Australia And Licensing in Pacific Rim

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Overview of opportunities in Asia and Pacific Rim countries, including new boom economies

Australia has a small economy, isolated by distance and based on commodities — mining, quarrying, farming. It is burdened with a large chronic trading deficit, and historically the manufacturing sector has been small and uncompetitive — stunted by high costs, low productivity and in particular a labor market plagued by unreasonable wage expectations, strong unions, and frequent industrial disputes.

Compared with the dynamo that is Japan, the large, long-term potential of PRC and India, the newly industrialized Asian tigers — Korea, Taiwan, Hong Kong, Singapore — and new boom economies like Thailand, Malaysia, Indonesia and Philippines, Australia does not at first sight appeal as one of the most exciting prospects on the Pacific rim.

So, I have concluded that there may be interest in general observations about Asia and the Pacific rim, which may provide useful background for the detailed technical expositions covering technology transfer in various Pacific rim countries.

First, some comments about the so called Asia-Pacific Region. For some time, it has been popular to talk of this as being where most of the future economic growth area of the world is going to occur until well into the 21st century, at least. What is envisaged as huge production outputs derived from inputs consisting of:

(a) Abundant low-cost labor.

(b) Abundant, cheap raw materials.

(c) Abundant (largely Japanese) capital.

A vast market consisting of several billion Asian consumers is also envisaged.

This concept has also been used as a basis for making a geometrically neat projection of a world split, geographically and economically, into three great trading blocks: The EC (1992), the American (North and South), and "the Asia-Pacific Region."

In my view, this scenario needs some qualification. There is no question, of course, that the prospects for economic growth in Asia and the Pacific as a whole are enormous. It is widely expected that by the year 2000, Asian-Pacific countries, collectively, will be accounting for one-half of world economic output. There is real energy and dynamism. There is plenty of reason for interest and enthusiasm.

But you do need to understand what it is you are looking at. It is a large number of far-flung individual countries that are historically, culturally, socially, politically, and racially diverse. It seems to me pretty unlikely that all or a large number of these countries might come together as a collective economic bloc — a sort of EC equivalent. For a start, the geography is against it.

We all know that the PRC is a huge country, and so is India, and so is Australia. But just the total area of Indonesia, land and sea, from border to border, north to south, east to west, is as great as that of the whole of the European community, from England to Greece, from the Straits of Gilbraltar to the Baltic Sea. In fact, from east to west, Indonesia alone is as wide as the United States. And the distance between Tokyo and Jakarta is about the same as between New York and London. Add a whole range of differences in national characteristics.

The idea that Japan and China could be part of an integrated Asian economic community has about as much going for it as the possibility of the European's inviting the United States *and* Russia to join the EEC.

When you look at doing business in Asia and the Pacific, you have to examine each country separately.

◄ Economic Prospects ►

What are the economic prospects, short term and long term, of that individual country, what are the business possibilities *for you* in that particular country, and what special difficulties are involved? What are the indigenous social, political and business peculiarities and customs that you need to know about?

This includes things as simple as knowing that in Thailand, when you sit down at a meeting, you must be careful what you do with your feet. Whatever else, do not cross your legs and point one of your feet at any of your Thai colleagues. It is extremely bad manners and most objectionable to them.

Don't touch a Thai — male or female — on the top of the head, which is sacred. It is where the spirits go in and out.

The Thai's revere their royal family. So be careful how you handle the paper currency. It has the King's face on it.

If you have an appointment with your Thai friend and he simply doesn't turn up at the appointed time, or you go to his office and find he's gone off somewhere else, don't fret and don't get upset. He will probably contact you a few

**Mallesons Stephen Jacques, Hong Kong; edited version of paper presented at LES U.S.A./Canada Annual Meeting, October 1989.*

days later, as charming as ever, and go on with business as usual. The missed appointment won't even be mentioned. Probably it was not convenient for him to keep it. Part of the Buddhist approach to life is that it consists of a sea of inconveniences through which you have to steer a "middle path."

There are many ways that you have to be attuned, alert to possible differences in behavior and ready to adapt to them.

Using Thailand again as the example (it is after all at the top of everyone's list, as the emerging economy voted "most likely to succeed") politeness at all times is essential.

Much of our Western style of doing business if fairly direct and to the point. Negotiations are conducted adversarially, even aggressively, and an occasional calculated loss of temper is not unknown. In Thailand, this sort of thing is not polite. It is socially unacceptable. No matter how frustrated you are feeling, you stay cool, you keep smiling, and you continue to be patient. You are a "Farang." Roughly translated this means something like an uncouth, ignorant foreigner. To prove it by acting like one will only cause you loss of face and respect, and will improve your chances of being taken to the cleaners.

◄ Reserve Judgment ►

Also, try to be careful and always reserve judgment. Things may not always be as they appear to Western eyes. In Thailand, nothing is necessarily as it seems to be.

There is a saying:

In Russia, nothing is allowed except what is allowed.

In the U.S.A. all things are allowed except what is not allowed.

In Thailand, all things are allowed including what is not allowed.

To put it another way, in Thailand it's a matter of finding the way to do what you want to do. If you work around and under and over the problems, you will find the way.

Politeness dictates to a Thai person that you should be given the answers that you appear to want. When your Thai colleague says "yes" to you, you have to work out whether what he really means is "no," or "maybe," or "I hear you," or "I have not understood a word."

I could go on with a litany of these kinds of observations on a country-by-country basis. But I have said enough to try to make the point. Wherever you go in Asia, do your homework, learn about the regulations, and learn about the culture. Recognize, and cost in, the fact that it's going to take much longer than it would in the U.S.A. or Canada — and go forward carefully. Above all, take each country separately. The so-called region is not heterogeneous.

I know that all of this sounds like motherhood stuff. It is. Yet many people still go rushing in to some totally alien Asian environment, and expect to carry on as if they were in Milwaukee or Cleveland or Toronto.

JAPANESE CAPITAL

Let me go back to the Asian economic bloc scenario that I was debunking. Part of the equation is that it will all be fuelled by Japanese capital. With that part, I largely agree.

Japanese capital is pouring into Thailand, Malaysia, Indonesia, and the Philippines. Much of it is associated with relocation of Japanese manufacturing industry. But more is going into real property investment and development, and also timber, fishing, mining and other natural resources.

Banking and financial services may be expected to follow as the local markets are deregulated and internationalized. What are you seeing in the U.S.A. in terms of the intrusion of Japanese capital, is also substantially happening, with variations on the theme, in many Asian countries.

THE CONSUMER MARKET(S)

The next thing that I want to look at is that idea of a regional market consisting of hundreds of millions of consumers. This is only partially accurate. Populations per se do not equate markets (for goods or services).

Many people now talk and think of the PRC as a market consisting of one billion consumers. In reality, the PRC is a country with a population of 1 billion people, which in terms of urban GDP per urban adult — people with real disposable incomes — is one of the smallest consumer markets in Asia.

Presently, the largest markets in Asia, in these terms, are Japan and India followed by Australia and Taiwan, each with a total population of less than 20 million. Sometime in the 21st century, China will emerge as a major consumer market.

Meanwhile, what you are looking at is, first, in Japan and India, two substantial domestic markets that are (in differing ways) pretty protected, and thereafter, a whole host of emergent and the emerging markets that in relative terms are small and are isolated by large distances between key economic centers and insulated by differences in demand characteristics deriving from diversities of race, culture, language, politics and just about everything else.

There are only selective, limited opportunities for utilization of a single country as a base for standardized regional manufacturing and marketing operations.

TECHNOLOGICAL DEVELOPMENT

Going back again to the Asian economic bloc concept, you will recall that I said it was based on assumptions as to inputs of low labor costs and low-cost raw materials. According to the economic doctrine, this is where developing countries have their natural competitive cost advantages, especially for industries requiring labor-intensive production methods. And it is true that the cornerstone of Japan's postwar development was exploitation of abundant and cheap labor.

More recently, cheap labor in labor-intensive mature industries provided the foundations for the industrialization of South Korea and Taiwan. Hong Kong and Singapore,

similarly, have built economies based on cheap labor. Thailand, Malaysia, Indonesia and the Philippines are all now heading down similar tracks, deploying low-cost labor as the basis for achieving industrial development.

A feature of this kind of economic progress is that it is related to taking mature manufacturing industries, which employ standardized technologies to produce standardized outputs, and developing competitive businesses through using lower labor costs to achieve higher productivity and reduced market prices. Consequently, there is little call for R&D development and technological process. Product innovation is largely irrelevant.

This is one of the reasons why, historically, the Asia-Pacific region has not presented many sound opportunities for marketing new technology. New technology has not been greatly needed or wanted. The preferred approach was to grab hold of a mature accessible and readily copyable design or process and use cheap labor to squeeze a further 5% of productivity out of it. This part of the scenario is now undergoing fundamental changes.

Japan has already abandoned its position as a provider of low-cost, high-volume, value-for-money products. It is pursuing a strategy of growth based on capital-intensive development of new products and services and the creation of new methods of production and distribution.

Taiwan and Korea are fast following. The fruits of their success to date are being digested. In both countries, there are shortages and huge increases in costs of labor, of land, and of other inputs. On top of this, South Korea and Taiwan have incurred substantial currency appreciations over the last couple of years.

◄ Two Responses ►

Broadly speaking, there have been two main responses to these developments.

The first has been a massive relocation to Thailand, Malaysia, Indonesia, and the Philippines of labor-intensive line production industries, which have become too expensive to maintain domestically in Japan, Korea, Taiwan and Hong Kong.

The second response is that Korea and Taiwan are now following Japan's lead. They are turning to investment in capital-intensive domestic technological development — factory automation, and switching to high value-added, technology-intensive, products.

In Korea, in particular, the large conglomerates (chaebol) are pouring massive sums into scientific and technical education and into R&D programs.

All of this suggests improved opportunities now exist in these countries for marketing innovations and technologies, whether by implanting them in subsidiaries or joint ventures or by straight sale or licensing.

Similar improved opportunities can be expected to emerge in Thailand, Malaysia, Indonesa and the Philippines, in due course, as these countries progress toward newly industrialized country (NIC) status on the back of labor-intensive, export-based production, and in their turn convert to more capital-intensive investment in technological efficiency and product and process innovation.

The scenario that I have described all accords very well with the orthodox World Bank type of "blueprint" for industrializing third-world countries and integrating them into the world economy. The concept is of progressive transfer of appropriate mature, mass production, export industries successively through generations of developing countries, with periodic relocation of production centers from country to country. For several decades in some industries — for example, jeans manufacturing — the most absorbing question in life for management has been: "Where shall we put the production plant next?" And Asian countries have been, and are currently, among the most attractive locations.

However, the thought that I want to leave is that this scenario may not continue unchanged. There are several factors or developments emerging, which, it seems to me, could dramatically alter the whole pattern, and the prospects for economic development, in Asia and the Pacific region. I shall touch on two.

The more obvious one is that a number of European countries with small or less-developed economies are now starting to emerge as highly competitive producers of products, which for some decades have been the staple manufactures to be appropriated to emerging third-world economies. These include clothing and other textiles, shoes and leather goods, low-price motor vehicles, and other "value-for-money" mechanical products, white goods, etc.

Portugal, Belgium, Ireland, Turkey, and southern Spain are cases in point, and it seems probable some COMECON countries may soon join the list.

A concomitant development could also be the adoption by the European Community (EC) and perhaps also the U.S. of further methods of effective market protection and entry restrictions, with respect to imports from Asia. (We are already seeing indications that this will occur to some extent in the EC even though fears of a fully blown "fortress Europe" may be unfounded.)

The prognosis is that Western export markets that have underwritten the development cycles, first of Japan, and subsequently of Taiwan, Korea, Hong Kong and Singapore, and currently of Thailand in particular, may not continue for much longer to be so available for similar exploitation by new waves of aspiring Asian NICs.

The second emerging new ingredient or development that I want to mention is of more fundamental significance.

◄ Microelectronics ►

This is the potential impact of new microelectronics processing technologies. The practical implications of the development and introduction of new production processes based on microelectronics — such as new generation robots, computer-aided design (CAD), computer-aided manufacture (CAM),

and ultimately computer-integrated manufacturing (CIN) — are quite revolutionary.

In terms of the subject matter of this paper, their significance lies in the extent to which they may erode and eliminate the comparative advantages of low-wage, low-cost countries in Asia and the Pacific, even for what have been historically labor-intensive and raw materials-intensive industries.

They will do so by opening up a whole new world of opportunities for replacement of labor (and to some extent also, raw materials) and for raising productivity, by capital intensification and technological progress. The labor substitution, and costs reduction, capabilities of the new technologies derive not only from new manufacturing methods as such.

At least equally relevant are things like:

1. Increasing the speed and expanding the size of machines.

2. Enhanced avoidance of waste and of rejects of finished and semi-finished goods.

3. Linking together sequential design, processing, assembly, and packaging operations with elimination of intermediate handling and other labor inputs.

4. Computerized inventory control and computer regulated storage, dispatch, and auxiliary operations.

Above all else, what the new array of microelectronically-based technologies offers is economies of scope. They permit automation with a high degree of flexibility of application and operation. Traditionally, mechanized production processes have been inflexible, with each machine capable of only one application. Mechanization has therefore presupposed economies of scale. It has only been efficient for long production runs.

However, the flexibility of microelectronic automation will allow the same machines and production procedures to be programmed and reprogrammed for multiple process and product applications. Capital intensification via labor substitution will no longer be dependent on high volume. The new automatic processes will permit low production costs to be attained for small-batch production.

In addition, a whole new range of associated and auxiliary activities will for the first time become open to capital intensification via substitution of labor with new computerized technologies. I have already mentioned inventory control and dispatch. There is also transportation, and other support services, and administration. Even management is not immune. What all this means for the Asian Pacific region is that exploitation of the abundance and cheapness of labor could largely cease to be relevant.

Redeployment of manufacturing operations, especially labor-intensive ones, to the low-wage countries of Asia and the Pacific may be dramatically slowed and possibly even reversed. Flexible automation of old, as well as new, production processes and associated activities will further reduce labor costs and will otherwise increase the efficiency of industrial manufacture in the West. The result could be substantially to destroy the comparative competitiveness and growth prospects of industrial production on historic lines, in developing countries.

What is then to happen in the Asia Pacific region? Obviously, I do not know all the answers. But it seems likely that at the end of the day the only course open to countries in the region will be to follow suit and attempt to adopt and benefit from the new production technologies, and the efficiency gains that these offer.

For countries like Korea, Taiwan and Singapore this may be feasible. They have the capital, and they are largely investing heavily in scientific education, training, and development of the technical skills and competence that will be a necessary prerequisite for successful introduction and implementation of microelectronically-based technologies.

India is also likely to come out alright — and conceivably ahead of them all.

For less-developed countries, the adaptation will be a lot harder and longer.

I think we could well see in Asia and the Pacific a swing back from export-oriented growth to domestic import substitution, probably coupled with increased protection on a national basis.

Even in this situation, however, introduction of the new production technologies will be a highly desirable objective — among other things because of the advantages they will offer for more efficient manufacture of suitably adapted products for the different domestic markets involved. The other thing that is very clear is that there is no way that in the foreseeable future countries in the area will be able to bridge the technological gap to the point of being able to "do it on their own."

Initially, over at least the next decade, the only practical methodology for introduction of the new technologies will in most instances be by acquisition and imitation. So again, what emerges for the people here today is a prospect of substantial opportunities, of kinds that have not previously existed, for selling, licensing and transferring Western technology into countries in Asia and the Pacific.

The final thought that I would leave you with brings me back to the title of this presentation — and believe it or not, Australia. The thought is that the advent of the new microelectronically-based production technologies, and also the scope for applications of microelectronics to new diversified ranges of finished products, could perhaps result in Australia emerging as a preferred base for manufacture and production in Asia and the Pacific.

Despite its present shortcomings, Australia does have some obvious potential advantages as an export manufacturing location:

1. It is politically stable.

2. There is a generally liberal foreign investment policy.

3. A substantially deregulated market economy.

4. Abundant supplies of (relatively cheap) energy and raw materials.

5. A sophisticated, Western-style regime of recognition and enforcement of intellectual and industrial property rights.

6. Though the population is only 18 million, they have real disposable incomes. Australia's con-

sumer market is presently the third biggest is Asia, so there is a sizable domestic market base available to underpin production for export.

7. There is an educated and skilled workforce, and a level of technological development and competence, that is well suited to receive and assimilate and exploit the new microelectronically-based technologies, and indeed to contribute to their ongoing development.

But, what about those negatives which I mentioned earlier: The labor disputes? The distance from export markets? High taxes, and generally high costs of production?

Well, taking labor first, it is quite possible that the introduction of the new microelectronically-based production technologies may go a long way to solving Australia's labor problems. The labor factor will be substantially substituted by capital. As a result, dependence on human resources will be reduced, and the power of the trade unions will be commensurately diminished.

Next, costs and productivity. I believe it is inevitable that in the near future the Aussie dollar will devalue by between 20% and 30% against the Deutsche Mark and other strong currencies. It will also devalue to this extent against the U.S. dollar and the Yen, assuming those currencies do not also commensurately devalue. Such devaluation of the Aussie dollar will mean that the cost of manufacturing inputs in Australia, including raw materials, and the cost of managers, and skilled technical personnel, will suddenly be competitive.

It is also relevant that many raw materials used in the components of the new generation of microelectronically engineered products can be locally sourced in abundance in Australia.

Last, but not least, bribery and corruption are not epidemic to business and politics in Australia. And regulatory delays, indirect exactions, and administrative "hassle factors" are minimal, compared to what a foreign investor, or transferor of technology, may expect to encounter in India, or Indonesia or the PRC.

These are elements of doing business in certain Asian and Pacific countries that involve substantial real costs that are not always taken into account when comparing cost levels.

As to taxation, it is high, compared to some places — Hong Kong, the special economic zones in PRC, the Cook Islands. But in the past five years, Australian corporate tax has been reduced to a flat 39%. And today, Australia's tax regime, for corporate and business profits, is fairly comparable with most countries in Asia and the Pacific. Also, who is to say that what are now low-tax countries will remain so, if third world economic circumstances should alter in the way I have suggested they could?

And so to the distance factor. Australia's distance from other countries, gives rise to transportation costs and to complexities of ordering, scheduling, distribution, and delivery. These distance-related factors have contributed to making it impractical to sell Australian manufactures in Western markets in U.S.A. and Europe, in competition with locally made products.

This situation will probably continue as regards Western markets. But it may be different in the Asia-Pacific area. As I noted earlier, the distances all over Asia are vast. In terms of exporting from one country to another in the area, Australia's distance disadvantages are not so especially great.

Furthermore, one of the characteristics of many of the microelectronically engineered new products is that they are smaller, and lighter, and cheaper and easier to transport efficiently over large distances. To this is to be added the potential impact of electronic data interchange. It is envisaged that within a decade, there will be communication systems enabling anyone with a desktop computer to trade with anyone in the world, with built in language translation facilities to remove the language barriers.

The present state of this emerging technology is not perfect. There is the case of an English-to-Russian computerized language translation facility which, for the English line, "The spirit is willing, but the flesh is weak" provided, in Russian, "The Vodka is very good, but the meat is rotten."

However, it is impressive that for the Australian Formula One Grand Prix motor race, in Adelaide, Honda engineers back in Japan, receive data via satellite from onboard computers in the Honda cars. This is analyzed in Japan and instant advice goes back to the team in the pits and to the driver.

Finally, in terms of potential for Australia to export to Asia and the Pacific, it is relevant that the versatility of application of the new production technologies will permit efficient, capital-intensive, small-batch production on an "as-required basis" of product lines that are individually tailored to the special tastes and requirements of different emerging consumer markets in the area.

Also, even if in Asia there is a reversion to import substitution, and greater protection, as I have suggested, I think it is still reasonable to suppose that Australian products, coming from a country that is part of the Asia-Pacific area, will be accorded at least equal treatment with other countries in the area, and possibly better treatment than products from Europe and the Americas.

The last point is that Australia is a "beautiful country" to live in, and the inhabitants are like Americans and Canadians. You should not have difficulty in persuading your managers and skilled personnel to be posted there.

For all of these kinds of reasons, therefore, it may possibly be that, after all, Australia will be a place worth having a closer look at, in the future, as a potential location for selectively transferring new technologies for exploitation in joint ventures, wholly owned subsidiaries, or by licensing of relevant opportunities in the Asia-Pacific area.

ACKNOWLEDGEMENTS

"Impact of Microelectronics on the International Division of Labour," Prof. Dr. K. Dorner, March 1989.

"Industrial Revival through Technology," OECD, 1988.