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Notes

Interview Survey of Leaders of Economic World in Singapore

—General Manager of EDB, Chairman of Keppel Corporation
Limited, Managing Director of SINGAPORE AIRLINES—

Ryuei Shimizu

<Abstract>

Singapore has some problems, of which important ones are a shortage of labor of high quality and a rise of protectionism in foreign countries. EDB carries out education and training programs and SIA has an own school to train staff and employees, as a counter-measure to solve the problem of the shortage of labor. EDB, SIA and Keppel enforce an automation for the same object. So as to overcome protectionism, EDB makes an effort to let foreign companies come to here and to make Singapore an important strategic node of global companies by offering various infrastructures. Thereby it aims at a spontaneous technologytransfer. Way of thinking of "problem is challenge" and "customer is supreme", and an attitude of competitiveness are listed up as strengths of Singapore.

<An Aim of This Interview Survey>

It is said that Japanese industrial structure is now experiencing the most rapid change since Meiji Restoration. Some industries, for example, these of electric home-appliance, car, and semi-conductor, have become top-runners in the world, and have lost a precedent model to catch up with. Furthermore Japan has become the biggest creditor nation in the world, and Tokyo is changing to become the financial center of the world. Top managements of Japanese companies which since

the Meiji Era have pursued the model set up by the West now finds trouble in setting-up a new direction of business in the future.

The author plans to collect the data on how a number of today's leaders in the Japanese economic-circle made decisions on strategies. These data will then be kept for a hundred years or so in the records of the researchers of business administration, history of business and industry. He had interviewed heads of about 100 Japanese big companies, such as the president of TOYOTA MOTOR CORPORATION, NISSAN MOTOR CO., LTD., MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., HITACHI LTD., MITSUBISHI CORPORATION, THE DAI-ICHI KANGYO BANK LTD. and others. The contents of the interviews were published in Mita Business Review of Keio University (in Japanese). In interviews the author has realized that many Japanese top managements have strong interest in NIES' desire to chase after Japan, their philosophies and strategies. He also observed that the apprehension of company heads to be caught up with influence their decision making. The author also interviewed 5 leaders in Korean economic circle and 5 company-heads in Taiwan last year. Most recently, he interviewed the top managers of 2 big companies and government agency in Singapore.

<An Outlook of Singapore>

Singapore was a part of the Federation of Malaysia in 1963 after gaining independence from

England. It became independent from the Federation of Malaysia in 1965. Its population of 2.69 million as of 1988 consists of 75.95% of Chinese origin, 15.18% of Malay origin, 6.48% Indian origin, and 2.38% of the others.

The policies of PAP (People's Action Party) Government in Singapore which is led by Prime Minister Lee Kuan Yew, were carried out neutrally to avoid antagonisms in the country and to maintain favorable relations with neighbour countries. The government has decided Malay as the national language and Chinese, Malay, Tamil and English as official languages, with the last, as the administration language. Actually, many young people in Singapore speak English and their mother language.

It seems that the government policies attach importance to "discipline and efficiency" and important decisions are made by top-down procedures by Prime Minister Lee. As for the economic policies, the government carries out a drastic liberalization policy in the field of investment in foreign countries and foreign trade, and in positive domestic policies, such as the introduction of high technology, investment in finance and information services, and strengthening of investments in R&D. These policies have enabled Singapore to become a globalized prosperous commercial city-state and it has developed so rapidly that it has become a major member of Asian NIES. But because of recession in world economy, a rise of protectionism, slow growth of neighbouring countries caused by decline of prices in primary industry products, declined competitive power caused by a rapid wage increase, and the end of housing construction boom in Singapore, the rate of economic growth of the country recorded minus signs in the middle of 1980s. It has changed to plus signs again in 1986 and 1987, through a new policy of increasing efficiency and lowering wage costs.

With this environment, PAP, the ruling party won an overwhelming victory in the general election held in September 1988 and gained 80 of the 81 total seats. Even if some questions on the succes-

sor of Mr. Lee and some dissatisfaction with the policies of PAP government might smolder, with this big political victory, the present policies will remain for the time being.

Many thanks have to be expressed to Mr. Hirotsugu Koike, bureau chief, Miss Jane Oh Kwee Ngor, and Mrs. Minerva Lau staff writers of the bureau of THE NIHONKEIZAI SHIMBUN in Singapore, who made the trouble of arranging the appointment with VIPs for me, and reviewed the records of the interview.

Mr. Tan, Chin Nam (General Manager of Economic Board in Singapore—EDB—)

1989. Feb. 8 at Main Office
in Raffel City Tower

Interviewer ; Ryuei Shimizu
Hirotsugu Koike

Shimizu What is the current and future critical problems of EDB? Please tell me the problems of external and internal environment in EDB.

Tan We would like to view problems as challenges. I think that will be a more positive way of looking at things. It is through converting problems into challenges that we'll be able to focus the attention of organisations and people. The government's role is to create a very favourable environment so as to allow businesses to grow. So, my comment will be pertaining to how we will make that environment more conducive. This world is definitely a different world now. Because it is becoming more global, countries are more closely interlinked. What happens in Japan will affect USA, and what happens in USA will affect the rest of the world and so on. So this is a global world that we are talking about. We are seeing competition emerging and right now companies do have this tendency of looking at the whole world as their market.

Shimizu You mean looking at the whole world globally?

Tan Yes. I think this global aspect is very important and that was the reason why last year in October we had a very important "Global Strategies Conference". The views of the government were expressed at the Conference which involved 1,000 people. Many of them were from the private sector. They exchanged views with regards to how companies could formulate their global strategies by making use of the 'new' Singapore. We explained our position: how do we see the business world and how do we intend to organise ourselves in order to make sure that Singapore can continue to grow. The whole world is becoming very global, and companies are spreading out their activities by adopting a regional or global perspective. Asia Pacific is emerging as a very interesting area because the growth rate in the Asia Pacific is much higher than the rest of the world, certainly much higher than the OECD's 2 to 3 per cent. This trend will continue which means Asia Pacific will become a very important market. It is also a very important manufacturing base for many international companies. Japan, in particular, is able to make full use of the emerging capabilities of Asia Pacific. I think this is largely because Japan is able to advocate a very clear concept of international division of labour, which is clearly captured in the Maekawa report to deal with the high yen situation. The Maekawa report has resulted in the increasing investment by Japan in this part of the world. This supports very well the globalisation trend that we are seeing in the whole world. Of course, we are also seeing the emerging protectionist sentiment in various countries. But I think ultimately, every country will realise that the whole world is inter-related. The 1992 Single European Market will provide Europe with a very good arrangement to gain further strength, so that Europe will be able to play an even bigger role in the global economy. This is an arrangement which will result in Europe playing an enhanced role. So, whether they are protectionist for the time being

or not, we are seeing a more inter-related world ultimately. In that kind of environment and with emerging new technology, in particular information technology which provides the means to link up companies and operations, we are seeing that companies do have the basis to perform an integrated business operation by making use of the comparative advantages of each location in which they choose to operate.

Shimizu You mean private companies have such a power?

Tan Yes. International division of labour is more efficiently done through the companies. Companies can decide on which activities they would like to distribute to which country and how they want to link up the activities. By making use of information technology and computer network, they can achieve good coordination. With this new global business environment, I think governments are now responding in terms of creating a more favourable environment to accommodate the inflow of investment and allow coordination of the activities to take place transnationally. This new environment is indeed exciting.

Internally, Singapore is now quite different. Over the last thirty years we had seen Singapore grow from a per capita GDP of US\$475 to presently around US\$8000. This is still much lower than Japan and we are actually in the intermediate position. Our longer term objective is very clear as the government has already spelt out, that is to become a developed country. So when you ask what is the main problem or the main challenge confronting Singapore, the answer really is in terms of how can we start another "S" or economic growth curve. In the first S-curve, we saw Singapore grow from a per capita GDP of US\$475 to US\$8000. Many of the things that we are doing now are designed to make sure that Singapore will be able to start a new economic growth curve, so that we will become a developed country in the next century, 1990s and beyond. The reason why we want to do that is because the population is now better educated and the workforce is being

transformed. In fact, the new inputs into the economic system are now very different from the existing workforce because they are better trained and orientated towards technology. This is supported by heavy investment that the government has put into all of our infrastructure including the port, the airport and telecommunications. In fact, we call this our total business capability.

Our workforce is improving quite dramatically, because out of 40,000 people who enter the education system per year, 5,000 will come out as graduates, 10,000 will come out with polytechnic diplomas, and another 15,000 will be trained in various industrial skills and craft, and 10,000 will be the rest. So this is the new workforce that we are seeing coming out of the education system every year.

With better workforce, better infrastructure and our total business capability, Singapore can indeed add more value to the business operation of the companies, international or local. This is how we intend to evolve Singapore. We see ourselves as a strategic node in global business.

Shimizu You have placed importance on education of people and strategic infrastructure. What about the technology transfer from advanced countries ?

Tan Yes, very important. For example, in the area of information technology, we have a National Information Technology Plan. It involves technology transfer and setting up the mechanism to train information technology professionals. Many of the programmes that we design under this plan are done in collaboration with international technology leaders. For example, we had a technology transfer programme with IBM which resulted in the establishment of the Institute of System Science (ISS) in the National University of Singapore (NUS). The ISS originally concentrated on education and it provided special post graduate diploma programme to convert non-information technology professionals to system analysts. It also provides continuing education for information system professionals. There are train-

ing programmes for managers and decision-makers in the use of Information Technology (IT) as a competitive tools. Right now, this particular institute is going into R&D. This R&D programme is interesting. It also has the assistance of IBM. Current research activities include work in double bytes computing among other things. You can see how the institute has involved from manpower training to R&D.

Shimizu Another R&D and educational system ?

Tan Yes, another example is the Institute of Molecular and Cell Biology (IMCB) which is a R&D institution in bio-tech. This institution is interesting in the sense that it has attracted many very highly qualified and internationally well-known people to serve as researchers or advisors. This will provide a strong basis for Singapore to go into bio-technology area.

Shimizu What problems are encountered in implementing R&D programmes like the ISS and IMCB ?

Tan It does require the full commitment of the government. In the case of the ISS, the government had a good partnership programme with IBM. We select programmes that we would like to go into and provide the necessary finance, while IBM the expertise and contribution in terms of hardware and available expert resources. In the case of the Institute of Molecular and Cell Biology, it is fully financed by the government. But in other areas like mechantronic and precision engineering, EDB has partnership programmes with the French, Japanese and German governments to set up various training institutes. So we've got French-Singapore Institute, Japan-Singapore Institute and German-Singapore Institute. All these institutes involved collaboration between the Singapore Government and the overseas partners. It included also the participation of companies providing the machinery facilities and expertise. Essentially we integrate inputs from various sources and evolve our own programmes which are able to meet with the needs of industries. These institutes that I have

mentioned are all very practical and hands-on. The earlier institutes (ISS & IMCB) that I have mentioned are more in the fields of R&D and advanced education. Industrial training is very important. Apart from infrastructure and a good general education, we must also have the skills and the technology. Otherwise it is not possible for Singapore to continue to become a major manufacturing centre.

Shimizu What kind of cost Singapore Government does pay to support these institutes you mentioned?

Tan We paid for the instructors, building, and running cost.

Shimizu The Singapore Government is efficient in financing?

Tan It is a partnership. Foreign governments and companies will contribute because they recognise the importance of these institutes. There is mutual benefit. The companies will be able to demonstrate their use of technology and facilitate transfer of technology. We will benefit in terms of getting our trainees fully trained. When they are fully trained and go out to the industry, they can get meaningful employment. For example, when we first started the concept of transnational training institutes, we had TATA, Philips and Brown Boveri participating in various precision engineering training activities. All the trainees were employed by the companies upon graduation and many were made available also to other companies in the industry.

Over a period of time, such institutes will become more and more general training institutes, in the sense that the output will be made available to all the industries. This is the partnership programme that we are talking about and the partnership is done according to a transnational basis.

Shimizu Can you please clarify as to how IBM can benefit from the ISS?

Tan For IBM, it is in terms of demonstrating its capability in Singapore and also the region. As the Institute of System Science is considered a success, now there are other somewhat similar

arrangements in Korea, Taiwan, Malaysia and Indonesia. In a way, IBM succeeded in demonstrating its leadership in information technology and this has definitely an impact on the market perception and positioning of the company.

Shimizu You mean a demonstrative effect?

Tan Yes, very much so.

Shimizu What about the Institute of Molecular and Cell Biology?

Tan This is the Singapore government's initiative. We do not have a foreign partner. The institute does welcome international collaboration in R&D and has a very high powered international advisory board with many prominent world-class scientists, some of whom are Singaporeans based overseas, to guide its development and research direction.

Shimizu Do you have other institutes which are joint ventures with foreign companies?

Tan Yes, of course. For example, Grumman International and Nanyang Technology Institute Centre (GINTIC), which specialise in CAD/CAM and Computer Integrated Manufacturing (CIM) activities. This is a high level centre of excellence in an important field and is located in the Nanyang Technology Institute (NTI), our new technology university. Our partnership approach in setting up technological institutions can involve both the private sectors or foreign governments. The thrust is to bring about technology transfer which is extremely important because our ability to exploit technology will determine our ability to continue to make progress.

Shimizu How do companies make use of Singapore nowadays?

Tan We see that companies nowadays have a tendency to distribute their activities in their chosen domain of operation. We see ourselves as a strategic node, a total business node which can be integrated by companies into their global strategies. They can use Singapore as a coordinating centre. They can use Singapore to do better manufacturing because our overall emphasis is to generate better activities and higher value-added, which

means more sophisticated manufacturing with a higher degree of automation. Companies can in fact make use of Singapore to do more than manufacturing. This includes product design, R&D, logistics management and distribution, marketing, technical services, financial management and international business management. We call this 'total business'. More and more companies are now using Singapore as an operational headquarter (OHQ) so that they can coordinate their activities in the Asia Pacific region. They are also integrating Singapore into their global business plans. We are emphasising both manufacturing and services.

We are also encouraging local businesses to be linked to the multi-national companies under a Local Industry Upgrading Programme (LIUP) to facilitate technology transfer and further business development. The whole arrangement is to make sure that our economy will become more balanced. We cannot be good in everything. But certainly we want to create an environment to allow companies with the strengths and skills to emerge so that they can specialise in certain niche areas.

Koike Mr. Tan, may I know how many companies have already established OHQs in Singapore?

Tan Right now we do not want to count them anymore as we have well passed the initial phase of intensive publicity. OHQ is a special scheme which we have that would accord certain benefit to the companies because of the scale and substantiality of their operations. There are many companies which are also performing this kind of coordinating role without being given OHQ. You can come to Singapore to set up a company to perform international business coordination, without applying for the OHQ incentive.

Koike You mean they can enjoy the OHQ incentive if they applied?

Tan Yes, they have to apply providing their activities are substantial enough. Otherwise, they could perform the coordinating role without the incentive.

Koike How many companies have already obtained the OHQ incentive?

Tan Right now, as I said we do not want to count them anymore for publicity purpose. But if you really must know it, it is 20 and is still increasing.

Koike I think the information will be good for foreign investors who are considering establishing their OHQs in Singapore.

Tan Initially, it is necessary to publicise the number of companies. But henceforth it is not important. For the first, second and third cases, yes, we should publicise. But right now it is not necessary to count publicly. Just like the pioneer status, we have not counted the number of awards publicly for many years now. Our emphasis is more on making our business environment conducive so that companies will come to Singapore to carry out more and better activities in a sustainable manner.

Koike I think it will be useful to give the numbers.

Tan I think initially it would be very helpful but subsequently it is more important for the investors to assess for themselves the attractiveness of Singapore. They should calculate as to whether they can make money in Singapore, how they make use of Singapore as a place to coordinate, introduce manufacturing, services, and distribution activities. Right now the OHQ number is 20 and it is still increasing. But if you ask me the number three months or six months later, certainly it will be higher. I will say they are increasing.

Koike Mr. Tan, it was already reported in Business Times that the EDB is considering awarding OHQs to at least four or five companies each year.

Tan I think the number quoted is six.

Koike Is six correct?

Tan There is no specific quota, so long as the companies are able to bring substantial activities, they are welcome. If they do qualify, we will accord them with OHQ status. Certainly we should be able to attract more than six a year.

Shimizu MITI in Japan had certain programmes to help companies. After the war, in 1950s, funds were given to key industries such as the coal mining and steel manufacturing and electrical power supply. In the sixties, MITI placed a semi-restriction on imports of certain products such as cars and household appliances, and backed export for steels and textiles. Nowadays, MITI takes on a coordinating role, providing a small percentage of costs for such national projects like R & D of LSI. Does the Singapore government provide funds for such projects as OHQs or an automation.

Tan Actually, our role is quite different from MITI. In the case of MITI, I think it is very focussed. But in our case, our concern is more in terms of creating a favourable environment. In the case of automation, yes, it is true that we have a programme to promote national automation, in the same way that we have a National Information Technology Plan. National automation is necessary because Singapore is very small and our resources are limited. We want to encourage companies to make good use of labour resource. Of course, we do allow foreign workers to come here but the number should not be unrestricted, otherwise Singapore will be overcrowded. As part and parcel of the plan, we encourage companies to optimise the use of resources, provide a full package of incentives to companies, assist them to conduct feasibility study and help them through implementation with tax incentives so that they could automate and robotise their operation. It is basically to create a favourable environment to generate certain desired activities. We do not directly invest money in VLSI research. Well, in a way, you can say that our Institute of Cell Molecular and Biology is a government investment in basic research but even then we should view it more in terms of developing R&D manpower for the biotechnology industry. The other training centres and computer institutions are to produce raw materials for the industry. Our basic approach is to create the environment, provide the raw materials, invite companies to come in, encourage

local companies to upgrade so that we will be able to generate higher value-added activities over time. This is how we can move up our economic ladder and also in a sustainable manner.

Shimizu In Japan, the role of education is carried out by the Ministry of Education. Is it true that in Singapore training of highly skilled technicians is carried out by the EDB and not the Ministry of Education?

Tan Well, the education ministry is responsible for our main stream education. The EDB can go into partnership with companies very easily but the Ministry of Education may not be able to do it so freely. By making use of this kind of flexible arrangement, we are able to introduce industrial skills which are required by the industries. The role of the Ministry of Education is extremely important because it is responsible for providing the basic human resource to the industry. Of the 10,000 polytechnic level graduates we produce every year, 1,000 would come from EDB institutes, so you can see that polytechnic has the role to produce the other 9,000.

There is good complementation. From time to time, EDB would also initiate certain new institutions. The same thing would be true with the National Computer Board. For example the NCB is behind the establishment of many of the training institutions in the computer field. Like the Institute of System Science, there is also the Centre for Computer Studies (CCS) which is a polytechnic level institute and the Japan-Singapore Institute of Software Technology (JSIST) which was initiated and managed by the EDB for a few years in the early phase of the institute's existence. Right now, the co-ordinating responsibility has been transferred to the National Computer Board (NCB). The JSIST is now under the Singapore Polytechnic although the NCB continues to provide advisory inputs through some organisational arrangements. Every year in Singapore, the various computer training establishments including JSIST are able to produce 1,000 computer software people to meet the needs of the market. So, you can see that

in Singapore, although we do have a mainstream education system, where necessary, we can establish other complementary institutions.

Shimizu Japan's MITI does not have such an institute to educate manpower for industry. Such services are provided by companies. Fujitsu for instance, has to train 1,000 software-engineers each year, adding to the cost of labour. In Singapore, these costs are borne by the EDB, not companies?

Tan Yes, the Government invests heavily in educating our people. For example, we set up the Nanyang Technological Institute (NTI) to produce engineers. Right now, collectively, between the NTI and NUS, we could produce 1,300 new engineers per year. So you can see that the government is investing heavily to achieve economic progress and I think that is important because if you want to encourage business expansion, you must provide the raw material and this role is performed very actively by the government. But that is not to say that we do not encourage companies to introduce in-house training programmes. The National Productivity Board, which is working very closely with various Japanese productivity organisations is responsible for bringing about a new national mentality in quality and productivity and that must include the need to train workers continuously by companies. So, in-house-training programme is also very important but the country has assumed a lot of responsibility in producing the raw materials needed by the industry.

Shimizu What are your other priorities besides information technology?

Tan I think biotechnology is something that will become very important. Automation is also of critical importance. Singapore is very small, we do not have enough people to go into highly sophisticated research areas. We prefer to collaborate with people. So we encourage companies to come here and bring the technology to use Singapore as a total business centre. If necessary, our companies would also go into joint venture with international industrial leaders. I think another illustra-

tion of a technology programme is the Information Communication Institute of Singapore (ICIS) which is being set up now by Singapore with AT&T to train professionals in telecommunication software. It is a postgraduate level institution. Bell Lab is involved with us to set this up under a partnership programme. With AT&T's leadership, we will be able to go into R&D subsequently as well. Our technological perspective is focussed on exploitation of technology and this is also a very important aspect of our new global strategy. We emphasise more on application. We create an environment to allow companies with capacity to emerge successfully. Services, total business capability and our response to the distributed activities approach will make Singapore a strategic node for global business. This is a very major positioning statement.

All these new strategies are designed to realise the full potential of Singapore. Our education and training strategies are integral part of this. We encourage companies to explore strategic alliances with international companies. Labour is a very scarce resource in Singapore and we have to make full use of it. That is why we have the national automation programme and the special arrangement to allow foreign workers to come in in a controlled manner so that we are able to enjoy an augmented labour pool. The inflow must be regulated. Otherwise Singapore would be overcrowded. These are the things we are doing to prepare ourselves for the challenges of becoming a developed country. The problem is that we are such a small country that we have to overcome our limitation in order to continue to make progress.

Shimizu Is management education also carried out in Singapore?

Tan Management education is of course important and we have a school of management in Singapore, offering MBA and other executive training programmes apart from basic university education in business.

Shimizu What about in other government institutes?

Tan I think management of technology is one area which should be given more emphasis and as you know engineers and scientists may not be the best managers. So I think it is important to bridge the gap between management and technology. That is why one month ago, NTI invited two MIT professors to conduct seminar on management of technology in the training centres that we mentioned above. Their emphasis is more on technical education. Management is not a key element of the programme. But certainly, at the university level, our engineers and technologists have to be exposed more and more to management subjects and management of technology should deserve more emphasis.

Shimizu What is the secret of EDB's success? How is EDB structured and organised?

Tan I would say that we need to be very flexible. For example, last year we introduced the concept of strategic business unit (SBU) which is an arrangement to allow entrepreneurship to emerge within the organisation. Many of the new initiatives that we have are implemented using the SBU concept. For example, our SBU (Automation) is responsible for implementing the national automation programme and another SBU is responsible for the co-ordination and the formulation of the national biotechnology plan which should be finalised by the end of the year. The organisation must be flexible and have the capacity to renew itself. If you trace back the history of EDB, EDB came into existence in 1961 and has since given birth to Development Bank of Singapore (DBS), Jurong Town Corporation (JTC), Singapore Institute of Management (SIM), National Productivity Board (NPB) and Singapore Institute of Standard and Industrial Research (SISIR). So EDB has been spinning off many organisations over the years and I think it will continue to do so. The SBU idea is to provide a proper mechanism to allow such spinning off arrangement to continue. Our organisation structure is quite flexible. For example, in order to encourage and help companies to distribute activities, we set up the International Business

Linkages (IBL) unit to help companies to re-configure their activities in such a way that the company's globalisation plan would be able to be achieved effectively in the region. In the process, of course, we would like to see companies introduce appropriate higher value-added activities in Singapore.

Koike When did you establish the International Business Linkages unit?

Tan That was last year. It is to respond to the distributed approach adopted by companies in spreading out their activities regionally and globally.

Koike Is this also one of the SBUs?

Tan No. It is not one of the SBUs, although it could have been organised as one of them. This is to illustrate the earlier point made that if there is need, we can always establish a new function. Thus, we have to be fast and responsive. We need to be flexible and responsive so that we will be able to continue to perform a role to help Singapore to achieve economic progress.

Koike I think flexibility is one of the features of the Singapore Government organisation. How do you form the idea of SBU and some other units?

Tan Brainstorming. We have a corporate planning meeting last year. Follow-up discussions led to the crystallisation of the idea. So, it is a process. Of course, the organisation must have the culture to allow ideas to emerge. We want to make sure that good ideas will be given the necessary support to be implemented. So, the organisation must have the culture, the management style and the system to allow good ideas to be captured and implemented.

Koike So far you have formed 2 SBUs?

Tan Actually, we have more than that. We have automation, biotech and one other which is extremely important, the International Direct Investment (IDI) programme. EDB has been responsible for encouraging companies to invest in Singapore. But last year, we started the International Direct Investment function which would

encourage local companies to invest overseas. So, we have both inward and outward investment. Hopefully, with outward investment we will be able to achieve growth through GNP and not GDP alone. Presently, our emphasis has been on growth through GDP. The moment we expand the scope of growth through international investment, overseas dividends and profits could contribute towards our GNP. Overseas investment with the right arrangement and incentive will have many economic spin-offs. We would like to see linkages with Singapore. For example, if you invest in US, and if certain activities make sense to be transferred to Singapore, I think we would like to bring them about through providing some incentives.

Koike So far, you have formed 3 SBUs, so are you considering forming other SBUs?

Tan Yes, if there is a need, such as in areas which are significant and which will affect the economic well-being of Singapore. But, of course, we also have the operational EDB departments and divisions to run our normal day-to-day business. The SBU is to bring about more focus in certain new areas.

Shimizu You said that some ideas come from a number of people. In my view, any good idea must have the top management's support.

Tan Good ideas can come from both top management and also people working on the ground.

Shimizu Do you have some evaluation system by the top management?

Tan It is important to create a climate which is conducive to promote discussion. Let's say, if I were to come out with an idea and if my staff could provide some inputs, then the idea will evolve and become a better idea. We do encourage officers to come forward with ideas. We value innovation and creativity. It is both top-down and bottom-up and it promotes dialogue and discussions.

Shimizu In Japan, we had a kind of discount system—if someone makes an error, then he will be discounted. Nowadays, we have to encourage people, so we have introduced the so called add-

ing system. Do you have such a system in EDB?

Tan We do not have such a formal system. I think your idea is a valued one since it does promote more contributions from staff.

Koike What do you think of the idea that Singapore should join the OECD as a member?

Tan We are not a developed country yet.

Koike It is a matter of time. Do you think by early 1990s, it is likely that Singapore would join the OECD as a member?

Tan Presently, I think we are at the half-way mark. We are not a developed country yet. Maybe when we have become a developed country, that will be the time to join.

Koike Have you discussed the idea with your colleagues?

Tan I think the idea has not been brought up for discussion at the recent OECD-NIES dialogue. So we can say that it is something that we have to think about in due course.

Shimizu Please give me your frank opinion or comment on the behaviour of the Japanese companies and the Japanese government's policies.

Tan We would certainly like to encourage Japanese companies to go into higher value-added activities. We would also like to have the Japanese companies to respond to our longer term economic development objectives. I think it is a question of finding a good strategic fit. Companies must know where we are going so that they are able to continuously improve their activities. It is not a standstill situation. I think some Japanese companies may have the tendency of wanting to have status-quo, ie. no change. But I think this is a very dynamic world. If Singapore is changing because we do want to be a developed country, but of course, in a justifiable and sustainable manner, this must mean that companies operating in Singapore must continue to restructure their activities to move into higher value-added activities. This would impose a lot of stress on the management. This means that they must have the mandate and support from the headquarters to change and move up-market so that they would be able to contribute in an en-

hanced capacity. This is not a criticism but my response is yes, we would like to encourage companies to move up-market and many have done so. We are encouraging companies to introduce operational headquarter activities including corporate services and move into better-manufacturing and achieve higher value-added. They have reduced the use of foreign workers and I think such companies are likely to be more successful in Singapore. Companies could also do R&D here and introduce enlightened human resources management programme. They could train more local professionals to run their operations. Many Japanese companies are now considering a higher degree of global localisation. This is Sony's Chairman Mr. Akio Morita's terminology, which means wherever they go, they would employ local executives to be managing directors, senior executives and so on. This trend would probably be worthy of emulation because many multi-national companies here do appoint local professionals to top positions provided they can contribute and add value. I think over a period of time, Japanese companies would probably have to adopt this practice as well. It is a sensible thing to do.

Shimizu Do you think that the Japanese companies are reluctant to make technology transfer?

Tan We are seeing more willingness to carry out higher value-added activities, even R&D is being distributed. Unlike the past, we did not see this kind of tendency at all. We are seeing convergence between the behaviour of other international and Japanese companies. The whole world is becoming so global. Whenever you do business, there are certain global business practices that are being observed.

Shimizu Thank you very much.

<Comment>

Although I have heard that the ministers or high-ranking officials in Singapore are very young, I was really surprised to see a young General Manager Tan Chin Nam actually appear. I was impressed too that he has a full understanding of

capitalism, the freedom of private companies have to be respected. He said that the role of EDB was to make the country's environment conducive for private companies to operate here. Workers are trained that they may be better skilled and prepared to work in such companies. Services such as marketing and latest telecommunication systems are available to multi-national companies that they may operate easily their "total business" here. I was surprised to learn, too, that the government here follows the schemes practised by the private companies instead of the private companies following the government as in Japan, for example.

When I asked him what was the problem of EDB, he replied that he sees the problem as a challenge. This showed his positive attitude for a policy. Despite rising protectionism in the world, we can overcome it by an innovation of information technology which can link all the countries and companies all over the world. Because of this innovation in information technology which was initiated by the private companies, it is sufficient for the government to just provide an environment for companies, where the problem of protectionism will be dissolved spontaneously. The most important function of the government to set up an environment is to educate workers. EDB devotes its energies to train professionals in information technology. This project is presently being carried out in collaboration with IBM, and it aims to advance the basic research of information technology. Meanwhile practical training of mechatronics has been done with several foreign governments and its aim is its application and not its research.

Mr. Tan was clearly aware that all these education and training would link strongly and directly to automation. I always think that an economic growth of a country is caused by a development of a scientific technology in short term, and by education, which is a foundation for scientific technology, in long term. I was surprised to know that EDB had similar beliefs.

Further EDB is now pushing multi-national companies in foreign countries to utilize Singapore

as an OHQ. In order to promote this policy, it has set up an environment where the multi-national companies can freely operate in the field of automation, product designing, intensive R&D, physical distribution and marketing. I was much interested in Mr. Tan's keen insight that, if EDB could make multi-national companies all over the world utilize Singapore as OHQ, and many talented Singaporean work in the companies, then, the natural inflow of scientific technologies would be expected. Although many top managements in companies of the other NIES require strongly a transfer of technology, Mr. Tan said that EDB does not require so.

EDB General Manager, Mr. Tan places big trust in strive for excellency of private companies and wants just only to support them, not lead them, like a top manager of a big conglomerate, not government officer. I feel, I will see a very new type of government which is taking a strong position of globalization and liberalization.

<An Outline of EDB>

The Singapore Economic Development Board (EDB) is an autonomous quasi-government body established in 1961 with the objective of planning and leading Singapore from a trading nation to a modern industrial economy.

The Singapore Government has 13 Ministries, one of which is the Ministry of Trade and Industry which has 12 Boards, such as National Productivity Board (NPB), Public Utility Board (PUB), Trade Development Board (TDB), Economic Development Board (EDB), etc.

EDB has published its global strategy in October 1988, where 7 key new strategic thrusts have been formulated. First, to make companies here more flexible, EDB has set up an International Business Linkages Unit. Second, Singapore aims to become an important strategic node of global companies for the Asia-Pacific region. Third, the companies should integrate the all activities such as production, R&D marketing, technical supports, and so on. EDB offers infrastructure and manpower to help it. Fourth, EDB offers important services which are inherently technology-and knowledge-intensive. Fifth, programmes have been enforced, to help small and medium

local enterprises develop by financial assistance schemes, technical advisory. Sixth, EDB's strategy is to create a favourable environment to allow niches to emerge and grow. Seventh, EDB is committed to the continual improvement of the technological capability.

<Personal History of the General Manager>

Age : 38 years old

Educational Background and Business Career ;

His first degree of Industrial Engineering and Economics obtained in Australia under the Colombo Plan Scholarship and Singapore's President's Scholarship.

Master degree of Business Administration obtained in United Kingdom

He was awarded the Public Administration Medal (Bronze, Silver and Gold) by the president of the Republic of Singapore in 1978, 1982 and 1987 respectively.

1982 Appointed to General Manager of the National Computer Board (NCB)

1986 Deputy chairman of NCB

General Manager of EDB

1988 General Manager of EDB concurrently chairman of NCB

He is also on the Boards of various statutory organisations, including Telecommunication Authority of Singapore, Singapore Polytechnic, Ngee Ann Polytechnic, National Productivity Council and several Government companies.

Mr. Sim Kee Boon (Chairman of Keppel Corporation Limited)

1989, Feb. 8. at Telok Blanga Road, Singapore

Those present ; Wong Ngiam Jih (Manager, office of chairman)

Interviewers ; Ryuei Shimizu

Jane OhKwee Ngor

Shimizu What are the current and future problems of Keppel Corporation ?

Kim Shiprepair is a mature industry which is

both capital and labour intensive. Also, the market can be quite cyclical because it is dependent upon the shipping industry. In 1985 the cycle was very bad, although the industry has now recovered.

Shiprepair has a long history, and developed from Singapore's historical position as the major port in this region. It became capital intensive with the development of supertankers, which required heavy investment in large drydocks. It is an industry which is not easy to enter. Conversely, it is difficult to re-locate. That is why in Japan, it is not easy to shift shipyards which have been closed to other countries.

Another problem which we face is the general shortage of labour in Singapore. This applies not only to skilled workers but semi-skilled and unskilled ones as well. Also, although the industry is middle technology, we require many engineers and other professionals.

Because of the shortage of workers, we face increasing labour costs. In addition, material and other costs are also rising.

Shimizu What about the problems in fund raising and fluctuations in exchange rates?

Kim We do not have much problems in fund raising or dealing with fluctuating exchange rates.

Shimizu What about technology development?

Kim This may affect the market in the longer term, because ships are being built to sail for longer periods between drydockings.

Shimizu What kind of counter measures or strategies are required to cope with the problems?

Kim Well, the first is to persuade the government to let us bring in more foreign workers. We are also increasing automation and computerization. We are prepared to spend more money in these areas. Let me give you a small example. The company has spent a lot of money to buy personal computers for our staff, and we are also encouraging them to buy computers for their homes. We want them to become more computer literate and use their skills at work.

We place great importance in training so as to improve the quality of our manpower. We must

improve the morale of our workers and motivate them to provide better service, because basically we are a service industry. Our objective is excellence of service, and in order to achieve that we must have good people.

In the longer term, we may have to diversify to other countries which do not have shiprepair industries as developed as Singapore's. However, we will be retaining this core business in the region.

Shimizu What are the strategies which cannot be imitated by other competitors?

Kim Among our competitors overseas, our advantages are our location and cost competitiveness. For example, our costs are much lower compared with Japan's. Also, our infrastructure is good. We can get spare parts and materials easily, and have the necessary supporting industries. In addition, unlike in other countries, the government does not interfere.

Shimizu You said the government does not interfere?

Kim Yes. The government has been very supportive.

Shimizu What about the morale of employees and the capital ratio?

Kim I think the morale of our employees is high. We have a high capital ratio.

Shimizu The top management must be very capable.

Kim Well, I would say not bad.

Shimizu Does your company encounter any problems in terms of high technology?

Kim Well, we do not have much problems in high technology because shiprepair is a middle technology industry. However, for the development of our country, this technology is important because from it we have developed other supporting industries which are very important to us. This is why it is very difficult for us to transfer our activity to other places like India or Indonesia, because they do not have the necessary supporting industries.

Shimizu Do you have any problems in the

internal organization and human resources of your company?

Kim Yes, we have some problems. Internal organization and human resources at the top level, I would say we do not have major problems. At the middle and lower levels, especially technical people, foremen and supervisors, our staff tend to be poached by other companies. This is because our training is good and our reputation as an employer is quite high.

Shimizu So job hopping often occurs in your company?

Kim Not to the same extent as in other industries such as electronics, where they have a shorter history and the entry qualifications are not as high. However, if we are not careful, it can become a major problem. So we have to seek ways to retain our people.

Shimizu What kind of measures are being taken to retain workers?

Kim For a start, we try to pay competitive salaries. We are providing more personal computers and better tools and equipment so that workers can be more productive and gain better job satisfaction. We also intend to provide more training and promotion opportunities. More job rotations will be made wherever possible. Because we are such a big group, there are more opportunities and employees don't have to feel that they are stuck in jobs with no prospects.

Shimizu Do you have any problem in your personnel evaluation system?

Kim Not really. This is quite well done in our company.

Shimizu I do not know the evaluation system of personnel in Singapore companies. In Japan, many employees join companies after they graduate from schools. Do Singapore companies prefer to employ staff who have working experience?

Kim In our company, we employ both fresh graduates as well as experienced workers. But in terms of numbers, the majority are fresh graduates. Many of our senior staff joined the company right after school. We try not to recruit from

outside if possible.

Shimizu Do you publish the personnel evaluation system to employees?

Kim We do not publish it but keep a record. There is a separate file for each employee, and an evaluation is carried out each year.

Shimizu In Japan, some companies keep this kind of evaluation secret. What about in Singapore?

Kim In our case, we show it to our staff. This is something which is well-known and accepted here.

Shimizu What is your diversification strategy?

Kim I should explain that we started as a shiprepair company. That is why our old name was Keppel Shipyard. This company has a long history of about 130 years. It was only in the last 8 to 10 years that the company diversified. It is now a large, diversified company in the Singapore context. That is why some people call Keppel a conglomerate. We are more diversified than our competitors e.g. Sembawang Shipyard and Jurong Shipyard. We are in shipping, financial services, property and rigbuilding. We are going into the leisure business. At present, 50% of our revenue is from shiprepair and shipbuilding. In the long term, we hope to bring this down to 20-25%, but the volume could be the same.

Shimizu Japanese shipbuilding companies are prohibited from advancing into the financial field. Does your company encounter this problem?

Kim In Singapore, there is also tight control by the government. We are one of the few companies allowed to go into the financial services business; not every company here can do so.

Shimizu You mean the company has gained trust from the government?

Kim Well, I would say the government has confidence in the company. We have gained this confidence over many years.

Shimizu How could your company gain such confidence from the government?

Kim I would say it is because our company's record is very good. We have had a finance com-

pany for many years.

Shimizu Why are the state-owned companies in Singapore different from other countries' state-owned companies?

Kim One general characteristic of government-owned companies here is that they are commercially successful and profitable. They are well run and there is no government interference. Also, there is not much influence peddling there. Even the monopolies in Singapore are very efficient, such as Singapore Telecom, Public Utilities Board, Port of Singapore Authority and Civil Aviation Authority of Singapore. These are all government monopolies. They compete with overseas companies, but internally they are very efficient and are making a lot of profits.

These are the differences between them and government-related companies and monopolies in other countries—in the region and even in Europe and America. They are mostly losing money due to inefficiencies, subsidies and political interference. We have none of these. In fact, very often our government-owned companies are so efficient that the private sector complain about them. So governments in other countries such as Malaysia and Indonesia are following us as a model.

So I think it is the quality and vision of management which is important and not the size of the market. You must get your basic objectives right. Which is why I sometimes admire Japanese companies because they have their basic objectives right. The shareholders are not very important. The company, its workers, top management's vision of what they want the company to be—these are very important. Management in American companies is quite different.

Shimizu Please tell me your frank opinion or comment on the behaviour of Japanese companies and the policy of the Japanese government.

Kim I always admire Japanese companies because they have good long-term objectives. In terms of technology transfer, the Japanese always keep technology to themselves and are unwilling to transfer it. This is a common perception. In

terms of contribution to developing countries, I would say there is a problem in opening the Japanese market.

Japanese imperialism still survives, although only with the older generation. However, there is a lot of worry that Japan might return to nationalism and imperialism. Some people are afraid that Japan might take the route of militarism again. It is said that Japanese are easy to lead influence. I think this is the strength and weakness of the Japanese. This is also the case with Germans. You can mobilise them easily.

Shimizu Thank you very much for your comments.

<Comment>

Keppel Chairman Mr. Sim Kee Boon greeted me with so sweet a smile that he seemed like an old friend of mine, although I just met him for the first time. While I talked, he leaned himself forward, making an effort to listen and understand my poor English. He was so zealous during the discussion that he asked me why I made such interview-surveys, and how would I analyse the qualitative factors quantitatively. It happened frequently that the interviewer was reversely asked by the interviewer. He showed keen interest in the ranking of contribution of qualitative factors to business results featured in my book "The Japanese Business Success Factors" which I had presented to him. After having understood the ranking of contribution, he answered my questions precisely and in detail one after another.

He listed up the problems of Keppel. He said that it was an old shiprepair company which has long 130 years of history. Shiprepair is a capital-intensive and at the same time, labor-intensive industry which is influenced by business cycles. Then he cited automation and the upgrading of quality of labor as the first counter-measure to the problems. To do that, the education and training of technicians had been carried out intensively. To discourage job-hopping of employees, good bonus, offers of new personal-computer or job-rotation

and many others were introduced as motivation. I was surprised to hear Mr. Sim say that since shiprepair was fundamentally a service industry, he had emphasized the upgrading of the skill of workers in order to provide a high standard of service to clients. This way of thinking is a supreme business philosophy.

He cited diversification as the second counter-measure. Keppel has already advanced into the field of real estate, leisure and finance. The profit from shiprepair has declined greatly from being the main source to about 50% of the total profit of Keppel group in recent years. He expects it to further fall to 20%~25% in the future. I was astonished at hearing that a shiprepair company like Keppel can enter the business of finance which is generally prohibited by law in Japan. This was possible of the trust given to Keppel which has done good performance for so many years and the trust for Mr. Sim himself who was a high ranking Government official. He explained that the top management was always aware of competition from foreign big companies and planned policies on a long-term basis. This is why the company is very efficient.

Indeed, Chairman Mr. Sim has a firm business philosophy that makes the company survive and grow for many more years to come. He is always having a stiff competitive attitude, taking the weakness and strength of the company into account. I was convinced that the way Keppel is becoming into a conglomerate would be a good model of restructuring for old companies in the world.

<Operating Review> Due to rationalization and cost cutting, and high levels of dock occupancy, Group revenue increased by 16%, pre-tax profit increased by six times. Mergered Singmarine is listed and its share was oversubscribed 154 times.

| | Revenue (Group) | Profit before tax |
|------|------------------------|-----------------------|
| 1983 | 666,895 (S\$ thousand) | 27,986 (S\$ thousand) |
| 1984 | 807,973 | 5,374 |
| 1985 | 616,064 | ▲49,917 |

| | | |
|---|-----------------|-------------------------------|
| 1986 | 576,285 | 7,270 |
| 1987 | 670,726 | 45,776 |
| Issued & fully paid up capital | | |
| | | 262,032 (S\$ thousand) (1987) |
| Total assets | 1,142,391 (") | |
| number of employees | 5,282 | |
| Revenue earned by employee | | 126,983S\$ |
| Total wages, salaries and related benefits paid | | 105,035 (S\$ thousand) |

A feature of the company

It is an old and big government-related company in Singapore which has been founded 130 years ago as a repairing base for the British Navy. At present, it has changed to become a conglomerate which has various industry segments, such as shiprepair & shipbuilding (39.8% in revenue), offshore & related construction (29.8%), property (4.8%), financial services (7.3%), engineering (8.6%), shipping (5.1%), others (including information technology and leisure activities) (4.7%)

<Personal history of the Chairman>

Age ; 59 years old

Educational background and business career ; Graduated from University of Malaya (Singapore) with BA in economics

1953 Joined the Civil Service

1962 Acting Permanent Secretary (Ministry of National Development)

1963 Acting Permanent Secretary (Ministry of Finance)

1966 Permanent Secretary (")

1968 Seconded to Intraco Ltd., as Chairman and Managing Director

1975 Returned to the Civil Service Permanent Secretary (Ministry of Communications)

1983 Permanent Secretary to the Public Service Division of the Ministry of Finance.

1984 Director of Keppel Corporation, Executive Chairman

In addition to his Civil Service duties, he was appointed to the Board of Directors of Various government-related companies, such as chairman of National Grain Elevator, Director of DBS Bank, Chairman of Insurance Corpora-

tion in Singapore, Chairman of Civil Aviation Authority of Singapore, etc.

Dr. Cheong, Choong Kong (Managing Director of SINGAPORE AIRLINES LIMITED)

1989. Feb. 9. at Airline Road, Singapore

Interviewers ; Ryuei Shimizu,
Hirotsugu Koike,
Jane Oh Kwee Ngor

Shimizu What is the critical problem of your company in the present and in the near future ?

Cheong The critical problem of SIA is the one on protectionism. We usually find ourselves in a position of high demand which we are unable to satisfy, because we are not allowed to put on more capacity. Even at present, along most of our routes and services, the load factors are very high and we have to turn away passengers. At the same time we are unable to get the other countries to agree to put on more capacity. So this is protectionism and that is our biggest problem.

Shimizu You mean other foreign countries' protectionism limits your company's capacity ?

Cheong We can't grow because every time we want to put on an extra frequency, we have to negotiate with the other side. And it is a long and tedious process ; sometimes we succeed and get less than we require, but sometimes we get nothing. The aviation industry is slowly liberalising, but not fast enough. Because we are not sure whether we can reach agreement to put on more capacity, it also prevents us from planning properly because you can't just put on extra frequency whenever you want to. You have to get the aircraft and the delivery time is about one and a half years. So it takes you a long time between ordering and delivery. It's not only the aircraft, you also have to plan for your manpower needs. It takes for example, about 10 years to get a cadet pilot to the stage of commander. But because you are not sure

what you will be allowed, you can't make proper plans. That is the big problem for us. So that is our number one problem. Another problem is the same problem that faces Singapore, i. e. the shortage of labour, particularly the highly skilled labour such as pilots, aircraft engineers and computer professionals. We still have a high proportion of expatriate pilots, but the whole world is short of pilots at present.

Shimizu So could you give me some figures on the ratio or proportion of the expatriate pilots ?

Cheong Of the commanders, about half are expatriates.

Shimizu How about the influence of exchange rate ?

Cheong Fluctuation of exchange rate can be a problem for us because most of our revenues are earned overseas from Japan, USA, Australia, UK etc. When these foreign currencies fluctuate, that can have significant impact on our accounting profit.

Shimizu I was surprised to know that SIA's revenue contributed about 4.1% of Singapore GDP, it is unbelievable.

Cheong Our value-added was S\$1,727 million in 1987 and the GDP was about S\$42 billion. So it is 4.1% of Singapore's GDP. Fund raising is not a problem for us at all. For the next few years, we do not see ourselves going out to seek fund for capital projects. In fact, our cash reserves exceeds our borrowing at the moment. Another problem is the cost of fuel which is uncertain. Fuel cost forms a large proportion of our total cost.

Koike Can you tell me the percentage of the fuel to the total cost ?

Cheong It changes quite rapidly, because as you know the price has been fluctuating. It was 15.9% in FY 1987/88. It used to be as high as over 30% at the peak of the oil price when oil was fetching about \$30 per barrel. It went down and stayed at around 20 percent for a while. So, protectionism is certainly the biggest problem. Fuel cost, shortage of skilled manpower and the volatility of the exchange rates, these are problems too.

Koike As for solving the problem of labour shortage, you are about to introduce so-called high-tech airplanes, but it has been delayed?

Cheong Our first B747-400 aircraft will be coming in the middle of March, provided there is no more delay. The second aircraft will be coming in the end of March. So they will be flying from April onwards. For the first few months, it will fly Singapore-Hong Kong and other short routes, because it is necessary to give our pilots some training. But the Singapore-London non-stop will start in end-May.

Koike Is SIA the first in the world to introduce the high-tech aircraft?

Cheong We are the second to take delivery of the aircraft. Northwest is the first.

Shimizu What kind of counter-measures or strategies are there to cope with the problems like protectionism, shortage of labour, etc.?

Cheong Protectionism, there is very little that we can do. It is because air service agreements are negotiated between governments and traffic rights are exchanged between governments. But of course, most governments are influenced by their national airlines. If the airlines are protectionistic, or afraid of competition, or for whatever reasons, they will try to exert pressure on their government not to exchange traffic rights. The most that we can do is just to go out and campaign for greater liberalism in the aviation industry. We ourselves set the example by letting more airlines fly to Singapore.

On the question of manpower, one way is through greater automation. But there is a limit because some of the people that we are short of are the computer professionals who make automation possible. The new aircraft, such as the B747-400, requires only 2 men in the cockpit, so we save one and that helps.

Shimizu In the case of Japan, many pilots of JAL opposed.

Cheong We have started our pilot training school. We used to send our cadets to England to get their commercial license. Then we train them

up in our simulator on various aircraft types. But now, even for that initial training, we will do it in our own school in Singapore. We have set up our own training school or training company which will offer ab initio training to our pilots.

Shimizu May I know when have you established it?

Cheong Very recently, just a month or two months ago.

Shimizu The other problems?

Cheong With the fluctuation of the exchange rate, we do a bit of hedging in the futures and option market. As for the other problem of fuel cost, there is nothing we can do. Again, we do a little bit of hedging by futures and option, but not very much.

Shimizu Do you have any problems in the internal organisation and human resources of your company which carries out the strategy? I have been interested in some evaluation and appraisal system of personnel. Please tell me about such systems in your company?

Cheong We have always placed importance in our human resources. We move our staff through various parts of the company to give them all-round exposure in the company's operations. In recent years we have been managing our human resources systematically and scientifically. For example, we have a systematic procedure for appraising staff performance. Every year, a manager has to appraise his subordinate. His subordinate will appraise his own subordinate, telling him how well he had performed, where his weaknesses are, what his strengths are, and setting out an action plan for the next year. The managers and supervisors got to tell the employees and at the end of it, there is a report form that the employees must sign. In other words, the employees acknowledge that their managers or supervisors had in fact told them about their performance. The employees either agree with their managers or supervisors, or if they do not agree, they write down their reasons and sign. So, it is a systematic and open appraisal. We have also done a job evaluation. Every job is

evaluated and a weight is given to it to measure the size of the job. We also have a system for assessing what we call the estimated potential, that is, it measures the ultimate potential of the individual. The potential of the individual is matched with the job size.

All these things are being done systematically and we hope eventually to match the salary and the job. So every job of a certain size is matched with a certain salary scale. So, the employees get paid for the job they do.

Shimizu In Japan, many Presidents said that they evaluate middle manager by a standard how they educate their good subordinates, how many good subordinates they educated or motivated. Do you evaluate by such a system?

Cheong No. On the training side, we are doing it more scientifically and systematically. Previously we had been providing training but not systematically. Now, for our senior staffs we have set up training paths. So there is a programme for every individual. From the day he joins the company to the day he leaves, at every stage of his career, he must go through a certain kind of training course. Now we are trying to extend this concept to the lower level of staff. We plan to set up our own in-house management development training school. You know our big computer center, there is a lot of land beside it which we own. The building is going to be next to that.

Shimizu We would like to know the reasons why SIA is so efficient even as a state-own company?

Cheong I think it is purely incidental that we are a state-own company. As far as I can remember, we have always managed ourselves as if we are a private company. The government has never got involved in our management. The only involvement of the government is in the negotiating process for the traffic rights.

Shimizu So, do you think in Singapore the government is less involved in the airline management than other countries?

Cheong Well, I can say definitely that in Sin-

gapore, the government is not involved at all. I do not think that it is true of other countries. A lot of examples we read about in the papers obviously showed that the government has a hand in the decision made by the company.

Shimizu What is the secret of SIA's success?

Cheong One is that we recognise we are in the service industry. From the very beginning, we have placed great value on the quality of service. Everybody in the company knows the customer is supreme. We have to provide good quality service, there is no doubt about that. That is part of our company philosophy. Everyone, as soon as they join the company knows about it.

Another reason is our attitude towards competition. We are always in favour of free competition. We have never tried to seek protection when entering competition. This is why we said any airline can fly to Singapore anytime, whenever and however they like as long as there are reciprocal rights for SIA. I think this attitude towards competition is very healthy. It keeps our employees on their toes. They always have to compete against the biggest possible competitor. Thirdly, I think, is our willingness to invest money in the future. We spend a lot of money in technology and automation. We have invested a lot of money in our hangars for example. We always insist on having the latest aircraft and keeping the fleet as young as possible which means selling the aircraft at an early age. This means that we are always modern and at the forefront of the technology. We have also invested a lot of money in computers.

Shimizu Is there any special term to describe the strategy of selling old aircrafts and buying new aircrafts?

Cheong No. It simply means the process of keeping your fleet young. Because when your fleet is young, it means several things: One, it costs less to maintain, therefore saving on maintenance cost. Two, it is more reliable, which means punctual departures for the passengers. Three, it is the latest technology which means it is most efficient.

It burns less fuel for the same distance. That again saves cost. Fourth, it is an investment because when you sell it you can get a higher price for it. The residual value is high, so it is like an investment.

Shimizu Why other airlines in the world cannot introduce that kind of strategy?

Cheong There are certain risks involved. It is a huge investment. A Boeing 747 costs over US\$ 100 million. So, first of all, there is the problem of funding. Secondly, there is an impact on your profit and loss account. The depreciation of the aircraft will depress your profit. Thirdly, there is a risk, as in all investments. If when your aircraft has to be sold to make way for the new one, and the used aircraft market is in the doldrums, you will lose.

Shimizu So the question should be raised ; why only SIA can introduce such a strategy?

Cheong Other airlines can answer that better than us.

Shimizu Introducing a new technology makes money and that money goes back to new technology. It means a good-cycle?

Cheong You can get caught. You buy so many new aircraft and if there is a recession, you must have that financial strength to tie you over a few years of excess capacity.

Shimizu In that case, many American companies stockholders always require some profit. So companies can't invest much money in high technology or aircraft. Are there any stockholders who require partially in Singapore?

Cheong We haven't that much experience. We became a public company only in 1985. I understand that you are talking about short term and long term profit objectives ; the need to get good quarterly numbers. We are not under that kind of pressure.

Shimizu So your stockholders are too weak.

Cheong So far they are quite happy. The share price has been going up and we are paying dividends.

Koike Do you have some speculation that SIA

would be listed in Tokyo or other financial centres in the world?

Cheong So far, there are no immediate plans under study. But it is a possibility.

Shimizu I know that your efficiency comes from rapid decision-making of top management. How can you make such rapid decision?

Cheong Our organisation structure is very simple. In fact, the senior management is quite flat and the span of control is quite wide. So there are not many layers of reporting. In a way, it is quite informal. Quite often, I myself, as an example, can just call an officer 3 or 4 levels under me. I don't have to go through the director or manager. It is flexible and informal.

Shimizu You call him directly?

Cheong Yes, directly. I know his name, though of course not all of them. But for the one I know, if I want to see him I don't have to bother his boss or his boss's boss and so on.

Shimizu I guess the average age of the top management is quite young?

Cheong It is getting older. It was young sometimes ago. If you look at the top dozen people in the company, the average age is 48 years.

Shimizu In Japan, average age of CEOs is 62, and average age of others executives 57. Honda is an exception where CEOs have to retire when they reach the age of 55.

Cheong The oldest among our senior management is 53. The youngest is 40.

Koike Could you explain the roles of the chairman and the managing director? Because sometimes I wonder whether it is possible for a person to hold two important posts. I'm talking about Mr. Pillay, he is also the MD of MAS (Monetary Authority of Singapore) and the Chairman of SIA.

Cheong Well, he is the MD of MAS but he has keen interest in SIA and we still need his guidance. In fact he still chairs two important committees in SIA, i. e., financial and planning committees.

Koike I understand Mr. Pillay is one of the contributors to SIA's success. Could you let us

know some other people who contribute to SIA?

Cheong Well, we all contributed, down to the lowest level.

Koike It is true that in the earlier stage, Mr. Lee Kuan Yew had asked some foreign pilots to come to Singapore?

Cheong We have been employing foreign pilots for a long time.

Shimizu Is Singapore government holding 100% of SIA share?

Cheong In the early years, yes.

Shimizu How long does it takes for gradual decrease and what is the present share of the government?

Cheong In fact, after SIA was separated from Malaysia-Singapore Airlines in 1972, 100% was owned by the government. In 1975/76, we started having a share incentive scheme for the staff. So every year the company offered shares to the staff. By 1985, just before we became a publicly listed company, the staff owned about 23% of the company shares and the government owned the rest. At present, the government owns about 56% and the staff owns about 8% of the shares.

Koike May I know the future schedule to privatise the company?

Cheong Temasek Holding has announced it is their intention to continue selling their shares in stages. But the time, sizes and prices will of course depend on the market condition and the ability of the market to digest the huge offer.

Shimizu Since government is holding 56% of the share, I suppose they have some influence to send some of the government staff to the company?

Cheong No. Even from 1972, we have been running like a private company. No government interventions had taken place at all.

Shimizu In Japan, some private companies were asked to employ some former higher rank government officers.

Cheong Even though our senior management is relatively young, they've all been very long with the company. They grew up with the company.

Shimizu So government staff cannot be introduced because the senior management is young?

Cheong No. The government has no intention to intervene in the running of the company.

Shimizu Is this an exception compared with other state-owned companies?

Cheong As far as I know, I don't think the government interferes at all. The whole idea is to privatise and operate the separate company, like a private company. I don't think we are that exceptional in Singapore.

Shimizu SIA is entering the hotel business in Singapore. Is that part of the diversification plan of SIA?

Cheong There is no diversification plan. We go into hotel business for a specific reason, that is to ensure there are enough rooms for the tourists. Because if there are not enough rooms here, the tourists might not come to Singapore. At the end, the company will suffer. This is the reason. It is not part of the master plan of diversification. We don't have such plans.

Shimizu Do you have any other diversification plans, for example leisure land or some kind of soft system engineering?

Cheong In fact, we have a 50% share in a computer software company. But we will be getting out of that business. Small thing, nothing very much. As for insurance company, we do have a subsidiary company. It's main business is with aviation. It takes our aviation insurance and also provides other insurance coverage.

Shimizu In Japan, there are legislations binding the banking or insurance companies and they are controlled by the Ministry of Finance. In Singapore, are there any such legislations regulating its financial institutes?

Cheong I'm not sure whether they would like to use the word "regulate", but MAS (Monetary Authority of Singapore) is the authority. It issues licences. There is some form of control.

Shimizu Does your company have some kind of labour unions?

Cheong We have 3 unions in the company. One for the pilots, one for the administrative level staff at the lower management level, and another one, which is the biggest one, for the rest of the staff, like clerks, officers and so on. We do have occasional disagreements with the unions. Every few years, we have to negotiate a collective agreement. But I think compared with other countries, our problems are very mild. We never have to face a strike or even a slow down. On the other hand, it's not true to say there isn't an organised labour. We do spend a lot of time negotiating with the unions.

Shimizu Is there any regulation to control the strike or disputes?

Cheong Yes. The country has an industrial arbitration act. The ministry can step in as soon as it is notified about the dispute. After that neither party can take industrial action till the issue is resolved. So it is either resolved at Ministry level through mediation or resolved in the arbitration court. So strikes are possible. In fact, last year or two years ago there was a strike in the country. But not in the airline industry.

Shimizu The last question that I would like to raise is related to World War Two. Have you been through the war? Please tell me your frank opinion of Japan?

Cheong I was born in 1941. By the time I knew what was going on, the war was over. I don't have any bitter experience.

Shimizu Thank you so much for your detailed comment.

<Comment>

As it is said that SIA is the biggest company in Singapore, whose added value amounts to 4.1% of Singapore's GDP and its quality of service is the best in the world, I have had a strong interest in its philosophy and management. Our car arrived at the gate of SIA after running for 20 minutes around Changi Airport under the shining sun. I got a permit to enter the premises after submitting my passport. It was further changed to visitor's badge at the gate of main building where SIA office is.

Judging from this stately guards, I expected a grave person to appear but I was surprised to be greeted by a smiling Dr. Cheong who said softly and politely, "Professor Shimizu, I have been waiting for you."

Managing Director Dr. Cheong is a man of scholarly type and answered my questions softly, precisely and logically one by one.

He listed up as success factors of SIA, a way of thinking that "the customer is supreme", a way of thinking to always compete against the biggest competitor, a good cycle of investment in high-tech. → profit increase → further investment in high-tech., and training, educating and evaluating employees and staff in scientific, systematic and open procedures. To my question whether the ability of top-management is a main factor or not, he replied that they have already built up a management system where personalities are not necessary. They don't print their faces in the annual report of SIA. I think, this shows his modesty not to advertize himself.

He explained problems of SIA from the view point of these factors or strength. Protectionism in many countries to hinder free competition, delays in concluding air service agreements and in decision making of strategies. The protectionism, shortage of pilots and engineers who can deal with high-tech., and fluctuation of rate of exchange and fuel prices are explained as the problems of SIA.

He is now considering bold and precise counter-measures to overcome the problems and at the same time, to strengthen its strength further. For example, the delay in concluding air service agreements caused by protectionism results in delay of planning strategies which in turn, delays the delivering of a new aircraft. So, pilots have to be trained in short time. Since the pilot training has much to do with landing and taking off, Singapore-Hongkong short route will be flown frequently at first. His way of thinking for counter-measures is surprisingly reasonable.

As mentioned above, Dr. Cheong carries out incessantly an improvement in the quality of serv-

ice to customers and scientific and systematic management for employees and staff, showing the objective of winning the global competition. I am fully convinced that his deep insight, strong power of execution, besides, his modesty not to display his ability, will let SIA grow steadily to become a leading airline company in the world, and at the same time, his philosophy and procedure of management will become one of the new models of global service industry in the future.

<Operating Review>—Passenger, cargo increasing. Cargo expected rapid increase next year. Fuel prices tend to go down. S\$ 90 million expected by selling B747-200.

| | Total revenue | Profit before tax |
|--------------------------------|----------------------|-----------------------------|
| 1983~84 | 2,974.4 (S\$million) | 127.3 (S\$million) |
| 1984~85 | 3,165.5 | 221.2 |
| 1985~86 | 3,174.6 | 311.5 |
| 1986~87 | 3,483.0 | 492.3 |
| 1987~88 | 4,010.9 | 666.5 |
| Issued & fully paid up capital | | 619.6 (S\$million) (1988.6) |
| Total assets | | 6,364.0 (") |
| Return on shareholder's funds | | 20.5% |
| Number of employees | | 10,790 |
| Revenue earned per employee | | 350,158S\$ |
| Value added per employee | | 166,895S\$ |
| | | [note] 1 S\$ = 0.5 U.S.\$. |

A feature of the company

It has continued to make the highest profit in the past since its foundation of 1973. An average growth rate of profit of all its group during the past 5 years is about 45%. Its 1,727 million of added-value is equivalent to 4.1% of GDP of Singapore. It has a high reputation for safety, cleanliness, punctuality and good service. An average age of aircrafts is 4 years old that is much younger than the average age of aircrafts of airlines which join IATA.

<A Personal History of the Managing Director>

Dr. Cheong was born in Malaysia in 1941. He joined Singapore Airlines in 1974 and served in a variety of functions—Personnel, Marketing, Planning and Management Services—before becoming Managing Director of SIA in August 1984.

Dr. Cheong holds a PhD in Mathematics from the Australian National University in Canberra. Before joining

SIA, he was an Associate Professor of Mathematics at the University of Malaya, where he lectured for 6 years.