

# Reducing Trade Friction in World

*Cooperation will be required among high-technology nations to avoid problems; licensing would be affected*

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Following the great economic development during the 1960s, Japan was attacked by the Oil Crisis twice since 1978. Western countries also got a great shock, but most severely damaged was Japan, which had little source of energy and natural resources such as oil. It was over 99% dependent on imports for oil. Especially, the Oil Shock was devastating to the materials industry in Japan, such as the petrochemical and aluminum smelting industries.

As a result of deperate efforts, progress was made in technologies for saving resources and energy, but it was not enough to compensate the high costs in raw materials. The materials industry eventually fell into the category of the so-called structural depression industries.

Skyrocketing manufacturing costs in the Japanese enterprises allowed a sharp increase in imports from the U.S.A., which had cheap raw materials. Ethylene production dropped from 6 million t/year to as low as 3.5 million t/year. In aluminum smelting, Japan once had a total capacity of 1.5 million t/year and the actual production amount was on the level of 1.2 million t/year. Production was sharply reduced to 200,000 t/year, allowing its home market to be penetrated by American exports of aluminum metal.

As a result, these two industries in Japan are almost bankrupt. Even the big enterprises of these trades had many potential unemployed men and were forced to pass their dividends. In order to prevent possible social panic that could be anticipated from such a depressed business atmosphere, the Japanese Government enacted "The Law for Provisional Measures for the Structural Improvement of Specified Industry." It conducted guidance for a mild readjustment of industries. I think these actions are natural and well-timed measures for keeping social peace.

The individual company suffering from such depression is positively changing its types of business to overcome these difficulties. This move is still far from finalized, but it is progressing step by step. It is slowly decreasing the ratio of the products manufactured by the conventional technologies. For example, the textile industry, which had once been said as the typical one of

the industries suffering from recession, came to life again through its efforts of increasing the sales ratio of non-textile goods to 20-30% and carrying out the development of textile goods with higher quality.

The petrochemical industry is now devoted not only to the development of the new products in the new areas such as fine chemicals and specialty chemicals, but also to the research and development in the area of high technologies such as new functional materials, composite materials and bioindustry. Shipbuilders are increasing their share in constructing on-land facilities and all kinds of machinery, in order to cope with the decrease in orders for shipbuilding. Iron and machinery manufacturers are also absorbed in the development of higher-grade materials. They are also making the new programs to develop the area not explored yet regarding "Heavier, thicker, longer and larger" products, and are aiming at its realization.

## Unemployment

In transforming themselves, the Japanese industries have not generated any visible unemployment. In other words, they could not lay off or discharge their employees on account of the existence of each labor union organized on a company basis and the longtime employment. So, each company has had to create new business sectors and convert its business structure by all means, to absorb their potential unemployed workers.

Compared with the above, industries that are not so dependent on oil were not so seriously affected by the Oil Shock. They walked their peculiar ways. Those in this field are now called "Sunny industries" in Japan. Among them, electric, electronic and machinery industries first succeeded in overcoming these difficulties and took the initiative for the return to prosperity, under the extensive national campaign for resource-saving, energy-saving and labor-saving.

Inherently, the Japanese have lived in a narrow land, and so are characteristically fond of finding out an infinite value and the universe in a tiny thing (just as their likings for Bonsai, Netsuke, swordguard, etc.). This characteristic has invited a trend of being "lighter, thinner, shorter and smaller" to the general demand for commodities, and has given an impetus to improve quality and level of the industrial products capable of fitting this trend. Especially, electronic, electric and communication industries showed a drastic growth, and it triggered the expansion and development of machine tools, robots used in industries, and automobile industries. Pharmaceutical and photofilm industries neighboring to the chemical industry have also succeeded in overcoming recession through the improve-

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ment of quality and productivity.

Optical glass fiber has been commercially produced with success by a part of the materials industry which has been trying to develop new functional products. The high-level information communication system (INF) was established with the commercialization of this material, and it also became possible to expect the arrival of the new information era. Carbon fiber using acrylic fiber and pitch as the raw material is now used not only for airplanes and heat-resisting apparatuses but also for daily goods such as golf shafts and fishing rods. It has thereby contributed to the improvement of our daily life. Besides, by the invention of newly-developed fine ceramics, the development of structural materials having high strength and excellent heat resistance can be expected. It further gives us a fancy dream on the arrival of the Second Stone Age when this fine ceramics replaces metal. If this material is commercially more developed, Japan will be able to use a natural resource which exists unlimitedly in Japan.

If the Japanese likings for "lighter, thinner, shorter and smaller" products was stayed as it is, Japan would not go outside beyond the culture at the Edo period. It would take a national isolation policy. About 117 years ago, however, Japan opened a country to foreign intercourse with the aim of carrying forward the modernization of all her civilization. Since then, Japan had been struggling for the improvement of the educational system and the establishment of the infrastructure for both hardware and software required for modern industries through the cultural exchange mainly with the Western countries. It finally succeeded in obtaining modern and basic knowledges, experiences and technologies.

In addition to Japan's capability of absorbing such modern technologies, after the 1950s numerous new technologies were introduced into Japan through the kindness and assistance of the Western countries, in particular of the U.S.A. We were devoted to absorbing these technologies. We finally constructed the foundation of modern industries.

Looking back over the 40 years since World War II, we find that Japanese industries have a lot of unsettled problems and contradictions which have arisen in the course of her too-rapid economic growth. We endeavored to contribute to the development of the international society in our own way. For example, we developed the new technologies and new products and expanded the commercial intercourse. The present status, however, teaches us that we have not made full efforts to keep other countries from troubles such as trade friction. So, how to prevent this trade friction and to sustain a good relation with other countries is the most important subject for Japan, and Japan's future depends on its results.

#### HOW TO REDUCE OR SOLVE TRADE FRICTION PROBLEMS

The history of industrial development shows that, generally speaking, trade friction comes about when a new production method exceeding the old one is invented. As seen in the history of technological development in Western countries, and also as shown in the former conflict on the trade between India and Lan-

cashire, trade friction is attributed to innovation of production methods. Therefore, it is quite difficult to prevent trade friction nowadays when production technologies are making rapid progress. Besides, imbalance in trade often occurs between nations, because today they cannot maintain their economy without diversified commodity exchange among a lot of nations.

Therefore, nations have to keep the general balance of import and export. A country that does not will be shut out from the world market. Of course, all the countries must not only keep the general balance but also take many-sided and carefully thought out measures so that an extreme imbalance will not occur. Anyway, trade and industrial friction do not arise or pass away temporarily. So, all countries must make a constant effort to solve each problem.

I am not an expert on trade, so I do not have a bright idea on solving the problem, but I should like to introduce the following two proposals, which can be considered to be the effectual measures to reduce or solve trade friction.

#### Promote Trade

The first one is to promote two nations' trade in the same industry. For example, if the U.S.A. and Japan mutually open 1/5 of their semiconductor market to the other country, both countries will make efforts to export such items since the other country cannot manufacture favorably. Then, both countries' trade in semiconductors will become well balanced. It may be also good that both countries mutually buy and sell a certain portion of their production amounts for semiconductors. Signs of the prevalence of such trade seem to be increasing the past several years, but in general, if such trade in the same industry becomes popular, trade friction in the same industry will be reduced at least. Besides, consumers in both countries can gain great profits out of a free exchange of the products and the competition, and their mutual problems will be solved in this kind of trade.

This proposal may be criticized for the reason that only "haves" can put it into practice, so as in the case of cross-licensing in the field of technological licensing. However, any nation necessarily has the product peculiar to that nation, and even the products in the same industry often differ from others with the respect of quality, appearance and fondness. Therefore, regardless of the quantity of such products, this proposal is considered to be an effective means for activating this kind of trade between two nations.

Another proposal is to increase transactions of such technological intangible assets as patents and know-how, that is to activate licensing or technology transfer. It is also important to promote investments which are accompanied by mutual transfer of technology. Especially, trade should be freely carried out at the large market composed of 600 million population in the U.S.A., European countries, and Japan, and unless such relation is continuously kept in the future, development of each country cannot be hoped for. Therefore, if intellectual property rights and good ideas are more positively exchanged among the countries, both industrial and cultural level will be further raised with a

mutual formation of good will. And, as its far-reaching influence, all the countries in the world will be able to have profits from this mutual exchange.

It is extremely important for the countries having technologies to put technology transfer to practice between them on the two-way traffic. By stimulating each other, these countries will find the way to be able to coexist in this competitive world and to further develop their own industries.

Existence of one's own country in peace is most important for all the countries, so it is quite natural for them to look after their own interests first. However, any enterprise and country cannot survive independently like people cannot live by themselves. As there is the only one market in the free world, all the enterprises and countries should aim at the well-balanced trade. I think that trade friction will be further reduced if more attention is paid on this point by people in the world, especially politicians and leaders of industries. And, if we continuously make these efforts, our good will will be transmitted to the other parties of the trade, and transactions will be made easier.

### TRANSFIGURED PRODUCT DEVELOPMENT

Today, all the industries in the world are devoted to the development of new products and new technologies. Above all, special emphasis is placed on the development of the higher-value added products and specialty products by enterprises in the technologically-advanced countries where it became impossible to maintain their business results on the present level only by making and selling their conventional commodity products.

Reflecting this trend, enterprises in the world tend to pay enormous amounts of research and development expenses for new products, and a keen competition is pursued for the increase in sales of the new products. Besides, fields of new products having been recently developed or now under development are becoming further interdisciplinary, and the companies aiming to cultivate the new market by developing the composite products are increasing, making use of technologies or products in different fields.

There are two types of development of products. One is needs-oriented and another seeds-oriented. Japan has been rather good at the former type development. Final demand of a market is quickly grasped, and it is reflected on the research and development, and a product which completely meets the market's needs is manufactured. For that purpose, researchers should not shut themselves up only in their laboratories. Close contact between researchers and salesmen is, of course, required, but researchers themselves are recommended to go into the marketplace and see firsthand the consumers' reaction.

#### Westernized

In recent years, it is noticed that the Japanese market has been surprisingly internationalized and westernized. For example, we can eat almost all kinds of foreign dishes in Tokyo, and can buy in Japan almost all souvenirs made in foreign countries. At present, young men's clothes are almost westernized. Living circumstances in buildings in Japan are much the same as

those in the U.S.A. and European countries.

On the contrary, production facilities made in Japan such as machine tools, semiconductor production facilities, robots used in industries and office machines are exported to the world. The U.S.A. and European countries are somewhat flooded with the Japanese products, although Japanese culture does not exert much influence upon foreign countries. Such a phenomenon indicates that a resemblance can be seen in a lot of products made in the U.S.A., European countries, and Japan. And, this trend is expected to go on increasing, because the U.S.A., European countries and Japan hold the free market in common. In such circumstances, there is a high possibility that a product which is wanted in one country is also requested in another country. We can predict the products we should aim to develop.

Enormous expenses are required for the first-stage research and development of a newly individualized product, so it is absolutely impossible for the manufacturer to gain founders' profits only from the market of its own country. Besides, intensified competition for development of products has become further keen among the advanced enterprises, and their developing abilities are becoming comparable with one another, so it is almost impossible for the company having its own new product to take the initiative for selling it in the market of advanced countries by the method of usual sales activities. It is too late to start market activities in the foreign countries after good results in the market of its own country was obtained. Therefore, it is all the more important for the enterprises in the U.S.A., Europe, and Japan to cooperate or combine with one another in the development of new products.

#### Antitrust Laws

This kind of cooperation by the enterprises in the same industrial field is prohibited by the Antitrust Laws in the U.S.A. However, application of the law is said to be softer in the near future, so more and more enterprises will cooperate or combine with one another, without distinction of their nationality, in the research and development for the products and in some kind of business activities themselves.

Time and required funds will make it necessary for multinational enterprises in the U.S.A., Europe, and Japan to cooperate to effectively develop new products. It is nearly impossible for them to individually grasp the market trends for new products in highly-advanced technological fields. Such cooperation enables them to increase the number of researchers, for example, or save research expenses. These enterprises will be able to enter the market more promptly and to make more accurate estimates to the demand. Trade friction between countries will be reduced, and mutual understanding will be promoted. Further, it will bring about the prosperity of the free society, and will strengthen the unity of the countries.

#### HOW LICENSING WOULD BE

How would technology transfer be affected under the above-mentioned world circumstances? Technologies on commodity products and those for improving their productivity will be transferred as usual, but technology

transfer for starting new businesses will not increase in number, because needs in this field would decrease.

On the contrary, there would be keen competition for the development of new products in the high-technology fields. I think, in the future, the availability of manufacturing technologies for new products will be decreased. Money and cross-licensing will be the major way to get them. Or, technologies will be transferred only when colossal amounts of royalties paid for them.

I think that the above-mentioned cooperation or combination between the enterprises will be the best way to prevent these difficulties, though it cannot be taken by all of the countries in the world. For example, the countries which do not possess any excellent industrial technologies cannot take such a measure.

However, all the countries (even the advanced-technology countries) cannot develop all the advanced high technologies and new products manufactured from them by themselves. It is difficult to say that all the research works on advanced technologies being under way in these technologically-advanced countries will result in success. As mentioned above, all the countries will have to cooperate with one another to achieve the expected results.

I think it most desirable that all the industrial technologies are used for the development of all the

countries' industries, and it will be realized undoubtedly in the course of time. However, the fact is that the advanced technological countries are still competing with one another in developing new technologies and new products, and cannot invest money in the new research to come next, because research and development expenses cannot be compensated as far as founders' profits are obtained. In the present licensing market, technologies of others cannot be obtained in disregard of interests and strategies of other countries and enterprises.

In order to improve these circumstances, governments and enterprises in all the countries should take more pliable measures so that they can do everything for the activation and development of the world economy, while continuously carrying on their own operations in the international economic society.

Certainly, technology transfer can be affected by the industrial policy of the country. But how to make different industrial policies of different countries compatible with one another, and how to mutually use these technologies and supplement each other, are the key points for the further development of the world. All nations should have opportunities to discuss this subject with one another.