellow of the American Institute of Aeronautics and Astronautic, United States of America (AIAA)
9. Member of the "Royal Swedish Academy of Engineering Sciences", Sweden.
10. Member of the "Academie Nationale de L'air et de L'espace', France.
11. Member of the Japanese National Academy of Engineers.
12. Honorary fellow of the Institution of Engineers, Malaysia.

13. SCIENTIFIC AWARD, Department of Education and Culture of the Republic of Indonesia (October 29, 1982).
14. Professor on Aircraft Design and Construction at the Bandung Institute of Technology (ITB), Bandung, Indonesia.

Others Awards / Prizes:

1. DAS GROSSE VERDIENSTKREUZ MIT STERN UND SCHULTERBAND, Federal Republic of Germany (November 11, 1980).
2. DAS GROSSE VERDIENSTKREUZ, State of Niedersachsen, Federal Republic of Germany (December 1, 1980).
3. DWIDYA SISTHA MEDAL, Department of Defense and Security of the Republic of Indonesia (August 9, 1982)
4. MAHAPUTRA ADIPRADANA MEDAL, Jakarta, Republic of Indonesia (August 17, 1982).
5. GROOTKRUIS IN DE ORDE VAN ORANJE-NASSAU, The Kingdom of Netherlands (May 25, 1983)
6. GRAND CORDON OF THE ORDER OF AL-ISTIQLAL (INDEPENDENCE), Kingdom of Hashemite Yordania (April 1986)
7. CAVALIERE DI GRAN CROCE, Republic of Italy (June 16, 1986).

GRAND OFFICER DEL'ORDRE NATIONAL DUE MERITE, Republic of France (April 24, 1987).
9. LA GRAN CRUZ DE LA ORDEN DEL MERITO CIVIL, Royal Kingdom of Spain (June 1988).

10. The Highest Honors from The Government of Republic of China,
THE ORDER OF BRILLIANT STAR WITH GRAND
CORDON, Taipei, Republic of China (June 10, 1994).

3. Positions

1. Minister of State for Research and Technology of The Republic of Indonesia (1978- to present).
2. Chairman Agency for the Assessment and Application of Technology / BPP Teknologi (1978 - to present).
3. Chairman Agency for Strategic Industries / BPIS (1983-1989: Council for Strategic Industries / DPIS) (1989 - to present).
4. Chairman National Research Council / DRN (1984- to present).
5. Vice Chairman of the Counseling Board Indonesian Strategic Industries, which H. E. President of The Republic of Indonesia as the Chairman (1988 - to present).
6. Chairman, Chief Executive Officer (CEO), President, Indonesian State Aircraft Industry : PT. Industry Pesawat Terbang Nusantara / IPTN (1976 - to present).
7. Chairman, CEO President, Indonesian State Shipbuilding Industry: PT. PAL Indonesian (1978 - to present).
8. Chairman Batam Industrial Development Authority / OPDIP Batam (1978 - to present).
9. Chairman, CEO, President, Small Arms and Munitions Industry / PT. PINDAD (1983 - to present).
10. Chairman of the Counseling Board, Indonesian Defense Industry.

11. Chairman Team for Defense Security Industrial Development (Presidential Decree No. 40, 1980) (1980 - to present).
12. Member Indonesian Parliament: The People's Consultative Assembly / MPR, from Functional Group / GOLKAR the current government political group (1982 - to present).
13. Vice Chairman of the Counseling, Board. Functional Group /GOLKAR the current governing. political group, which H.E. President of Republic Indonesia as the Chairman (1982 - 1988: Member of The Counseling Board of GOLKAR), 1993: The Executive Coordinator of The Counseling Board. Functional Group / GOLKAR. (1988 - to present).
14. Founder and Chairman Indonesian Aeronautics and Astronautics Institute (1983 - to present).
15. Founder and Chairman of The Counseling Board, Indonesian Foundation for Technology Development / YPTI (1984 - to present).
16. Chairman of the Counseling Board Indonesian Engineers Association / PII (1984 - to present).
17. Chairman of The Counseling Board Indonesian Association for Technical Experts / PATI.
18. Chairman Indonesian Moslem Intellectuals Association / ICMI (1990- to present).
19. Chairman Inter Departmental Team on Electric Power Generation Plants Development Project (Presidential Decree No. 35, 1987) 15.10.1987 - to present).

20. Chairman of Engineering Science Committee Indonesian Academy of Sciences / AIPI (Presidential Decree No. 179/M/1991, 19.7.1991) (16.11.1991 - to present).
21. Chairman Board of National Standardization (1994 - to present).

22. Member of Supervisory Board of Directors Indonesian State Oil Company / PERTAMINA (1983 - to present).
23. Member of Board of Trustees Founder Indonesian Institute of Technology /ITI (1984 - to present).
24. Chairman of Steering Committee The Surabaya - Madura Bridge Development: Tri Nusa Bima Sakti (Presidential Decree No. 55, 1990) (1978 - to present). (1990 to present).
25. Advisory Agency for Wallacea Development (1992 - to present).

26. Chairman of Advisory Board Center for Information and Development Studies / CIDES (1993 to present).
27. Executive Chairman The Development of Eastern Part of Indonesia / DNPKTI, which H.E. President of The Republic of Indonesia as the Chairman (Presidential Decree No. 120, 24.12.1993) (1993 - to present).
28. Chairman Executive Team of Natuna Project (Presidential Decree No. 14, 1995, Nation Project Development) (1995 - to present).
29. Chairman Forum for Cooperation on Economic and Technology between Republic of Indonesia and Federal Republic of Germany (04.04.1995 - to present).

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ISLAMIC DEVELOPMENT BANK (IDB)

Establishment of the Bank

The Islamic Development Bank is an international financial institution established in pursuance of the Declaration of Intent by a Conference of Finance Ministers of Muslim countries held in Jeddah in Dhul Qa'da 1393H (December 1973). The Inaugural Meeting of the Board of Governors took place in Rajab 1395H (July 1975) and the Bank formally opened on 15 Shawwal 1395H (20 October 1975).

Purpose

The purpose of the Bank is to foster the economic development and social progress of member countries and Muslim communities individually as well as jointly in accordance with the principles of *Shari'ah*.

Functions

The functions of the Bank are to participate in equity capital and grant loans for productive projects and enterprises besides providing financial assistance to member countries in other forms of economic and social development. The Bank is also required to establish and operate special funds for specific purposes including a fund for assistance to Muslim communities in non-member countries, in addition to setting up trust funds.

The Bank is authorized to accept deposits and to raise funds in any other manner. It is also charged with the responsibility of assisting in the promotion of foreign trade, especially in capital goods among member countries, providing technical assistance to member countries, extending training facilities for personnel engaged in development activities and undertaking research for enabling the economic, financial and banking activities in Muslim countries to conform to the *Shari'ah*.

Membership

The present membership of the Bank consists of 50 countries. The basic condition for membership is that the prospective member country should be a member of the Organization of the Islamic Conference and be willing to accept such terms and conditions as may be decided upon by the Board of Governors.

Capital

The authorized capital of the Bank is six billion Islamic Dinars. The value of the Islamic Dinar, which is a unit of account in the Bank, is equivalent to one Special Drawing Right (SDR) of the International Monetary Fund. The subscribed capital of the Bank is 3,654.78 million Islamic Dinars payable in freely convertible currency acceptable to the Bank.

Head Office

The Bank's headquarters is located in Jeddah, Saudi Arabia and it is authorized to establish agencies or branches elsewhere.

Financial Year

The Bank's financial year is the Lunar Hijra year.

Language

The official language of the Bank is Arabic, but English and French are additionally used as working languages.

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