第２セッション 発展格差問題

Widening Development Gap in Asia

Papers & PPT
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第 2 セッション
発展格差問題　Widening Development Gap in Asia

セッションチェア
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第 2 セッションは GIARI のメンバーでもあります、私、深川が浦田先生に続きましてチェアを務めさせていただきます。

第 2 セッションのテーマは「発展の格差」という問題です。第 1 セッションでは主として経済統合全体に関する話が様々な角度からなされていたわけですけれども、このセッションでは内部の問題について考えていきます。東アジアの中にも後発国の問題がありますし、中国のように巨大な国の場合には、国の中にも経済統合をしていくのは結構だけれども、勝ち組と負け組が出るようなことは困るということがあるように思います。そこで、そうした問題に焦点を当てまして討論を進めていきたいと思います。

最初のご報告者は「発展格差の縮小へ向けた人材育成における地域協力の役割」をテーマに、インドネシア国際戦略研究所でシニアエコノミストを務められていますシマンジュンタク（Simandjuntak）先生にお願いいたします。今聞いていらっしゃる方、通訳機日本語はチャネル 1、英語チャネル 2 となっておりますのでよろしくお願いします。それからプレゼンターの方、セッション 1 と同じに 20 分間でプレゼンテーションをお願いします。討論者は 10 分以内で終えていただきたいと思います。それではよろしくお願いいたします。

【報告】

Development Gaps in ASEAN and East Asia: A Human Capital Perspective [1)]

「発展格差の縮小へ向けた人材育成における地域協力の役割」

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Statistically, development gap is a perpetual feature of economies or parts thereof that co-evolve together like the East Asian economies. It has been investigated very intensively using different perspectives. It may just be an unavoidable phenomenon in the transition to the steady state income as countries at different demographic stages seek to grow while saving differently. Certain elements of culture such as a more secular view of the world, thrift as a life's call, and receptiveness to ideas of foreign origin may explain part, but not the entirety of gap between economies. The "Bell-Curvists" like Richard Lynn who tend to squeeze life's phenomena into the "Bell Curve" of distribution even attribute economic gap to genetically inherited general intelligence quotient. Even luck may have played a role in economic development. Adam Smith considered colonization a misfortune for the colonies.

This paper is an attempt to look at development gap in East Asia from human capital perspective. It, too, can never be an exhaustive explanation. Knowledge is never complete as Kurt Goedel once said. Nevertheless, the human capital perspective seems to have gained a large followership in politics, academia and business. There is in fact a danger that people look at human capital as development mantra, overlooking the fact that producing something, tangible or intangible, requires a set of inputs and processes of which human capital and its deployment are only part. The concept of human capital as it is used in this paper is broadened to include health and entrepreneurship in addition to educational attainment, which in the economic literature is placed as core. Sequentially the extent of the gap in general, the health gap, the education gap, the entrepreneurship gap and implications for co-operation in East Asia will be discussed. This purely qualitative paper is expected to amplify interests among scholars and policy makers in human capital formation not only as a highly rewarding use of limited

[1)] The original version of this paper was prepared for the Expert Study Group on Comprehensive Economic Partnership in East Asia (CEPEA).

resources as demonstrated by developed economies of East Asia, but also as a realistic option in the attempt of lagging economies to catch up with the leading ones.

The Human Resource Divides in East Asia

East Asia Summit (EAS) Countries of the early 2000s are faced with stark contrasts despite some signs of convergence and multiple initiatives on an accelerating catching up. The sticky gap is well known to politicians and scholars. National, regional and global rounds of poverty eradication program have been launched in over 60 years after World War II. Narrowing the gap between developed countries and developing ones has indeed been made an element in almost all agendas of international relations, including global and regional trade agreements. The paradigm evolves continuously. There were times when priority was attached to meeting basic needs. A different approach was launched in the late 1960s under the heading of "development through trade" where manufactures originating in developing countries are granted easier access in developed countries' markets. The story of the East Asian success is to a large extent one of preferential trade opening which in due course of time triggers a large-scale manufacturing relocation to the developing East Asia.

Old paradigms of cooperation may be reinvented or new ones my even emerge. However, development catching up will remain probabilistic. It takes huge efforts under a favorable external environment for a catching up strategy to work sustainably. Whatever the approach is called its success depends crucially on the human capital edge that the catching up countries is capable to harness. Whether one talks about cooperation, facilitation or liberalization the centrality of human capital accumulation as prerequisite of success is well acknowledged. In all walks of life champions are successful accumulators of human capital. What is more human capital is apparently the most durable form of capital. Its cross-border flows leave a lasting footprint of people-to-people connection. Unlike gold human capital is more difficult to misappropriate. Benefits of a rising stock of human capital is spread very widely unlike those of a physical building that owner can internalize completely. Human resources development or human capital accumulation is, therefore, a very promising field for inter-governmental co-operation and has, in fact, occupied a very high rank in the priorities of development co-operation.

The development gap that separates the 16 countries in the East Asia Summit from one another is well known. In terms of per capita GDP in 2007 international PPP dollar Brunei Darussalam, Singapore, Australia, Japan, New Zealand and Republic of Korea form a small club of countries with per capita GDP ranging from $ 24801 in the

Republic of Korea to $ 50199 in Brunei Darussalam. These high-income countries account for only 6.4 percent of the total population of the EAS area. Malaysia can be grouped as a middle-income economy, but add only another 1 percent in terms of population. The rest of EAS economies have to struggle with a per capita income, which is lower than world average. Furthermore, the gap that separate Japan as the richest populous economy within EAS area with a per capita GDP of $ 33632 from China, India and Indonesia with a per capita GDP below world average but together account for 83 percent of EAS population is truly enormous. Issues of development gap are aggravated by an even lower output in Lao, PDR, Cambodia and Myanmar and apparent entrapment of Myanmar in stagnant development, however difficult it is to judge on Myanmar's development given the lack of recent indicators. Under such a deep gap one has to stretch every imagination to arrive at agreements that are perceived to be of mutual benefits for both ends of the spectrum.

The proposed tripod of Comprehensive Economic Partnership in East Asia (CEPEA) looks to fit well with the prevailing circumstances in EAS countries in that cooperation is attached at least the same importance as integration. Unfortunately, proposing a binding commitment in co-operation is far less straightforward than it is for integration. First of all, the enormity of development issues makes any co-operation initiative look like a drop in vast ocean. It is perhaps the perceived limited benefits that discourage governments from pursuing speedy implementation of the numerous cooperation agreements between ASEAN and the rest of the world, particularly its external dialogue partners. Secondly, co-operation requires in most cases funding commitment which governments prefer to make on a bilateral basis rather than regionally. Thirdly, EAS countries are faced with a huge imbalance in terms of potential to contribute to the financing of cooperation in spite of the rapid speed at which China, India, ASEAN-4 and Vietnam are catching up. Designing co-operation under such circumstances is a herculean job. Yet, experiences with regional and sector cooperation under the umbrella of the European Communities, later European Union, indicate that acceleration of catching is probable under a proper mix of co-operation, integration and facilitation.

Enhancing productive capacity rather than artificially raising consumption has been accepted as the core principles of good co-operation. The core element of productive capacity is, in turn, human capital understood as the net present value of income that people, individually and as collective, can generate throughout their productive life, net of natural resources depletion and consumption of produced physical capital. In a study on the wealth of nations the World Bank arrives at some interesting figures. The gap that

one sees in income is generally found in wealth. Within EAS countries per capita wealth is highest in Japan at PPP $ 493241 in 2000 before Australia at $ 371071, and Singapore $ 252607. In the middle we have Malaysia and Thailand with per capita wealth of $ 46687 and $ 35854 respectively and at the lower end Indonesia at $ 13869, China $ 9387 and India $ 6820. Figures are not available for CLMV. The composition of per capita wealth shifts in favor of intangible capital, the residue after natural capital and produced capital, as income rises. Intangible capital comprises 77.8 percent of Australia's per capita wealth, 69.2 percent of Japan's wealth, but only 57.8 percent of Indonesia's wealth, 54.8 percent of India's wealth and 44.8 percent of China's wealth. Intangible capital can take different forms such as patents, trade mark, and copy rights. Its main ingredient is human creativity and innovativeness. Co-operation under EAS initiatives should, therefore, be centered on human capital formation and accumulation. Yet, human resources development is an immense field, spread all over walks of life, all spatial units and all stages of the human life cycle.

Human capital of a country can be gauged with the help of three groups of indicators: health, educational attainment, and entrepreneurship, the last group being a proxy for the use of knowledge and skills. If the relation between population and human resources is linear EAS countries would by far be the richest in the world. Apparently, the relation is anything but linear. Which element should be discussed first is also akin to chicken or egg. Health is an input to education in as far as it affects human accomplishments in education. On the other hand, the health of an unborn baby is partly dependent on the education of the mother. In the section that follows health is discussed first before education and entrepreneurship.

The Health Capital

One of the most comprehensive yardsticks of health is life expectancy at birth. Longer life can be understood to mean longer working life. On this score EAS countries are led by Japan with 83 years, followed by Australia with 82, New Zealand and Singapore with 80 each and South Korea with 79. In the middle there live Chinese, Malaysians, Thais, Vietnamese, the Filipinos and Indonesians with life expectancy ranging from 68 in Indonesia to 73 in China. Indians, Cambodians, Laotians and Burmese live significantly shorter, namely closer to 60 years. Life expectancy is usually positively related with health. Longer life expectancy is a logical consequence of improving health. However, life expectancy can be adjusted with health to arrive at Health Adjusted Life Expectancy (HALE). It roughly tells how long people live a healthy life. On this score

the top 5 within EAS area is occupied by Japan at 75, Australia 73, New Zealand 71, Singapore 70 and South Korea at 68. The middle group consists of Chinese at 64, Malaysians at 63, Vietnamese at 61, Thais at 60, Philippines at 59 and Indonesians at 58. Health-adjusted life expectancy is only 53 years for Indians, 52 years for Burmese, 48 years for Cambodians and 47 years for Laotians. Years of life can be lost because of premature death and burden of diseases. Put together they are converted into DALYs (Disability Adjusted Life Years). DALYs are as long as 0.4 per population of Lao, PDR in 2002, 0.38 for Cambodia, 0.3 for Myanmar, and 0.29 for India. Indonesia and China suffer from DALYs of 0.21 and 0.15 per population respectively, but the healthiest countries of Japan and Australia lost only 0.1 and 0.11 per population. Both numbers of HALE and DALYs tell about losses of life expectancy. Compiled mainly from WHO, UNESCO, ILO and to a lesser extent national statistical offices selected indicators of health, education and entrepreneurship are reproduced in Appendix Table.

Interpreting differences in life expectancy, HALE and DALYs is difficult. What is it that one can say in economic terms about the longer HALE of the Japanese than that of the rest of East Asians? Given Indian population of 1124787 thousands, the Japanese's HALE of 75 and Indian's HALE of 53 and an implicit foregone HALE of 24.7 billion, can something meaningful be squeezed out these numbers? The optimal length of life is largely unknown. Relatives of an aged human being are usually willing to pay a large sum money for the latest medical technology. There must have been strong evolutionary reasons for such behavior. If what counts in life is the share in the gene pool as argued by some geneticists, and if that share depends on fitness or probability of reproducing successfully, living longer beyond reproduction age may not be the best strategy to maximize share in the gene pool. Be it as it may, the rise in life expectancy from around thirty at the start of Current Era to over eighty in the case of the Japanese in early 21st century is widely considered one of the greatest human accomplishments. It is possible to statistically attach a pecuniary value to human life. One can multiply length of life with the Statistical Value of Life (SVL) which can be gauged on the basis of the amount of money that a person is willing to pay for an extension of life by one unit of time as it is implicitly done in insurance, to obtain an estimate on the total value of a population.

Longer HALE does indicate the competitiveness of a country to provide for its people the tangible and intangible ingredients of a healthy life. The ingredients are extremely manifold and relate to one another in intricate ways. The tangible ingredients start with the living environment, housing, access to treated water, excretion facility, genetic distance between husband and wife, maternal nutrition during pregnancy, child nutrition,

access to vaccines and vitamins, access to social amenities, including sport facilities, access to health facilities in times of sickness and a lot of other ingredients that get more diversified as one climbs up the life cycle. On the other hand the intake of certain ingredients beyond a certain quantity affects health in a harmful way. Tobacco is connected with diverse diseases and is even called a time bomb in a 2008 study by the World Bank. Its incidence tends to decline with per capita income. EAS countries are home to most active consumers of tobacco. Other health-phobic substances include alcohol, excessive fat, and abused narcotics. Physiological capital of a person such as body-mass index, height and physical dexterity depends to an important degree on the intake of tangible ingredients. Educational attainment has been found, for instance, to be positively related with body weight at the time of birth. Under weight is statistically correlated with lower attainment.

A myriad of intangible ingredients go to HALE. Life style is one of the most generic among them. The intake of health-phobic substances is part of life style, which in turn is at least partially affected by government policies. Dependence on tobacco excise revenue is often time quoted to defend a very puzzling policy of compulsory statement on the harmful effects of tobacco and alcohol on the one hand and toleration of extensive emotional advertisement on public properties such as busy intersections and government-sanctioned sport events. Education is undoubtedly a very important ingredient to health. The educational attainment of a mother is bound to affect the health of her descendents for a very long time. Health literacy is a very important element of inputs to health and should be sought at the earliest stages of the life cycle.

The health gap as reflected in HALE or DALYs of East Asians can further be broken down to more varied indicators such as access to piped water, education of mothers in the fertile cohorts, early births, underweight at birth, births attended by medical professionals, infant mortality, incidence of malnutrition, health facilities per population and areas, medical doctors and nurses per population and many other indicators. The wide gap that one finds in HALE and DALYs is also reflected in health ingredients. The pattern is more or less straight forward. Poor countries fare poorly in terms of HALE, DALYs and other health indicators.

The following is just an illustration of the gap in health inputs in the period of 2004-2006. Access to improved water sources is universal in Australia, Japan, Singapore and over 90% in Malaysia, Thailand, the Philippines and Vietnam but is only 65% in Cambodia and even 60% in Lao, PDR. Likewise, access to improved sanitation

is universal in Australia, Japan and Singapore, but only 48% in Lao, PDR, and 28% in Cambodia and India respectively. Life expectancy at birth ranges from 60 in Lao, PDR to 83 in Japan, a difference of 23 years. Only 3 out of 1000 births in Singapore, 4 in Japan, 5 in Australia, Republic of Korea and New Zealand die in infancy, but 79 in Lao, PDR, 74 in Myanmar, 65 in Cambodia and 57 in India. Children failing to survive 5th life's year are as many as 121 out of every thousand in Lao, PDR, 103 in Myanmar, 89 in India and 82 in Cambodia, but only 3 in Singapore, 4 in Japan, 5 in Republic of Korea, and 6 in Australia and New Zealand. In the age of 5 or less over 40% of children are stunted in Lao, PDR, India, Myanmar and Cambodia.

Given the severe gap health improvement should have been given a strong and durable push in severely lagging countries. There are signs that health is being elevated to higher rank in household and government expenditures. Lao, PDR and Cambodia spent on health in 2005 no less than 3.6% and 6.4% of GDP. However, health is relatively sticky as an issue of development. Catching up at a rapid rate is improbable in health. For obscured reasons people spend more on health as they get richer. New Zealand spends 8.9%, Australia 8.8% and Japan 8.2% on health in 2005. Resource availability cannot be the entire explanation for such a positive relation between income and health. Equally puzzling is government inclination to spend on health in that their commitment to health is positively related to per capita income and health status. Government shares in total health expenditures are as high as 82.2% in Japan, 77% in New Zealand, 64% in Thailand and 53% in Republic of Korea, but only 24% in Cambodia, 21% in Lao, PDR, and 10.6% in Myanmar. Health accounts for 18% of total government expenditures in New Zealand, 17.8% in Japan and 17% in Australia, but only 4.1% in Lao, PDR, and 1.1% in Myanmar.

Health can perhaps be called the prime element of human capital. Before the arrival of culture health as reflected in physiological capital is the currency of survival. More healthy members of a group secure a better access to mating and reproduction than less healthy ones. While culture such as philanthropy, altruism, co-operation and medical technologies has immensely reduced the limiting impacts of physical disabilities some elements of intangible capital, such as schooling-based knowledge and skills, have remained more accessible with better health. Access to employment is usually made conditional on health such as height, body-mass index, color blindness, and freedom from certain diseases. On the other hand, nurtured competencies have greatly gained in importance as the knowledge intensity of life in general and its science intensity in particular are rising. Proper education and training can compensate for a lot of

shortcomings that stem from physical conditions.

Ideally speaking educational attainment should be measured in terms of literacy or mastery of general and scientific knowledge, hard skills and soft skills. However, statistics on the mastery of knowledge and skills are available only very partially and in scattered forms. For practical purposes other indicators are more accessible.

The East Asian stories about human resources development are mixed. Long ago, East Asia was said to suffer from over population that hinders the progression to higher per capita income. While perception about East Asian population has changed some difficult issues persist. The share of EAS countries in world population will remain very high in 2020 at 47%. Of the latter 87% agglomerate in China and India and another 14% in the next three most populous countries of Indonesia, Japan and the Philippines. The other 11 countries share only 9% of the region's population. The picture of world labor force looks similar. The share of EAS countries in world population in the cohorts of 15 years and over will remain high at 49.7% in 2020 down only slightly from 50.3% in 2010. Of the nearly 405 million addition to world population in the group of 15 years and older between 2010 and 2020, 40 percent will come from EAS countries. Of the increase in EAS countries almost 73 percent will be Chinese, Indians and Indonesians. Large population number does signal survival advantage of a group such as ability to feed members. On the other hand large population poses some difficult problems in an increasingly science-driven world. Enormous resources will have to be invested in education, health and entrepreneurship to enable large population to compete successfully.

Literacy and Educational Attainment

Information on education is available from myriad of sources. UNESCO maintains a large-scale online database. Education is also reported by the International Labor Office for labor force and by World Health Organization in relation to the impacts of parent education on child health. World Bank's Development Indicators also include some series on educational attainment and educational resources. Needless to say, National Bureaus of Statistics compile extensive data on education. However, not all series are available for the sixteen EAS countries. Statistics are also hard to compare. One year of schooling may mean different length in terms of hours of teaching or amount of resources spent. Some figures look suspiciously small or big. Caution is therefore needed in interpreting educational statistics.

Imbalance is unmistakable in the human capital of EAS countries. Some countries are known for their very strong propensity to invest in education. They include Japan, Republic of Korea, Singapore, Australia, New Zealand and Malaysia. Others are yet to earn such reputation. East Asian good record in education is well known. However, enormous challenges still lie ahead. School life expectancy from primary to tertiary education is highest in Australia at 20.5 followed by New Zealand at 19.5, Republic of Korea 16.6, Japan 15 and Brunei Darussalam at 14. In the middle one finds Indonesia at 11.6, the Philippines at 11.8 and China 11.2. Despite a strong reputation as investor in education school life expectancy from primary to tertiary is lower in India at 10. Lao, PDR ranks lowest within EAS countries at 9.2. The gap is also reflected in enrollment in secondary and tertiary education. Republic of Korea and New Zealand rank highest in terms of tertiary enrollment at 93% and 80% respectively ahead of Australia at 73%, Japan 57%, Thailand 50%, the Philippines 28% and China 22%. India and Indonesia lag at a distance with a ratio of 17% and 12% respectively. Cambodia with 5 percent and Lao, PDR at 9% lag farthest behind.

The countries of EAS differ starkly in terms of inputs dedicated to education. Expenditures on educational institutions as fraction of GDP ranges from as low as 1.5% for Indonesia (this number looks suspiciously low) to 7.2% for the Republic of Korea, the highest among EAS countries. Apparently East Asians value education differently. Involvement in financing educational expenditures also differs starkly among governments in the regions. Governments of OECD members in the region shoulder over 70 percent of total expenditures on educational institutions. In the case of New Zealand the share of government in educational expenditure is even higher at almost 81 percent. On the other hand government shares in educational expenditures is moderately lower in Indonesia at 64.3 percent or even lower in the Republic of Korea at 60.5 percent, revealing that the reputation of South Korea as champion of education is attributable to households endeavors to a greater extent than it is in the rest of EAS countries. Expressed as the ratio of expenditure on educational institutions from primary to tertiary institutions to per capita GDP, both in US PPP dollars, average propensity to invest in education is highest in the Republic of Korea at 0.29, followed by Japan at 0.28, Australia at 0.26, Malaysia and New Zealand at 0.25 and India at 0.22. Among the countries of EAS Indonesia shows the weakest average propensity at 0.06, putting aside countries for which data is not available. How should one comment on the statistical fact that expenditure per student in Indonesia in 2003 of PPP US $220 is only 2.7 percent of Japan? Under such circumstances catching up is only an illusion.

The same dollar is deployed differently in in education in EAS countries. In Australia, India and the Philippines expenditure per student is mostly routine in nature. Capital expenditure accounts for only 0.8 percent of total per student expenditure in India, 2.3 percent in the Philippines and 9.1 percent in Australia. On the other hand Indonesia spends 10 percent, Japan 15 percent and South Korea 19% on capital expenditure. Under routine expenditure compensation of teachers and other staffs constitute the lion share in most countries. However, the structure of routine expenditures is by no means uniform across borders. In the case Australia, Japan, South Korea and Malaysia a sizable proportion is left to cover other routine expenditures other than compensation of teachers and other staffs. The proportion ranges from 39 percent in Japan to 53 percent in Malaysia. It is puzzlingly low at 1 percent in the case of Indonesia. What teachers and other staffs can accomplish with trivial routine expenditure is one question that needs further exploration.

Ability of educational institutions to attract talents, develop and maintain them determines to an important degree the quality of education. Admittedly, every student brings to the learning process certain traits that are given to educational institutions such as intelligence, health and family background as discussed for instance in Charles Murray's controversial *The Bell Curves.* What teachers can do is to add to the pre-school capital the magnitude of which remains a matter of heated disputes. However, arguing that the addition is related positively with qualification and motivation of teachers does sound plausible. Some teachers may choose teaching profession as a call. However, a minimum level of compensation is required to make educational institutions competitive vis-à-vis other employers while competing for superior talents. On this score EAS countries generally offers attractive compensation. Entry salary in primary educational institutions as percentages of per capita GDP is almost 400 in India, 184 in the Philippines, 146 in South Korea and 100 in Australia. Such progressive level must have allowed institutions to set demanding standards for teaching profession. The percentages are lower at 88 in Japan, 82 in Malaysia, 77 in New Zealand and lowest at 72 in Indonesia. The picture looks similar for top salary. India ranks highest with a top-salary to per capita GDP ratio of 615 percent, followed by South Korea at 400 percent, the Philippines at 219%, Japan 211 percent, and Malaysia at 183%. Again Indonesia occupies a low rank at 104 percent.

Educational attainments are more directly linked than educational inputs to economic development and other processes that one wishes to accelerate with the help of education. Unfortunately measuring attainments is formidably difficult. How does one

compare 25 years of experience without schooling with 19 years of experience with 6 years of schooling? How does one compare as element of human capital three years of schooling in mechanical engineering with the same length of schooling in fishery or even political science? Assigning different weights to different levels of education or using earning differential between different levels of schooling does help as attempted in many studies. However, the problem of measurement remains very complex. Educational institutions do have the tradition to require students to go through exams and to cumulative record grade point average, but testing the latter's correlation with creative, productive and entrepreneurial accomplishments is rarely performed. Though advances in ICT may one day allow a real-time accounting of the stock and changes in human capital due to schooling such approach is a remote possibility for the time being and may not be the best way to proceed.

UNESCO does report on educational attainment. Within EAS countries children reaching Grade 5 have reached 100 percent in Japan, almost 100% in Australia, Malaysia, Republic of Korea and Brunei Darussalam, 92% in Vietnam, 86 percent in China and almost 80 percent in Indonesia and 73 percent in India. Cambodia and Lao, PDR lag far behind with a ratio of 62 percent respectively. Upper secondary graduates as percentage of their cohort have approached 70 in Australia and Japan, exceeding OECD average of 59. Republic of Korea, the Philippines and Thailand are not far behind Australia and Japan, but China, India and Indonesia, the three most populous countries of EAS, do lag far behind with ratios of between 21 and 28. Attainment in tertiary education is highest in New Zealand where tertiary graduates make up 72 percent of relevant cohort compared to 61% in Japan, 59% in Australia, 42% in Malaysia, 40 percent in Thailand, 26% in China and 16% in Indonesia. A more comprehensive picture can be gained from ILO's labor statistics. For every 1000 population in the cohorts of 25-64 years 400 have completed tertiary education in Japan, 317 in Australia, 273 in the Philippines, 135 in Korea and a small 49 in Indonesia. Unfortunately, numbers are not available for the two most populous countries of China and India as well as for CLMV.

The Use of Health and Educational Attainment: Entrepreneurship

The last element of human capital on which the economic status of a person and community of persons greatly depends is entrepreneurship. Health, knowledge and skills get productive only when exercised or used as underlined more than half a century ago by Friedrich von Hayek in his now classic piece titled "The Use of Knowledge in

Society". Entrepreneurship is needed to reproduce a useful product using existing knowledge like making cars out of the same technologies or millions of tons of soap using a single formula. This type of entrepreneurship is called "economizing spirit" by Israel Kirzner. A different kind of entrepreneurship is indispensable to harness new scientific discoveries such as the science of stem cell for productive purposes. Indeed, it is probably also entrepreneurship of non-commercial kinds that allow scientists to venture into new paradigms, sometimes at the cost of being condemned as heretics, or politicians to migrate from monarchy to democracy and from totalitarianism to pluralism.

Much has been written on entrepreneurship, mostly in association with capitalist systems. Some trace it back to cultural background or particular changes in it. Unfortunately, something similar to a black box is found in the properties that are understood as ingredients of entrepreneurship. The view that entrepreneurship is largely born rather than acquired and nurtured has largely discouraged empirical studies on entrepreneurship. The fact that entrepreneurs make up only a very small fraction of working population is widely swallowed as fact. The imbalance of wealth that in the long progression of time turns in favor of entrepreneurs has been exploited often time for political purposes, particularly in countries where the small class of entrepreneurs happens to consist almost entirely of immigrant citizens like the ethnic Chinese in Indonesia and seemingly also in the rest of Southeast Asia. Policy on entrepreneurship development is largely reduced to affirmative action in favor of groups that are perceived to have been disadvantaged like the "Bumiputra" in Malaysia and poorly defined "indigenous population" in Indonesia. Such pragmatism may have helped enlarge the population of entrepreneurs in some places, but as far as Indonesia is concerned the result has been too meager to justify the distortions that come along with sporadic affirmative action.

The fact that entrepreneur population differs across nations indicate that entrepreneurs can perform differently under different policy settings. Market is a more promising hatchery for entrepreneurs than government intervention, though reality is a mixture of the two. A certain level of regulatory certainty is conducive to entrepreneurship, though not a complete certainty. Policy transparency is good for entrepreneurship, but there is no money to be made under perfect information. Intellectual properties serve as a strong incentive for innovative and creative works, but progress would have been unlikely or at least turned much slower if everything is protected under intellectual property rights. Positive inclination toward wealth accumulation is likely to encourage people to

accumulate wealth, but culture that is unrestrictedly permissive to greedy undertaking is likely to turn counterproductive. Fair access to finance is stimulating to enterprise establishment, but financial egalitarianism of the extreme sort would prevent the flow of financial resources to most businesses that serve as backbone of contemporary civilization. To ascertain the degrees of mixtures in the entrepreneurship environment that tends to work best empirical extensive testing is needed. Good entrepreneurship policy is only possible, if it is based on such findings. The alternative is the current practice in most countries where people of talents are expected to respond to stimuli that are implied in open market-friendly policies that governments across the five continents seek to establish in the last quarter of a century or so.

Realizing the importance of entrepreneurship to sustainable development the OECD launched in late 2006 its Entrepreneurship Indicators Program following a feasibility study in 2005, the latter under the sponsorship of the Kauffman Foundation. The program seeks to develop indicators for entrepreneurship determinants, entrepreneurial performance and entrepreneurial impacts. The countries covered are limited to OECD members. Entrepreneurship performance is measured in terms of firm-based indicators: employer firm birth rate, employer firm death rate, business churn, net business population growth, survival rate at 3 and 5 years and proportion of 3 and 5 years survival; employment-based indicators: high-growth firm rate by employment, gazelle rate by employment, ownership rate start-ups, ownership rate business population, employment in 3 and 5 years old firms, average firm size after 3 and 5 years; and other that includes high-growth firm by turnover and gazelle rate by turnover. The findings show that entrepreneurship activities have been most active in the transition economies of East Europe where birth rates and one year survival rates are highest in contrast to Italy and the Netherlands where they tend to be low.

National bureau of statistics of EAS countries do extensively collect statistics that one can use as indicators of entrepreneurship. The last column of the Appendix Table shows that the number of employers as percentage of working population differs across the eleven countries for which data is available. The most entrepreneurial in EAS are obviously the Koreans. Seventy three out of every thousand working Koreans are employer against 26 Japanese, 31 Australians, 33 Indonesians, 34 Malaysians and 65 New Zealanders. Digging deeper into enterprise statistics and labor statistics would undoubtedly allow the measurement of entrepreneurship in EAS countries, but requires formidable statistical works. The variation between countries suggests that EAS countries, too, are open to entrepreneurship promotion under a well-designed policy.

Countries may not be as helpless as they are generally believed to be while confronted with the realities of scare entrepreneur. Needless to say, in a region where commercial life is getting linked more and more closely across borders cross-border initiatives on entrepreneurship appear to make sense.

Room for East Asian Co-Operation

Each of the three elements of human capital has been discussed. Putting them together is even more daunting. A very well educated worker will produce little, if afflicted with severe illness that translates into large DALYs. A healthy worker with low educational attainment is also bound to produce less than a similarly healthy worker with a better education, considering that educational attainment extends productive capacity through the use of tools. A worker with excellent health, excellent education and strong entrepreneurship is likely to produce the most, but the differential productivity is hard to gauge. Writing concisely $\mathbf{K_h} = A\ H^h\ E^e\ U^u$ where $\mathbf{K_h}$ means human capital**, H** health capital and **U** entrepreneurship leaves some very important questions unanswered, notably the exponents that one should assigned to each of the three elements. Supposing that human capital is a product of the three elements rather than their simple addition one can easily see how differential in just one of them would separate countries far and wide within a relatively short period in terms of human capital stock. We see such separation happening in East Asia when Japan pulled ahead before World War Two, Korea, Singapore and Chinese Taipei in the last 40 years, and a similar process is currently in the making in China and hopefully also in other EAS countries.

Catching up of the narrowing of inter-country development gap is primarily a national affair. The successive rise of Japan, Republic of Korea, Chinese Taipei, Singapore, Hong Kong China SAR earlier years and the rise of China in recent past clearly indicate that a successful catching up is primarily the outcome of a national endeavor. Before the financial crisis of 1997-1998 it was in fact a habit among East Asians to encourage developing economies of the region to learn from the experiences of the more developed economies. Formal regional integration and co-operation have not been an important ingredient of the success attained by these economies, however helpful regional stability may have been to such progression to higher stages of development. Notwithstanding the proliferation of regional and sub-regional integration and co-operation in East Asia, positive catching up will continue to rely much more on national initiatives than regional initiatives. However, regional co-operation should not be narrowly seen as a strategy of benefaction to lure the participation of poorer

economies. It can accelerate regional integration wherein division of labor as the most important source of growth can thrive quicker than otherwise would be the case.

Regional co-operation in human resources is as old as the co-operation itself. In fact under the UN institutions regional co-operation was maintained even during the period of cold-war hostilities. Since the inception of the ASEAN external dialogues East Asian co-operation has branched into a very complex web. Targeted predominantly at official institutions with a view to improving their capacity the cooperation is spread across a very wide range of sectors and issues. In the vastness of ASEAN-centered cooperation some weak points are apparent. While comprehensive review is missing co-operation agreements are generally perceived to have progressed at slow speed as far as implementation is concerned while new agreements keep piling up. Most of the initiatives are bilateral and sub-regional at best, involving one or more countries of ASEAN on the one hand and a particular dialogue partner on the other. This preference for bilateral co-operation is by no means anomalously East Asian. It is among the core features of cross-border development co-operation across continents. Assuming a good coordination such bilateral cooperation can serve as regional binding ties, but needs undoubtedly complementary regional initiatives to be able to serve as durable binding tie. Greater impacts can be produced, if governments can pool their co-operation resources, which individually may look like a drop in the vast ocean.

It has been a cliché to say that co-operation should primarily aim at creating capacity rather than accessing consumables – fishing net or better capacity to make net rather than fish – or that it should be future oriented rather than shortsighted. Yet, parties to regional co-operation are well advised to reflect on their records on cooperation, asking among others the question on the extent to which completed projects and programs improve the ability of beneficiaries to face up future development challenges.

Closing the human resources gap between members of EAS as discussed in respect of the three basic elements is a herculean challenge. Yet, changing global and regional environments are sure to make it even more formidable. Elsewhere in countless of reports and analyses it has been said that the world and its inhabitants are entering a new chapter of evolution. Natural forests, mangrove forests, coral reefs disappear at a dangerous rate of depletion. Desertification exacerbates ceaselessly. The seas are overfished and fishermen are getting less choosy in respects of their catches. To move a motorized civilization centered round internal combustion in mining sites, factories, farms, leisure centers, on the roads, in the air, at homes and in offices billions of tons of

fossil fuels are burned every year. The ease at which people around the globe can now communicate with another at an instant and at asymptotically declining cost may have burdened the life of some species such as the bees which may have found it more and more difficult to get home from their work places under the confusing telecommunication signals. Many islands in the world's largest archipelago, the hatchery of many marine species, are projected to disappear in the wake of rising sea surface as global warming deteriorates. Soil is getting thinner and as are water tables. Some gases are said to escape the atmosphere at an accelerated rate because of the warming. Fresh water, energy, food crises have become a recurring feature of the world economy. Humans are likely to survive in the "Red-Queen games" or doing the running and staying at the same level of fitness by stretching their creative and innovative capacities, at least for a little more while. Indeed, the geologically little time still looks very long in Gregorian calendar, obscuring the detrimental impacts to non-scientists that make up the bulk of the human race. Considering the positive feedback entailed in the ongoing environmental changes the time seems to have really come for them to think anew, to switch to a new path of development. Admittedly, such warnings are often time ridiculed as just another apocalyptic prophecy, which by default unleashes a new wave of human ingenious responses. However, there is no harm in shifting to a lifestyle that is less resource-intensive than the current dominant style, yet promises better quality of life at the same time. A case in point is electricity which may be cut tremendously with the help of better technologies without sacrificing comfort.

Preceding discussions are basically verbal in nature. Extensive works on health and education statistics cannot obscure the problems that arise from incompleteness, discontinuity of series and limited comparability across borders, however helpful existing statistics may have been for the purpose of rough estimates. These statistical problems point out to one area of co-operation that looks trivial at first glance but indispensable for human resources co-operation. It borders at frustration to keep missing parts of statistical series or cross section. Yet, statistics are compiled for a certain purpose. In an integrated world comparability of statistics is crucial to the merits of gathering them. More importantly, statistics are compiled to allow model testing which in turn can greatly aid policy making and implementation. Policy study and related activities should therefore be attached a high priority in EAS co-operation. Such co-operation promises high benefits at relatively low costs, accessible to all members, and non-controversial politically. In the absence of reliable and current statistics and well-tested models policy makers would have to be groping in the dark, leaving success largely to chances. The call for an OECD-type of institution in EAS context is, therefore,

a valid one. Improving an information base is a condition sine qua non of an informed decision on co-operation involving countries that house almost half of the world's population. Areas where it is badly needed extend far beyond human resources. Whether the institution is a new establishment or an existing institution converted as necessary is a question of secondary importance.

OECD-type of co-operation is complex and highly attractive to scholars but not necessarily to politicians who are fond of to show tangible results to their constituents. The ongoing projects and programs in East Asian co-operation, particularly the ones involving ASEAN as a group should be managed better to produce such results, however unspectacular each of them may be. EAS may consider stepping forward by pooling resources to acquire and update capacity in new technologies that are of crucial importance to the daily life of East Asians. Promising areas abound. They include crop diversification, seed improvement and soil conservation in agriculture, transformation of marine fishery from hunting to aquaculture of a large scale, reforestation based on fast-growing species, alternative energies, to vaccine search in health. This co-operation in science and technology can be shaped in such a way as to allow interested members to proceed under the formula of EAS-X.

Considering the human resources gap in EAS countries one is tempted to suggest some modes of cooperation where real transfer is involved from richer members to poorer ones. Bilaterally such transfer is a generic element of development co-operation of which in turn human resources co-operation is a significant part as reflected in scholarship and assistance in times of natural disaster. Expecting a regionalization of development assistance may not be realistic for EAS for the time being. Yet, EAS regional co-operation requires visible projects and or programs to be perceptible to the billions of East Asians. One major program in health, one in education and one in entrepreneurship promotion would help raise awareness about CEPEA in general and EAS human resources co-operation in particular. Whatever happens in the politics of EAS human resources co-operation should precisely be conceived as a tie that helps bind people of East Asia in good or bad times.

A government-centered co-operation strategy is not without fundamental weakness in the 21st century economy. One of the distinctive features of this century is its much deeper science intensity, which is expected to deepen further. In the course of the last 30 years or so liberalization, marketization, privatization, deregulation, de-bureaucratization, have made economies more dependent on one another, less

state-centered, and more private-driven at the same time. Today's employment and sourcing of goods and services, including telecommunication and transportation services, are much more dependent on private businesses than they were 30 or so years ago. A similar shift is taking place in science, the last frontier in the quest for economic growth, with the rise of corporate science. The share of private sector in the total expenditures on research and development (R&D) has risen to exceed by a large margin the shares of both government and university research centers in all developed economies, including EAS economies. Responding to the fundamental shift, governments and civil societies prescribe corporate governance reforms, corporate social responsibility (CSR) and other initiatives, however meager the success may have been measured in terms of reduced frequency of deadly governance scandal. Given the very prominent role played by private business in contemporary economic system the effectiveness of co-operation that is exclusively government to government must have been reduced. EAS co-operation is also challenged to secure the involvement of the private sector. Relying on the deepening of regulation as governments was doing in the aftermath of the Asian financial crisis and is likely to be doing following the current crises is insufficient. The current mode of engagement in that representatives of the private sector are invited to present views in front of political leaders have proven to be ineffective. The perennial complaint about the lack of enthusiasm among business people about ASEAN integration and East Asian integration may have something to do with faulty design in that it fails to address issues that are really urgent in the eyes of the private sector. How exactly governments can better engage private sector in regional co-operation is a very difficult question. However, private sector involvement is perhaps one of the promising innovative elements of regional co-operation in the 21st century. It is even more pressing in human resources co-operation.

Effective co-operation requires funding. On this score EAS is faced with a dilemma. The gap that needs to be narrowed is immense in magnitude and complexity. Even a slight catching up seems to require a large financial commitment. The largest part of the financial resources will have to originate in national budgets. It can never be overemphasized that the East Asian human resources gap is to an important extent the result of misallocation of public resources. Correcting such misallocation would allow accelerated investment in human capital. Yet, even the most trivial form of co-operation such as information gathering and processing in comparable format can only advance with adequate financial support. It should not be conceived as a one-way flow from richer to poorer members. EAS should consider establishing a Co-operation Fund to which all members contribute in accordance with ability.

Selected Basic Indicators on Human Resources for EAS Countries

	Population 2020 (Mio)	Labor Force 2020 (Mio)	GDP Per Capita PPP $2007	HALE [1] at Birth	DALY [2] per thousand population	Health Expenditure as % of GDP 2005 Total	Government Shares in Health Expenditure %	School Life Expectancy Primary to Tertiary	Total Public Expenditure on Education as % of GDP 2005	Education Expenditure as % of GNI 2006	Adult Population with Tertiary Education as % of Total Adult Population (25-64 Years)	Annual Expenditure on Education Institutions per Student as % of Per Capita PPP GDP	Students Studying Abroad Latest	Teacher's Top Salary as % of GDP per Capita, Primary School Around 2004	Teaching Hours per Year at Primary School	Employers as % of Working Population
Australia	24	12.2	34923	73	110	8,8	67,0	20,5	4,8	5	31,7	26	9833	144	888	3,1
Brunei D.	0,5	0.2	50199	65	130	2,0	79,6	14,0	-	4	-	-	2468	-	-	-
Cambodia	18	10	1802	48	380	6,4	24,2	9,8	1,6	2	-	-	2480	-	-	0,2
China	1431	834.3	5383	64	150	4,7	38,8	11,2	-	2 (?)	-	-	417351	-	-	-
India	1362	589	2753	53	290	5,0	19,0	10,0	3,2	3	4,9	22	-	615	1013	-
Indonesia	268	137.4	3712	58	210	2,1	46,6	11,6	3,6	1 (?)	-	6	33904	104	1260	3,3
Japan	122	60.1	33632	75	100	8,2	82,2	15,0	3,5	3	40,0	28	60225	211	578	2,6
Korea, Rep.	49	25.5	24801	68	-	5,9	53,0	16,6	4,4	4	13,5	29	101913	400	810	7,3
Lao, PDR	9	4	2165	47	400	3,6	20,6	9,2	3,0	1	-	-	2206	-	-	-
Malaysia	31	15.2	13518	63	150	4,2	44,8	12,7	5,9	6	12,8	25	45195	183	792	3,4
Myanmar	52	33	-	52	300	2,2	10,6	12,7	-	1	-	-	2911	-	-	-
New Zealand	4,6	2.5	27336	71	120	8,9	77,4	19,5	6,5	7	27,1	25	7355	149	985	6,5
Philippines	119	49.3	3406	59	190	3,2	36,6	11,8	2,5	2	27,3	11	-	219	1182	4,5
Singapore	5	2.8	49704	70	110	3,5	31,9	-	-	-	-	-	20322	-	-	4,9
Thailand	69	38.7	8135	60	210	3,5	63,9	13,5	4,2	5	13,6	-	24082	-	1000	3,1
Vietnam	96	56	2600	61	170	6,0	25,7	-	-	3	-	-	23160	-	-	0,5
EAS	3360	1870.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
World	7780	3681.3	9980	67	-	8,6	44,0	10,8	-	4	-	-	-	-	-	-

* Together with New Zealand

1) Health Adjusted Life Expectancy in Years

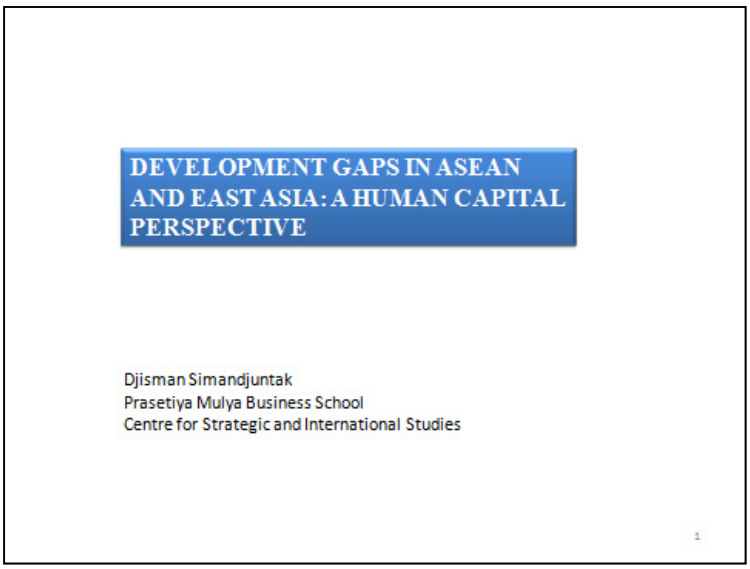
2) Disability-Adjusted Life Years or Loss of Life Years Due to Premature Death and Burden of Disease

【Power Point】

Development Gaps in ASEAN and East Asia: A Human Capital Perspective [1)]

Djisman Simandjuntak

(Senior Economist at Centre for Strategic and International Studies (CSIS), Indonesia)



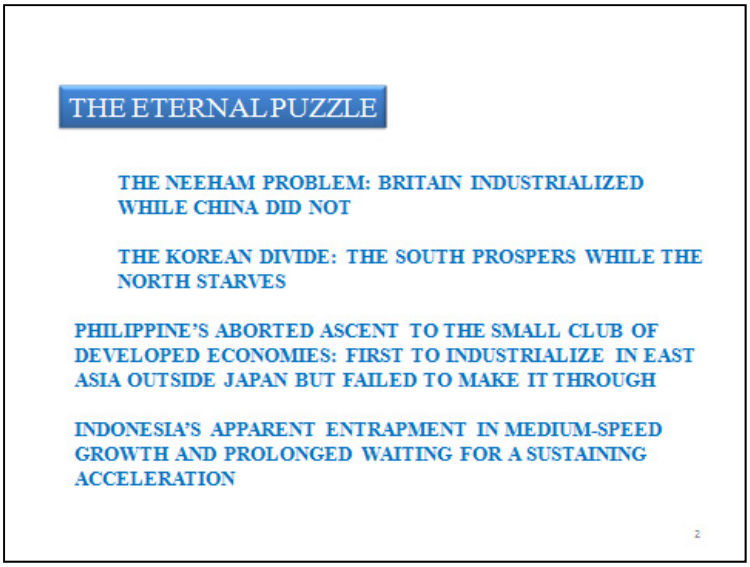


ILLUSTRATION: INCOME PPP GDP PER CAPITA 2007

Brunei D	50199
China	5383
India	2753
Indonesia	3712
Japan	33632
Cambodia	1802

SIMILAR PICTURE IN TERMS OF PER CAPITA WEALTH

3

INPUT SIDE OF DEVELOPMENT GAP

DIFFERENTPHYSICAL GEOGRAPHIES AND UNEQUAL ENDOWMENT WITH NATURAL RESOURCES

DIFFERENT SPEEDS IN THE ACCUMULATION OF PRODUCED CAPITAL

DIFFERENT PREFERENCES FOR AND CYCLES OF HUMAN CAPITAL ACCUMULATION

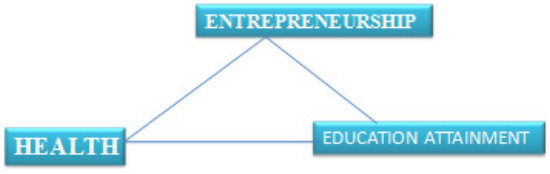
DIFFERENT CULTURES, SYSTEMS, POLICY ENVIRONMENTS, AND INSTITUTIONS

GOVERNANCE,LEADERSHP AND MANAGEMENT

DIFFERENT LUCKS

4

A HUMAN CAPITAL PERSPECTIVE



5

HEALTH ADJUSTED LIFE EXPECTANCY AT BIRTH, IN YEARS

JAPAN	75
CHINA	64
INDIA	53
INDONESIA	58
CAMBODIA	48

6

DISABILITY ADJUSTED LIFE YEARS (LOSS DUE BURDEN OF DISEASES AND PREMATURE DEATHS)

JAPAN	100
CHINA	150
INDIA	290
INDONESIA	210
LAO, PDR	400

7

OTHER INDICATORS OF HEALTH

WEIGHT AT BIRTH

HEIGHT

GENERAL IQ

COMPLEX SET OF HEALTH RESOURCES AND LIFESTYLE

8

HEALTH EXPENDITURE AS % OF GDP 2005

NEW ZEALAND	8.9(77.4)
CHINA	4.7(38.8)
INDIA	5.0(19.0)
BRUNEI D	2.0(79.6)

IN PARENTHESIS PERCENTAGE SHARES OF GOVERNMENT IN TOTAL HEALTH EXPENDITUE

9

EDUCATIONAL ATTAINMENT: RARE STATISTICS

INTERNATIONAL STUDY OF MATHEMATICS AND SCIENCE ACHIEVEMENT: HONG KONG, KOREA, JAPAN, SINGAPORE TOP OF LIST

SCHOOL LIFE EXPECTANCY FROM ELEMENTARY TO TERTIARY: AUSTRALIA 20.5; CHINA 11.2; INDIA 10.0; INDONESIA 11.6; CAMBODIA 9.8

ADULT POPULATION WITH TERTIARY EDUCATION:
JAPAN 40%; INDIA 4.9%;

10

EDUCATION RESOURCES

EDUCATION EXPENDITURE AS % OF GNI: NEW ZEALAND 7; MALAYSIA 6; INDIA 3; LAO,PDR 1

STUDENTS ABROAD: CHINA 417K; KOREA 102K; MALAYSIA 45K; LAO, PDR 2206

ANNUAL TEACHING HOURS PER TEACHER AT ELEMENTARY SCHOOL: JAPAN 578; INDIA 1013; INDONESIA 1260

11

ENTREPRENEURSHIP

RECOGNIZED AS CRITICAL TO DEVELOPMENT, BUT STATISTICS ARE HARD TO COMPILE. KOREANS AND NEW ZEALANDERS HAVE HIGHEST NUMBER OF EMPLOYERS AS PERCENTAGES OF WORKING POPULATION

12

RELATIONSHIP BETWEEN THE THREE ELEMENTS

YET TO BE INVESTIGATED EMPIRICALLY.
HEALTH DETERMINES EDUCATION ATTAINMENT.
MOTHER'S EDUCATION AFFECTS HEALTH OF CHILDREN. HEALTH AND EDUCATION APPEAR TO HAVE IMPACTS ON ENTREPRENEURSHIP

13

ROLE OF REGIONAL COOPERATION

SUPPLEMENTARY TO NATIONAL ENDEAVORS AND BILATERAL COOPERATION, BUT MORE THAN JUST SYMBOLIC. COOPERATION PROMOTES INTEGRATION, HENCE DIVISION OF LABOR, HENCE WELFARE.
EAST ASIAN FUND FOR HUMAN CAPITAL FORMATION?

14

【討論】

Development Gaps in ASEAN and East Asia: A Human Capital Perspective

討論者:トラン・ヴァン・トゥ

（早稲田大学大学院社会科学研究科教授）

こんにちは。私は英語も日本語も下手ですけれども、こういうような日本での国際会議でどういう言葉を使えばいいかいつも迷います。今日は Dr. Djisman のペーパー、英語で書かれたので読んだときに簡単なコメントを英語で書きました。しかし、今朝インタープレターとの打ち合わせでは日本語のほうがいいと言われましたので日本語で話させていただきます。

Dr. Djisman のペーパーは非常に興味深いもので、特に経済発展のギャップ、所得のギャップ、それから人的資源のギャップが強調された。中でも人的な資源のギャップから見たほうが重要ではないかというような問題提起ですね。これは非常に面白かったです。そしてペーパーの中に人的資源は 3 つの要素で構成されていて、1 つは健康そして 2 つ目は教育で、これらはサプライサイドの 2 つの要因です。そして 3 つ目は起業家精神でこれはデマンドサイドの要因です。そして筆者によれば東アジアでは所得のギャップよりも、3 つの要素から構成される人的資源のギャップのほうが深刻である。この分析の結果、各国のドメスティック・ポリシー、つまりそれぞれの国内の政策と、地域全体の協力で、ギャップを縮めるべきということが結論づけられています。

以上は、私がこの論文を読んで、感じ取ったポイントです。

やはりヒューマンキャピタルの側面から見たギャップを分析することは非常に重要であると思っています。現在のヒューマンキャピタルでのギャップは将来の所得のギャップをもたらすので、こういうヒューマンキャピタルでのギャップは問題の深刻さを表すことができます。

そういう理由で、私は Djisman 博士のアプローチに賛成です。ただ、所得でのギャップと人的資源のギャップはだいたい相関関係があるので、所得のギャップからだいたい人的資源のギャップも予想できることであります。もちろん Djisman 博士が出された具体的なデータは非常に興味深いものでした。けれども政策提言になりますと、もう少し問題を掘り下げて明らかにする必要があるのではないかと思います。

私はいくつかの問題についてもう少し詳細にコメントしたいと思いますが、時間の関係で教育問題と起業家精神の問題だけに絞って、私の見解を述べたいと思います。まず、エンタープレナーシップがなければ養成された人材が雇用されないので、ここで教育と雇用との関係を議論できます。教育と雇用との関係をみますと少なくとも東アジアにおいて 3 つのことを指摘しておく必要があります。1 つ目は若者、つまり 15 歳から 24 歳までの人口、その人たちはこの 10 年間か 20 年間、かなりの高学歴化で、割合として学歴が非常に高くなりまし

た。しかし同時に 2 番目の問題として若者層の失業率も深刻で高い。特にいわゆる educated unemployment です。教育された失業者が非常に多い。それが 2 番目です。そして 3 番目のポイントは、アジアで展開している企業、日本企業とか外国企業が直面している問題としてスキルレーバー（skilled labor）の不足です。つまり、熟練労働、エンジニアとか中間管理層などは足りない。そういう問題を指摘できると思います。

例えば、こういうデータを見ていただくと、1994 年から 2004 年の間、インド、インドネシア、フィリピン、タイの高等教育の状況ですね。このデータから大学を卒業した人たちの割合を見ますと、例えば、タイの場合は 4%から 11%に上昇したとか、あるいは高等学校の卒業者の割合もかなり高くなった。また、若い人たちの unemployment も示されています。さらに、jobless のデータも印象的です。Jobless は失業者だけでなく、今仕事を持っていないが、就職活動をしていない人たちも失業者に加わっています。つまり、今仕事を持っていないし、学校にも行っていないが、仕事を探していない人たちです。そういうような人たちを含めた場合は jobless と言います。これを見ますとインド、インドネシア、フィリピンとも非常に高く、この jobless の割合が 24%以上ですね。タイの場合は低く 10 数%で。こういうような問題を指摘しておきたいです。

今アジアで展開している日系企業が直面している問題は何か。第 1 番目の問題は賃金が急速に上がったということですけれども、2 番、3 番はだいたいエンジニアだとか中間管理層のリクルートが非常に難しいということです。言い換えれば人的資源が足りないということです。

そこで、こういうふうにまとめられます。つまり、現在の労働市場においてミスマッチがあります。熟練労働の場合は需要が多くて供給不足です。けれども、そうでない若い人たちは、供給が多くて需要不足という問題があります。そうしますと、やはり各国の教育政策はやはりそういうような問題を解決しなければなりません。企業が必要な人材を供給できるような教育というようなことをやらなければなりません。だから単純にギャップ、例えばヒューマンキャピタルギャップを縮めるというマクロ的、全体的ではなくて、こういうような詳細ないろいろな問題の検討も必要ではないかと思います。

そこで東アジアでの協力関係を考えますと、二国間の協力ではトレーニングプログラムはいろいろありますけれども、労働者の移動が必要です。労働移動がかなり盛んにはなりましたけれどもいろいろ摩擦も起こっています。このため、秩序のある労働移動、効果的移動の促進を各国が検討して協力していくことが必要です。FTA とか EPA については、例えば看護師とか介護福祉士などの人材をアジア諸国から日本への移動ということを織り込んでいますけれども、やはりそういう秩序のある移動がまだ少ないですね。例えば、日本とインドネシアの EPA 締結に伴ってインドネシアから日本への看護師などの移動は、年間 300 人くらいというように非常に少ない。今後はこういうようなことを拡大していくことが重要です。

最後にエンタープレナーシップについて非常に興味深いご見解を聞かせていただきました。これは例えばエンタープレナーシップをどういうふうに測るか、Dr. Djisman のペーパ

ーには、労働人口の中の employers、つまり雇用主の割合は 1 つのインディケーターとして指摘されましたけれども、このインディケーターはちょっと適切ではないんじゃないかなと思います。中小企業が多い国はどうしてもこのような指標が高いわけです。あるいは、農業国から工業国へ入りつつある国はどうしても低いわけです。だからこの指標はちょっと問題があるのではないかなと思っています。

もしエンタープレナーシップは、例えばシュンペーターが言ったように、新しいマーケット、新しい技術、新しいプロダクトについての探求精神、そして risk taking、そしてなんといっても rent seeking ではなくて profit seeking を追求するというような人たちは起業家精神のある人と定義すれば、私はどんな国でもだいたい潜在的にはエンタープレナーシップがあるんじゃないかなと思っています。問題はそのエンタープレナーシップが顕在化するかどうかです。顕在化するためには政策が必要です。例えば中国では 1984 年まで郷鎮企業はあまりなかった。けれども政策の転換で 84 年以降は非常に多くなった。あるいはベトナムでも同じように 2000 年ごろから新しい民間企業が次から次へと生まれていって、これも政策の結果ですね。

後もう 1 つは各国のエンタープレナーシップを考えるとき、直接投資も一緒に考えなければならない。直接投資は foreign entrepreneurship と言えば、domestic entrepreneurship と foreign entrepreneurship はリンクしていて、外国からの投資が多くなると、国内の起業家精神も出てくるんじゃないのかなと思います。そこでまた直接投資に関する政策も 1 つの問題になる。

こういうことを考えますと、エンタープレナーシップという要素をヒューマンキャピタルに入れて考えますと面白いけれども、やはりもう 1 つの要素はポリシーフォーメーションキャパシティですね。つまりエンタープレナーシップを顕在化したり、人材の養成や需給ミスマッチの解消を促進したりする政策形成の能力も重要でないかと思います。これら全ての要素を合わせて考えますと、クズネッツとかアブラモヴィッツとかが描いたような social capability ではないかと思います。そこでその中で、エンタープレナーシップの場合は、多分地域協力には限界がありますけれども、政策形成能力とかキャパシティビルディングとか、そういうような方面でのアジアの協力の余地があるのではないかと思っています。

時間が来ましたので終わりにしたいと思います。どうもありがとうございました。

【Powerpoint】

Development Gaps in ASEAN and East Asia:
A Human Capital Perspective

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Comments on Dr. Djisman Simandjuntak's paper "Development Gaps in ASEAN and East Asia: A Human Capital Perspective"

Tran Van Tho
(Waseda University)
December 4, 2009

Dr. Djisman's Points:

- Development gaps in East Asia should be discussed in terms of gaps in human capital.
- Three elements of human capital are health and educational attainment on the supple side, and entrepreneurship on the demand side.
- In all three elements, the gap in East Asia is more serious than that in income.
- Domestic policies and regional co-operation are essential for narrowing the gap.

- It is appropriate to analyze the development gap from the human capital perspective. The gap in human capital suggests a continuing gap in income in the future. The picture therefore looks more serious than what the current income gap illustrates.
- For this reason I agree with the approach of Dr. Djisman.

- However, even though the paper showed the gaps in human capital in East Asia and called for narrowing the gaps both by domestic policies and regional cooperation, it is not yet clear what areas domestic policies should address and in what areas the regional cooperation should be emphasized.
- In my opinion, the issues should be broken down to find real problems faced by late comers in the East Asian region.

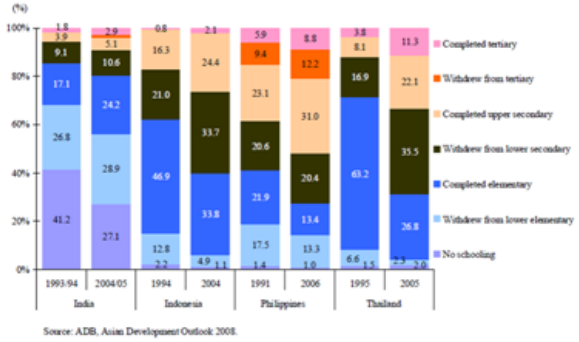
- Let me elaborate on the issues of education and entrepreneurship, and clarify the areas which should be addressed by government policies.

Current Problems on Education and Employment in East Asia (1)

The following observations can be made:

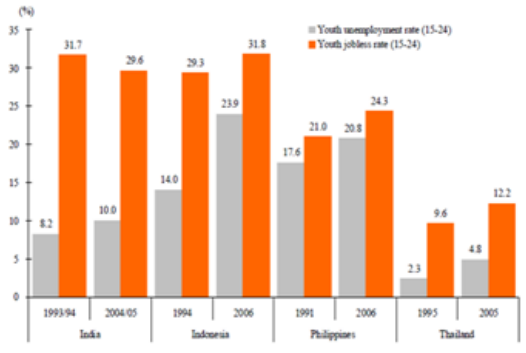
- Young people have increasingly acquired higher education.
- But unemployment of youth people has also risen, in particular, educated unemployment.
- On the other hand, firms have increasingly met difficulties in recruiting skilled labor, such as engineers and middle managerial levels.

Educational Profile of Working Youth



Source: ADB, Asian Development Outlook 2008.

Youth unemployment rate and jobless rate (15-24)



Source: ADB, Asian Development Outlook 2008.

Problems of Japanese Companies Operating in Asia (2006, %)

	2	3	4	5
Thailand	Difficulty in recruiting engineers	Difficulty in recruiting middle managers		
	53.3	43.2	43.2	41.2
Malaysia	Difficulty in recruiting engineers	Difficulty in recruiting middle managers		
	37.9	36.1	33.1	30.8
Indonesia			Difficulty in recruiting middle managers	
	46.5	43.2	37.4	31.6
Philippines			Difficulty in recruiting middle managers	Difficulty in recruiting engineers
	43.6	40.9	38.1	37.6
Vietnam	Difficulty in recruiting middle managers	Difficulty in recruiting engineers		
	59.0	50.6	39.8	36.1
India				Difficulty in recruiting middle managers
	36.1	32.8	31.1	26.2

Source: METI, *White Paper on International Economy and Trade 2007*

Current Problems in Education and Employment in East Asia (2)

- There is a mismatch between education and the skill requirements of the labor force. In the labor market there is the co-existence of shortage of some types of graduates and the surplus of other types.
- Domestic education policies of developing countries should therefore aim at expanding the number of graduates in the areas which are needed by firms.

Cooperation in East Asia

- Besides training programs, promotion of temporary movement of workers from late comers to more advanced countries will contribute to narrowing gaps in human capital.
- Movement of such workers should be managed in an orderly way to avoid social and cultural conflicts.
- FTA and EPA should actively incorporate the temporary movement of workers from late comers.

Entrepreneurship (1)

- Employers as % of working population is not an appropriate indicator for entrepreneurship. Such a ratio is high in countries which have a large number of small and medium sized firms, and inevitably low in countries in the early stage of development.
- My definition of entrepreneurship: (1) strong spirit of searching for new markets, new technology, new products and so on; (2) risk taking; (3) and profit-seeking instead of rent-seeking.

Entrepreneurship (2)

- According to this definition, we may say that most countries potentially have entrepreneurship. But the emergence of entrepreneurship depends on the policy environment. Policy reforms in China in 1984 encouraged the birth of township and village enterprises (TVEs), and the new wave of private enterprises that has appeared in Vietnam since 2000 was attributed to the amendment of the new enterprise law in 1999.

Entrepreneurship (3)

- Domestic entrepreneurship may also appear along with increasing flows of FDI (foreign entrepreneurship). In particular, strong linkages between the two are essential for the appearance of domestic enterprises.
- Again policy environment is important for FDI inflows as well as for encouraging strong linkages between FDI and domestic firms.

Social Capability: A Broader Sense of Human Capital

- In addition to entrepreneurship, policy formation capacity should also be included in the demand side of human capital.
- Health and education affect human capital formation utilized by entrepreneurship. But entrepreneurship is strongly influenced by policy formation capacity.
- All these factors make up the social capability of a country (Kuznets, Abramovitz, …)

- There is little room for regional cooperation in the area of entrepreneurship, but intellectual regional cooperation will enhance the policy formation capacity of late comers. This will result in the emergence of entrepreneurship.

【質疑応答】

深川： 社会科学研究科のトラン・ヴァン・トゥ先生でした。コメントありがとうございました。それでは第1セッションと同じようにもしご質問、あるいはコメントがあればフロアから多分1つくらいですかね、受けたいと思うんですけどいかがでございましょうか。

ちょっとみなさんお昼を食べすぎてしまったのかもしれません。それでは私から1つ質問させていただきたいと思います。ヒューマンキャピタルの中で、健康、教育、起業家精神という観点から今日はお話をいただいたと思うんですけど、教育にしても、健康にしても確かに自国の政府とかが頑張らなくてはだめで、地域協力でやれるところは限界があるっていうのもそうかなというふうに思ったんですけれども。でも自国とか、あるいは二カ国間の協力とかで協力してあげようと思っても、トラン先生のコメントの中にもあったんですけど、起業家精神というのは、政府とか、外国人が助けてあげられるものではないんじゃないかという気もするんです。起業家精神についていうとどういう協力がありうるのか教えていただければというふうに思います。あとトラン先生のコメントも含めて、もう1回レスポンスをお願いしたいと思います。

Simandjuntak: Thank you, Madam Chair. What I am going to say may sound like a wild idea. I try to go deeper beyond the popular explanations for the obvious gap between economies that we keep seeing whenever we confront income statistics. I appreciate the comments by my friend Tran. All the points are well taken and are clearly enrichment to the views that I expressed.

Entrepreneurship, as I said, is a very new theme in empirical studies. OECD launched such study a few years back. I find the framework of that study very useful, but cannot discuss it in details on this occasion.

I agree that there is not much that we can expect from regional cooperation in pushing forward cooperation to strengthen entrepreneurship.

But the main message that I would like to get across is first that nationally, I think, there is a strong reason to argue that governments should pay more attention to human capital formation rather than physical infrastructure formation, spending more on health,

Simandjuntak: (cont'd) education, and perhaps also entrepreneurship, rather than on physical infrastructure.

We see, for example, that Korea and other more developed economies in East Asia for that matter, are more aggressive to invest in education and health compared to many other economies. The investment is not confined to government investment. The people, too, spend a great deal on education. Governments follow rather than lead. So it is not government budget that serves as primary source of finance for human capital formation. But to be able to inspire people, governments of less developed economies in East Asia on their side should invest more in human capital formation than they are doing currently. Enabling them to learn such lessons and to internalize them in development policies is one possible item of regional co-operation.

The second message that I would like to underline is related to the room that is open to East Asia to deploy regional cooperation for the purpose of human capital formation in general and entrepreneurship in particular. We are familiar with the regional production system, which is also called regional production fragmentation in East Asia. Employees of companies that are involved in such production system have a good chance to become entrepreneurs, serving for instance as vendors of auxiliary inputs. Regional cooperation can encourage firms to mobilize their respective regional networks for the purpose of spreading entrepreneurship, opening thereby the room for deeper division of labor for mutual benefit.

The third message relates to priorities of regional cooperation. Resources are typically very limited for regional cooperation. Governments still prefer to pursue national development assistance policies. Considering the resource constraints regional cooperation should concentrate on human capital formation rather than physical infrastructure, which usually profits from bilateral cooperation.

The positive externalities of investment in human capital may be much greater than those of physical investments.

Those are the three main messages that I would like to share. Underlying reasons are discussed in greater details in the paper.

【報告】

Industrial Cluster Policy in CLMV to Narrow the Gaps in East Asia

「東アジアの地域統合と CLMV 諸国における産業クラスター政策」

Akifumi Kuchiki

(Professor at College of Bioresource Sciences, Nihon University)

1. Introduction

Three key issues for regional integration of East Asia are topics on deepening integration, narrowing gaps, and sustaining growth. The topic on narrowing gaps focuses on the development of Cambodia, Lao, Myanmar, and Vietnam. While there are many large industrial agglomerations or clusters in East Asia, there are none in Cambodia, Lao, and Myanmar. It may be difficult to narrow the gaps in East Asia without any industrial clusters in Cambodia, Lao, Myanmar, and Vietnam.

In his development theory, Nurkse (1953) explained that there exist vicious cycles of poverty in developing countries. Nelson (1956) also proved that there exists a low-level equilibrium trap. Yokoyama (1997) derived the policy implications as follows: To get out of the trap and take off, developing countries must attain critical minimum effort via the big push concept. Lewis (1954), Ranis and Fei (1961), Jorgenson (1967), and others discussed a dual economy that consists of traditional customary economy and modern market economy. A modern economy is needed to give employment opportunities to redundant labor in the traditional economy. Hirschman (1958) recommended fostering industries with high values of backward linkage effects at growing points or poles.

A closed economy, protectionism and centralization dominated the economies before the 1980s. However, the economic conditions saw a marked change after the 1980s. The principles of the open economy, free market, and decentralization started to dominate. Global trade and investment were liberalized. Economies moved away from the import substitution policy, which dominated the era before the 1980s, and toward the export-led policy. The most important change in the development strategy was that Asian economies introduced the foreign direct investment (FDI) by liberalizing the inflow of foreign investment.

In summary, the introduction of foreign investors to export processing zones has been instrumental to the big push that paved the way for Asian countries to free themselves from their low-level equilibrium trap since the 1980s. That is, the idea of industrial clusters was tapped to make foreign investors agglomerate in industrial zones in the Asian economies.

This paper proposes an industrial cluster policy of establishing an export processing zone to form industrial clusters at the cities in CLMV. The strategy of our flowchart approach to industrial cluster policy is an unbalanced growth under the conditions of the open economy and decentralization. The flowchart approach to industrial cluster policy suggests us to find actors to implement policy measures at Hanoi and Danang in Vietnam, Yangon in Myanmar, Savannakhet and Vientiane in Lao, Sihanouk Ville and Phnom Penn in Cambodia, Guangzhou in China, and Eastern Seaboard in Thailand.

The policies recommended by the flowchart approach are as follows: First, export processing zones are needed to invite anchor firms since domestic markets of countries in CLMV are small; Second, on capacity building, physical infrastructure for foreign direct investment in the labor intensive manufacturing industry should be strengthened; Third, incentives for anchor firms, such as cheap land prices, the construction of roads and railways for the firm, and the establishment of international hospitals and schools, are effective in inviting them to export processing zones; Fourth, the flowchart approach makes clear who are actors or players at each step of the flowchart in forming an industrial cluster.

We find the following facts by our interview method on the investment environment of the cities above: First, in inviting foreign direct investment in the labor intensive manufacturing industry with the high value of backward linkage to export processing zones, the score of Eastern Seaboard area in Thailand is more than that of Guangzhou and the highest among the cities: Second, the scores of the other cities are not so much different: Third, the score of Vientiane can become higher than the scores of the other cities by establishing physical infrastructure such as a port and water supply.

Section 2 reexamines development theories in the past including Hirschman (1958). Section 3 reclassifies industrial clusters by using Markusen (1996) and Iammarino and McCann (2006). Section 4 defines our flowchart approach to industrial cluster policy. Section 5 explains the development of the electronics industry cluster policy in northern Vietnam using the flowchart approach and introducing an interview method to find the bottlenecks of its industrial cluster policy.

Section 6 applies the flowchart approach to cities in CLMV. Section 7 concludes the paper.

2. Reexamination of development strategy

There is a critical minimum level of per capita income which must be reached in order for sustained growth to take place. To escape the low-level equilibrium trap, per capita income must rise to the critical minimum level. Leibenstein (1957) explained that, on the big push, the depressing forces operating below the critical minimum rate of growth include (a) population growth and the reduction in available capital per worker, (b) a rise in the incremental capital-output ratio, (c) insufficient stimulus to entrepreneurial activity, and (d) resistance to new ideas, technical progress, and non-productive conspicuous consumption (pp. 189-90).

Lewis (1954), Ranis and Fei (1961), Jorgenson (1967), and others discussed a dual economy. The Lewis model consists of the traditional agricultural sector with low or zero marginal products and the modern industrial sector with high rising marginal products. The Lewis model argues economic growth requires structural change in the economy whereby surplus labor in traditional agricultural sector migrates to the modern industrial sector. A modern economy is needed to give employment opportunities to redundant labor in the traditional economy. Hirschman (1958) proposed fostering industries with high values of backward linkage effects at growing points or poles. In Hirschman's concept of unbalanced growth leading sectors induce growth in other sectors. Individual firms create backward linkages through the purchase of inputs in the local market or they create forward linkages through selling output as intermediate input to other local firms. A theory of protecting infant industries supported the import substitution policy of fostering domestic industries that Hirschman recommended by the protection policy. That is, the government should foster domestic industries by intervening in the dynamic market failure and protecting the industries of import substitution.

Though a closed economy, protectionism and centralization dominated the economies before the 1980s, the economic conditions saw a marked change after the 1980s. Reaganomics, Open-Door Policy, and the Structural Adjustment Policy by the World Bank promoted the shift from the planned economy to the market economy and international trade and investment have been liberalized.

Economies moved away from the import substitution policy, which dominated the era before the 1980s, and toward the export-led policy that the World Bank called the "export push strategy adopted in Asia" in a book titled 'East Asian Miracle'

published in 1993. The most important change in the development strategy, however, was that Asian economies introduced foreign direct investment (FDI) to export processing zones, special economic zones or free trade zones by liberalizing the inflow of foreign investment. Development strategy changed from import substitution policy to export-oriented policy in the 1980s and 1990s. Most of Asian economies positively introduced foreign direct investment one by one and their development pattern was called patterns of flying geese.

In summary, unbalanced growth is needed to get away from the vicious cycle of poverty. The growing industry may belong to an industry with high backward linkages. International trade and investment has been liberalized since the 1980s. While Hirschman (1958) recommended us to foster the domestic industry by protecting domestic firms before the 1980s, we should introduce his unbalanced growth strategy under the liberalization of international trade and investment after the 1980s. One of the strategies is industrial cluster policy.

3. New classification of industrial clusters

This section tries to reclassify the classifications of Markusen (1996) and Iammarino and McCann(2006) and position University-Industry Linkages (UILs) and National Innovation Systems (NISs) overviewed by Hershberg, Nabeshima and Yusuf (2007) at the third step of our flowchart approach by Kuchiki and Tsuji (2008) that is composed of two steps of agglomeration and innovation. Kuchiki and Tsuji (2008) needs to take into account the third step of activating innovation in order to understand the dynamics of industrial clusters by Iammarino and McCann (2006).

Figure 1 shows our new classification consisting of the following four dimensions: the first dimension is whether there are industrial zones or industrial parks; the second dimension is which type of ownership of anchor firms is, public, private or semi-public; the third dimension is which linkage is, backward linkage, forward linkage or little linkage; the fourth dimension is which step an agglomeration locates, the first step of agglomeration, the second step of innovation, or the third step of innovation with University-Industry Linkages (UILs) and National Innovation Systems (NISs).

Our aim is to propose sufficient conditions for the success of an industrial cluster policy. That is, we hope to provide a flowchart that can lead to the successful formation of an industrial cluster if the sufficient conditions listed in the flowchart are satisfied.

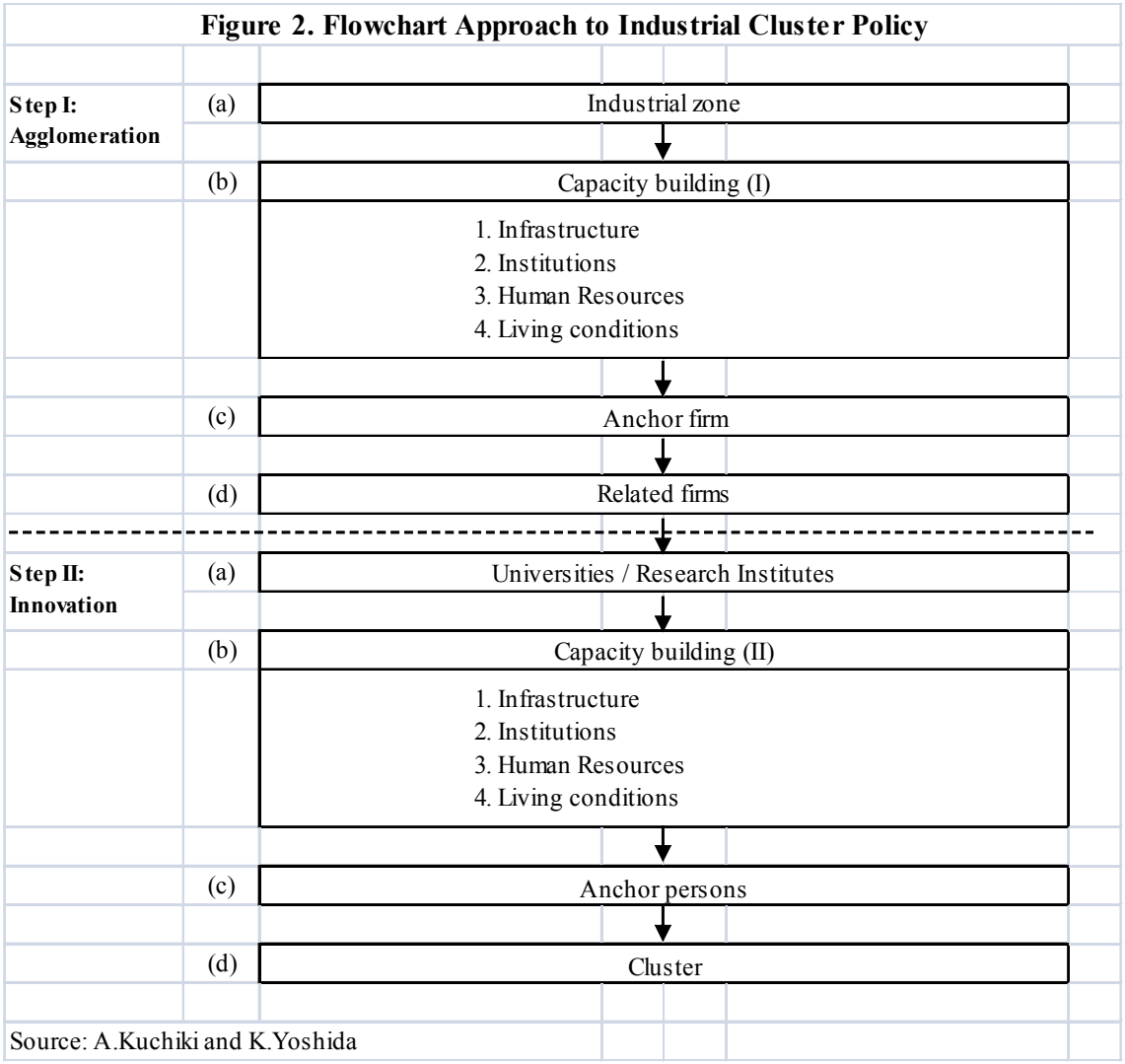
(1) Step I. Agglomeration:

Our flowchart approach is illustrated in Figure 2. First, we ask whether industrial zones have been established (see the detail in Kuchiki and Tsukada (2008)). If they have

not, we must decide which actors should establish such zones. Once these actors are identified, we return to the main stream of the flowchart.

Next we apply the flowchart's second step, capacity building, which takes place after the establishment of industrial zones. We examine whether there is an adequate water supply for the industrial zones. We then proceed along the flowchart to examine power supply, communication, and transportation.

Figure 2. Flowchart Approach to Industrial Cluster Policy



Source: A.Kuchiki and K.Yoshida

After looking at the physical infrastructure, we examine whether institutions are in place. The central government must institutionalize national tax systems and the local government must institutionalize local tax systems. It is well known that one-stop investment procedures are crucial for success in attracting foreign investors.

In the area of human resource development, an abundance of unskilled labor with a high literacy rate is a necessary condition for luring foreign investors whose purpose is to employ cheap labor. On the other hand, an industrial cluster sometimes

faces a shortage of skilled labor after industrialization has progressed; universities and on-the-job training centers for innovation are then needed for further development.

Living conditions are crucial for attracting foreign investors. Researchers from investor companies have incentives to work hard if they can enjoy their lives, so it is important to create satisfactory conditions in areas such as housing, schools, hospitals, and so on. These are the final conditions that must be satisfied to bring in anchor firms.

Here the anchor firm is defined as follows: it belongs to the manufacturing industry and has a high value of backward linkage in its input output relationship.

3. The electronics industry cluster policy in northern Vietnam

(1) Thang Long Industrial Park (TLIP)

As is shown in Figure 3, we explain a flowchart approach to industrial cluster policy by showing industrial clusters in Hanoi and Haiphong that are located west and east of national highway Route 5 (see the detail in Kuchiki (2007)).

Highway Route 5 is 100 km long and links Hanoi in the west and Haiphong in the east. Hanoi is the capital of Vietnam and Haiphong is a port city. Thang Long Industrial Park (TLIP) located in Hanoi was established by Sumitomo Corporation. Its total area is 220 hectare. Nomura Haiphong Industrial Zone (NHIZ) located in Haiphong was established by Nomura Security Company.

(2) Canon's effect

Sumitomo Corporation began selling TLIP land lots in 1997. Canon that was established in April 2001 started operation in May 2002. Companies that provided parts to Canon decided to move into TLIP particularly in 2002. Canon and its related firms established factories in TLIP after national highway Route 5 was constructed and Haiphong port rehabilitated in period 2 starting from 2002. Canon is an anchor company to lead other companies to provide parts and components.

(3) Its outcomes

The number of the suppliers to Canon is around 100 including about 20 local companies in 2007. Eighty two foreign firms have invested from 1997 to 2007 and about 37 thousand of people are employed in TLIP. The share of the export by the firms in TLIP as the total amount of Vietnam's export is 3.3 %.

4. Prescriptions for the industrial cluster policy of Hanoi

We propose that, considering the facts of northern Vietnam, its industrial policy can take the following three ways. First, the flowchart goes to Step II of innovation. Second, the flowchart feeds back to the capacity building of the flowchart.

Third, the local related firms are suggested to take partnerships with foreign firms.

Here we examine the second way of the feedback and raise the following twelve questions as is shown in Table 1.

We carried out a survey of the industrial cluster policy of northern Vietnam to determine whether we can solve its problems using our flowchart approach. We interviewed ten professionals on the questionnaire, and found the following six results, as summarized in Table 1. (The ten respondents included six staff at companies in Hanoi, three staff of Japanese semi-government organizations in Hanoi, and one Japanese professor studying the Vietnamese economy).

Regarding industrial zones, no respondent answered "Yes." Our survey made clear that the roads, electricity and ports of infrastructure are insufficient in industrial clustering. Regarding highway roads specific for automobiles, all of the ten respondents answered "No." In particular, the following roads are listed: (1) Hanoi – Haiphong, (2) Hanoi – southern China and (3) Hanoi – Noibai Airport. Regarding electricity supply, seven of the ten answered "No." Three of the ten, who belong to firms located in Thanglong Industrial Park answered "No." They have no problem of electricity supply since they are given priority for the electricity to be supplied.

But electricity supply in Hanoi is usually planned to stop (August 2008). Regarding communication, two of the ten respondents answered 'No'. Email system of Vietnam is not sometimes connected smoothly. Regarding ports, eight of the ten respondents answered 'No'. The other two who answered 'No' cannot know the problems of the port since they ask logistics companies to carry their materials and products, and do not directly use ports. This means that all of the respondents pointed out the problem of ports. Haiphong Port, which is a main port in northern Vietnam, is a river port and shallow in depth from five meters to seven meters. Cailan Port is located in Halong Bay and substitutes the role of Haiphong Port. It is worried about that the development of Cailan Port will harm Halong Bay that is a world heritage. So it is necessary to expand the facility of Haiphong Port. Cargos are loaded on a small ship at the port, sent to Hong Kong Port, and loaded on a large ship again.

Regarding institutions, all of the respondents answered 'No'. The problem of institutions is the most serious of the twelve questions. In particular, the four problem of customs clearance are serious as follow. First, every document on customs clearance should be translated into Vietnamese language. Second, every paper of the documents should be original. Third, companies should put their stamps on their documents. Fourth, every document needs the signatures of companies. In short, it costs much that original documents move from one place to another in northern

Vietnam to put stamps and signatures on the documents.

The three problems of transporting cargos from Hanoi to the border of southern China are as follows. First, working hours at customs clearance of the border is short in operation. Suppose that their working hours at Vietnam and China at the border are from 8 A. M. to 5 P.M. Their operating hours are different from the working hours and 9 A. M. to 4 P. M. The time difference between Vietnam and China is one hour. Then their operation hours are for six hours. Trucks must spend one night at the border when they miss to arrive at the border during the real operating hours. The time of one night is the cost.

Second, it cost much for container cargos to be transshipped, that is, unloaded from one truck in Hanoi and loaded to another truck in China at the border. The second problems of the transshipment of container cargos are as follows: stealing, damaging, getting wet, and delaying. A truck consists of its driving part and container part. We can reduce transportation costs when we can use the container part continuously beyond the border between Vietnam and China.

Third, the road condition is very bad as follows. First, there is a lot of death traffic accidents on the highways in Vietnam since the highways are not in particular use for automobiles. Bicycles and motorcycles can use the highways at the same time. Second, the speed of trucks on the highways is slow compared with that in Thailand and Lao due to the road condition of Vietnam. Suppose that the speed in Vietnam is 30 kilometer per hour while that in Thailand is 50 kilometer per hour (We interviewed a firm at Thanglong Industrial Park on August 30, 2008).

Regarding customs clearance in Vietnam, its implementation of rules is not transparent. It was pointed out that the rules change so often and are sometimes implemented.

Regarding unskilled labor, all of the ten respondents answered ‘No’ partly because illegal strikes happened at many firms in 2008. Firms are forced to be obliged to establish their labor unions starting from 2008. The boards of firms can designate the presidents of their labor unions in 2008. But the labor unions can decide their presidents by themselves in 2009. So the boards feel uneasy at the future of the labor unions.

The labor market of unskilled labor has become tight in Hanoi’s areas. For example, when firm A employed 50 workers in both 2007 and 2008, the number of the applicants of firm A in Thanglong Industrial Park reduced to 170 in 2008 from 700 in 2007. The firm employed its workers around the Hanoi area in the past but was forced to employ them from mountain areas far from Hanoi. The firm needs to construct an

apartment for the workers to live. The share of its workers from the Hanoi is 70 % in the past but reduced to 30 %. The share of the workers from the mountain areas became 10 % in 2008.

Regarding skilled labor, two of the ten respondents answered 'No'. It is a common phenomenon in most of Asian countries that workers change their jobs so often. The phenomenon is called job hopping. One respondent pointed out that it is difficult to find many Vietnamese people who can speak Japanese and that Japanese firms should employ the Vietnamese who can speak English. More the Vietnamese people will study Chinese and Korean languages due to the shortage of the Vietnamese who can speak Chinese and Korean languages.

Regarding living conditions, most of the respondents answered 'Yes'. But four of the respondents answered 'No' regarding hospitals. They usually use hospitals not in Hanoi but in Bangkok or Singapore in the cases of serious illness. In addition, few firms periodically send food from Japan due to the seriousness of bird influenza.

Regarding entertainment, some respondents answered 'No'. They cannot enjoy on Saturdays and Sundays due to the shortage of entertainment facilities such as shopping centers and movies. It is difficult to satisfy these conditions since people cannot fully saturate at any conditions.

Five of the ten respondents pointed out that the thefts of raw materials such as copper coils happen since some of their workers are lack in moral. It takes time for them to change their moral.

In summary, the issues of the investment environment of Vietnam are highways, electricity, ports, customs clearance, and unskilled labor in 2008.

(3) Prescriptions based on the flowchart approach to industrial cluster policy of northern Vietnam

We write out prescriptions for industrial cluster policy in northern Vietnam according to Figure 6. Northern Vietnam is needed to facilitate infrastructure for the next stage of growth since it has reached one thousand dollar of per capita of around 900$ in 2008. Capacity should be built for the stage.

First, new highway route 5 specific for automobiles between Hanoi and Haiphong is needed regarding roads. Second, it is desirable to construct a highway between Hanoi and southern China. The highway should be the same level as China's highway of three lanes of one way. It may be very sure that northern Vietnam will go to next stage if the procedures of customs clearance are simplified together with the construction of the highway. Third, a highway between Noibai Airport and the center of Hanoi is needed. Vietnam needs a highway to link Noibai Airport and Hoalac

Hitech Park the government shifts its capital from Hanoi to Hoalac Hitech Park. A highway between Hoalac Hitech Park and the center of Hanoi under construction is expected to be surely effective in promoting the growth of Vietnam since it has three lanes of one way specific for automobiles and is different from its highways that have already existed. The highways of three lanes of one way will contribute to economic growth and reduction in the number of traffic death accidents.

Electricity supply is usually planed to stop in Hanoi even though northern Vietnam is importing electricity from China. Increase in electricity is needed to be developed by private sector development of build-operate-transfer or official development assistance.

Regarding ports, Cairan Port should be expanded and Haiphong Port should be further facilitated. The procedures of customs clearance should be more transparent by simplifying them. For example, the format of customs clearance should be simplified by omitting signatures and stamps. Regarding transshipment, its rule should be changed into the rule of changes in driving parts of trucks by leaving the other parts and not transshipping the contents in trucks.

Regarding unskilled labor, it is desirable to employ it all over the country including local villages. Apartments for the unskilled labor are needed to be constructed. Their employment will contribute to reducing the income gap of people between Hanoi and mountain areas. Regarding thefts, it takes time to change people's moral by educating ethics.

5. An application of the flowchart approach to CLMV

A condition to be satisfied for regional integration of Asia is to narrow its regional gaps. The incomes of Cambodia, Laos, Myanmar, and Vietnam are not as high as other ASEAN countries. It is desirable that at least one industrial cluster is formed in each city of Cambodia, Laos, Myanmar, and Vietnam. The desirable situation for ASEAN to be integrated by reducing its income gaps is that the six cities are to be competitive by satisfying the conditions of investment environment for industrial cluster policy. Our flowchart approach is useful to propose industrial cluster policy.

Industrial agglomeration has been progressed in Hanoi and Guangzhou. Guangzhou has become to be difficult to further introduce the labor intensive industry due to rise in the wages of unskilled labor. Guangzhou is needed to upgrade the level of industrialization and make the labor intensive industry shift to other cities at the lower level of wages.

Canon is located in the center of industrial agglomeration in Hanoi.

Panasonic and Brothers of Japanese companies in the electronics industry are agglomerated in northern Vietnam. The demand for and supply of unskilled labor in the suburb of Hanoi was tight in the former half of 2008. Consequently, the wages of unskilled labor rose and companies in northern Vietnam tried to employ workers from in the mountain areas.

Generally speaking, the condition of physical infrastructure is relatively easy to be satisfied while the condition of institutions is relatively difficult to be satisfied. In particular, the implementation of institutions is difficult to be enforced. It is usual that the simplification of customs clearance is not enforced in most of the countries. It is necessary that neighboring countries should supply unskilled labor by lowering national borders, i.e., reducing tariffs and abolishing non-tariff barriers. It is effective to build the institutions to accept foreign workers.

As is shown in Table 2, this section compares the scores of the cities on their investment environment to form industrial clusters by using "our interview method" and "the investment environment survey method". The cities are Hanoi and Danang in Vietnam, Phnom Penn and Sihanouk Ville in Cambodia, Yangon in Myanmar, Vientiane and Savannakhet in Lao, Eastern Seaboard Region in Thailand, and Guangzhou in China. The results of the comparison of scores are that Danang is the highest and that Vientiane is the lowest. However, the score of Vientiane is better than that of Danang only if Vientiane facilitates its industrial zone and physical infrastructure. The factors of its comparison consist of the following nine factors: industrial zones, transportation, electricity, telecommunication, ports, institutions, human resources related to unskilled labor and skilled labor, and living conditions. The investment environment is an environment to invite the labor intensive industries to export processing zones of the cities.

When there are little differences in the scores of the cities, their differences crucially depends on the weight of each factor. The factors of industrial zones, unskilled labor, and ports are indispensable to invite the labor intensive industry to export processing zones. A highway to link an industrial zone and a port is needed to export products from the industrial zone. Customs clearance procedures should be simplified for a city to be competitive with other cities.

First, we apply "the interview method" to the cities of CLMV in the case of the weight of each factor of the nine given by a simplified AHP (analytic hierarchy Process) method. Suppose that the weight of the first group is one. We divide them into three groups as follows: the first group represents infrastructure for the labor intensive manufacturing industry at an export processing zone: the second group represents

infrastructure indispensable to the manufacturing industry: the third group is the factor of human resources. Then the weights of the second group and the third group are two and 0.5, respectively. This means that export processing zones do not function without industrial zones, ports and institutions. The weight of the second group is not the same as that of the first group.

Table 2 illustrates the case of Vientiane to obtain its score. The weight of industrial zones is 0.125 and the number of persons who answered 'Yes' is three. Multiplying 0.125 and 3 obtains 0.375. Similarly, the weight of roads is 0.125, the number of persons who answered 'Yes' is three, and multiplying them obtains 0.375. Continuing the process from the first factor of industrial zones to the ninth factor of hospitals and schools and adding the each point obtains 2.95 in total.

Regarding the final scores of the cities, that of Guangzhou, China is the second highest at the score of 5.75 and that of Phnom Penn, Cambodia, is the third highest at the score of 4.8. The fourth and fifth are Danang in Vietnam and Sihanouk Ville in Cambodia at the score of 4.3 and 3.81, respectively. It is reasonable that the investment environment of Danang to invite multinational firms in the labor intensive manufacturing industry to invest in export processing zones is good among all of the cities in August 2008 since Vietnam started to facilitate the investment environment earlier than other CLM, i.e. Cambodia, Laos and Myanmar. In general, Cambodia is better in the investment environment than Laos and Myanmar. The final scores of Savannakhet and Vientiane are low at 2.44 and 2.19, respectively. The score of Yangon is not so low at 3.75.

Second, we consider the case of the same weight to all of the nine factors at the percents of 11.1 as is shown in Table 3. We intend to reflect that this is not a case when the industry in export processing zones is not labor intensive. The final scores of Guangzhou and Yangon are the highest at 2.76 and the lowest at 2.76, respectively.

Third, we find the case when Vientiane's final score becomes high among eight cities in the case of the labor intensive industry at export processing zones. We suppose that Vientiane's numbers of persons, who answered 'Yes' on physical infrastructure of roads, electricity and communication, get 100 percent out of 10. Then its score at 4.5 is higher than that of Danang. In short, Vientiane is competitive with the other cities enough to invite foreign investors if it establishes industrial zones and facilitates physical infrastructure. The results show that all of the cities are competitive to invite the labor intensive industry into export processing zones when the cities satisfy the conditions of the establishment of industrial zones and the facilitation of infrastructure.

Next we apply "the investment environment survey method" to the cities of CLMV surveyed by ERIA (2008). Table 4 shows that the total scores of the cities are almost the same except Yangon in the case of the same weights of the ten questions of a questionnaire.

We obtained the following two conclusions. First, the scores of Phnom Penn and Vientiane in 2008 are the best and the worst, respectively. Second, however, each city has at present its possibility of forming industrial clusters if the city satisfies the conditions of industrial zones.

6. Conclusions

This paper proposed an industrial cluster policy of establishing an export processing zone to become an industrial cluster. The strategy is an unbalanced growth under the conditions of the open economy and decentralization. Our flowchart approach to industrial cluster policy was applied to Hanoi and Danang in Vietnam, Yangon in Myanmar, Savannakhet and Vientiane in Lao, Guangzhou in China, and Eastern Seaboard in Thailand.

The paper established a questionnaire survey method of prioritizing policy measures and giving the scores on the investment environment to the cities above. The questionnaire survey method was applied to CLMV, Thailand, and Guangzhou in China. The policy recommendations tried to find players, or actors, to implement the policy measures in the cases of 'No' of the questionnaire survey. The players are expected to be central governments, local governments, and players in the semi-government and the private sector.

We found the following facts to narrow the gaps in East Asia: First, in inviting foreign direct investment in the labor intensive manufacturing industry with the high value of backward linkage to invite to export processing zones, the score of Eastern Seaboard area in Thailand is more than that of Guangzhou and the highest among the cities analyzed in this paper: Second, the scores of other cities are not so much different: Third, the score of Vientiane can become higher than the scores of the other cities in CLMV by establishing physical infrastructure.

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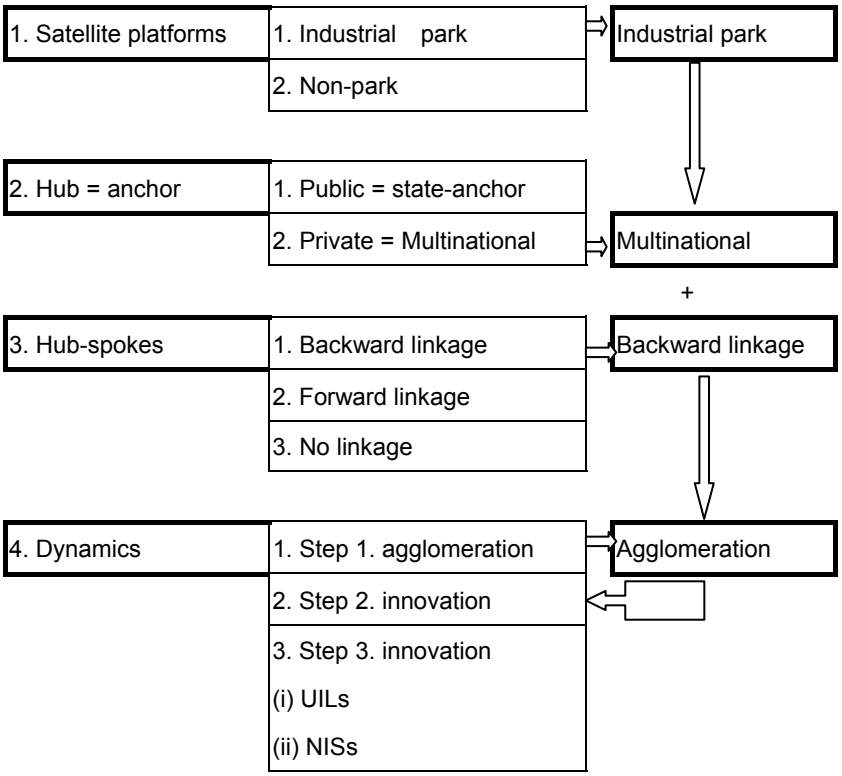
Figure 1. An Asian growth model:

Flowchart Approach to Industrial Cluster Policy

Classification



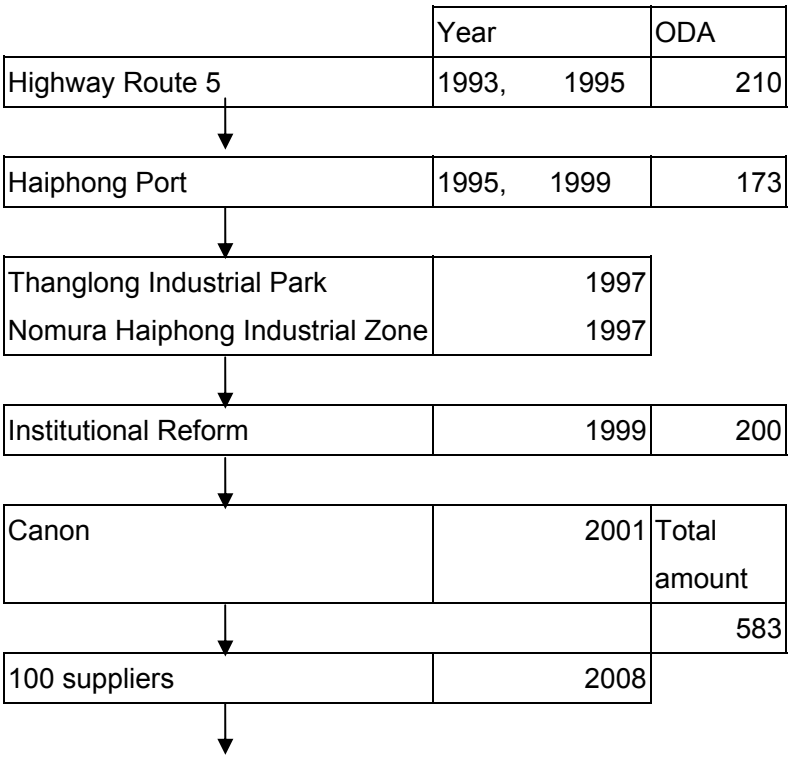
Source: Author.

UIL: university-industry linkage

NIS: national innovation system

Figure 3. The electronics industry cluster in northern Vietnam

(Unit:million $: 1$=100¥)



Source: A. Kuchiki.

Table 1. Questionnaires on industrial cluster policy: Hanoi

	1	2	3	4	5	6	7	8	9	10	Results	Problems
1. Do industrial zones exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
Capacity building: Physical infrastructure												
2. Does transport infrastructure exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
3. Does electricity infrastructure exist sufficiently?	X	X	X	X	X	X	X	O	O	O	3	X
4. Does communication infrastructure exist sufficiently?	O	O	O	O	O	O	O	X	O	X	8	
5. Does port infrastructure exist sufficiently?	X	X	O	O	X	X	X	X	X	X	2	X
6. Do institutions exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
Human resources												
7. Does unskilled labor exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
8. Does skilled labor exist sufficiently?	X	X	O	O	O	O	O	O	O	O	8	
Living conditions												
9. Do hospitals exist sufficiently?	O	O	X	X	O	O	X	O	O	X	6	
10. Do schools exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
11. Do entertainments exist sufficiently?	O	O	X	X	X	X	X	O	O	O	5	X
12. Do thefts happen?	X	X	X	X	X	O	O	O	O	O	5	X

Source: A. Kuchiki and T. Gokan (interviews in Hanoi on Aug. 28-30, 2008)

Table 2. Comparison of Cities in Investment Environment by Interview for Industrial Clustering (different weights)

Cities	Danang	Phnom P	Sihanouk V	Savannakhet	Yangon	Vientiane	Guangzhou	Hanoi	Bangkok	Weight
Full scores = 10.	4.38	4.75	3.81	2.44	3.75	2.19	5.75	4.06	9.13	AHP
1. Do industrial zones exist sufficiently?	10	5	8	3	3	3	3	10	10	0.125
2. Does transport infrastructure exist sufficiently?	4.2	2	3	3	2	3	10	0	10	0.0625
3. Does electricity infrastructure exist sufficiently?	5.8	1	3	7	0	5	2	3	10	0.0625
4. Does communication infrastructure exist sufficiently?	10	5	7	9	2	6	10	8	9	0.0625
5. Does port infrastructure exist sufficiently?	7.5	4	2	2	1	2	10	2	10	0.125
6. Do institutions exist sufficiently?	5.8	4	5	4	1	4	0	0	9	0.0625
7. Does unskilled labor exist sufficiently?	0.8	10	4	0	7	0	4	0	8	0.25
8. Does skilled labor exist sufficiently?	0	2	2	1	2	1	8	8	8	0.125
9. Do hospitals exist sufficiently?	4.6	2	1	1.5	7	2	6	8	10	0.125

Source: A. Kuchiki.

Table 3. Comparison of Cities in Investment Environment Survey by Interview for Industrial Clustering (the same weight)

Cities	Danang	Phnom Pen	Sihanouk Ville	Savannakhet	Yangon	Vientiane	Guangzhou	Hanoi	Bangkok	
Full scores = 10.	5.41	3.88	3.88	3.39	2.76	2.89	5.88	4.33	9.324	Weight
1. Do industrial zones exist sufficiently?	10	5	8	3	3	3	3	10	10	11.1
2. Does transport infrastructure exist sufficiently?	4.2	2	3	3	2	3	10	0	10	11.1
3. Does electricity infrastructure exist sufficiently?	5.8	1	3	7	0	5	2	3	10	11.1
4. Does communication infrastructure exist sufficiently?	10	5	7	9	2	6	10	8	9	11.1
5. Does port infrastructure exist sufficiently?	7.5	4	2	2	1	2	10	2	10	11.1
6. Do institutions exist sufficiently?	5.8	4	5	4	1	4	0	0	9	11.1
7. Does unskilled labor exist sufficiently?	0.8	10	4	0	7	0	4	0	8	11.1
8. Does skilled labor exist sufficiently?	0	2	2	1	2	1	8	8	8	11.1
9. Do hospitals exist sufficiently?	4.6	2	1	1.5	7	2	6	8	10	11.1

Source: A. Kuchiki.

Table 4. Comparison of the Cities from the Point of Investment Environment Survey (1)

(4) ERIA IES2009	Danang	HCMC	Phnom Penn	Sihanouk Ville	Yangon	Vientiane	Savannakhet	Weight
Industrial estates	3.35	3.06	3.5	3.7	2.9	3.2	n.a.	10
Transportation	3.13	3.49	3.3	3.3	3.3	3.2	n.a.	10
Electricity	3.1	3.91	3	3	2.2	3.4	n.a.	10
Telecommunication	3.57	3.37	3.5	2.8	3.1	3.6	n.a.	10
Water	3.64	3.03	3.4	3.5	3.5	3.4	n.a.	10
One-stop service	3.46	3.75	3.3	3	2.5	3.1	3.5	10
Governance	3.25	3.18	3.1	3.2	3.09	3.3	3.3	10
Regulatory framework	3.3	3.19	3.3	3.4	3.28	3.4	3.3	10
Labor	3.2	3.15	3.2	3.3	3.4	n.a.	n.a.	10
Accomodation	3.05	3.08	3.7	4	3.3	3.3	n.a.	10
Average	***3.31***	***3.32***	***3.33***	***3.32***	***3.06***	***3.32***	n.a.	Case 1

Source: ERIA's Investment Environment Survey 2009
(Economic Research Institute for ASEAN and East Asia in Jakarta).

Table 4. Comparison of the Cities from the Point of Investment Environment Survey (2)

	Danang	HCMC	Phnom Penn	Sihanouk Ville	Yangon	Vientiane	Savannakhet	Weight
Industrial estates	3.35	3.06	3.5	3.7	2.9	3.2	n.a.	20
Transportation	3.13	3.49	3.3	3.3	3.3	3.2	n.a.	10
Electricity	3.1	3.91	3	3	2.2	3.4	n.a.	10
Telecommunication	3.57	3.37	3.5	2.8	3.1	3.6	n.a.	10
Water	3.64	3.03	3.4	3.5	3.5	3.4	n.a.	10
One-stop service	3.46	3.75	3.3	3	2.5	3.1	3.5	10
Governance	3.25	3.18	3.1	3.2	3.09	3.3	3.3	10
Regulatory framework	3.3	3.19	3.3	3.4	3.28	3.4	3.3	20
Labor	3.2	3.15	3.2	3.3	3.4	n.a.	n.a.	20
Accomodation	3.05	3.08	3.7	4	3.3	3.3	n.a.	10
Average	3.30	3.28	3.33	3.35	3.09	3.32	n.a.	case2

【Power Point】

Industrial Cluster Policy in CLMV for Narrowing the Gaps in East Asia

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December 4, 2009

Industrial Cluster Policy in CLMV to Narrow the Gaps in East Asia

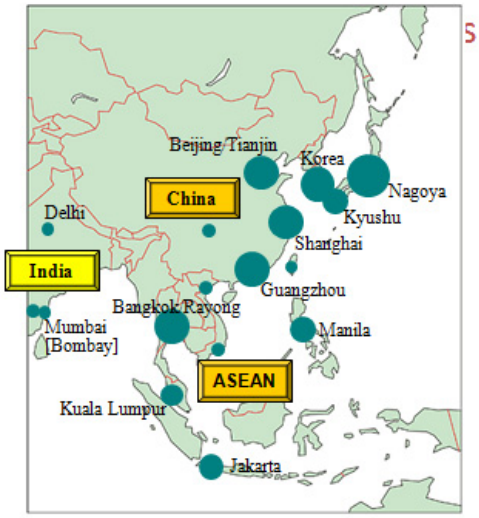
Akifumi Kuchiki
Professor, Nihon University

1

Today's topics

1. **Clusters: Flowchart Approach to Industrial Cluster Policy**
2. **Cluster-to-Cluster (C2C): Corridors**
3. **Asian triangle of growth in 2030:**
   CLMV: Cambodia, Laos, Myanmar, Vietnam

2 2



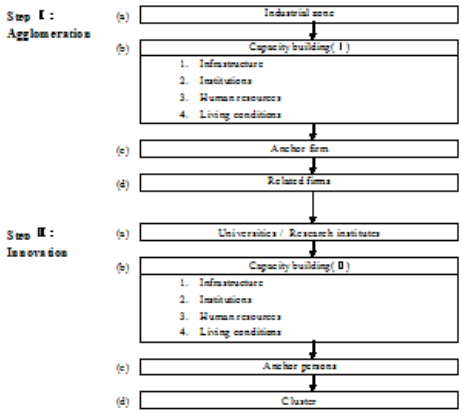
3

1. Flowchart Approach to Industrial Cluster Policy

1. Build capacity
2. Invite foreign players to initiate an industry
3. Foster local players

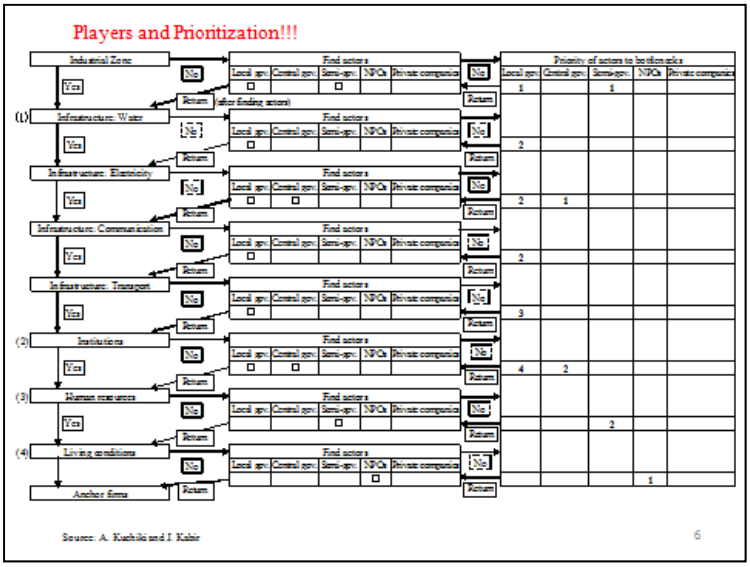
4

Figure 3. Flowchart Approach to Industrial Cluster Policy



Source: A. Kuchiki and K. Yoshida

5


Players and Prioritization!!!
Industrial Zone
Infrastructure: Water
Infrastructure: Electricity
Infrastructure: Communication
Infrastructure: Transport
Institutions
Human resources
Living conditions
Anchor firms
Yes
No
Return
Find actors
Local gov.
Central gov.
Semi-gov.
NPOs
Private companies
Priority of actors to be filled as
Source: A. Kuchiki and J. Kabir
6

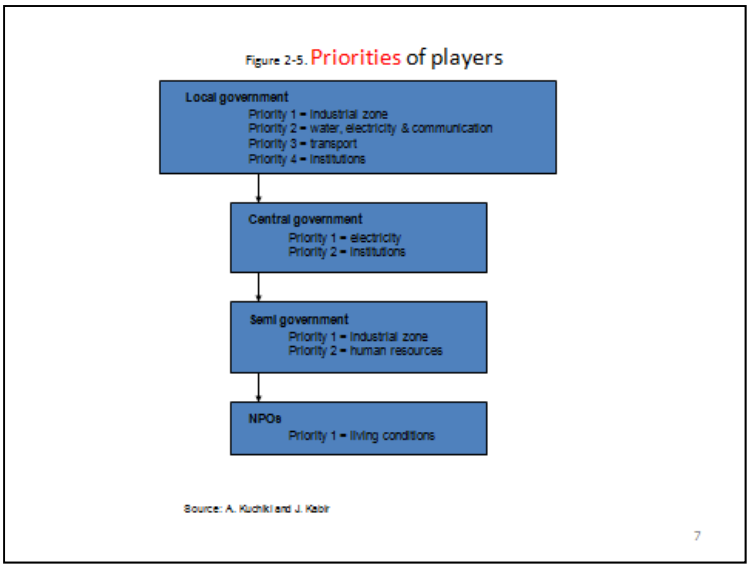
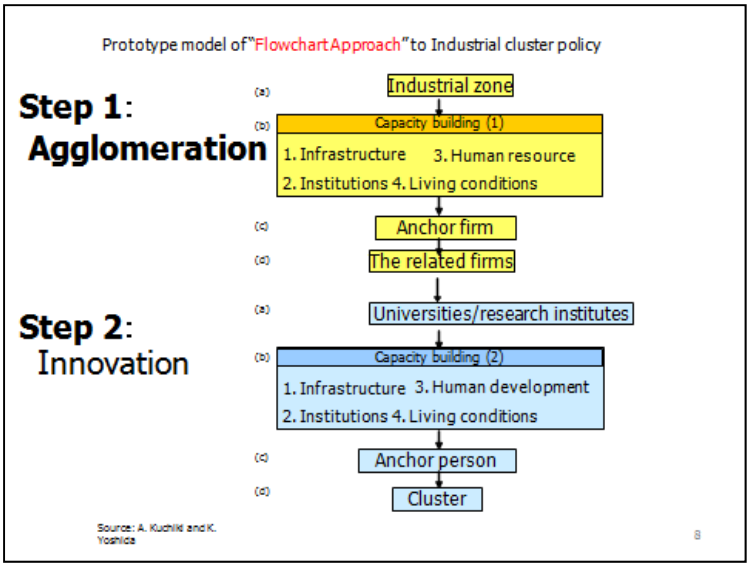


Figure 2-5. Priorities of players
Local government
Priority 1 = industrial zone
Priority 2 = water, electricity & communication
Priority 3 = transport
Priority 4 = institutions
Central government
Priority 1 = electricity
Priority 2 = institutions
Semi government
Priority 1 = industrial zone
Priority 2 = human resources
NPOs
Priority 1 = living conditions
Source: A. Kuchiki and J. Kabir
7


Prototype model of "Flowchart Approach" to Industrial cluster policy
Step 1: Agglomeration
Step 2: Innovation
(a) Industrial zone
(b) Capacity building (1)
1. Infrastructure 3. Human resource
2. Institutions 4. Living conditions
(c) Anchor firm
(d) The related firms
(a) Universities/research institutes
(b) Capacity building (2)
1. Infrastructure 3. Human development
2. Institutions 4. Living conditions
(c) Anchor person
(d) Cluster
Source: A. Kuchiki and K. Yoshida
8

Prototype model of the flowchart approach

(1) Labor intensive
(2) Export led growth
(3) Foreign direct indepent

to make use of introducing foreign direct investment in the labor intensive manufacturing industries with high value of industrial backward linkage

9

Industrial clusters in Asia: from Singapore to China

(1) The automobile industry cluster in the suburb of Eastern Seaboard in Thailand ,

(2) The electronics industry cluster at the Thang Long Industrial Park (TLIP) in Hanoi, Northern Vietnam,

(3) The software industry cluster in Guangzhou, China

10

(1) Thailand: Mitsubishi Motors as an Anchor Firm in the cluster of Eastern Sea Board Region:

420ha and 10 years: the number of the newly employed is abour 30 thousands.

11

	Loan contract agreement	Loan completion	Loan executed	executed
Water/Aqueduct Project	7/1982	4/1987	36.06	36.06
Leamchabang Port	9/1984	5/1993	31.78	
	11/1985	11/1993	48.42	
	2/1990	9/1995	58.68	
	10/1985	10/1992	25.76	
	9/1987	9/1992	19.89	184.53
Leamchabang Industrial Estate	10/1985	10/1992	25.76	
	9/1987	9/1992	19.89	45.65
Railway Projects				
Siracha/Leamchabang	9/1988	7/1998	9.2	
Sattahip/Maptaphut	9/1988	1/1997	28.26	
Khlang19/Kengkoi	2/1990	12/1999	72.98	110.44
Road Projects				
Chanburi/Pattaya	11/1988	3/1994	40.74	
Bangkok/Chanburi	12/1990	4/1993	134.35	
Outer Bangkok Ring	12/1990	4/1993	128.28	303.37
				[illegible]

Mitsubishi Motors (Thailand) Established in 1990

12

Main suppliers for Mitsubishi Motors

ts suppliers

SUMMIT SHOWA MANUFACTURING CO., LTD.
SUMMIT KURATA MANUFACTURING CO., LTD.
THAI SUMMIT HARNESS CO., LTD.

Leamchabang Industrial Estate

ndustrial agglomeration

SUMMIT AUTO BODY INDUSTRY CO., LTD.
SUMMIT AUTO SEATS INDUSTRY CO., LTD.
SUMMIT STEERING WHEEL CO., LTD.
THAI SUMMIT HARNESS CO., LTD.
THAI CHANATHORN INDUSTRY CO., LTD.

Samutprakan Prefecture

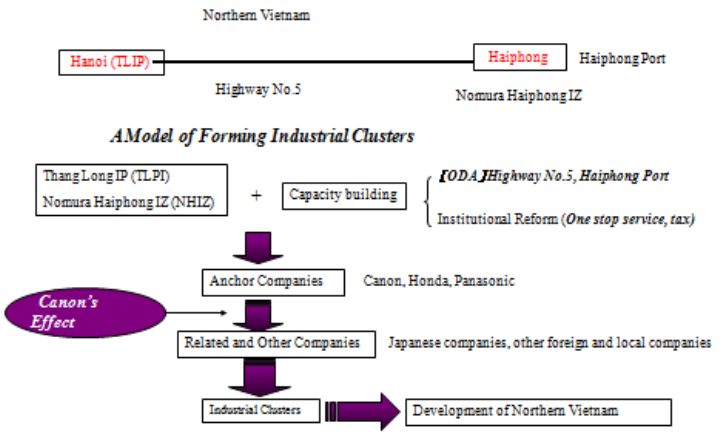
13

(2) Hanoi's Electronics Industry Cluster:

100 Japanese auto related firms

14

Figure 1: Industrial Clusters in Northern Vietnam



15 15

The electronics industry cluster in northern Vietnam

(Unit: million $: 1$=100¥)

	Year	ODA
Highway Route 5	1993, 1995	210
Haiphong Port	1995, 1999	173
Thanglong Industrial Park	1997	
Nomura Haiphong Industrial Zone	1997	
Institutional Reform	1999	200
Canon	2001	Total amount
		583
100 suppliers	2008	

30 thousand employees

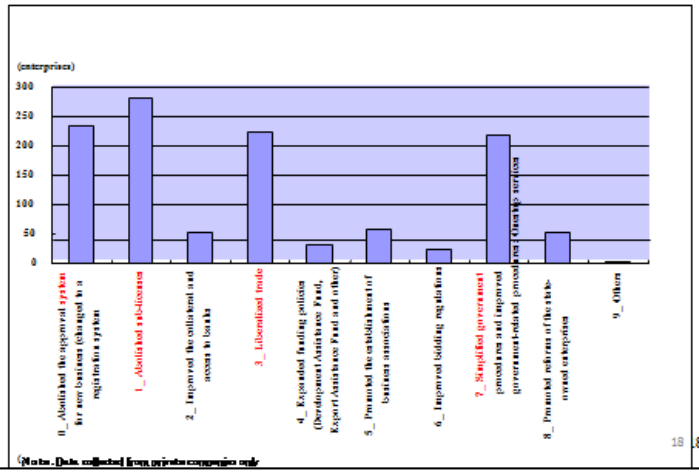
16

Hypothesis: Table 1. The Vietnamese Model of Fostering Industrial Clusters

	Contents	Items	Participation
Development of Land	Industrial zones	Site development	Central and local governments
		Tax incentives	Central and local governments
Capacity Building	Infrastructure	Roads, ports	ODA
	Institutions	Investment Climate	The government and ODA
		Human Resource: Technological Transfer	ODA
	Living conditions	Restaurants, Shops	Foreign direct investment

17 17

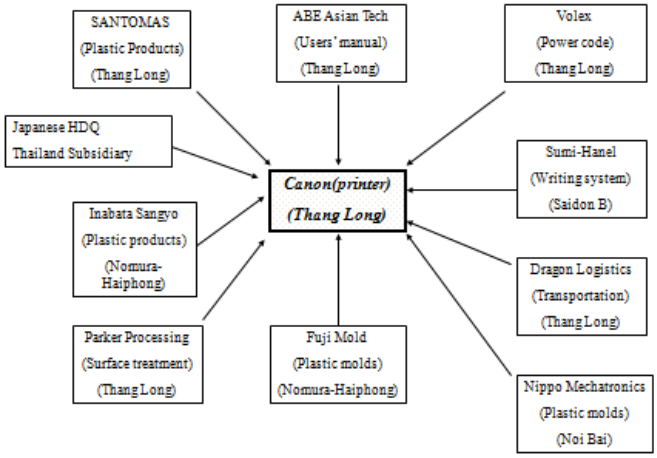
Figure 2: Institutional Reforms



18 18

(Note: Data collected from private companies only)

Figure 3: Canon's effects: Satellite Investment



19 19

- FDI to Northern Vietnam increased vis-a-vis the South
- Emergence of industrial agglomeration: e.g. "Canon's effect"

Figure: Change in direct investment (registered amount) and number of investments by region

Denom: US$, millions, higher number of investments)

	2000	2001	2002	2003	2004	2004/2000
North	92.3 (81)	272.9 (89)	373.4 (178)	804.5 (204)	1190.9 (197)	19.2 3.2
Central	58.7 (18)	128 (35)	145.1 (39)	218.4 (59)	405.2 (39)	6.9 2.2
South	707.1 (284)	2102.2 (378)	992.1 (538)	1081.1 (484)	2809.8 (498)	3.7 1.7

Data Source: Reproduced from General Statistical Office, *Statistical Yearbook 2000-2004*

Policy Coherence for Development: Case Studies from East Asia, *Journal of* **JBIC** *Institute*, No.29, p.29 (2006)

20 20

Conclusion;

1. We found ***the effects of Canon*** on the industrial cluster policy in the case of the electronics industry cluster in northern Vietnam. GDP of TLIP = 23%, 80 firms, Labor = 40,000 (2007)
2. We confirmed that our hypothesis of ***the flowchart approach*** to industrial cluster policy.
3. We made it clear that **ODA** played a crucial role in succeeding industrial cluster policy.

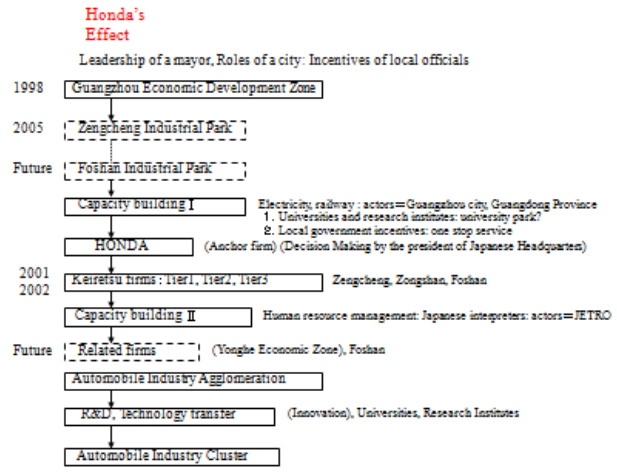
21

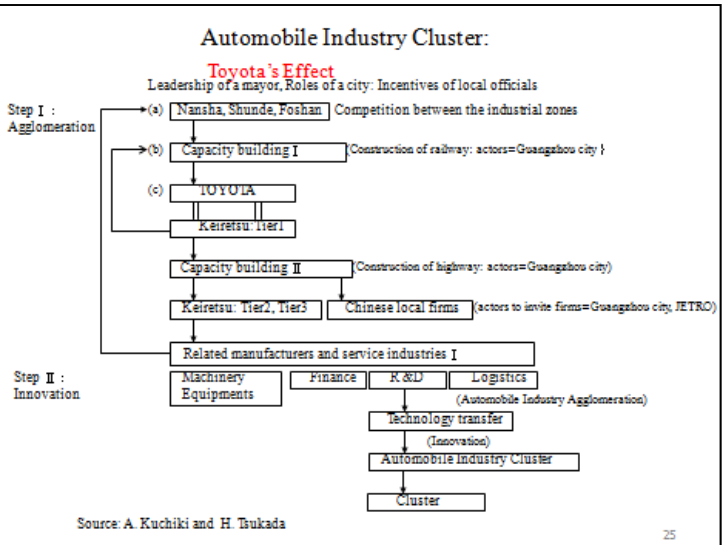
(3) Automobile Industry Cluster in Guangzhou

	Toyota	Honda	Nissan
Joint venture company	Guangzhou Toyota Motor Co., Ltd.	Guangzhou Honda Automobile Co., Ltd.	Dongfeng Nissan Motor Company
Establishment	2004 September 2006 May	1998	2004 May
Joint venture partner	Guangzhou Automobile (JVs with First Automotive Works in Tianjin)	Guangzhou Automobile, Dongfeng Automobile (Engines)	Dongfeng Automobile
Main products	Camry	Accord, Fit	Sunny, Tiida
Annual production volume	100,000 (2006) Production capacity is 300,000.	240,000 (2004). Second plant is under construction. (Scheduled to complete in 2006.	150,000
Location of headquarters	Southern coast of Guangzhou city (Nansha district:797 ㎢)	Center of Guangzhou city (Guangzhou Economic Development Zone)	North of Guangzhou city (Huadu district: 50 ㎢)
Agglomeration of components makers	Nansha district (12 keiretsu companies), Shunde district Foshan city (6 Keiretsu companies).	Guangzhou Economic Development Zone	Huadu district
Main components makers	Japanese makers	Japanese makers	Taiwanese makers, Japanese makers

Source: Based on Tsukada (2005), Kuchiki arranged partly.
Notes: Korea Hyundai Motor and Guangzhou Automobile produce commercial vehicles in Huadu. (Total investment: 135 billion yen)
Hyundai Motor and Beijing Automobile Investment Co. produce passenger vehicles.

23





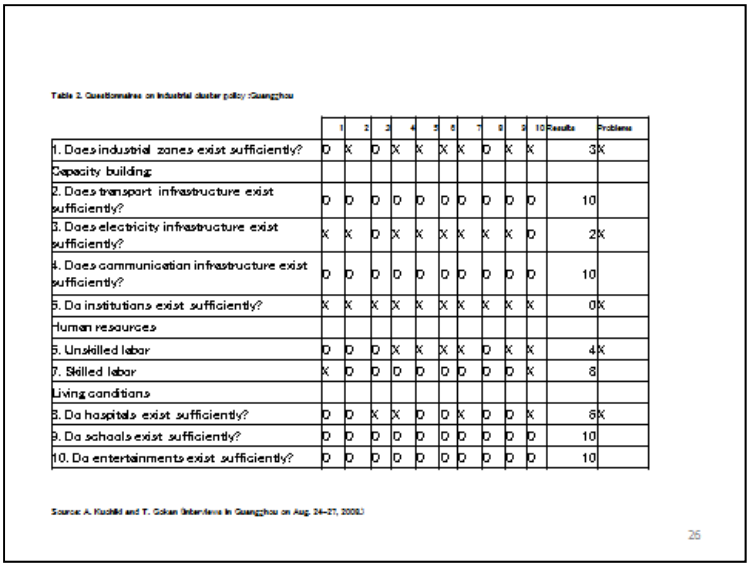
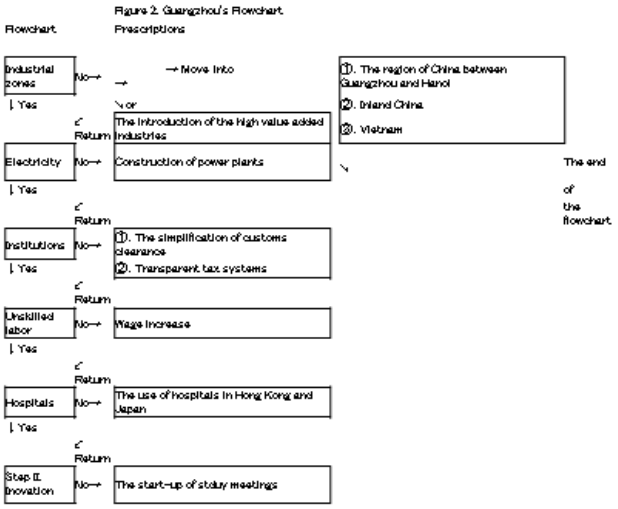


Table 2. Questionnaires on industrial cluster policy :Guangzhou

	1	2	3	4	5	6	7	8	9	10	Results	Problems
1. Does industrial zones exist sufficiently?	O	X	O	X	X	X	X	O	X	X	3	X
Capacity building												
2. Does transport infrastructure exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
3. Does electricity infrastructure exist sufficiently?	X	X	O	X	X	X	X	X	X	O	2	X
4. Does communication infrastructure exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
5. Do institutions exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
Human resources												
6. Unskilled labor	O	O	O	X	X	X	X	O	X	X	4	X
7. Skilled labor	X	O	O	O	O	O	O	O	O	X	8	
Living conditions												
8. Do hospitals exist sufficiently?	O	O	X	X	O	O	X	O	O	X	6	X
9. Do schools exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
10. Do entertainments exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	

Source: A. Kuchiki and T. Gokan (Interviews in Guangzhou on Aug. 24–27, 2008)

26



2. Cluster-to-Cluster

- **(1) Corridors:**
- *East West Economic Corridor (From Mawmyane, Myanmar to Danang, Vietnam),*
- North South Economic Corridor,
- Southern Economic Corridor

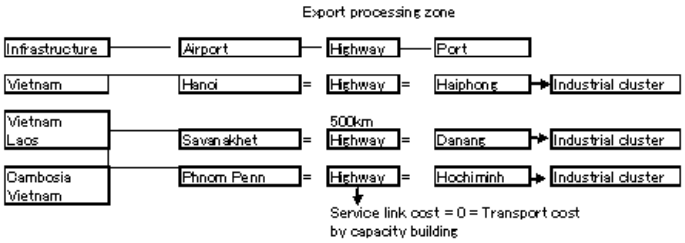
Cluster to Cluster (C2C):

(2) A highway: Guangzhou in China and Hanoi in Vietnam by the highway: it takes 14.5 hours for a car to go from

(3) Sumitomo Corporation: Thanglong Industrial Park in Hanoi will form a distribution network of logistics to link Hanoi and Guangzhou.

29

(4) Corridors: infrastructure
(ports, airports, highways)



30

(5)An example: Danang - Savannakhet

Flowchart

Industrial zone

Yes

Players(= Funding)

Candidates?

JBIC, JETRO, ADB,

Private companies

(1) Infrastructure → JBIC

(2) Human Resource Development → JETRO, JICA

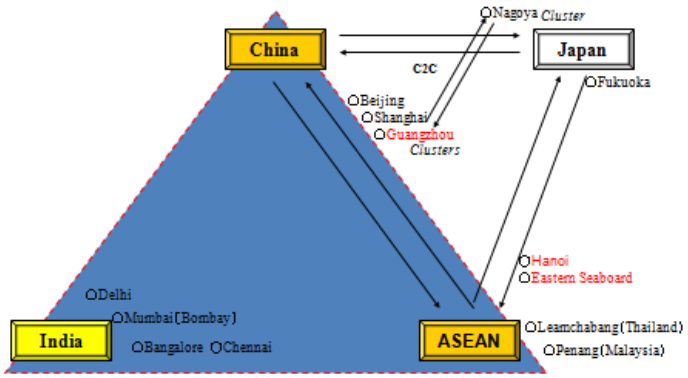
(3) Living conditions → Japanese trading corporations

Anchor firms → Targetting (Candidate)

1. Japanese trading corporations
2. Electronics

31

3. The Asian Triangle of Growth



32

- (1) Its research topics:
- deepening integration,
- *narrowing gap and
- sustainable growth.
- (2)*Narrowing gap: the development of Lao, Cambodia, Myanmar, and Vietnam. 3. ERIA will propose the policy recommendation for
- the development of industrial *clusters in CLMV.

33

(3) Comparison of the scores between the cities in CLMV based on FY2008 Survey done by you
(i) AHP method
(ii) Equal weight
(iii) A condition for Vientiane to be the first
(iv) ERIA Investment Survey

34

Table 1. Questionnaires on industrial cluster policy: Hanoi

	1	2	3	4	5	6	7	8	9	10	Results	Problems
1. Does industrial zones exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
Capacity building: Physical infrastructure												
2. Does transport infrastructure exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
3. Does electricity infrastructure exist sufficiently?	X	X	X	X	X	X	X	O	O	O	3	X
4. Does communication infrastructure exist sufficiently?	O	O	O	O	O	O	O	X	O	X	8	
5. Does port infrastructure exist sufficiently?	X	X	O	O	X	X	X	X	X	X	2	X
6. Do institutions exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
Human resources												
6. Unskilled labor	X	X	X	X	X	X	X	X	X	X	0	X
7. Skilled labor	X	X	O	O	O	O	O	O	O	O	8	
Living conditions												
8. Do hospitals exist sufficiently?	O	O	X	X	O	O	X	O	O	X	5	
9. Do schools exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
10. Do entertainments exist sufficiently?	O	O	X	X	X	X	X	O	O	O	5	X
11. Don't thefts happen?	X	X	X	X	X	O	O	O	O	O	5	X

Source: A. Kuchiki and T. Gokan (Interviews in Hanoi on Aug. 28–30, 2008)

35

(1) AHP method Cities	Danang	Phnom Penh	Sihanouk Ville	Savannakhet	Yangon	Vientiane	Guangzhou	Hanoi	Bangkok	Weight
Full scores = 10.	4.38	4.75	3.81	2.44	3.75	2.19	5.75	4.06	9.125	AHP
1. Do industrial zones exist sufficiently?	10	5	8	3	3	3	3	10	10	0.125
2. Does transport infrastructure exist sufficiently?	4.2	2	3	3	2	3	10	0	10	0.0625
3. Does electricity infrastructure exist sufficiently?	5.8	1	3	7	0	5	2	3	10	0.0625
4. Does communication infrastructure exist sufficiently?	10	5	7	9	2	6	10	8	9	0.0625
5. Does port infrastructure exist sufficiently?	7.5	4	2	2	1	2	10	2	10	0.125
6. Do institutions exist sufficiently?	5.8	4	5	4	1	4	0	0	9	0.0625
7. Does unskilled labor exist sufficiently?	0.8	10	4	0	7	0	4	0	8	0.25
8. Does skilled labor exist sufficiently?	0	2	2	1	2	1	8	8	8	0.125
9. Do hospitals exist sufficiently?	4.6	2	1	1.5	7	2	6	8	10	0.125

36

(2) Equal weight Cities	Danang	Phnom Penn	Sihanouk Ville	Savannakhet	Yangon	Vientiane	Guangzhou	Hanoi	Bangkok	AHP
Full scores = 10.	5.41	3.88	3.88	3.39	2.76	2.89	5.88	4.33	9.324	Weight
1. Do industrial zones exist sufficiently?	10	5	8	3	3	3	3	10	10	11.1
2. Does transport infrastructure exist sufficiently?	4.2	2	3	3	2	3	10	0	10	11.1
3. Does electricity infrastructure exist sufficiently?	5.8	1	3	7	0	5	2	3	10	11.1
4. Does communication infrastructure exist sufficiently?	10	5	7	9	2	6	10	8	9	11.1
5. Does port infrastructure exist sufficiently?	7.5	4	2	2	1	2	10	2	10	11.1
6. Do institutions exist sufficiently?	5.8	4	5	4	1	4	0	0	9	11.1
7. Does unskilled labor exist sufficiently?	0.8	10	4	0	7	0	4	0	8	11.1
8. Does skilled labor exist sufficiently?	0	2	2	1	2	1	8	8	8	11.1
9. Do hospitals exist sufficiently?	4.6	2	1	1.5	7	2	6	8	10	11.1

37

(3)	AHP Weight	Danang		Vientian		Savann		Yangon		Sianukh		Phunan h		Hanoi		Guangzhou
10	0.125	1.25	10	1.25	3	0.375	3	0.375	8	1	5	0.625	10	1.25	3	0.375
4.166667	0.125	0.520833	10	1.25	3	0.375	2	0.25	3	0.375	2	0.25	0	0	10	1.25
5.833333	0.0625	0.364583	10	0.625	7	0.4375	0	0	3	0.1875	1	0.0625	3	0.1875	2	0.125
10	0.0625	0.625	10	0.625	9	0.5625	2	0.125	7	0.4375	5	0.3125	8	0.5	10	0.625
7.5	0.0625	0.46875	2	0.125	2	0.125	1	0.0625	2	0.125	4	0.25	2	0.125	10	0.625
5.833333	0.0625	0.364583	4	0.25	4	0.25	1	0.0625	5	0.3125	4	0.25	0	0	0	0
0.833333	0.25	0.208333	0	0	0	0	7	1.75	4	1	10	2.5	0	0	4	1
0	0.125	0	1	0.125	1	0.125	2	0.25	2	0.25	2	0.25	8	1	8	1
4.583333	0.125	0.572917	2	0.25	2	0.1875	7	0.875	1	0.125	2	0.25	8	1	6	0.75
		4.375		4.5		2.4375		3.75		3.8125		4.75		4.0625		5.75

38

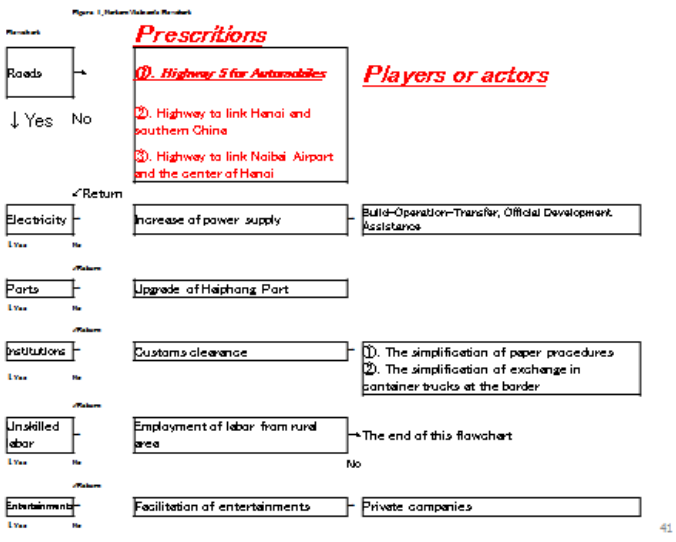
(4)ERIA ES2009	Danang	HCMC	Phnom Penn	Sihanouk Ville	Yangon	Vientiane	Savannaket	Weight
Industrial estates	3.35	3.06	3.5	3.7	2.9	3.2	n.a.	10
Transportation	3.13	3.49	3.3	3.3	3.3	3.2	n.a.	10
Electricity	3.1	3.91	3	3	2.2	3.4	n.a.	10
Telecommunication	3.57	3.37	3.5	2.8	3.1	3.6	n.a.	10
Water	3.64	3.03	3.4	3.5	3.5	3.4	n.a.	10
One-stop service	3.46	3.75	3.3	3	2.5	3.1	3.5	10
Governance	3.25	3.18	3.1	3.2	3.09	3.3	3.3	10
Regulatory framework	3.3	3.19	3.3	3.4	3.28	3.4	3.3	10
Labor	3.2	3.15	3.2	3.3	3.4	n.a.	n.a.	10
Accomodation	3.05	3.08	3.7	4	3.3	3.3	n.a.	10
Average	***3.31***	***3.32***	***3.33***	***3.32***	***3.06***	***3.32***	n.a.	Case 1

39

Summary

1. Eastern Seaboard area is the best in the investment environment.
2. The cities of CLMV are the same in the investment environment.
3. Our flowchart approach can be applied to the cities.

40



41

4. Conclusions

A. The Yuan economy is expanding from southern China to ASEAN.

B. The Greater Mekong Subregion is developing.

42

C. India's development:

- Delhi – Mumbai industrial corridor:
- Honda and 20 Japanese firms
- invest.
- Mumbai–Chennai (via Bangalore)
- industrial corridor
- ADB: ASEAN – India linkage
- China: China – India linkage

43

D. China-Singapore Belt Region

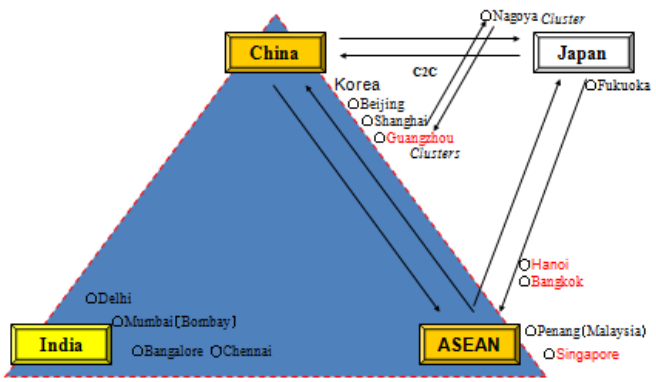
- in the triangle by reducing trade costs:
- i. Logistics network in the private sector
- ii. FTAs (CEPEA) in the government sector

44 44

- 1. Industrial cluster Policy:
- Flowchart Approach
- 2. Cluster to Cluster (C2C)
- 3. China, India, ASEAN:
- *Asian triangle of growth*
- *in 2030.*

45

Figure 1. The Asian Triangle of Growth: Japan needs the C2C linkages!



46

Thank you very much
for your kind attention.

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Professor, Nihon University

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47

【討論】

Development Gaps in ASEAN and East Asia: A Human Capital Perspective

討論者：栗田匡相

(早稲田大学大学院アジア太平洋研究科助教)

栗田と申します。よろしくお願いいたします。朽木先生、大変ウィットに富んだ、そして刺激的なご報告をありがとうございました。日本への警鐘のようなものをふまえて、非常に示唆に富んだ報告だったと思います。お偉い先生方の中に私のような若造がおりますので、今日は教えを受ける学生の立場でいくつかコメントないしは質問をさせていただければと考えております。

まず、お手元にあるペーパーの内容についてざっと概観をさらってみたいと思います。ペーパーの書かれた背景と言いますか、モチベーションみたいなものですけれど、日本、韓国、台湾が経験してきたような工業化政策、産業政策、つまり国民国家というものを基盤とした幼稚産業保護であるとか、国民経済をどうにか強くしていこうというようなスタンスの成長戦略が最近ではなかなかうまく機能してこなくなっている。代って多国籍企業や物流のネットワークを活かした、まさにこのシンポジウムのタイトルにもなっている「地域協力」というもののメリットを活かした成長戦略というものが最近非常に叫ばれているわけです。

これを見ていただくと、最初のジェネレーションとして、この工業化の世代別ということで並べてみたんですけど、これは我々がこのシンポジウムの前に内々の研究会をした際に、今日の座長の深川先生がお示しになったレジュメから少しひっぱってきたものなんですが、日本、韓国、台湾といったファーストジェネレーションは今申し上げた通りの幼稚産業保護であるとか、中央集権化であるとか、そういった国のパワーで産業を引っ張っていこう、成長を引っ張っていこうという形で国を開発していこうということだった。

しかし、その後の ASEAN、タイ、マレーシア、先行している ASEAN という意味でしょうけれども、そういうところは少し状況が変わってくる。そこには外資を入れて発展していこうという政策が出てくるわけですが。この段階では外資と内資の区別というのはちゃんと置いておきましょうということであったり、自然資源の活用をどうにか考えてみたいとか、あるいは華人の資本、そのネットワークを活かして成長していこうというのが、インターナショナリゼーションと書いてあるセカンドジェネレーションです。

その次に中国とかインドという国が来る。ここにベトナムも含めてもいいのかもしれませんけれども、ここはグローバリゼーションというものの恩恵をフルに活かして、FDI などももっとより強く活用していく。または先ほど言ったような物流のネットワークとか、ですね。そして、この段階になってくると非常に国によるイニシアチブのようなものがかなり薄れてきます。そして、今日のご報告にあった CLMV の 4 番目のジェネレーションがここに続く

ということになってくるわけです。ここで朽木先生は、クラスターポリシーというものが非常に功を奏していくのではないかと、とお話になったわけです。

ですので、国民国家からネットワークとか集積を活かした、地域協力を活かした形に成長戦略が変わってきているということと、工業化というものの意味がグローバルの成長戦略へと変わってきているということです。その成長基盤となるようなプラットフォームというのは、当該諸国である CLMV という国にあるというわけではなく、例えば日本のような先進諸国にあるということであったり、外資と内資の区別はもうほとんど関係なくなってきているとか、あるいは今日のご報告の中にもありましたけれども、個人の能力であるとか、1 つの企業の存在というものが非常に大きくなるような成長戦略というものが考えられるわけです。

今申し上げたことが背景になりますけれども、次にこういった地域協力のメリットを活かすような戦略というものを考えた時に、実際にこういった変化により適合できるような具体的な成長戦略というものはないのか、ということで、今日お示しになられたフローチャートアプローチというものがでてくるわけです。

フローチャートモデルというものは、実はその前にクラスターというものの概念を提起した、マイケル・ポーターさんという方のモデルがあって、これが朽木先生も触れられていましたけど、ポーターのダイヤモンドモデルと呼ばれるものです。これはどんなものかと言いますと、ポーターというのは特定産業において企業が競争に成功する際、国の経済環境、制度、政策などが果す役割を説明しようとしたんですね。国際競争を実行するのは国ではないんですけれども、企業または産業であるのにも関わらず、ある国に本拠地を置くような企業だけが成功しているのはなぜかというような問いかけからこのモデルを開発しました。

4 つの決定要因というのが要素条件、ファクターコンディションと呼ばれているものです。ある任意の産業で競争をするのに必要な熟練労働、またはインフラといった生産要素における地位であるとか、需要条件、どれだけ需要があるかとか、関連支援産業、サポーティングインダストリーというものがどれだけ育っているかとか、そういった 4 つの要因が必要だということになるわけです。これは日本の、今日は海外からの方も見えていますので、例えば秋葉原というような地域で考えてみると、秋葉原も歴史があってですね、非常に有名ないろんな家電製品を売っているお店がたくさん並んでいるところです。ああいうものも最初は少数の家電製品のメーカーが進出して来て、小規模な価格競争などが起きることによって、お客さんが集まってくるわけです。低価格が実現できれば、お客さんも更に集まる。それに伴っていろんな部品メーカーなどが集まってきて、いろんなネットワークができてくる。それを聞きつけていろんな他の家電のメーカーなども進出して来る。そこにさらなる競争が生まれて、さらなる低価格化が起きるとか、あるいは高品質化が起きるとか。そしてそういう高品質化からイノベーションのようなものが生まれてくるとか、というような形でその産業のクラスターの形成過程を説明することができるモデルになっているわけです。

ところが先ほど朽木先生、トートロジーと呼ばれましたけれども、実はこれは事後的なモ

デルです。つまり、先進諸国の成長戦略を後付け的に説明したものですから、どうやってイノベーションを生み出せばいいのかということに関しては、なかなかこれだけでは答えが出ない。そして今日のご報告の内容は CLMV という途上国の話ですから、先進諸国のモデルをベースにしているポーターさんのモデルではなかなか成長戦略として考えることが難しいわけです。なので、先ほどのフローチャートアプローチを改良して出そう。つまりはどうやってイノベーションを起こすか、どうやって集積を起こすかという意味での、プライオリティ、優先順位を重要視する。こういうふうにやれば少なくともアグロメレーションが起きますよ、イノベーションが起きますよ、というようなステップを提示するということです。CLMV ないしは途上国はインフラであるとか、いろんなものはもちろん不足していますから、そういうものとして優先順位をつけてどこからやっていくのかということを示したモデルとして、非常に実践的で有用性の高いモデルになっているかと思います。

ここからが質問になるわけですけれども、まず、『Foreign Affairs』の今年の 8 月号くらいに「輸出主導型経済モデルの終わり？―アジア経済が苦境に陥っている本当の理由」というブライアン・クラインさんとケネス・ニール・クキエルという方が書いたものがあったんですけれども、皆さん御承知の通りの金融危機では、第 1 セッションでも議論されたと思いますけれども、アジアの国は非常に打撃を受けた。それは中間財が 60%くらい域内貿易の割合を占めていて、最終財は基本的にアメリカとかに行っている。だから先進諸国が打撃を受ければアジアも打撃を受けてしまう。例えばカンボジアでは 5 万人の人たちが雇用を失う。これはびっくりすることにカンボジアの全雇用の 17%ぐらいの人たちの数字である、と彼らは論じています。なので、実はこのフローチャートモデルというのは、作れば売れるというような意味の状況を多分設定されているかと思うんですけれども、これからの社会、こういったグローバリゼーションの中で、危機とかいろいろな問題があるわけですから、デマンドサイドの分析というものの必要性があるのではないか。

もう 1 つの質問は格差に関する質問です。このセッションのタイトルに「格差」の言葉がついていますけれども、まずクラスターを作る、クラスターを作るとそこの地域は潤うかもしれないけれども、じゃあ国内の他の地域との格差はどうなるのか。あるいは、タイのケースが非常に重要だとおっしゃられましたけれどもタイは実はバンコクとか 1 極集中型の工業化を遂げることによって、東北部とかの地域とかの所得格差ですとか経済格差みたいなものが非常に担保されて、今でも残っていて、それが問題になっているんですね。そういうことが起こる。つまりは、国内の格差を助長したり、あるいは固定化したりしてしまう恐れがあるんじゃないか。

もう 1 つは国家間の格差です。実は先ほどのファーストジェネレーション、セカンドジェネレーションという図式をもう 1 度見てもらえれば分かるんですが、実はサードジェネレーションがセカンドに追いつくとか、中国はあるかもしれないけど、セカンドがファーストに追いつくとか、こういった相対的な順位づけそのものはこの 2、30 年間ほとんど変わっていないわけです。ですので、本来であれば成長戦略というものは、例えば上の諸国にくっつい

ていけるような、追いついていけるようなものであっていいはずなのに、そういうようなことに実は高度経済成長が言われていたアジアもなっていなかったんじゃないか。こうしたアジア域内で相対的な順位はほとんど変わっていないという事実をどう捉えるべきなのか。それを捉えた上でクラスターポリシーは中・長期的な CLMV 諸国の発展戦略として適当なのかどうか、という点ですね。かつ、格差の問題で考えるのであれば、CLMV というのは、右の図にもあるように貧困に苦しんでいる人がたくさんいる。そういった人たちにとって優しい戦略になっているのかどうかということをちょっと考えていただきたい。

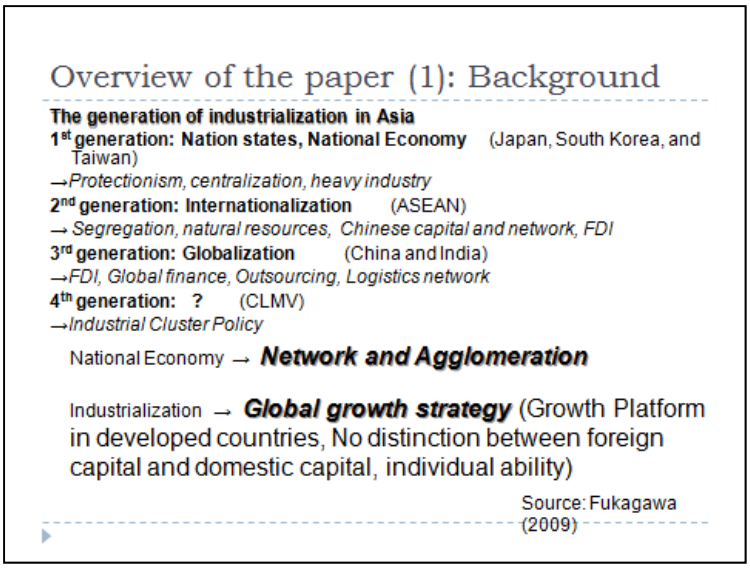
最後ですけれども、実はこれは WWF が今年出したレポートで、実はこの 10 年間くらいで、いわゆる CLMV 地域、メコン河流域地域で 1000 種ほどの動植物の新種が見つかったということが挙げられています。そして、APEC とかで鳩山さんが大変巨額なお金を開発に投じる、GMS（大メコン圏）地域に投じるということをお話されたわけで、アジア会議とかもありますけれども、そういう中でこういった野生動物の保護、もっと言ってしまえば生物多様性条約との関連をどう考えて行くのか、といったこともおそらく今後 CLMV が成長を遂げていく中でどうしても考えなければいけない話ではないかと思っております。以上です。

【Powepoint】

Industrial Cluster Policy in CLMV for Narrowing the Gaps in East Asia

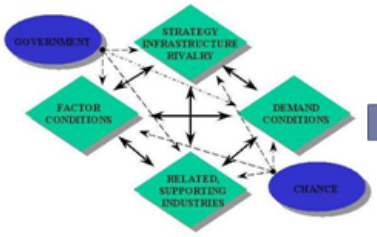
討論者：栗田匡相

（早稲田大学大学院アジア太平洋研究科・助教）



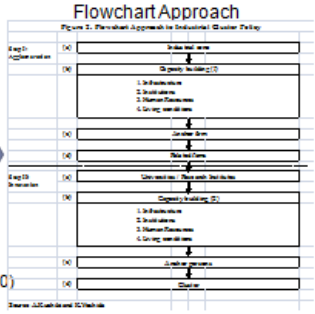
Overview of the paper (2): Model

Porter's Diamond model



Source: M. Porter (1990)

Flowchart Approach



- How to generate innovation
- Model for developed countries

- Importance of Priorities
- Model for developing countries

Question 1: Analysis of demand side

- Tamed Tigers, Distressed Dragon –How export-led growth derailed Asia's economics

  Klein and Cukier(2009)

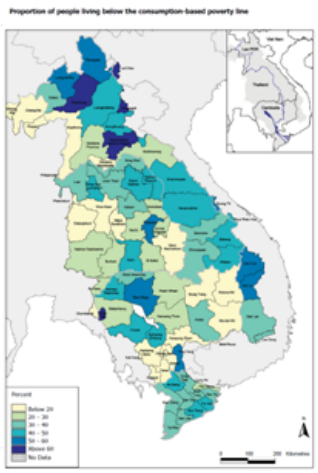
50,000 Laid-off workers of Apparel industry in Cambodia
(from September, 2008 to the beginning in 2009)

17% of total employment in Cambodia

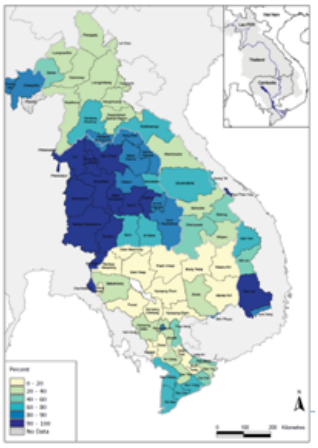
The need for the analysis on demand side

Question 2: Disparity

- **Widening disparity within the country**
  - Gap between cluster area and the others
  - The case of Thailand
- **Persistent disparity across countries**
  - Time-invariant order of GDP per capita
  - Pro-poor strategy?



Question 3: Sustainable development



【質疑応答】

深川：　ありがとうございました。北京ダックの発表に最後は何か、爬虫類系のお話でした。今のことに関してそれではフロアからご質問を受けたいと思うんですけれどもいかがでしょうか。

それでは私からまた 1 つ質問させていただきたいと思います。産業クラスターの話の中で、多分クラスターができるところはいいんだけれども、できないところはどうしちゃうんでしょうね、というお話はやっぱりいつもあるんだと思うんですね。そうすると、国の単位で考えているときは国の中でまあ何とかしよう、いくらなんでも政府がする。普通はすると思うんですけど、クラスターごとにばらばらに地方分権みたいになった場合、一体誰がそうじゃなくなっちゃった人たちを引っ張っていくのかという話はあるように思うんです。先ほどのコメントと一緒にちょっとお答えいただけたらなというふうに思います。

朽木：　栗田先生と今のご質問に合わせてお答えします。まず、私のモデルで話す時に一番問題になるのは、需要ですね。どこに売るのか。これはアジアの場合は、かつては、例えばキャノンがアユタヤにあった工場をハノイに移した。そこは輸出加工だったので作ったものはどこかに輸出するということを前提にしていますから、デマンドは最初から持っていっているわけです。だから、全く、輸出加工区の場合はデマンドというのは問題にならない。ところが、中国の国内向けとか、インドの国内向けといったところで進出した場合には、国内が飽和したときどうするかという問題はある。

とりあえず、アジアで起こったものは EPZ（Export Processing Zone）、輸出加工区を前提としていますから、そこはできるだけ問題にならないようなシフトをする。ですから、今タイで生産している部品をラオスのビエンチャンに新しい工業団地ができるから、ビエンチャンに移す。そこで地域統合というのが重要になってくるわけです。つまり、今国境があるのでここの通関手続きが 1 日かかったり、2 日かかったりする。これがコストになる。それから道路が東西回廊とか南北回廊とかいうのができているのですが、要するに先ほど言いました空間経済学の理論で言うと、2 地点間の輸送費がゼロになれば、A 地点と B 地点は同じ地点として考えてよくなるわけです。つまり、ラオスもタイも差がなくなるわけです。現実に今、タイの東部臨海に行きますと、ラオスの人が働いている。要するに、人の移動はそういうところで起きているわけです。ですから、いかに地域統合を早く進めて、午前中にありました FTA、EPA というのを進めて、国境の壁をなくしていく。これが午前中に出られた方の重要な役割になるわけですね。ですから、先ほどの問題で言うと、輸送費にかかるインフラ・コスト制度をどう低くするか

朽木：　というのが需要に大きく関わってくる。

(Cont'd)　それから格差の問題ですが、産業クラスターを作るということは、そこができたところとできなかったところの差を広くするわけですから、これは格差の拡大政策なわけです。ですから私がこういう話をすると、場所によっては犯人みたいに、お前何言っているのだという批判をよく受けるのです。が、ところが中国で起こった 1992 年鄧小平の南巡講話というのは、黒い猫でも白い猫でも、ネズミを取る猫はいい猫だ、つまり成長するところから成長しろというのが中国の発展につながった。これをやらなかったのがインドだったわけですね。それが、インドがここ数年はそういうことも認めるようになった。今日は説明しなかったのですが、デリー・ムンバイ産業大動脈という午前中見えた経産省も大変力を入れて、日本企業がホンダの自動車基地となろうとしている。そういうのが 20 社以上行って、ここ 1、2 年くらいでできると思うんですが、そういう新しい動きができてきている。だからとにかく平等にやったら、平等にそのまま沈んだままであるから、どうやって核を作って引っ張るか、ということが重要であるということですね。

それと、もう 1 つ私の大きな問題は、環境問題。これは産業が集積したらコンジェスチョン、混雑が起こるわけですから必ずポリューションが起きてくる。ですから、ここのポリューションを解決するのをどうするかというのを、これは松岡先生に次のセッションで頑張っていただきたいと思います。産業クラスターができるときにどうやって解決していったらいいかというのを次のセッションで解いていただければと思います。ちょうど時間もいいのではないでしょうか。

【報告】

Evolution of Regional HDI in China (1982-2006)

「人間開発指数(HDI)から見た中国の地域発展格差（1982-2006）」

Angang Hu

(Director of the Center for China Study at Tsinghua-CAS;
Professor at School of Public Policy and Management, Tsinghua University)

I. Introduction:

Historical progress of China's human development

How to measure the development level of a country or region? People used to use per capita income or per capita GDP to do it. The most typical is the World Bank's "World Development Report 2005". It divides the 206 countries and regions into four groups: high-income group (per capita GNI was over US$9,386 in 2003), the upper middle-income group (per capita GNI was US$3,035~US$9,386), the lower middle-income group (per capita GNI was US$765~US$3,035) and the low income group (per capita GNI was below US$765).[29] Following this method, this author has found that China falls into the lower middle income group, presenting a typical pattern of "One China, Four Worlds", with the 31 provinces, autonomous regions and municipalities fitting in the four different income groups.[30]

The second method is that advanced by UNDP, known as human development index (HDI). It has been extensively used to measure and compare the relative human development levels of various countries. As a composite index, HDI is used to measure the economic, health and education achievements. The HDI attempts to rank all countries on a scale of 0 (lowest human development) to 1 (highest human development) based on three goals or end products of development: Health and longevity is measured by life expectancy at birth; knowledge is measured by a weighted average of adult literacy and the gross enrolment rate of primary, secondary and tertiary schools; and decent living is measured by per capita GDP (PPP dollar) (UNDP, 2004).

[29] World Bank, World Development Report 2005: A Better Investment Climate For Everyone. Chinese edition, P. 254. Beijing, Tsinghua University Press, 2005.

[30] Angang Hu, Eds. "Regions and Their Development: the new Western region development strategy", Beijing, China Planning Publishing House, 2001.

As HDI includes per capita GDP, it is superior to the simple per capita GDP. The index has been widely acknowledged and accepted for its rich content and definite meaning.[31] In line with HDI, UNDP divides all countries into three groups: Low human development (0.0~0.50), middle human development (0.51~0.79) and high human development (0.80~1).

As the most populous country in the world, China used to be one of the poorest countries. **Over the past more than 60 years, especially over the 30 years since reform and opening up, it has created the biggest miracle in the history of human development, which is reflected not only in the alarming development speed but also in the major progress in human development.** China's HDI was 0.225 in 1950, an extremely low level, even lower than that of India. But it rose to 0.525 in 1975 to rank among the countries with the middle human development. It rose further to 0.722 by 2007 to rank the 92nd among the 182 countries. Such indicators as the life expectancy at birth, adult literacy and combined primary, secondary and tertiary enrolment were 72.9 years, 93.3% and 68.7%, above the world average. In just 25 years (1950~1975), China advanced into the lower middle level from the extremely low level and in just 20 years (1975~1995) it went on to edge into the ranks of the upper middle level from the lower middle level. It has continued to maintain the momentum of leveling up to the same level as high HDI countries.

Table 1 Changes in China's HDI Ranking in the World（1950—2007）

	1950	1975	1980	1990	2000	2007
China	0.225	0.523	0.533	0.608	0.719	0.772
Ranking	-	62	74	88	96	100
Total countries	-	102	113	136	173	182

Sources : Figures for 1950 come from Crafts, N. 2002, The Human Development Index, 1870-1999; some Revised Estimates, European Review, Economic History, 6, 495-505 ; figures for 1975 come from UNDP, Human Development Report 2002. Oxford University Press. p.246, 2002 ; figures for 1980-2007 come from UNDP, HDI_trends_components_2009.

In health, China has already brought infectious diseases under effective control and realized the modern demographical transition featuring low birthrate and low infant mortality rate. The life expectancy at birth rose from about 35 years before the founding of New China to 68 years by

[31] Todaro (1999) holds that The *HDI* has made a major *contribution* to improving our understanding of what is the composition of the development process in the countries (all are reflected in the HDI growth at all timnes) and what are the group and regional disparities inside a country. As an integrated social-economic index, HDI provides broad indictors both relative and absolute in the development of a country so as to make these countries to focus their economic and political policies directly on areas that need improvements.

1978 and further up to 73 by 2005. The maternal death rate dropped from 1,500/100,000 at the beginning of the 1950s to 34.2/100,000 by 2008. Infant mortality rate dropped from 200‰ to 14.9‰ in 2008. All these indicators are in the front ranks of developing countries.[32]

In education, China has completed the transition from a big population power to a big human resources power. It has realized the nine-year compulsory education, with the net primary school enrolment rate reaching 99.5% in 2008. The gross enrolment of junior secondary schools reached 98.5%. The senior secondary education (high school) is in for a period of rapid development, too, with the 2008 gross enrolment rate reaching 74.0%. The tertiary education has realized the transition from elite education to popular education, with the gross enrolment rate in 2008 reaching 23.3%.

In international comparison, the most successful of the 28 transitional states since the 1990s are only China and Viet Nam, which have maintained a rapid growth in social wealth while pushing rapid social reforms. In contrast, the human development growth is much slower in Poland and other Eastern European countries. Russia and other members of the Common Wealth of States experienced a big drop in human development and did not recover until the inset of the new century. (See Figure 1). The rapid convergence with high HD countries has also created the conditions for the convergence of different regions in China in terms of human development level.

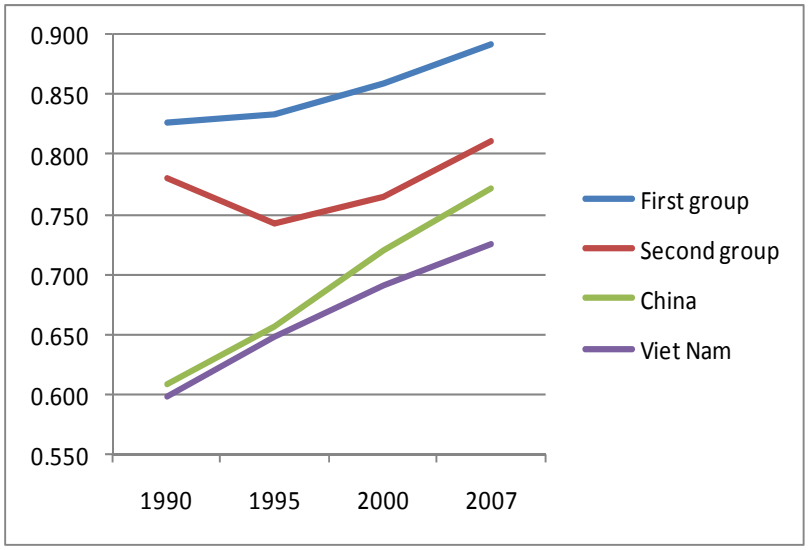


Figure 1 Changes in HDI of transitional states in 1990~2007

Note: Sorted out by the author according to UNDP: HDI Tends (1980~2007). Data are available from 20 transitional states. Those in the first group are of the stagnant type. They included Poland, Czek Republic, Slovenia, Hungary and Croatia. Those in the second group are of the downward restoration type. They include 12 countries: Lithuania, Latvia, Russian Federation, Tajikistan,

[32] Public Health Minister Chen Zhu, September 8, 2009.

Slovenia, Estonia, Romania, Belarus, Armenia, Tajikistan, Kazakhstan and Moldova. The third group is of the rising type, including China and Viet Nam.

However, **China has attracted world-wide attention not only for its tremendous progress in human development but also for its regional disparities in human development.** If the various regions of China are put in the world context, Guizhou is like Namibia in ranking while Shanghai is like Portugal (UNDP2005). Chinese provinces with high human development, apart from Shanghai, Beijing and Tianjin, are mainly concentrated in the eastern coastal areas and those with relatively low human development are mostly in the western part of the country (UNDP China Office, 2005).

This shows that reform and opening up have brought about huge achievements in human development but also regional disparities. How about the human development levels of various regions in China when put in the world context? What progress have various regions of China made over the past more than three decades? How has the regional HDI pattern come about? What new progress is expected in human development in various regions of China in the next 20 years? This paper tries to probe into these and other problems. The second part of the paper divides the regions into four groups or "four worlds" according to HDI level by the international standards. The third part is devoted to the evolution of the regional pattern of human development in China, which has experienced a fundamental change. Part Four presents a summary and conclusions.

II. Standards for dividing the regional HDI pattern

UNDP has released a world development report every year since 1990. The report divides countries and regions into three groups according to human development level. They are high human development (HDI$\geqq$0.80), middle human development (0.80$\leqq$ HDI $\geqq$ 0.50) and low human development (HDI < 0.50). The middle human development group claims to have the largest population in the world, accounting for over 2/3. Obviously, this group should be subdivided.

Putting China's various regions in the world context, we have found that most provinces are in the middle human development group and the three-group division cannot reflect the regional disparities. For instance, in 1990, the population of the middle group accounted for 99.89%. So, I have further divided this group into two sub-groups: upper middle (0.80$\leqq$HDI$\geqq$0.65) and lower middle ((0.65$\leqq$HDI$\geqq$0.50). So it has become four levels or "four worlds". From this we have obtained the standards for dividing the "four worlds" (See Table 2). This method of division facilitates the understanding of the distribution and evolution of China's human development level.

Table 2 Divisional standards for the "four worlds" in human development

Classification	Meaning	Standards
1st World	High Human Development	HDI≥0.80
2nd World	Upper middle Human Development	0.80>HDI≥0.65
3rd World	Lower middle Human Development	0.65>HDI≥0.50
4th World	Low Human Development	0.50>HDI

Note : The values for the second and third worlds are fixed by the author. The rest is determined by UNDP.

Source：UNDP. 2005. Human Development Report 2005, New York.

UNDP study of China reveals the regional disparities and changes in China's human development. We have added the data for 1982[33] to the "China's Human Development Report" for 1990 and 2006 published by UNDP and, in line with the "four worlds" division, analyzed the regional HDI pattern in 1982~2006.

What needs special mention is that UNDP did not use the logarithm method to regulate the per capita GDP (PPP dollar) at first. Instead, it used Atkinson's formula for the utility of incomes to convert the per capita GDP higher than the limit of the standards (i.e. average income level in the world).[34] In order to maintain the uniformity of standards, we use the logarithm method for the current incomes to recalculate 1990 GDP indicators and HDI. For that of 2006, we still use the HDI data published by UNDP.

III. Evolution of China's regional HDI pattern

China has made tremendous progress in human development following its reform and opening up program. Such achievements are easy to see and have been recognized and extolled by the international community. In poverty reduction, for instance, if China's progress is not counted, the world retrogressed in general (UNDP 2005). But how should we assess the human development progress from the perspective of regions? We have divided the regional HDI pattern (See Table 3) for 1982, 1990 and 2006 according

[33] Estimated according to the current method of calculation and by using the data available in the statistical yearbook.

[34] For details about the method of calculation, see UNDP, 1997, Human Development report 1997, New York, UNDP.

to the classification standards mentioned above. We have discovered that **China's regions have assumed a "One China, Four Worlds" pattern in human development. But it is different from the same pattern as described according to the per capita GDP**[35]. This shows that HDI is more accurately in describing the development stages and features of different regions than per capita GDP. This study is an auto breakthrough on the original studies, which has enabled us to have a more comprehensive and more accurate understanding of the national conditions, regional disparities and unevenness of development in China.

Table 3 China's regional HDI（1982－2006）

HDI group	1982	1990	2003	2006
High (HDI>0.80)			Shanghai, Beijing, Tianjin, Zhejiang, Liaoning, Guangdong and Jiangsu	Shanghai, Beijing, Tianjin, Zhejiang, Jiangsu, Guangdong, Liaoning and Shandong
Upper middle (0.65<HDI<0.80)	Shanghai and Beijing	Shanghai, Beijing, Tianjin, Liaoning, Guangdong, Zhejiang, Jiangsu, Heilongjiang, Jilin, Shanxi, Hainan and shandong	Heilongjiang, Fujian, Jilin, Shandong, Hebei, Hainan, Xinjiang, Hubei, Shanxi, Hunan, Chongqing, Henan, Inner Mongolia, Jiangxi, Guangxi, Shaanxi, Sichuan, Anhui, Ningxia, Qinghai, Gansu and Yunnan	Hebei, Heilongjiang, Jilin, Fujian, Shanxi, Inner Mongolia, Henan, Hubei, Hainan, Chongqing, Hunan, Shaanxi, Guangxi, Xinjiang, , Jiangxi, Sichuan, Anhui, Ningxia, Gansu, Qinghai, Yunnan and Guizhou

[35] According to the method of the World Bank, this author has divided the HDI into four different income groups. By the per capital GDP (real PPP), the first world has already entered the high income group. They include Shanghai, Beijing and Shenzhen, with their combined population accounting for 2.2% of the national total in 1999. The second world refers to the upper middle income group in the world. They include Tianjin, Guangdong, Zhejiang and Jiangsu, with their combined population reaching 22% of the national total. The first world refers to the low middle income level in the world, with their combined population accounting for 26% of the national total. The fourth world refers to a level like the lower middle income areas in the world. They are mainly distributed in the middle and western parts of the country, with their combined population accounting for half of the national total. Angang Hu, Eds. "Region and Devleopment: New Western Development Drive Strategy. Beijing, China Planning Publishing House, 2001.

Lower middle (0.50<HDI<0.65)	Tianjin, Liaoning, Heilongjiang, Guangdong, Jilin, Shanxi, Hebei, Jiangsu, Zhejiang, Guangxi, Shandong, Hunan, Hubei and Inner Mongolia	Hebei, Fujian, Xinjiang, Guangxi, Hubei, Inner Mongolia, Hunan, Henan, Shaanxi, Sichuan, Ningxia, Jiangxi, Anhui, Gansu, Yunnan, Qinghai and Guizhou	Guizhou, Tibet	Tibet	
Low (HDI<0.50)	Henan, Jiangxi, Fujian, Shaanxi, Xinjiang, Ningxia, Sichuan, Anhui, Gansu, Qinghai, Yunnan, Guizhou and Tibet	Tibet			

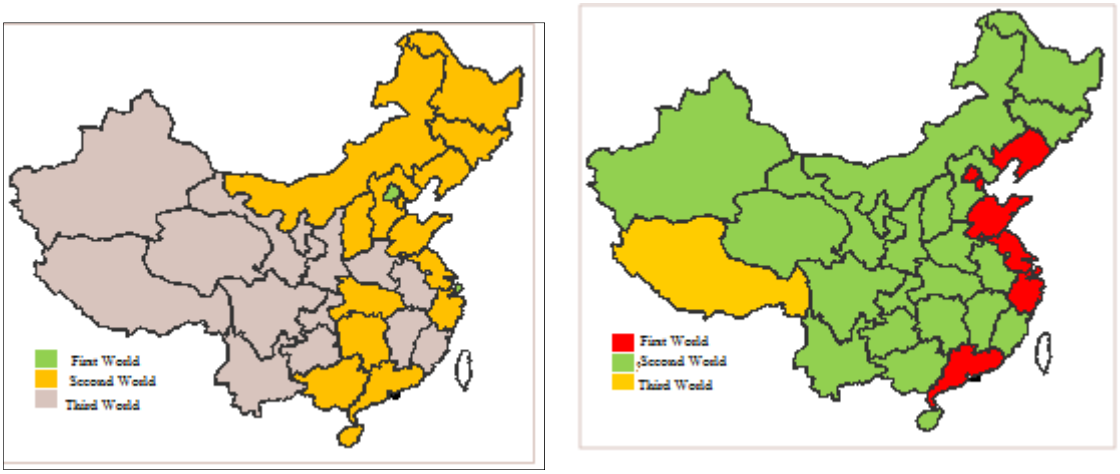
Note: Regions are arranged according to the sequential order from big to small.

Sources: State Council Population Census Office, State Statistical Bureau, Population Statistics Department, "China 1982 Population Census Materials (Computerized), Beijing, China Statistical Press, 1985; State Council Population Census Office, eds. "China 4th Population Census Data" (manually collected". State Statistical Bureau, "China Population Statistical Yearbook 2004", Beijing, China Statistical Press, 2004; UNDP and China Institute (Hainan) for Reform and Development, "China Human Development Report (2007/08), UNDP, 2008.

At the beginning of reform (1982), HDI was very low in various regions. About 56.54% of the population were in the lower middle human development group and 41.36% of the population were in the low bracket. Only Shanghai and Beijing were at the upper middle level, with their combined population accounting for only 2.10%.

Over the past more than 20 years, fundamental changes have taken place in the regional HDI pattern, with the "third world" and "fourth world" moving into the "second and first world". In 2006, eight areas were in the first world. They included Shanghai, Beijing and Tianjin, mainly municipalities under the direct administration of the central government and coastal provinces, with their combined population accounting for 30.34% of the national total. Most others were in the "second world" or in the upper middle human development group. There were 22 provinces, including Heilongjiang and Fujian, with a combined population reaching 69.44% of the national

total. Provinces listed toward the end of the "second world" were mostly the middle and western regions. Only Tibet was in the "third world". The population of the two categories made up 3.22% of the national total (Table 4). Such regional and population distribution has stimulated China's general human development level to move by leaps and bounds, ascending a new step for every few years.



a. 1982 b. 2006

Figure 2 Historical changes in the "One China, Four Worlds" regional Human development pattern

Note: Drawn based on the data in Table 3. In 1982, Chongqing and Sichuan were in the same province and Hainai and Guangdong were in the same province.

Table 4 Combined population of different HDI groups in national total (1982－2006)

Unit：%

HDI group	1982	1990	2003	2006	Changes in 1982-2006
1st World	0.00	0.00	22.15	30.34	30.34
2nd World	2.10	37.45	74.63	69.44	67.34
3rd World	56.54	62.36	3.22	0.21	-56.33
4th World	41.36	0.19	0.00	0.00	-41.36
National total	100	100	100	100	

Note：Population ratio is the ratio of combined population in the same world in the national total.
Source: Calculated according to the data in the table above and all years of China Statistical Yearbook.

The three sub-indicators have all played their part in the rise of regional HDI and human development. But the main contributing factor is per capita GDP while the health indicator has risen not so much. We have also discovered that relative disparity co-efficient in per capita GDP in various regions has been expanded while the disparities in health and education indicators have been narrowing (Table 5). This shows that the disparities of various regions are likely to be further enlarged due to the varying speed of rise when the per capita income of the regions rises in general. If we continue to increase investment in health and education, the disparities are likely to be narrowed, thus realizing the narrowing of the disparities in human development.

Table 5 Regional Human Development Disparities（1982-2006）

HDI		Trend of regional disparities	Main disparities
Health	Life expectancy at birth	Narrowing	Inter-regional
Education	Adult literacy rate	Narrowing	Inside regions
	Gross enrolment rate	Narrowing	Inter-regional
	Education as a whole	Narrowing	Inside regions
Economy	Per capita GDP	Narrowing-expanding -narrowing	Inter-regional
Overall	HDI	Narrowing	Inter-regional

Source：Estimated by the author.

Taken as a whole, China has attained the lower-middle level in income and upper middle level in human development. Major changes have taken place in the consumption structure (wealthy type in cities and well-off type in the rural areas). The size of poor population has been reduced sharply (lower than the average of developing countries). But China is not homogenous and unitary, without disparities. Rather it is heterogeneous and diversified with big disparities. I have categorized it as “One China, Four Worlds” or “One China, Four Societies”. It is far more complicated than what we have imagined. This basic national condition merits full attention and priority solution in discussing how to build a well-off society in every aspect of the word.

IV. Brief conclusions

The use of HDI to measure the development level of a country is more accurate than the use of per capita GDP in reflecting the dynamic changes in the development level. This author has divided HDI into four groups or “four worlds” to show the changes of development level of various regions in China over the past 20 years.

The three sub-indicators have all played their part in the rise of regional HDI and human development. But the main contributing factor is per capita GDP while the health indicator has risen not so much. The relative disparities in per capita GDP in various regions have been expanding while the disparities in health and education indicators have been narrowing.

China owes the significant rise in human development over the past 20 years to the steady rise in the average human development level in various regions. Almost every region has undergone changes in HDI and ascended a new level to varying degrees, thus leading to the fundamental change in the regional human development pattern, with those in the "third world" and the "fourth world" moving rapidly into the "second world" and the "first world". It is alarming to discover that about 1.2 billion people in the world are in the "first world", including 390 million people in China. With the development in the future, there would be more and more people getting into the "first world".

China's HDI in different regions will rise by varying degrees by 2020. The changes in regional human development may lead to a deeper understanding of what a well-off society really means, that is, **it requires that the HDI must reach 0.86~0.87, the high human development in the world when the per capita GDP is slightly higher than the world's average. About 80% will be in the "first world" and the remaining 20% will be in the "second world". The "third world" would be eliminated.** Even Tibet will also be in the "second world". **This is the most important feature of the China development model: the per capita income is relatively lower than that of developed countries but the human development has attained a fairly high level in the world.** In this sense, it is more important to seek growth in human development than in seeking the growth of per capita GDP. The "people first" scientific development approach advanced by the central authorities conforms not only to the national conditions of China but also to the historical trend of China's development. **As seen from the international perspective, it is entirely possible for China to realize its grand goal of completing the building of a well-off society.**

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Appendix Table 1　HDI of Various Regions of China（1982－2006）

Region	1982	1990	2006
Beijing	0.660	0.741	0.897
Tianjin	0.637	0.735	0.877
Hebei	0.538	0.644	0.768
Shanxi	0.545	0.654	0.775
Inner Mongolia	0.501	0.620	0.765
Liaoning	0.606	0.701	0.814
Jilin	0.554	0.657	0.778
Heilongjiang	0.571	0.662	0.786
Shanghai	0.693	0.777	0.911
Jiangsu	0.534	0.668	0.821
Zhejiang	0.527	0.669	0.831
Anhui	0.466	0.591	0.723
Fujian	0.492	0.642	0.786
Jiangxi	0.493	0.593	0.735
Shandong	0.514	0.650	0.797
Henan	0.498	0.613	0.758
Hubei	0.508	0.621	0.755
Hunan	0.511	0.619	0.753
Guangdong	0.559	0.696	0.820
Guangxi	0.514	0.621	0.741
Hainan		0.653	0.762
Chongqing			0.756
Sichuan	0.474	0.598	0.728
Guizhou	0.397	0.538	0.647
Yunnan	0.400	0.553	0.672
Tibet	0.382	0.446	0.616
Shaanxi	0.486	0.610	0.742
Gansu	0.456	0.564	0.681
Qinghai	0.441	0.548	0.685
Ningxia	0.475	0.598	0.724
Xinjiang	0.475	0.626	0.744

Source : Figures for 1982 are the authors estimates ; Figures for 1990come from "China Human Development Report 1997", with the per capita GDP recalculated according to the current method and HDI changes accordingly ; Figures for 2006 come from UNDP, China Institute (Hainan) for Reform and Development, "China Human Development Report 2007/08", UNDP, 2008。

【Power Point】

Evolution of Regional HDI in China (1982-2006)

Angang Hu

(Director of the Center for China Study at Tsinghua-CAS;
Professor at School of Public Policy and Management, Tsinghua University)

Evolution of Regional HDI in China (1982-2006)

Angang Hu
Tsinghua Univerisyt, Beijing, China
Dec 4th 2009
Waseda University Global COE Program

Outline

- Ⅰ. **Introduction: Historical progress of China's human development**
- Ⅱ. **Standards for dividing the regional HDI pattern**
- Ⅲ. **Evolution of China's regional HDI pattern**

Part Ⅰ. **Introduction: Historical progress of China's human development**

- How to measure the development level of a country or region?
  - per capita income or per capita GDP, (WDR 2005)
  - Human Development Index (HDI), (UNDP)
- HDI:
  - Health: life expectancy at birth;
  - Knowledge: adult literacy and the gross enrolment rate of schools
  - Economic: per capita GDP (PPP dollar)

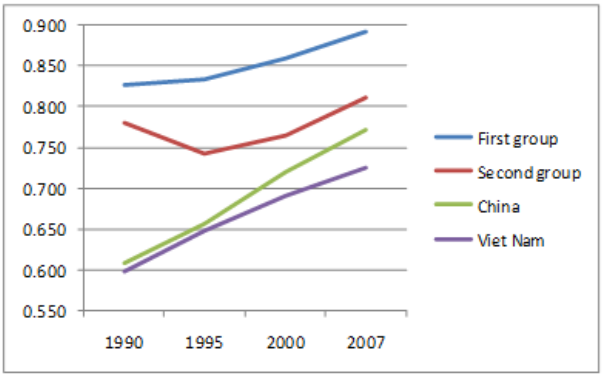
- As HDI includes per capita GDP, it is superior to the simple per capita GDP.
  - HDI has been widely acknowledged and accepted for its rich content and definite meaning.
- Over the past more than 60 years, especially over the 30 years since reform and opening up, China has created the biggest miracle in the history of human development, which is reflected not only in the alarming development speed but also in the major progress in human development.

Changes in China's HDI Ranking in the World
（1950—2007）

	1950	1975	1980	1990	2000	2007
China	0.225	0.523	0.533	0.608	0.719	0.772
Ranking	-	62	74	88	96	100
Total countries	-	102	113	136	173	182

- China's HDI is 0.722 in 2007, ranks the 92nd among the 182 countries.
  - life expectancy at birth: 72.9 years
  - adult literacy and combined primary, secondary and tertiary enrolment: 68.7%
- Life expectancy at birth
  - 35 years before the founding of New China, 68 years by 1978 , 73 years by 2005
- Education in 2008
  - net primary school enrolment rate: 99.5%; the gross enrolment of junior secondary schools: 98.5%; the senior secondary education (high school): 74.0%; The tertiary education: 23.3%

Changes in HDI of transitional states in 1990~2007



Regional Disparities

- China has attracted world-wide attention not only for its tremendous progress in human development but also for its regional disparities in human development.
  - Guizhou is like Namibia in ranking while Shanghai is like Portugal (UNDP2005)

Part Ⅱ. Standards for dividing the regional HDI pattern

- Three groups according to human development level:
  - high human development (HDI≧0.80)
  - middle human development (0.80≦HDI≧0.50)
  - low human development (HDI< 0.50)
- Furtherly divide the middle group into two sub-groups:
  - upper middle (0.80≦HDI≧0.65)
  - lower middle ((0.65≦HDI≧0.50)

Divisional standards for the "four worlds" in human development

Classification	Meaning	Standards
1st World	High Human Development	HDI≥0.80
2nd World	Upper middle Human Development	0.80>HDI≥0.65
3rd World	Lower middle Human Development	0.65>HDI≥0.50
4th World	Low Human Development	0.50>HDI

Part Ⅲ. Evolution of China's regional HDI pattern

- How should we assess the human development progress from the perspective of regions?
- China's regions have assumed a "One China, Four Worlds" pattern in human development.
- But it is different from the same pattern as described according to the per capita GDP

China's regional HDI（1982—2006）

HDI group	1982	1990	2003	2006
High (HDI>0.80)			Shanghai, Beijing, Tianjin, Zhejiang, Liaoning, Guangdong and Jiangsu	Shanghai, Beijing, Tianjin, Zhejiang, Jiangsu, Guangdong, Liaoning and Shandong
Upper middle (0.65<HDI< 0.80)	Shanghai and Beijing	Shanghai, Beijing, Tianjin, Liaoning, Guangdong, Zhejiang, Jiangsu, Heilongjiang, Jilin, Shanxi, Hainan and shandong	Heilongjiang, Fujian, Jilin, Shandong, Hebei, Hainan, Xinjiang, Hubei, Shanxi, Hunan, Chongqing, Henan, Inner Mongolia, Jiangxi, Guangxi, Shaanxi, Sichuan, Anhui, Ningxia, Qinghai, Gansu and Yunnan	Hebei, Heilongjiang, Jilin, Fujian, Shanxi, Inner Mongolia, Henan, Hubei, Hainan, Chongqing, Hunan, Shaanxi, Guangxi, Xinjiang, , Jiangxi, Sichuan, Anhui, Ningxia, Gansu, Qinghai, Yunnan and Guizhou
Lower middle (0.50<HDI< 0.65)	Tianjin, Liaoning, Heilongjiang, Guangdong, Jilin, Shanxi, Hebei, Jiangsu, Zhejiang, Guangxi, Shandong, Hunan, Hubei and Inner Mongolia	Hebei, Fujian, Xinjiang, Guangxi, Hubei, Inner Mongolia, Hunan, Henan, Shaanxi, Sichuan, Ningxia, Jiangxi, Anhui, Gansu, Yunnan, Qinghai and Guizhou	Guizhou, Tibet	Tibet
Low (HDI<0.50)	Henan, Jiangxi, Fujian, Shaanxi, Xinjiang, Ningxia, Sichuan, Anhui, Gansu, Qinghai, Yunnan, Guizhou and Tibet	Tibet		

Historical changes (1982-2006)

Combined population of different HDI groups in national total （1982—2006）/%

HDI group	1982	1990	2003	2006	Changes in 1982-2006
1st World	0.00	0.00	22.15	30.34	30.34
2nd World	2.10	37.45	74.63	69.44	67.34
3rd World	56.54	62.36	3.22	0.21	-56.33
4th World	41.36	0.19	0.00	0.00	-41.36
National total	100	100	100	100	

Regional Human Development Disparities（1982-2006）

HDI		Trend of regional disparities	Main disparities
Health	Life expectancy at birth	Narrowing	Inter-regional
Education	Adult literacy rate	Narrowing	Inside regions
	Gross enrolment rate	Narrowing	Inter-regional
	Education as a whole	Narrowing	Inside regions
Economy	Per capita GDP	Narrowing-expanding -narrowing	Inter-regional
Overall	HDI	Narrowing	Inter-regional

Brief Conclusions

- HDI is more accurate than per capita GDP to measure the development level of a country.
- HDI was divided into "four worlds" to show the changes of development level of regions in China over the past 20 years
- The relative disparities in per capita GDP in various regions have been expanding while the disparities in health and education indicators have been narrowing

- The changes in regional human development may lead to a deeper understanding of what a well-off society really means
  - **the HDI must reach 0.86~0.87, the high human development in the world when the per capita GDP is slightly higher than the world's average. About 80% will be in the "first world" and the remaining 20% will be in the "second world". The "third world" would be eliminated.**
- the most important feature of the China development model
  - **the per capita income is relatively lower than that of developed countries but the human development has attained a fairly high level in the world.**

Thank you!

Appendix Table: HDI of Various Regions of China（1982—2006）

Region	1982	1990	2006
Beijing	0.66	0.741	0.897
Tianjin	0.637	0.735	0.877
Hebei	0.538	0.644	0.768
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Fujian	0.492	0.642	0.786
Jiangxi	0.493	0.593	0.735
Shandong	0.514	0.65	0.797
Henan	0.498	0.613	0.758

Region	1982	1990	2006
Hubei	0.508	0.621	0.755
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Tibet	0.382	0.446	0.616
Shaanxi	0.486	0.61	0.742
Gansu	0.456	0.564	0.681
Qinghai	0.441	0.548	0.685
Ningxia	0.475	0.598	0.724
Xinjiang	0.475	0.626	0.744

【討論】

Evolution of Regional HDI in China (1982-2006)

討論者：Tomoo Marukawa

(Professor at Institute of Social Science, the University of Tokyo)

Thank you, Madam Chairman. I noticed that I'm the only one who hasn't prepared PowerPoint slides here. Sorry for that. That is because I just received Professor Hu's paper two hours ago. I will only give three brief comments or questions.

First, Professor Hu has referred to China as "One country, four worlds." But when we look at Table 3 of this paper, on page 174, I think this table shows that there have always been three worlds instead of four in China. In fact, in 2006 all provinces in China except for Tibet belonged to the first and second words. So why not call it "One country, two worlds plus Tibet"? That's my first comment.

The second is that I think it's a good proposal to adopt HDI instead per capita GDP, because the Chinese local officials were so obsessed with industrial growth rather than human development. However, at the same time I found that the investments, especially in education, are very impressive after 2001. For example, the number of university enrollments has doubled during the period from 2001 and 2006. That means in a span of five years the whole capacity of the university system has doubled, which is very impressive.

But in recent years I have started to read in Chinese newspapers that many university graduates are facing trouble finding jobs. Only Tsinghua University, where Professor Hu works, and Peking University graduates can easily find jobs. But there are now, if I remember correctly, 1,700 universities in China. So many new university graduates face trouble finding jobs.

So does that mean that instead of a disparity between those not enrolled in universities and those enrolled in universities, a new type of disparity has appeared, which is the disparity between those from good universities and less good universities, so a disparity related to quality of university education?

And I think the same thing can be applied to health care. I read in Chinese newspapers that there are many complaints about the high prices of medicine and health care. That means that only the rich people can afford to have good health care, while the poorer people cannot have good health care or cannot afford to buy medicine. So does that mean that a new type of disparity is emerging in China, which is a disparity in the quality of health care? That's all for my comments. Thank you

【質疑応答】

深川： ありがとうございました。では、フロアのほうからもできたらご質問をいただければというふうに思うんですけれどもいかがでしょう。じゃあどうぞ。

フロア： Thank you very much, Professor Hu. It was a very interesting presentation. And it is a pioneering job, using the HDI index in an analysis on regional China.

I have one question. First, Tibet is classified as the lowest.

My name is Young Nuk Chung, from Seoul National University. I'm an exchange researcher at Waseda.

Tibet is very low, and as far as I know, the Chinese central government has put a lot of money into increasing the development level of Tibet for many reasons. Why it is still even in 2007 or 2006 very low?

Second, in your one historical graph, Fujian is classified in the second group. As we know, Fujian was the first tier of open areas when China started economic reform and open-door policy in 1978. But why is Fujian still in the second group rather than the first group? That's my question. Thank you.

深川： 他にご質問いかがでしょうか？どうぞ。

フロア： My name is Diaz. I'm from Hasanuddin University in Indonesia. Thank you for your presentation, Professor Hu.

I would like to connect your presentation with the theme for today, which is regional integration. My question relates to the question that was raised by the first presenter. To what extent is improvement in HDI a result of integration of the Chinese economy into the regional or global economy? Or to put it another way, the improvement is a way to even increase the integration. So which is first, the improvement or the integration? Thank you.

深川： 他にございませんか。それでは胡先生お答えいただければと思います。

Hu： For a real understanding of China, to grasp the real situation, we need to develop some approach to consider China's regional disparity. I think it's a very complex, even contradictory story.

In 1998, the data only showed per capita GDP or per capita income. So my conclusions, like “One China, Four worlds,” is based on per capita GDP, defined in old terms. Even in 2002 my research followed this approach.

And today there are more choices, based on HDI. So we found even China as “One China, Three worlds” in 1982 until 2006. This is step by step, with three worlds, four worlds, even back to three worlds now. In the future it will be two worlds. These are steps--pictures, a dynamic change pattern of regional HDI for China.

On the other hand, we find the patterns of China very much like the world patterns. If you use per capita GDP or per capita income, according to the World Bank “World Development report” of 2006 or 2005, it’s similar. Income in a region or country diverges. But the education and the health for different countries converge.

So today I showed this map, and this pattern has changed. It’s very complex. But we want to find some policy implications.

We have regional disparity in terms of per capita GDP divergence, mostly driven by the market mechanisms. But like education, convergence is driven by the government. Even the public investment and government services are basically creating equalization basic public service for different regions.

Another question was about Tibet. Tibet is a special case in China. Why? In 1959 in Tibet life expectancy at birth was only 32-35 years, much lower than the national average and even lower than that in India.

Even now the per capita GDP in Tibet is higher than that of Guizhou, but life expectancy is lower. So the Chinese government is now making more and more investment, especially in human capital, now only for health but also for education. I think it’s a good policy.

I believe in it. Even now Tibet is lowest. By 2020 Tibet will be in the Second World if compared with other countries with same level of income. Thank you.

深川： 特にフロアからご質問がないようでしたら、非常に奇跡的なことにぴったりと終わることができました。素晴らしいプレゼンテーションをしていただいた発表者ならびにコメンテータの方々に今 1 度拍手をお願いいたします。どうもありがとうございました。