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学術論文 Articles

RAPID URBANIZATION AND CHANGES IN QUALITY OF LIFE OF HO CHI MINH CITY IN THE VIETNAMESE TRANSITIONAL ECONOMY

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Abstract

In recent years, urbanization has been taking place rapidly and vigorously in Ho Chi Minh City (HCMC), the largest urban agglomeration in Vietnam, due to the implementation of the *Doi Moi* economic reform policy. Many industrial and export-processing zones as well as new residential areas were established, accelerating urbanization in HCMC. This paper aims to examine the impact of urbanization under the *Doi Moi* policy on the socio-economic and environmental conditions and lifestyle of the residents of HCMC. We conducted a sociological questionnaire survey in HCMC, interviewing members of 432 house-holds on their quality of life and lifestyle, and reviewing the recent economic development, the urban services and the urban environmental conditions of HCMC. Urbanization together with economic development has resulted in an improved standard of living. Privatization of public services and services diversified through the markets also contribute to this improvement, although issues of affordability remain. On the other hand, negative trends such as the expansion of social disparity and the deterioration of urban environments have continued, and new issues like traffic jams and urban flooding remain, limiting the possibility of improving quality of life in HCMC.

KEY WORDS : urbanization, Ho Chi Minh City, Doi Moi policy, transitional economy

1. Introduction

Since the late 1980s, Vietnam has introduced market mechanisms in its own economic system and has adopted outward-oriented economic policies, shifting to a transitional economy from a socialistic economy. This has had an impact on the entire system of socio-economic structures and urbanization trends. Under the *Doi Moi* policy, the policy for the economic reform of Vietnam, Ho Chi Minh City (HCMC) has successfully promoted economic growth with around 10.8% for the period from 1996 to 2010. Many industrial and export-processing zones as well as new residential areas were established, resulting in accelerating urbanization, economic transformation, and development in HCMC.

In recent years, urbanization has been taking place rapidly and vigorously in HCMC. The population has also been continually increasing and is now estimated to be over 7 million persons, with an annual growth rate of 3.5%. Reviewing the city's development, we can see that urbanization under *Doi Moi* has brought about both positive and negative socio-economic, demographic and environmental changes in HCMC. This paper aims to clarify the characteristics of the urbanization of HCMC under *Doi Moi*, in terms of household economy, urban services, and urban environments, and examines how this urbanization and economic growth have impacted the quality of life of the people of HCMC; we also examine the reasons for these results.

In previous research, Zhang et al. (2006) compared the urbanization trends and mechanisms of Vietnam before and after the implementation of *Doi Moi*, and Phan & Coxhead (2010) examined inter-provincial migration and inequality during Vietnam's transition. Drakakis-Smith & Dixson (1997), and Bolay et al. (1997) examined the sustainability of the urbanization of HCMC under *Doi Moi* and point out its unsustainability due to environmental deterioration, urban poverty and social disparity. The former, however, deal only with the macro perspectives of the overall urbanization of Vietnam, while the latter discuss the impact of urbanization in only the very early stage of *Doi Moi* based on secondary data. As the socio-economy of HCMC has been transforming rapidly since the late 1990s, with the establishment of new private busi-

nesses in the services and manufacturing sectors and of legal/ institutional frameworks concerning urban management, we will examine the characteristics of the urbanization of HCMC in the more recent stage of *Doi Moi*, since the late 1990s.

2. Analytical Framework and Major Survey

The urbanization of HCMC has been taking place in the context of rapid economic development (compressed economic development) and a local government that has lacked appropriate urban management measures during the process of transition but that has made certain efforts to gain control over the situation and enhance people's lives. Our research clarifies how this urbanization in the Vietnamese transitional economy has affected quality of life and lifestyle based on the people's perception of their socio-economic and environmen-



Fig. 1. Analytical Framework

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tal situation, and reviews the economic development, urban services and urban environmental conditions of HCMC. In this research, we applied a number of different research methods and integrated the results of the original sociological survey shown as below and investigations to clarify the contexts on socio-economic developments and economic disparity, urban management and urban services, environmental conditions of HCMC. (Fig.1)

First, we collected and analyzed economic, social and environmental data available at both the city and local levels. We carried out a sociological survey at the household level in 2004. The questionnaire consisted of questions about changes in the household over a period of 5 years (1999-2004) in household economy, living standard and lifestyle, and perceptions about the urban environment. The total number of households interviewed was 432. In addition to the household survey (quantitative), we also interviewed representatives of local governments at different levels (qualitative) in order to elucidate the impact of policies and their implementation in the areas where the urbanization has been taking place (Fig. 2).

HCMC consists of 24 urban and rural districts, of which 13 are inner districts where urbanization was taking place before 1975; 6 are newly established urban districts that changed from rural districts during 1997 and 2003 and where urbanization has been taking place since then; and the remaining 5 are rural districts that have recently begun urbanizing. In our research to evaluate the impact of urbanization on quality of life in HCMC, we selected one typical district from each of the three types: Go Vap (inner district), Binh Tan (new urban district), and District 2 (rural district).



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Fig. 2. Map of HCMC and the Districts Surveyed

- 3. Transformation and Urbanization of HCMC under *Doi Moi*
- 3.1 Transformation of the Socio-Economic Structures of HCMC

Du & Fukushima (2010) describe the transformation of the socio-economic structure of HCMC under Doi Moi. A favorable economic cycle has gradually formed during HCMC's process of economic development that links the outcomes of all development phases since around 2000. HCMC was able to promote the manufacturing sector by attracting foreign direct investment (FDI), resulting in increased exports and high economic growth. The expansion of HCMC's local markets made the trade and service sectors very active. The emergence of the private sector in particular generated more employment and improved industrial productivity, and massive job opportunities then attracted urban migration to HCMC. The increasing regional population and improvement in household income expanded regional markets, resulting in further growth in trade and services. The globalization process together with local industrialization brought about an obvious societal transformation in HCMC. This transformation is clear in the form of a double-structured economy based on the formalization of society and the expansion of a very active private informal sector, an improvement in income and consumption and the expansion of disparity, and urbanization with rural-to-urban migration.

3.2 Urbanization of HCMC

Under *Doi Moi*, the population of HCMC increased from 3.6 million in 1986 to 7.4 million in 2010 due to both natural population increase and social population increase. According to statistics on HCMC, the migration rate also increased noticeably from 0.84% (1989-1999) to 2.33% (1999-2004). This increase caused the city's population increase rate to rise to 3.6%. From 2004 to 2009, more one million migrants came to HCMC. This population increase was also accelerated because the rural-to-urban migrants were young and included a massive reproductive population. Thus, this migration led to a natural population increase in the next demographic stage.

As mentioned above, the urban areas of HCMC have been expanding from the 13 inner districts to the 6 new urban districts and finally to the 5 rural districts under *Doi Moi, with* the peaks of migration into each district occurring at different times. Let us now examine the urbanization trends of the three districts surveyed. Go Vap saw its highest number of immigrants in the period from 1995 to 1999, while migration to Binh Tan peaked from 1999 to 2004, and District 2 has been urbanizing since 2004. Go Vap, located in the northern belt of the inner city, is one of the districts where urbanization has been taking place fastest in the city. In 2004, its population was about 450,000, of which migrants accounted for approximately 60%, and its rate of population growth was relatively high at approximately 7% per year for the period from 1995 to 2004. Binh Tan District was established in 2003 in the southwest of the city, after separating from Binh Chanh District. In 2004, its population was about 400,000, of which migrants accounted for approximately 80%. Its rate of population growth was relatively fast at about 15% for the period from 1999 to 2004. District 2, located in the northeast of the city but divided from District 1 (city center) by the Saigon River has a population of about 130,000, of which migrants account for 42.2%. The rate of population growth is relatively modest (about 4.3%), compared with those of the two other districts. The urbanization trends of Go Vap, Binh Tan and District 2 have continued since the time of their peaks and their populations reached 548,200, 595,400, and 187,500, respectively, in 2010. Migrants are particularly concentrated in suburban districts, possibly because the price of land in these districts is relatively cheaper than in the inner city, and/or due to the creation of industrial and processing zones, which generate jobs and attract workers.

4. Managing Urbanization

4.1 City Planning and Regulations

Urban planning should play a very important role in establishing development orientations. The master plan of HCMC to the year 2025, approved by the Prime Minister in 1998, has been revised. The development of HCMC extended to the north and southwest of the city because the Saigon River and Mekong Delta hindered development toward the east and south, respectively. These expansions of urban areas have been developed by the private sector, by real estate companies and by people from the inner districts, however, this development has come about in a spontaneous and disorderly manner rather than following any specific plan. Because of such rapid urbanization and the lack of specific urban planning at the district or sub-district level, the HCMC government and district offices were unable to control these spontaneous urban developments. Inadequate management and insufficient implementation of existing policies and regulations also contributed to the situation. For example, many impermissible houses were built, partly because of a lack of concern on the part of the district offices and partly because the resources and capacity of the district offices were still limited. Many district offices were not yet able to manage a ward (which used to be a commune) with a larger population Regulation of planning and related issues has tended to follow the rapid urbanization.

These spontaneous developments have been very problematic in terms of living environmental conditions and land tenure, due to a lack of basic services such as a piped water supply or drainage system or any formal registration of land use rights, even though they have provided affordable housing opportunities for the lower income population of HCMC. The residents of such housing, however, now must wait for urban upgrading/improvement and legalization programs to be implemented by the city government.

However, from 2004 to the present, the city government has gradually been enhancing its urban management capability, although much remains to be done. It started to control informal housing development in 2008, and began strengthening its power of enforcement. The government has also actively invested in the development of an appropriate infrastructure.

4. 2 Urban Service Provision and Upgrading of Spontaneous Development Sites

Since the late 1990s, the HCMC government has conducted urban upgrading and improvement programs including the active provision of urban services such as roads, electricity, water, schools, and hospitals. Roads have been gradually widened and paved and enhanced with green spaces. One important step was the initiation by the government in 2004 of the systematic legalization and upgrading of all informal and spontaneous development sites. For example, the city government declared rural district Binh Tan an urban district in order to promote legalization programs and formal urban development with sufficient provision of urban infrastructure in this area of informal and spontaneous development. The authorities of Binh Tan have managed its urbanization better since then, controlling land use and new developments.

With the increase in the local population, local markets have grown and both individuals and private companies have responded quickly to the people's demand for consumption under *Doi Moi*. Considerable investment has been made in everything from small shops, restaurants and cafés to large entertainment and shopping centers. Thus, the rapid urbanization has affected not only the townscape but also the people's way of thinking and lifestyle.

4.3 Provision of Public Services for Migrants

In the past, it was very difficult for migrants to obtain permanent residency in HCMC. Beginning in 1999, however, following HCMC People's Committee Resolution 27 and the Guidelines 02 of the City Police, migrants to HCMC were allowed a permanent resident permit if they met three criteria: a certificate of house ownership; residence in HCMC for at least five years; and a stable job. Resolution 108/2005/ND-CP issued on 19 August 2005 and a number of amendments to the Resolution later simplified these criteria to residence in HCMC for at least 3 years, and house ownership in HCMC. Since Residence Law came into effect on 1 July 2007, Vietnamese have had the right to choose their place of residence with more simplified conditions: a stable job and accommodation (owned or rented), and residence for at least 1 year. The management of migrants has become increasingly more relaxed, and many migrants are satisfied with the assistance received from the police in processing registration documents for provisional leave or residence.

With respect to the availability of public services to those without a permanent residence permit, there were some restrictions in the past, and some remain in effect today. This is largely due to the quota system for public services in the tradition of socialist countries. For example, each household with a permanent resident permit was allowed access to water and electricity at a cheap cost, while migrants without permanent residence had to pay extra, as in the trading and service sectors. Education and health care were also more or less subject to the same situation. Introducing the market mechanism makes urban services more accessible and diversified, though also more expensive. The recent privatization of the education and health care systems, for example, has provided more choice for both migrants and non-migrants, who responded positively to our questions regarding improvement in these services (see Section 6 below).

5. Urbanization and Urban Environments of HCMC

The report entitled "Population, economic development and environmental changes in HCMC" (Diep Thi My Hanh et al., 2004), written by our collaborative research group, clearly describes the deterioration of the urban environment of HCMC in the urbanization and industrialization process. Due to inadequate water treatment for both industrial and household waste water, water courses have been polluted. An analysis of the quality of water samples from selected canals shows serious pollution. Even today, many people still throw their garbage into a nearby canal. The deterioration of water quality varies from one district to another, depending on their level of urbanization. Thus, among our surveyed districts, Go Vap shows the most pollution, followed by Binh Tan and District 2. The water quality of the canals in Go Vap worsened over time, following the urbanization trends of the district from 1996 to 2004. The air of HCMC has also become polluted, with levels of dust and SO₂, beyond the acceptable environmental standards of Vietnam. Air and noise pollution has reflected not only the expansion of construction and industrial activities, but more seriously the tremendous increase in the use of motorcycles. The land has also been polluted partly due to industrial production and farming, and partly due to people's behavior in waste processing. Organic materials, nitrates, and lead in the soil exceed national environmental standards.

Dellution	Vietnamese	Concentration (mg/ m ³)			
Pollution	standard	Go Vap	Binh Tan	District 2	
Dust	0.3 mg/m ³	1.32	2.17	2.69	
SO ₂	0.5 mg/m ³	0.665	0.570	0.894	
NO ₂	0.4 mg/m ³	0.237	0.320	0.556	
СО	40 mg/m ³	14.3	14.0	2.8	
Noise	75 dBA	79.4	83.1	80.1	

Table 1. Air and Noise Pollution

Source: Authors' calculations based on Diep Thi My Hanh et al. (2004).

6. Impact of Doi Moi on Quality of Life in HCMC

6. 1 Results of the 2004 Survey (Fig. 3, Table2, 3)

Let us now examine the impact of *Doi Moi* and urbanization on quality of life in HCMC based on the results of the questionnaire survey we administered in 2004. In this questionnaire, we asked the respondents to evaluate changes in their standard of living, lifestyle, and living environment over the 5-year period from 1999 to 2004, the period when the impact of *Doi Moi* started to spread through the society of HCMC.

Household economy

In many cases, the rapid transformation of society and urbanization under *Doi Moi* made it necessary for people to change jobs, whether voluntarily or not. For a long time during the period of planned economy, mobility in the labor market was not significant. The job structure and labor market of HCMC, however, became dynamic under *Doi Moi* and many new jobs were created. While the share of labor in the agricultural sector reduced from 25.8% to 11.0% during 1999-2004, a tertiary sector had been emerging (41.2% to 50.4%). Although the labor share of the secondary sector did not change much (35.4% to 38.6%), its contents had been changing through emerging privatized and foreign or joint-ventured manufacturers. The informal sector regained its strength after a long period of planned economy, and also attracted free laborers working on their own account.

During this process of transition, a certain number of people lost their jobs while others, mostly the younger generation, found greater opportunities to get a better job. Among those under 40 years of age, 84% reported having changed their job within the previous 5 years, while it was clearly more difficult for the senior generation. Changing jobs, however, did not guarantee success. Only 33% of those who changed jobs increased their income and/or were promoted, while 61% experienced inconveniences such as a greater distance from home to work, lower income or a bad promotion.

With respect to income, 36.7% of working people had increased their income compared with 5 years earlier, while the income of 49.2% remained the same and that of 14.2% decreased. An increase in income is one of the positive impacts of economic growth. Although the percentage of house-holds in urban poverty in HCMC decreased in the period of economic growth, social disparity, defined as the ratio of the average income of the top 20% to that of the bottom 20%, gradually expanded from 6.17 (2002) to 6.19 (2004), according to national surveys on living conditions in the years under consideration.

Urban services and lifestyle

With respect to education, among households with at least one school-age child, 62.0% thought that privatization of schools made their children's schooling "more convenient than before," only 15.8% saw more disadvantages, and 22.2% thought there had been no change compared with 5 years earlier. However, 54.2% of non-migrants, but only 42.2% of migrants, indicated that find that they saw more advantages, while only 42.2% migrants find advantages. With respect to vocational training and skill development for in computer operation or English, 34.1% of people aged over 13 took part in such training in order to enhance their qualifications.

With respect to health-care and medical service, HCMC residents saw improvement, with 56.5% of the respondents indicating that medical examination and treatment at the time of the survey were better, while 38.5% thought they were the same, and only 6% thought they were worse. The proportion of respondents who buy medicines at a drug store without a doctor's prescription decreased to 81.2% from nearly 100%.

Regarding entertainment and shopping, traditional cultural activities have become minimized as urbanization with economic growth has also resulted in the emergence of new cultural types, such as internet service, billiards, cafés, supermarkets, bookstores, karaoke, etc. The cultural face has consequently changed considerably and has become much more diversified, attracting the participation of people from all age groups. Notably, entertainment types that used to be exclusively for richer people, such as going to the theater or going on a tour are relatively common now. These new cultural services are attracting more people from all strata and all age groups: 66.4% of households reveal that trading and services (consumption) are now much more favorable and convenient than before. Regarding daily shopping places, the proportion of households that use a supermarket as their primary shopping place increased from 10.2% (1999) to 18.0% (2004), while the use of traditional markets, hawkers' shops and small shops decreased, although traditional markets were still the most popular shopping place (51.7%).

In response to our survey question regarding transportation, "What means of transport do you use to go downtown?," over 90% of the answers concentrated on motorbikes. This trend continued throughout the 5-year period covered by the survey. In fact, the suburbanization of HCMC has been accelerated by an increase in motorbike ownership; car ownership has not yet become popular. The people of HCMC rely heavily on motorbikes for daily activities such as commuting to work, accompanying children to school, and shopping.



Fig. 3. Changes in Quality of Life in Urbanizing Districts of HCMC Source: Authors' Survey, 2004

Table 2. Monthly Household Income and	Changes by	Income Group
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unit: %

	Income Group	UIG (Top 20%) n=86	PIG (Middle 60%) n=260	LIG (Bottom 20%) n=86	All samples n=432
Av. HH Income (1,000 VND/month)		3,817	2,822	1,954	2,848
Change in HH	Increase	53.5	33.2	30.2	36.7
income (1999-2004)	Same	45.3	50.0	50.0	49.2
. ,	Decrease	1.2	16.8	19.8	14.1

Note: UIG: Upper income group; PIG: Popular income group; LIG: Lower income group.

Differences between the categories are significant at the 1% level by analysis of variance. Source: the authors' survey, 2004.

unit: %

Income gro		Income group	UIG n=86	PIG n=260	LIG n=86	All samples n=432
Housing	Size	Better	45.3	40.2	31.4	39.2
conditions	(1999-2004)	Same	46.5	55.8	61.1	54.5
		Worse	8.2	4.0	7.5	6.3
	Comfortableness	Better	27.9	31.5	34.9	31.5
	(1999-2004)	Same	57.0	55.0	43.0	53.0
		Worse	15.1	13.5	22.1	15.5
Public services	Garbage collection % *	1999	100.0	86.6	54.7	81.7
		2004	100.0	95.1	66.3	89.3
	Piped water access % *	1999	100.0	71.0	62.0	75.0
		2004	100.0	79.0	65.0	81.3
	Electricity (stableness)	Better	59.3	49.2	39.6	49.2
	(1999-2004)	Same	40.7	48.8	59.3	49.4
		Worse	0.0	2.0	1.1	1.4
Daily shopping *	Supermarket	1999	27.9	6.2	4.7	10.2
(main place)		2004	32.6	14.4	14.0	18.0
	Traditional market	1999	62.8	52.3	58.2	55.6
		2004	60.5	48.0	53.5	51.7
	Hawkers' shop	1999	4.7	32.3	33.7	27.1
		2004	2.3	29.6	30.2	24.2
	Small shop	1999	4.7	9.2	3.5	7.2
		2004	4.7	8.0	2.3	6.2
Safety	Security from criminal	Better	60.5	67.7	55.8	64.0
	activity (1999-2004)	Same	26.7	28.5	36.0	29.6
		Worse	12.8	3.8	8.1	6.4
	No flooding % *	2004	77.9	50.0	48.8	55.1
Environment	Water pollution *	Better	0.0	0.0	0.0	0.0
	(1999-2004)	Same	13.9	86.5	60.4	67.0
		Worse	86.1	13.5	39.6	33.0
	Air pollution * (1999-2004)	Better	0.0	0.0	0.0	0.0
		Same	10.5	83.1	54.6	63.0
		Worse	89.5	16.9	45.4	37.0

Table 3. Changes in Living Conditions by Income Group

Note: *: Differences between the categories are significant at the 1% level by analysis of variance. Source: the authors' survey, 2004

Living environment

With respect to housing and basic services, living conditions improved or remained the same for most households and only a few experienced worse conditions: 39.2% of respondents reported that they moved to larger housing, approximately 54.5% had no change; and 6.3% moved to smaller housing. The quality of housing and living facilities also improved: 31.5% of households noted that their housing became more comfortable, while 15.5% reported worse facilities. In 2004, 81.3% and 89.3% of households had access to piped water

and garbage collection service, respectively, and most households had access to electricity.

Regarding safety (security from criminal activity and flooding), 44.9% of households claimed that their residence area had been frequently inundated because houses were now blocking previous water outlets. Among households reporting inundation, 33.1% felt that the situation had become worse, 32.6% declared that it remained the same, and 34.2% thought that it had improved. Additionally, 64.0% of respondents thought that security from criminal activity in their residence areas had improved, while only 6.4% thought that security was "worse than before."

Improvement in quality of life by income group (Table3.)

We examined improvement trends in quality of life by different income groups defined as the upper income group (UIG; top 20% of income percentile), the popular income group (PIG; middle 20-80%), and the low income group (LIG; bottom 20%). The average monthly household income of the UIG was VND 3.82 million, while those of the PIG and LIG were VND 2.82 million and VND 1.95 million, respectively. The income gap between the UIG and the LIG was 1.95 times, which was small compared to the 6.19 times reported by the HCMC Department of Statistics (2010). This is simply because we selected newly urbanizing areas as sampling sites, where popular housing for the ordinary population was dominant. Changes in income over the 5-year period covered by the survey, however, indicate a widening income gap: 53.5% and 45.3% of the UIG increased or maintained their income, respectively, while only around 30% of the PIG and LIG increased their income and the income of 15-20% decreased.

The different income levels affected quality of life differently. The UIG lived in formal and planned development sites with better and safer living environments in terms of housing, accessibility of basic services, and less risk from flooding, while many of the PIG and LIG lived in spontaneous development sites that often lacked basic services if no improvement or upgrading program had yet been implemented. For example, approximately half of the PIG and LIG faced a flooding risk, while only 22% of the UIG risked flooding, and 34.9% of the LIG and 21.0% of the PIG had no access to a piped water supply. A more problematic issue was education, with 87.1% of the UIG, but only 33.3% of the LIG, enjoying improved education services, and 26.9% of the LIG indicating that education had become worse. As education is an important investment for the next generation, this gap in children's education may further expand social disparity. However, even the LIG noted improvements in some standards of living such as garbage collection, health care, consumption of goods and services, and transportation (motorbike ownership). More importantly, we can observe that the emerging PIG, the majority of society, have been enhancing their quality of life in many life fields, even though they have achieved only lower to lower middle class status in society.

It can be said that economic growth and urbanization under *Doi Moi* have provided many economic opportunities and a variety of consumption alternatives to the society of HCMC. Since social disparity has been widening, the rich have had more opportunities to upgrade their lives, but the LIG has been able to access only limited goods and services based on their affordability. For example, approximately one third of the UIG enjoy shopping at supermarkets, while one third of the PIG and LIG still buy daily goods at hawkers' shops. On the other hand, the city government has been gradually enhancing its urban management capability, and has started to improve living standards for the PIG and LIG through the provision and upgrading of basic services.

Perceptions of the urban environment

As the population and economic activities had been growing too fast, there was an environmental deterioration in terms of the quality of water, air and land that in turn worsened quality of life. People's awareness of environmental pollution was quite limited: only 33.0% of the surveyed households noticed that their water resources were polluted, and only 37.0% thought the air had become more polluted because of increased smoke and dust from the considerable increase in construction and transportation. There is a large perception gap with respect to the local environment. The recognition of pollution by the UIG was very much higher than that by the PIG. If such pollution is not noticed and properly resolved, it will result in extremely serious consequences and cause a negative impact on the city's urban sustainable development.

6.2 Recent Trends in the Improvement of Quality of Life of HCMC

HCMC has continued to attract both foreign and domestic investment since 2004. The economic growth rate has been continuously high, at an average of 11% for the last five years, despite world economic crises such as the sub-prime loan crisis of the USA and the Euro crisis. Every year, more than 120,000 new jobs have been created in HCMC (HCMC Department of Statistics, 2010). At the end of 2009, the proportion of urban poor in HCMC had decreased substantially, largely due to the campaign for reducing urban poverty after 2004, but also due to a delayed re-setting of the poverty line against the inflation from 6 million dongs to 12 million dongs. This will expand the target group of urban poor reduction policies. Recently, a program for social protection was established for some vulnerable groups, through which the prices of some daily necessities have been stabilized and rent control for workers has been implemented. However, the economic

disparity of HCMC, that is, the income gap between the top and bottom 20%, has been expanding continuously from 6.19 times (2004) to 6.24 times (2006), then 6.37 times (2008), and 6.80 times (2010) during the economic growth that has taken place under *Doi Moi* (HCMC Department of Statistics, 2010).

Many important investments in urban infrastructure, such as the Thu Thiem bridge and tunnel across the Saigon River and the East-West highway, have changed the face of HCMC and brought new advantages to its residents. At the micro level, the city government promotes the campaign to build up cultural life in each ward, which includes mutual help in business activities, upgrading of alleys, local security enhancements against theft, drugs and prostitution, and ensuring democracy and participation at the community level. But traffic jams, environmental pollution and urban flooding limit improvements in quality of life in HCMC. All residents of HCMC, migrants or non-migrants, rich or poor, withstand sacrifices and hardships. Urbanization must go hand in hand with economic development, the implementation of new policies, and investments in infrastructure.

7. Conclusion

The urbanization of HCMC has been taking place in the context of rapid economic development and a local government that has lacked appropriate urban management measures during the transition process but that has made certain efforts to control the situation and enhance people's lives. Drakakis-Smith & Dixson (1997) and Bolay et al. (1997) point out that the urbanization of HCMC under Doi Moi was unsustainable due to environmental deterioration, an increase in urban poor, and social disparity, based on studies in the very early stage of Doi Moi. However, since the late 1990s, the socio-economy of HCMC has been transforming rapidly, new private businesses in the services and manufacturing sectors have been established, and legal/institutional frameworks of urban management have gradually been set up. This new situation has contributed to the improvement of people's income and quality of life. The HCMC government has been evolving to not only control informal developments but also to provide basic public services, promote improvement, upgrading, and legalization programs, and relax the migration policy, which facilitates migrants' access to public services. Privatization of public services provides more choices in urban services. Urbanization together with economic growth has also resulted

in the emergence of cultural and consumption activities. The residents of HCMC recognize their changing lifestyle and appreciate their new access to more convenient and diversified services in education, health care, medical services, entertainment and shopping.

On the other hand, negative trends such as the expansion of social disparity and the deterioration of urban environments have continued, and traffic jams and urban flooding have become more serious. These factors limit improvements in quality of life in HCMC. The expansion of social disparity is particularly problematic, as the poor are often unable to enjoy the services provided through the market due to their cost. There is a gap between the reality of local environmental pollution and the residents' recognition of it, indicating the importance of improving not only environmental controls and treatments but also the people's environmental awareness.

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THE DYNAMICS OF GENDER POSITION AND DISPOSITION: COMPARATIVE STUDY IN TWO INDUSTRIALIZED NATIONS, JAPAN AND NORWAY

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Abstract

All over the world, women's empowerment has become an important issue. This article explores the position of women living in two different industrialized contexts, the Japanese model and the Nordic model. When we consider a gender equal society, Scandinavian countries show some of best examples of welfare state strategies, and Nordic countries are often treated as one coherent category in worldwide analyses. In this article, we focus on Norway, and make comparative considerations on women's labor, education, family role and the status of women. Furthermore, drawing on the modernization theory concerned with the cultural aspects of gender, it shows how configurations of gender are shaped by both welfare state strategies and gender role ideologies in two nationalities. Findings reveal the existence of distinctive profiles of women's position and their affinity to normative conceptions of the gender order and ideal types depend on the historical pathways of gender ideologies embedded as Emmanuel Todd's modernization theory, cultures and the ways in which they underpin welfare state institutions and policies.

KEY WORDS : gender, women's position, modernization theory

Introduction

All over the world, women's empowerment has become an important issue. Since the 1970s, the improvement of the status of women has become a worldwide concern, especially after the Convention on the Elimination of All Forms of Discrimination against Women adopted by the UN General Assembly in 1979.

When we consider a gender equal society, Nordic countries are often treated as one coherent category in worldwide analyses, especially in the field of gender research. Those studies have yielded contradictory conclusions concerning the implications of welfare states for gender stratification. While progressive welfare states were generally found to be those with the highest women's labor market participation rates, and thus the lowest levels of women's economic dependency and poverty rates (e.g., Daly 2003; Esping-Andersen 1999; Korpi 2000; Misra, Budig and Moller 2007; Orloff 2006), they were also found to be those with the lowest women's occupational and earnings attainment (Mandel and Semyonov 2005, 2006; Wright, Baxter and Birkelund 1995). However, it is true that Norway was in recent history an agriculture-based country with strong patriarchal traditions mainly influenced by conservative Christian values. Norway became a democratic state in 1814 with an accomplishment of full rights to vote for all men in 1898 and then also for women in 1913.

On the other hand, Japanese society has been known as a sexual division of labor society, and its gender stratification patterns are sharper than Western industrial nations. This body of research today tries to contribute to a greater understanding of the origins and consequences of the Japanese women's position in the labor market in the phase of economic development.

Statistics show that in the 1960's, the rate of working women was fewer than 10% in Japan and Norway. Today in Norway it has almost reached 70%, meanwhile in Japan, the rate has only surpassed 50% with a few margins (Statistical Bureau Japan and Norway). Why and how the two countries developed so differently in gender equality is an interesting question. Can it be explained only by differences of welfare state policies? This paper aims to answer this question with reference to conceptual ideologies introduced by Emmanuel Todd's theory of modernization, and then tries to explain how far Emmanuel Todd's theory of modernization would justify the gender inequality gap in Japan and Norway.

In addition to that, in this paper, we will focus on the following points to consider the topic of gender in position or disposition considering women during modernization from a historical point of view. Through this consideration, we will examine the status of women in a different perspective, focusing on position and dispositions, and providing a new perspective from Japan and Norway.

The paper is organized as follows: Section I will discuss the views on the gender perspective, theoretical explanation: Emmanuel Todd's ideology and modernization linked with women. Section II shows the historical perspectives and modernization ideology related to Japanese women. We will introduce comparative analysis of women in education, work, and family role, and discussion in section III. Section IV presents concluding remarks.

1. Gender Perspective and Theoretical Explanation of Modernization

1.1 Gender Perspective

The term gender refers to socially and culturally constructed sex differences. Its emergence can be dated to the late 1960s, and it is developed by the second wave feminism (Pilcher and Whelehan 2004). In the field of sociology and other social sciences, gender became a key word to examine social inequality after the 1970s. The gender order is a patterned system of ideological and material practices, performed by individuals in a society, through which power relations between women and men are made and recreated as meaningful in everyday practices. When we look back at the well-known claims by Simone de Beauvoir, "One is not born, but, rather, *becomes* a woman", gender socialization and gendered reproduction are an indispensable theme to consider the persistent inequality in education and society (Amano et al. eds., 2009).

The relationship between the body and gender is a central issue for gender theory (Connell 1987). Connell argues that gender is the outcome of recurrent interpretations of, and definitions placed upon, the reproductive and sexual capacities of the human body.

1.2 Theoretical Consideration on Modernization and Family Dynamics

The literature on gender has offered two sets of explanations

for cross-national disparities in gender equality: modernization and institutions. Modernization explains the development and especially focusing on the informal institutions that shape the norms and values prevalent in a society. The modernization view argues that as countries become more economically developed, industrialized, democratic and their populations' more educated, equality between sexes will emerge, as the resources available to women will increase and give them a better bargaining position (Inglehart and Baker, 2000).

Although the modernization view suggests that development will bring about gender equality and cultural change, a growing body of literature claims that persistent norms, beliefs, and values matter. Inglehart and Baker (2000) highlight that cultural change depends on the heritages of societies and these heritages have autonomous and enduring effects.

Therefore besides economic development, people have to accept that the values attached to the culture of a country or community matter for gender consciousness. These long lasting institutions have to be studied alongside development to fully understand gender equality outcomes. It will be important to focus on Emmanuel Todd's modernization theory, which has shown that modernization brings predictable changes in gender roles in the long run.

In Todd's modernization theory, it is said that he attempts to systematically correlate family structure, literacy, godlessness and political ideology, as: Family Structure+ Literacy+ Godlessness= Political Ideology. This shows the relationships among family systems, modernization phases (literacy, industrialization, dechristianization, contraception), and political ideology (nationalism, socialism, religious conservatism) (Willy C. http://www.craigwilly.info).

And, his family structure model can be summarized and applied as follows (Figure 1).

Todd presents an extremely powerful interpretation for the rise of ideologies in the modern age with the presentation of the societal modernization and cultural change. He shows that family structure leads to the position or disposition of women at home and the society. He argued that women's position today was impacted by the cultural ideology in the process of modernization. He explained the modernization process in different countries in a different way. For example, he describes the difference between the traditional Japanese and England family, thus in the traditional Japanese family, there was neither individualism nor equality. A single son inherits the bulk of property and in particular "family headship," having authority over collateral family branches (i.e. his brothers' households) (Ochiai et.al. 2008). He further explains as these family structures contain deep-seated, conscious and unconscious, implicit and explicit, values and norms about an individual's rights, responsibilities and place in the social universe. These family values and assumptions have "massive," in the sense of existence-defining, implications. The Englishman is a "free" individual who upon adulthood leaves his parents and is responsible for himself. The Japanese is an "integrated" individual who upon adulthood remains closely bound with his family in a hierarchical system of solidarity and obedience.

In Emmanuel Todd's *L'Invention de l'Europe*, four premier European family types are identified according to two major criteria: an individual freedom or under the authority of his parents in adulthood, and in terms of inheritance (Todd 1990).

These categories are: the "absolute nuclear" family, liberal and non-egalitarian, the "egalitarian nuclear" family, liberal and egalitarian; children are completely free upon adulthood, founding independent families and inheritance is equally distributed, the "stem" family, authoritarian and non-egalitarian, several generations may live under one roof, and the first-born child, mainly a boy will inherit the entirety of property and family headship (and thus perpetuate the family line). Other children typically leave the home to get married or become priests/soldiers. The fourth is the "communitarian" family, authoritarian and equal. Several generations may live under the same roof until the eldest die and the inheritance is divided equally (Figure 1).

According to Todd's theory on authority and inequality countries are characterized: these principles of discrimination and hierarchy are projected onto domestic and international politics. Those types have impacts on women's autonomy at home and the society. Then what would be the relationship to Japan? Japan is categorized under the stem family structure like Germany. This system can be applied in a global scale and sees the dynamic interaction of different but mutually influencing masses of humanity and nations.

Much of the literature explains that education and fertility has interlinked and age at marriage matters. Todd in his book *the Causes of Progress* (1987) shows that the correlation coefficients that associate ages at marriage with literacy rates, distinguishing between the two sexes, emphasizes women's specific role in the process of cultural development, the correlation between female ages at marriage.

Todd wrote, "around the 1970s, women were marrying latest in Japan, Singapore, the Philippines and Sri Lanka — at between 24 and 25 years of age, on average. But this is much less than in northern Europe during the era of its take-off; there the ages of women at marriage were registered as between 26 and 28 years." He explained further. "Though often considered in present day Europe to be a model of cultural discipline and productivist ascetism, Japan turns out be an example of no more than moderate anthropological and demographic change, in a phase of economic take off. Japan's authoritarian



Figure 1: Family Structure Model and Social Change Authors composed with applying Todd's model (1984, 1999)

family structure, which could have made possible the raising of age at marriage to the approximate point it had reached in Germany, Scandinavia or Scotland, in fact never led Japan to experience the anthropological tensions typical of preindustrial Europe (Todd 1987 p.16, pp.75–76).

Todd excellently describes the need for ideology and religion. When family takes actions or decisions far from religion then its leads to a better position for women in the society and the home.

Todd's explanation about Norway: The case of the Nordic countries is an interesting case in that clearly there are massive cultural and socioeconomic commonalities despite apparently different family structures.

He wrote that "after 1850 a Nordic-Central European group emerges, noteworthy for having literacy rates of over 70 per cent (counting both sexes together) and average ages for women at marriage of over 27 years. This group comprises Scandinavia, Germany Switzerland and the Netherlands". He explained further. On family structures, a link exists between certain types of family structure and the spread of mass literacy works well for the continent of Europe, including Norway, Sweden, all exhibit the same sort of family structure, that is one simultaneously bilateral and vertical (Todd 1987 pp.36–37, 43).

1.3 Family Structures in Europe and East Asia

How can we apply his family structure and modernization theory to Asian research? As an example, Japanese sociologist, K. Sechiyama examines Patriarchy in East Asia based on Todd's theory. He argues the social system and gender structures among East Asian societies, and contrasts of capitalism and socialism, and cultural differences between the Korean and the Han Chinese (Sechiyama 2013).

He emphasizes the diversity in East Asia, and argues that the Chinese type of patriarchy is relatively accepting of female participation in labor, on the other hand, the Koran peninsula is characterized by the relatively rigid patriarchy. In terms of the extent of permeation of Confucian culture in these societies, the influence of the traditional view of a gender division of space in which the realm of the male is outside and the realm of the female in the home. The Chinese pattern especially Southern Chinese extends from Taiwan and Hong Kong to outside of China such as Singapore, and such regions in Asia will be "De-housewifization" with global economic conditions (Sechiyama 2013, Ochiai et al. 2008).

Speaking of the female labor force, Korea and Japan still

draw female labor-force participation rates M-curves, contrasted with a reversed U-curve of Taiwan for example (Tendo 2013). We need to consider the commonalities and diversities in East Asian societies with deep examination of modernization and family change.

2. Women, Education and Modernization in Japan: from a Historical View

2.1 Modernization in Japan

Now, let us move to the theme of Japanese women, focusing on education and modernization.

When we consider the position of women in Japan, modernization is a key word to analyze the social change. In this article, we focus on three turning points of modernization, first the Meiji Restoration in the late 19th century, secondly the mid 20th century after World War II, rapid economic growth, and thirdly after 1990, late modernity (Tendo 2013).

Modernization means becoming a modern society. Modern societies, sometimes simply called industrial societies, are different from any previous type of social order. In the Meiji period (1868–1912), modernization and industrialization had a tremendous impact on society and children's socialization or education.

To build up a powerful nation-state and to catch up with Western countries, the government used the *le* system to make a strong unified nation, to centralize administrative power and put this system into practice.

The *le* system maintained a house lineage across the generations. Looking back in history to the Edo period (17th–19th centuries), the *le* system was fundamental in keeping the feudal regime stable. Among samurai families, to continue the *le* was a crucial task for the householder in a patriarchal family system. A child, especially the first boy, had a specific meaning as the successor of the household community or lineage. The Meiji Government used this conventional household system as a governing device to strengthen the 'modern' nation (Miyasaka 2000).

Japanese societies had local educational systems in the Edo period, such as *Terakoya*, private elementary schooling for common people taught by monks and samurai. *Hankou*, feudal domain schooling, was also established by daimyo, mainly for boys. Education consciousness may be said to be a traditional mentality. Even in the Edo period, it is said that around 40% of men and 10% of women could read and write;

the Japanese literacy rate was not so low compared with other Western countries (Yonekawa 1993 p.221).

The Meiji government established a formal educational system in 1872. It was one of the national strategies to train children to be good citizens to contribute to the nation.

Elementary school enrolment rate in 1873 was 28.1%, and increased rapidly in 20 years (1890, 48.9%) (Yonekawa 1993). Some people expected social success through education, so called careerism, after the end of Japanese feudal society.

Not only official education but also family education was strengthened in the Meiji period. The official elementary school system expanded greatly among not only boys, but also girls. Girls' education was considered an important part of nation building by the government, to educate children at home as future human resources for the nation. Family education (*Katei-kyoiku*) is child socialization and education mainly conducted by parents at home.

From the historical perspective, we found that Japanese modernization in education was clearly divided by gender classification. In the process of modernization, family education was expected to play a complementary role by supporting formal education. The "good wife and wise mother" ideology was spread at the end of Meiji period, and mothers were expected to be the agents of child socialization to nurture healthy and wise children for the next generation. In sum, in the Meiji period of late 19th century Japan, we see a visible, explicit pedagogy that is a strong classification of gender and clear boundaries between subjects, curriculum, space, and purpose of education existed at this time.

2.2 Rapid Economic Growth and Social Change after 1950s

The second turning point of modernization in Japanese society began after 1945, especially during the period of rapid economic growth in the late 1950s. A new civil code was settled on, and the *le* system was abolished in 1947. It seemed as if a new age of the 'democratic' family and society would come into existence. The transformation of society after the war also affected family life-style and peoples' mentality. After a few years of hard times following defeat, people's lives changed as recovery and economic prosperity increased. Changes in the industrial structure after the mid-50s led to greater urbanization with labor migrating from rural to urban areas. A new family structure, the so called the 'modern family', was used as an 'effective' model to promote rapid economic growth; men as providers and women as homemakers functioned to support the newly established gender order in

society.

Child socialization and family strategies experienced a transformation from visible to invisible pedagogies different from the socialization of the Meiji period 'positional family'. The new middle class family type can be recognized as what Bernstein (1977) labeled a 'person-oriented family'. This person-oriented family seemed to be more democratic than the positional family, however, it was characterized by the sexual division of labor, and power relations between genders rooted in the 'modern family' ideology.

Yet despite productive innovation in Japanese companies after the Rapid Economic Growth, we need to be reminded that Japanese business and management systems were almost totally male dominated ones. After World War II, the sexual division of labor system penetrated in the Japanese labor market, family function, culture and education. Sexual divided curriculum: home economics for girls, and technical arts for boys, were an example of gendered education and curriculum in the Rapid Economic Growth period. To compete with other countries' industries, the Japanese government wanted an "efficient" system, so called sexual division of labor system; male workers/husbands as "24 hour business soldiers" and full-time housewives, metaphors of "defense of the home front".

3. Comparative Analysis and Discussion

Next, we consider a gendered society. Based on theoretical consideration of Todd's modernization theory and a gender perspective, we focus on female labor, wage gap and sexual division of labor in two industrialized countries, Japan and Norway. Findings through some comparative data reveal the existence of gender segregation and gender order in a society.

3.1 Labor Market

In the field of gender it has been approved that being employed and having ones own source of income have been important issues. Norway has made good progress in this area.

Statistics show that while 44 percent of women were working in 1972, the figure in 2011 had risen to 62 percent.

On the other hand, there is a significant gender gap in employment in Japan. In 2011, only 63% of women were employed compared with 88% of men — the fifth largest gap among OECD countries (the OECD averages were 65% and



Source: Author Composed with World Bank Development Indicators 2013

Figure 2: Labor Participation Rate, Female (% of Female Population Ages 15+)

80%, respectively).

While in most OECD countries this gap tends to narrow as the level of education rises, in Japan the gap remains substantial, regardless of the level of education (OECD 2013).

Figure 2 shows the Labor Participation Rates, Female (% of Female Population Ages 15+) in both Norway and Japan since 1990 to 2011. Since the year 1995, Norway's trend has increased dramatically. This can be due to the introduction of a welfare policy package to women labor in order to have a well balance between family and work. Because, it is important to note that although economic support for non-working mothers may have the potential to advance women's economic independence.

In 2011, 68% of Japanese women with tertiary-type degrees were employed, a considerably smaller proportion than the OECD average rate of 79%. In comparison, 92% of men with a similar degree were employed, a larger proportion than the OECD average of 88%. Moreover, women in Japan who are employed tend to be underemployed (e.g. they are working part-time involuntarily and/or are overqualified for the job, in 2011, 34.8% of employed women worked part-time, compared to the OECD average of 26.0% (OECD 2013).

If current labor force participation rates for men and women in Japan remain the same as in 2011 (63% for women and 84% for men), the labor force is projected to decline by more than 10% over the next 20 years.

In order to address the looming labor shortages in future, Japan needs to make more efficient use of everyone's skills in terms of education and economic participation: greater gender equality is key of sustaining economic growth: for example, according to OECD (2012) gender parity in labor force participation is projected to increase GDP in Japan by almost 20% over the next 20 years. Figure 3 shows the nature of the unemployment rate as a percentage of the female labor force with time in two countries. In 1990, the unemployment trend of Norwegian women starts decreasing and in the case of Japan it acts in the opposite way. This can be explained by the degree of flexibility in the labor market faced in Japan with the impacts of globalization pressures. Workplace practices make it difficult for Japanese women to reconcile work and care commitments. As a result, both fertility rates and proportions of women in work and in management positions are low. The social-democratic nations shows that in the labor market it is impossible without active efforts by the state to protect their rights as mothers, and to provide them with comfortable terms of employment and support services. For example, extensive supply of high-quality public daycare facilities subsidized by the state, in addition to flexible terms of employment, long maternity leave, and paid leave to care for sick children.

In Norway, more than 75% of the working-age population aged 15 to 64 has a paid job. This figure is much higher than the OECD employment average of 66%. Figure 4 shows that vulnerable employment (unpaid family workers and own-account workers as a percentage of total labor force) in Norway is less than Japan and its value is always below 5 percent. But it shows a good sign that in Japan vulnerable employment trend for women is declining over time.

Employment rates are generally higher for individuals with



Source: Author Composed with World Bank Development Indicators 2013

Figure 3: Unemployment Rate as Percentage of Female Labor Force



Source: Author Composed with World Bank Development Indicators 2013



a higher level of education; in Norway an estimated 88% of individuals with at least a tertiary education have a paid job, Norwegian women are still less likely than men to participate in the labor market. In Norway, 73% of women have jobs. This is more than the OECD average of 60% and relatively close to the 77% employment rate of men in Norway. This percentage point gender difference is much lower than the OECD average difference of 12%. This points and suggests Norway has been successful in addressing the constraints and barriers women face accessing work.

3.2 Women in Education

The latest research shows that Japan has been at or near the top of the international rankings on education. Japanese women have made great strides in education. Today, young women in Japan are more likely to have a university degree than young men: 59% of women and 52% of men aged 25–34 years, compared with 23% and 32 %, respectively, for women and men aged 45–54 (Statistical Bureau Japan).

In the case of Norway, the trend of the strong increase in the workforce with higher education being especially strong among women is also continuing. However, the trend of higher education in Norway is heading towards a clear female dominance. Projections estimated that the number of women with a higher education will increase by more than 200,000 by 2030, and may reach as many as half a million. With regard to men, the growth represents just slightly more than 50,000 persons (OECD 2013).



Source: Author composed with World Bank development indicators 2013

Figure 5: Unemployment with Tertiary Education, Female (% of Female Unemployment)

In any country, the education pattern is also apparent among those who are in employment today. The education sector can also play a role by promoting gender balance in tertiary programmed and domains of study. This may happen, for instance, by encouraging schools and families to provide students with balanced perspectives on gender roles in society.

Figure 5 provides the picture that in Japanese educated women who do not reach their satisfaction in the labor market.

Changes in corporate labor practices and family policies can play an important role in boosting women's participation in the labor market and reducing underemployment.

3.3 Why does she not want to be a Head?

In addition, speaking of gender roles, we have to consider the reason of women's disposition in working conditions. Thinking of the educational field, one of the most gender equal workplaces, the data showed few women in educational leadership. A survey conducted by Japanese researchers of education, pointed out the characteristics of female managerial teachers, and the interview research of female high school principals reveals Japanese social cultural system and difficulties of female workers and employees (Kawano & Muramatsu eds. 2011). At the elementary schools, the ratio of female teachers are more than 60%, and the female principals' ratio is 18.5 % (2012), however, at the junior high school and high school, the ratio of female principals are down to 5.6% and 5.8% each (Source: School Basic Research, Japan 2012).

In general, Japan is known as very few portions of female managerial positions. Since the Basic Law for Gender-equal Society was enacted in 1999, the Japanese government, some companies and corporations began to promote female leaders, to make efforts to contribute to the formation of a gender equal society.

However, it is not easy for a woman to have a managerial position, and compared with foreign countries, the number of female directors and COEs are very few.

3.4 Women's Status and Gender Wage Gap

Speaking of women's status, it would be a considerable overstatement to claim that the great changes that have affected Scandinavian women's lives during the 1970s and 1980s came about as a result of public policy. This argument is supported by many studies (Brit & Helga 1987).

Even in very active states, policy regulates the changes that are already occurring for a variety of reasons rather than initiating the changes. Policies can, however, affect the direction and speed of social changes. During the 1970s women entered into the labor market on a part-time basis; also they stayed longer in the educational system, although in traditionally feminine areas; Scandinavian men began to participate more in child care, although not in housework strictly speaking; women increased their political participation and representation rates to the highest in the world, Very loosely, one might say that these changes were partly a result of economic development (Brit and Helga 1987). This reminds us of Todd's theory on cultural and family ideology related women's autonomy.

The most important fact that makes gender equality easier to achieve in Norway than in Japan is strongly related to the amount of hours that people work. In average Norwegians work only 37.5 hours per week and have highly restricted amount of overtime. Meanwhile, in Japan, people work on average 47 hours per week and, due to less juridical regu-



Source: OECD Database on Earnings Distribution 2012

Figure 6: Gender Pay Gap Increases with Age

lations, often do excessive overtime. In Norway there is no "nomikai", or after five drinking communication culture as in Japan. The balance of work and leisure time makes family and work possible to combine.

In 2013 September, Norway's second woman Prime Minister Arna Solberg was appointed in that month's election, after 8 years of government by Jens Stoltenberg. All the Nordic governments have a high percentage of women ministers. One third of all members of Scandinavian parliaments are women. Their representation in the public system of decisionmaking is higher than anywhere in the world.

In addition, gender wage gaps are pervasive in all walks of economic life and imply large losses in terms of foregone productivity and living standards to the individuals concerned and the economy. When we consider the Gender wage gap in Japan among OECD countries, even for younger workers the gender pay gap is 15%, and it increases to around 40% for those over 40. Japanese women have great difficulty to rise to the top and less than 5% of listed company board members in Japan are women, one of the lowest proportions among OECD countries (Figure 6).

3.5. Position at Home

"M-curve" is a symbolic phenomenon of Japanese female labor conditions. Many women have to leave companies when they decide to get married, having children or taking care of small children at home, so quite a lot of Japanese women aged in their late 20's to early 30's leave the labor market, and participation rates on those age categories decrease. The trade-off system between work and family life for women is one of the main causes of declining fertility, and the "M-curve" reflects the continuing sexual division of labor in a society.

When we consider the birth rates of 14 OECD countries, the largest rises were in Denmark, Norway and the Netherlands. These rises amounted to between a third and one half of an extra child on average per woman. Fertility rates continued to decline or remained stable in Austria, Japan, Hungary, Korea, Portugal and Switzerland — all low fertility countries (OECD 2012).

The declining trend of the total fertility rate (births per woman) can be due to the modern family formation and a decrease in desired family size (Table 1, Figure 7). Rising female education and employment, insufficient support to families juggling work and children, a need to generate a secure job

Table 1:	Total Fertility	Rates in	Selected	Countries	or Regions

Country or region	Year	TFR
Japan	2012	1.41
The United States	2011	1.89
France	2010	2.00
Norway	2011	1.90
United Kingdom	2010	1.98
Italy	2010	1.41
Germany	2011	1.36
Netherlands	2011	1.76
South Korea	2011	1.24
Hong Kong	2011	1.20
Singapore	2011	1.20
Taiwan	2011	1.07
Thailand	2010	1.60
Philippines	2010	3.10

Source: Author composed with Data of Ministry of Health, Labor and Welfare, Japan

http://www.mhlw.go.jp/toukei/list/dl/81-1a2.pdf



Source: Author Composed with World Bank Development Indicators 2013

Figure 7: Total Fertility Rate, Norway and Japan

and income, or growing housing problems may have all also played a role. The authors have concluded that the impacts and changes of declining the total fertility rates in Japan have a direct relationship to globalization pressures (Tendo and Meewalaarachchi, 2010).

4. Concluding Remarks

This article offers a comparative analytical review of two countries, Norway and Japan and proves that women's position in Norway has generally increased and gender inequality has narrowed, although they remain considerable in Japan with time. The difference between women and men's participation in the labor force in Norway has never been less than it is now.

The achievement in education of females in Japan roughly parallels that of Western industrial nations, yet the role played by women in the economy remains largely uninvestigated. As we understand in any other country gender gaps tend to narrow as the level of female education rises, in Japan the gap remains substantial, regardless of the level of education. Therefore researchers always highlight the comparatively low status of Japanese women in the work place and overall gender equality in the society, when compared with other developed countries.

It has been proved in many studies that female education has an impact on total fertility rates. Education also has a positive impact on women's empowerment, but can be restricted with traditional cultural ideologies depending on the country contexts. This is explained by Todd's theory of modernization.

According to Todd's theory of modernization, Japan is more conservative in gender norms and ideologies. Patriarchal values are not explicitly written in the modern Japan but still those work and make gender role rigid in the cultural atmosphere.

Traditional attitudes towards gender balanced society have been regarded as an important determinant of women's entry into political decision makers. It is well known that women's power in parliament is best in the Nordic nations. Sweden leads the world. Though women position in the political field was not a focus in this article, it is obvious that structural and institutional explanations need to be supplemented by accounts emphasizing the importance of the political culture.

The ability of governments to develop policies that are evidence-driven, responsive, and inclusive is fundamental to achieving genuine gender equality in any country. The responsibility of government agencies for appropriately addressing issues of gender inequality and mainstreaming gender into policies and programs was formalized in the 1995 Beijing Declaration and Platform for Action, but not practiced enough yet.

Policies can, however, affect the direction and speed of social changes but not always, as Norway shows one of the highest gender equal countries on the world map: Even in very active states, policy regulates changes that are already occurring for a variety of reasons rather than initiating the changes. Once Todd suggested that Japanese system seems eminently plausible and intuitive, these family's values are then projected, more or less crudely rationalized, as the country's political ideologies once it enters the modern age. People's fantasies of their "ideal politics" are just a projection of what they unconsciously consider "normal" according to their family values.

As in the light of what has been said, it would be useful to examine more clearly the similarities and differences between Norway's welfare regime and that of Japan. It is also worthwhile to reflect more closely on the demographic evolution of the two countries noticing specially some of the important differences through the modernization process. The Japanese government will have to take much more forceful policies to hinder the institutional and structural barriers, if it wishes to change the gender imbalance in the society and the work place.

Notes

Figures are mainly composed by Mangalika Sriyani Meewalaarachchi.

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DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES IN JAPAN: AN ANALYSIS OF THE LINK WITH HUMAN RESOURCE DEVELOPMENT

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Abstract

Small and Medium Enterprises (SMEs) have been playing a major role in every area of the national economy in Japan. Their importance is indicated by the very large share of the economy that they occupy, whether in terms of number of companies, total number of employees, value of shipments or GDP. However, since last two decades it does not seem that this sector is performing well and achieving their expected goals. The firm entry rate has down ward trend while exit rate has trended upward in recent years and considerably exceeded the entry rate. One of the reasons for high rate of business failures in SMEs, as some SME advocates argue that, is due to its less attention to the human side of their businesses when compared with their counter parts of large enterprises. Therefore, the broad objective of this study is to examine the function of human resource development (HRD) in SMEs in Japan. Specifically, this study attempts to examine the relationship between HRD practices and business performance. A structured questionnaire was developed and sent to 436 manufacturing SMEs in Aichi Prefecture and 144 firms responded to the questionnaire resulting in 32 percent response rate. Based on the data analysis it was found a strong positive relationship between HRD practices and business performance of manufacturing SMEs in Japan. Further, the study confirmed statistically significant mediating relationship of HR outcomes in between HRD practices and business performance in SMEs in Japan.

KEY WORDS : human resource management, human resource development, small and medium enterprises, HR outcomes, operational performance, financial performance.

1. INTRODUCTION

Small and Medium Enterprises (SMEs) have been playing a major role in every area of the national economy in Japan. Their importance is indicated by the very large share of the economy that they occupy, whether in terms of number of companies, total number of employees or value of shipments or GDP. There are 4. 69 SMEs in Japan, constituting 99. 7 percent all enterprises, accounting for 70 percent of all employment (Small and Medium Enterprise Agency, 2013). Although most people are familiar with large companies such as Toyota, Sony, and DoCoMo etc., it is the SMEs that drive Japanese economy. Although their relative importance as a share of the number of enterprises and the number of employees is declining compared with the situation at the beginning of the 2000s, there is no change in the fact that the SME sector still accounts for the vast majority of enterprises and employees in Japan. Large enterprises (LEs) such as Toyota, Honda, and

Sony originally began as small family businesses (Sato, 2013). The revitalization of SMEs promotes competition in the market and can be the driving force in creating new industries and transforming the industrial structure. The majority of products of LEs are made up of parts produced by SME subcontractors, and therefore, the reliability and availability of Japanese products is supported by the underlying strength of SMEs. Local economies are underpinned by the activities of SMEs particularly those involved in the service industry, the retail industry, and the construction industry. SMEs also play a major role in revitalizing the local economy and increasing employment opportunities (Sato, 2013).

Japan's SMEs come in thousands of varieties, ranging from world-leading technology firms to the neighborhood candy stores. These small and medium-sized businesses form the real foundation of the Japanese economy (Small and Medium Enterprise Agency, 2013). After many years of recession following the collapse of the bubble, the Japanese economy is now starting to show some encouraging signs. New economic growth depends on how active a role the SMEs and entrepreneurs who support the economy can play in supporting such expansion (Small and Medium Enterprise Agency, 2013). SMEs are prevalent across the Japanese economy, constituting the lion's share of enterprises in all sectors. SMEs are most numerous in the retail, services and restaurant/lodging industries but among the most productive are those in the manufacturing sector. While many of those in the services sector are wholly reliant on domestic demand, a large proportion of SME manufacturers are essential suppliers to Japan's famous large exporters. Japan's SMEs have been a major source of employment and growth, but their role in the economy has been hindered by their weak performance. SMEs span many industries and have historically served as key suppliers to large manufacturing firms and represent the backbone of the service sector.

However, over the last two decades, SMEs have no longer been a thriving source of growth. The profitability and investment of SMEs have declined significantly and business registration of SMEs has been in the decline. The number of manufacturing establishments employing four to 299 people steadily declined from 434,754 in 1985 to 254,675 in 2007. The sharp decline in the number of establishments was caused not only by the abolishment of enterprises but also by the lower number of enterprises entering the economy. As shown in Figure 1, the entry rate has experienced a prolonged decline since the 1970s. The main factor behind this appears to be the trend in sole proprietorships, which account for a huge number of Japanese enterprises. This phenomenon, however, should not be regarded entirely as a problem of sole proprietorships because they have the potential to grow and employ more people. However, the firm exit rate has trended



Figure 1: Trends in Entry and Exit Rates of SMEs in Japan Source: Small and Medium Enterprise Agency, 2007

upward in recent years, and rose by a record annual average of 6. 0% (based on the number of enterprises) between 2001 and 2004. As a consequence, the firm exit rate has considerably exceeded the firm entry rate despite the slight upward swing in the recent past (METI, 2006).

Nevertheless, successful business management of SMEs largely depends on the quality of human resource that supports companies (JASMEC, 2001). Securing and training high quality personnel are, therefore, key factors for the growth of SMEs, which often have limited opportunities to utilize managerial resources. But, it is argued that SMEs are paying less attention to HRD practices when compared with their counter parts of large enterprises (Kok, 2003; Wong et al., 1997;Gamage 2007). Therefore, the prime objective of this study is to develop and test a conceptual model linking HRD to business performance that fit for SMEs. Specifically, this study attempts to examine the relationship of HRD practices with business performance shedding some lights on the process through which these impacts are taking place.

2. LITERATURE REVIEW

In this section an overview of research on Human Resource Management (HRM) in SMEs is presented and subsequently, briefly presents main conclusions of studies which have been conducted on the relationship between HRD and business performance within SME business context.

2.1 HRM in SMEs

HRM is the function within an organization that focuses on recruitment of, management of, and providing direction for the people who work in the organization. It is the effective and efficient utilization of human resources to achieve organizational objectives (Opatha, 2010). HRM is the human side of the organizational management. It is mostly responsible for the attraction, selection, training, assessment, and rewarding of employees for getting maximum contribution toward the organizational success. Stone (2005) defined human resource management as productive use of people in achieving the organization's strategic business objectives and the satisfaction of individual employees. This definition clearly indicates that the organizations' objectives are dependent on their work force productivity. The effective use of HRM practices is able to link these practices with organization's goals and objectives. In order to accurately measure human

resource practices, a number of HR functions may need to be evaluated. The importance of these practices may differ from firm to firm. One of the most comprehensive and widely used measures for human resource practice was presented by Dressler (2008) and Fisher et al. (2006). In their studies, human resource management practices are characterized as multidimensional, and it has four major facets namely; human resource development, staffing, employee performance evaluation, and compensation management of employees.

Given the importance of SMEs employees to the national economy, it is disheartening to note that scant attention in SMEs research is given to the study of HRM. No matter where you look, in surveys (e.g., Hornsby & Kuratko, 1990), in reviews of literature (e.g., Good, 1998), and in empirical studies (Heneman & Berkley, 1999), scholars are lamenting over the dearth of information about human resource management practices in SMEs. Proper management of a company's human resources is the key to business survival in today's world. The organizational effectiveness of the firm (Huselid, 1995; Terpstra and Rozell, 1993) and its ability to create a sustainable competitive advantage (Prahalad, 1983; Pfeffer, 1994) can hinge upon whether HRM practices are properly thought out and successfully implemented. The human potentials in a company are generally much more difficult for competitors to duplicate than the plant, equipment or even products that a company produces (Flanagan and Despanade, 1996). Consequently, the nature and wellbeing of a company's employees can become its main strength in carving out a profitable existence in the industry. HRM practices can be particularly important for small firms (Marlow and Patton, 1993) since they tend to be so dependent on human capital. Research indicates that inadequate and insufficient management of employees in small firms has resulted in low productivity and high turnover rates (Mathis and Jackson, 1991) and is one of the leading causes of small business failures (McEvoy, 1984).

HRM is generally associated with large organizations. There is a strong relationship between size and the extent to which establishments had introduced personnel policies, procedures and other arrangement (Price, 1994). The issue of size raises the question of the relevance of mainstream HRM practices for enterprises who count their employees in tens rather than in thousands. Although no clearly articulated HRM framework exists for SMEs, they like their larger counterparts also have to recruit and select staff, achieve level of performance, and train staff. Given the prevalence of small enterprises in many economies it is surprising therefore that relatively little is known about the extent, nature and determinants of training in small and medium-sized businesses (Johnson & Gubbins, 1992). SMEs are often limited in their ability to undertake HRM activities due to a lack of finance, knowledge and managerial skill (Gilbert & Jones, 2000). As a consequence, their HRM practices are highly informal and relatively unsophisticated (Jameson, 2000; Gilbert & Jones, 2000). The lack of information about human resource in SMEs is problematic for theory, research, and practice. Current human resource theory is often developed and tested in large organizations. As a result, little is known about the extent to which the theory extends to smaller entrepreneurial organizations.

The overall goal of human resource management is to ensure that the company will be able to achieve success through people. HRM aims to increase the effectiveness and organizational skills, which means the ability of an organization to achieve its goals using the available resources in the best way possible. Some authors in their studies have found that HRM systems can be the source of firms' organizational capabilities that allow one to learn and benefit from new opportunities.

The generic purpose of HRM is to generate and retain appropriate and contended workforce who gives the maximum contribution to the organizational success (Opatha, 2010). Therefore, a highly qualified, motivated and happy staff is the main factor for the success of SMEs. And also, effective HRM system helps organization attract and hire suitably qualified people and keep their knowledge, skills and attitudes updated. Therefore, they are capable of performing what they are supposed to perform. On the other hand, effective HRM system helps the organization to retain contended workforce. It means that HRM system helps keep employees motivated. Motivated workforce is a happy workforce. This brings many benefits to the firm. For example, if the work force is happy, they always give their contribution to the organization by means of producing quality product or service. If the product or service is good interms of its quality, customers buy these products or service and they become happy customers. If customers of the firm become happy, they become loyal customers to the organizationthereby increasing the propensity to buy more and more in time to come and making positive influence to the other to become new customers through word of mouth. Good service is a key factor that explains why a potential

customer chooses a particular firm or why existing customers stay or leave another. Best impressions of a service, expressed from a friend or relative, effects in choosing a firm. Moreover, a bad impression on service will send customers to other competing firms. High customer service gives all firms sustainable and long term competitive advantage. This service will be difficult to duplicate and surpassed by competitors in the short run. Good service is not reached immediately; it takes many months, if not years, of investment in the training and dedication to achieve it.

Research suggests that when customers are more satisfied with a firm, they increase their loyalty which results in reducing price elasticities, lowering market costs, and decreasing transaction costs, thereby improving overall financial performance (Anderson et al., 1994; Fornell, 1992; Reichheld and Sasser, 1990). However, firms must depend upon their employees to improve customer satisfaction. Specifically addressing this issue, the management literature finds a direct link between employee attitudes and customer satisfaction (Schneider and Bowen, 1985; Schneider et al., 1980, 1992). When employees are more satisfied with their firms, they provide customers with better interactions, thereby increasing customer satisfaction.

2.2 Human Resource Development in SMEs

Human Resource Development (HRD) is one of the important functions of HRM aiming at helping employees develop their personal, professional and organizational knowledge, skills, attitudes, and motivation. HRD includes such opportunities such as employee training & development, employee career development, performance management and development, coaching, mentoring, succession planning, key employee identification, tuition assistance, and organization development etc.

Nadler (1970) defined HRD as a series of organized activities, conducted within a specified period of time, and designed to produce behavioral change. Some of the common activities he identified within HRD are training, education and development. He identified training as those activities intended to improve performance on the job, education as those activities intended to develop competencies not specific to any one job, and development is preparation to help the employee move with the organization as it develops.

The focus of all aspects of HRD is on developing the most superior workforce so that the organization and individual employees can accomplish their work goals in service to customers. Organizations have many opportunities for human resources or employee development, both within and outside of the workplace. Human Resource Development can be formal such as in classroom training, a college course, or an organizational planned change effort or it can be informal as in employee coaching by a manager. Healthy organizations believe in HRD and cover all of these bases.

In Japan, the concept of HRD can be identified by three terms: Noryokukaihatsu (development of individual abilities); Jinzaikeisei (formulation of a mastery level of human resources through the work system and training), and Jinzaiikusei (fostering of development of human resources through management of human resource process). Individual development, career development and organization development are the three major components of HRD in Japan.

An educated and well-trained work force is considered to be essential to the maintenance of business firm's competitive advantage in a global economy. It is also believed that HRD can and should be a powerful agent to facilitate a firm's expansion and the development of capabilities, thus enhancing profitability (Cosh, Duncan, and Hughes, 1998). However, Westhead and Storey (1997) suggest that employees in SMEs are much less likely to receive training than their counterparts in larger organizations. They offer that small business owners are not aware of the benefits of HRD and consequently provide two possible explanations to account for this phenomenon. One is "ignorance", which suggests less than an optimal amount of it to their employees. Another is the "market forces" explanation, according to which business owners provide a less than optimal level of HRD because they anticipate that the costs associated with HRD may exceed the benefits (return) to be derived from it. Much of research has, however, been rather narrow in its focus. Studies have often limited themselves to formal training (Westhead and Story, 1997;Cosh et al., 1998; Patton et al., 2000), thereby ignoring informal types of training. Recent studies show that many small employers rely heavily on in-house, on-the-job training (Johnson and Gubbins, 1992; Curren et al., 1993, 1996). Other studies have confined their scope to particular occupational groups, particularly managers (or aspiring managers), neglecting the training experiences of other categories of workers (Westhead and Storey, 1996; Loan-Clark et al., 1999; Patton et al., 2000). Other researchers have conducted evaluations of particular training initiatives, which though often insightful may not be typical of most small business (Cushion, 1995; Marshall et al., 1995; Westhead, 1997). It is guestionable, whether

the findings of these studies ought to be generalized to the broader small business population. These restrictions on the scope of studies may limit our understanding of the motives for, process of, and consequences of HRD provisions for small employers and their workforce (Kitching and Blackburn, 2002).

Despite the growing importance of SME research during the last decade, Pettigrew et al. (1990) claims that, little attention has been paid to the study of human resource development practices in SMEs. Not only do SMEs themselves pay less attention to training, but the issue of training and development in SMEs has also been relatively neglected by academics. Cosh, Duncan, and Hughes (1998), Marshall et al., (1995), and Westhead and Storey (1997) have attempted to rectify this situation. However, their studies are inconclusive and their focus is strictly limited to westernsociety. Most of these studies have used a binary indicator as their measure of training (e. g. Westhead and Story 1997;Cosh et al. 1998)-whether training is provided or not-but this failsto distinguish adequately the quantity or quality of such training (Kitching & Blackburn, 2002).

The recent attempt by Cosh et al. (2000) to provide a more sensitive measure of the quantity or quality of training uses training costs as a percentage of total sales. This measure, however, seems most appropriate to training which has a measurable money costs as in the case of external courses. Training which do not incur a direct or easily measurable money cost, such as that provided in-house by employers or other members of the workforce would not appear in this type of calculation. Indeed, informal learning at the work place, despite its pervasiveness, may be impossible to cost because of its diffuse character. Unfortunately, this is a serious omission because small business owners often rely heavily on in-house training (Kitching & Blackburn, 2002).

To determine whether HRD programs produce real benefits for SMEs, we must investigate the relationship between those programs and their effects on the business performance of SMEs. Although a number of previous studies have attempted to accomplish this task, serious inadequacies in these studies have questioned the validity of their findings. To rectify this situation, an attempt was made to examine the relationship of HRD practices with operational and financial performance in manufacturing SMEs in Japan putting some lights on the mediating relationship of HR outcomes in between these two.

2.3 HRD and Business Performance

Since the purpose of HRD practices is to improve human capital, it is intuitive that the impact of effective HRD would be felt first at the employee level. HRDpractices should directly impact on the employees of the firms where they are practiced and, if done effectively, will result in a two types of positive employee outcomes; enhancement of human capital and employee motivation. According to ability-motivationopportunity model, HRD is skill enhancing bundle of HRM practices and will impact on improving human capital of its employees and increase motivation level of employees. These HR characteristics will be reflected by positive HR outcomes.

Business performance is viewed as multidimensional. Drawing on Dyer and Reeves's (1995) work, researchers in strategic HRM have categorized business performance into three primary groups related to HRM: HR outcomes, operational outcomes, and financial outcomes. *HR outcomes* refer to those most directly related to HRM in an organization, such as employee skills and abilities, employee attitudes and behaviors, and turnover. *Operational outcomes* are those related to the goals of an organizational operation, including productivity, product or service quality, new product development or innovation, and customer satisfactions. *Financial outcomes* reflect the fulfillment of the economic goals of organizations. Typical financial outcomes include growth in sales, growth in profits, return on invested capital, and return on assets (Jiang and Lepak, 2012).

2. 4 HRM Outcomes-The Mediating Link between HRD and business Performance

HR outcomesrefer to those most directly related to HRM in an organization, such as employee skills and abilities, employee attitudes and behaviors, and turnover. However, the following HR outcomes have been well documented in the literature and are considered for the study.

Knowledge Quality (KQ)

The role of knowledge in firm performance is well documented in the literature. There are numerous theoretical and empirical studies examining the relationship between knowledge and firm performance. The essence of these studies is that the higher the level of knowledge acquired or accumulated, the greater the level of firm innovation and performance. For example, Liebeskind et al. (1996) and Powell et al. (1996) investigated the role of social networks and found that they were important sources of learning and innovation for firms. In recent studies, Lane et al., (2001) found that knowledge acquired by an IJV from its parent company contributed to its high performance.

Occupational Safety and Health (OSH)

There is increasing and compelling overseas evidence that providing a healthy and safe working environment has the potential to increase labour productivity and in turn increase company profits. Research on the connection between occupational health and safety (OHS) and increasing employee productivity and performance has become topical as a result of increased interest in identity ways to improve performance in the workplace. Increasingly enlightened employers, together with trade unions, are striving to provide safer and healthier workplaces which can translate into increased productivity, more job satisfaction, and stronger bottom-line results (Brandt-Raufet al., 2001; Boles, et al., 2004; De Greef & Van den Broek, 2004).

Job Satisfaction (JS)

The majority of the research examining the employee satisfaction-performance relationship has been conducted on the micro-level of analysis, otherwise known as the individual employee level. For example, research has reported a positive correlation between individuals' job satisfaction and their performance (laffaldano & Muchinsky, 1985). Moreover, a recent meta-analysis found a substantive correlation between individual job satisfaction and individual performance (Judge, Thoresen, Bono, & Patton 2000). In his review of the job satisfaction literature, Locke (1976) observed that more than 3,300 scholarly articles had been published on the topic of job satisfaction. Harter, Schmidt, and Hayes' (2002) search yielded another 7,855 articles having been published between 1976 and 2000. As the increase in research studies suggest, the notion that job satisfaction might be positively connected with performance outcomes.

Employee Commitment (EC)

According to (Meyer and Allen 1991) organizational commitment is of three types i. e. affective, continuance and normative. Affective commitment is regarded as an employee's attachment to acknowledgment and participation in the organization. Employees having strong affective commitment remain with the organization. Continuance commitment is one's awareness of the outlays related to parting with the in attendance association. Employees who possess continuance commitment will remain in the organization. Normative commitment is the sentiment of responsibility of an employee to the organization on the basis of his personal norms and values. Employees with normative commitment remain with the organization because they believe they ought to. A relationship study has been conducted by several researchers between Human resource management practices and organizational commitment. According to Paul and Anantharamayan, 2004) HRM practices show an eminent optimistic relationship with organizational commitment.

Employee Attitudes (EA)

Numerous studies show that employee attitudes contribute to organizational citizenship behaviors (Bateman and Organ, 1983; George, 1991; Konovsky and Paugh, 1996; Moorman, 1991; Smith et al., 1983; Williams and Anderson, 1991). Organizational citizenship behaviors are voluntary employee behaviors that go beyond minimum job requirements, and, in turn, contribute to firm outcomes (Organ, 1988). Thus, evidence exists from a variety of perspectives that understanding employee attitudes and the relationship to a firm's financial performance is an important issue. While early research suggested that work-related behaviors were reflected in successful organizational outcomes (Argris, 1957; McGregor, 1960), most of this work focused more on individual outcomes rather than organization performance. More recent works (Harter et al., 2002; Ostroff, 1992; Ryan et al., 1996) have demonstrated specific relationships between financial performance and employee attitudes.

Results of various studies indicate that a higher use of HR practices leads to higher levels of each of the employee outcomes discussed above. It means that employees of companies employing effective human resource practices are more likely to demonstrate: higher quality of knowledge, higher level of occupational safety and health, job satisfaction, commitment and positive attitudes toward the organization. Further, the results of these studies indicate that these positive employee outcomes do indeed lead to higher levels of performance.

Employee Motivation (EM)

According to Davidoff (1987) individual performance is generally determined by three factors namely; Ability-the capability to do the job; Work environment-the tools, materials and information needed to do the job; and Motivation-the desire to do the job. Motivation is significant because even people with the required knowledge, skills, and abilities will perform poorly if they are not motivated to devote their time and effort to work When workers lack motivation they tend to resort to anti-work behaviours such as absenteeism, negligence of duty, late-coming, failure to meet deadlines, display of open frustration and all these factors work negative to the performance and credibility of an organization. Organizations need to place all efforts to ensure that incentives such as intrinsic motivators, extrinsic motivators and performance management approaches are used in order to retain, attract, increase workers efforts, satisfaction and commitment.

Motivation refers to a process governing individual choices among different forms of voluntary activities (Vroom, 1964). Robbins and Judge (2008) posited that motivation is the process that accounts for an individual's intensity, direction and persistence of effort toward attaining a goal. This means that motivation determines how much efforts a person puts in his or her work, the direction to which those efforts are geared and a measure of how long a person can maintain effort. Motivation could be intrinsic or extrinsic. Intrinsic motivation derives from within the person. It refers to the direct relationship between a worker and the task, and is usually self-applied. Examples of intrinsic motivation are achievement, accomplishment, challenge and competence which are derived from performing one's job well (Afful-Broni, 2004). Extrinsic motivation comes from the work environment, external to the person and his or her work. Good salary, fringe benefits, enabling policies and various forms of supervisions are good examples of this type of motivation (Mankoe, 2006). One of the most important factors that move every human beingto achieve his or her goal is motivation. Indeed, motivation is that guiding principle that enables people to stay focused on the path of success regardless of the challenges that may be encountered. This includes personal as well as professional goals and targets (Baumeister & Voh, 2004). Based on above observations, it is evident that the existence of relation between motivation of employees and business performance.

Employee Loyalty

Loyalty is a feeling of positive orientation of employees related to the future direction and development of the company, which has an impact on current operations. It is a psychological bond, which binds individuals to the company and may involve multiple stages, for example, in the form of consent, identification or even internalization. The long term success of any company depends heavily upon the quality of its workers and worker loyalty. Benjamin Schneider, professor emeritus at the University of Maryland, has shown conclusively that the employee's loyalty-related attitudes precede a firm's financial and market performance. And there is a much greater payoff in working on improving the human factor than people thinks. Researchers at University of Pennsylvania found that spending 10 percent of a company's revenue on capital improvements increased productivity by 3.9 percent. But investing that same amount in developing the employee capital more than doubles that amount, to a whopping 8.5 percent (Keiningham and Aksoy, 2013). Long-term business objectives of the company can be achieved when employee loyalty can be established. Employee loyalty can be developed independently, mostly on the basis of job satisfaction. Therefore it is unreasonable to encourage employees directly to be loyal, as this may cause the opposite effect. In practice, it often happens that an employer requires from the employees to be loyal, but fails to ensure that the company would operate towards achieving employee satisfaction. Such attempts to obtain loyalty are usually unsuccessful, because employee loyalty cannot be developed without developing employee satisfaction. Employee satisfaction tends to affect employee loyalty and productivity (Heskett, 1994). Drawing upon above discussion it can be inferred that employee loyalty is a key determinant of organizational performance.

Employee Involvement (EI)

Recent empirical research indicates that different employee involvement practices have very different effects on performance, and that these effects can vary when employee involvement practices exist in combination (Ichniowski et al., 1997; McNabb and Whitfield, 1997). But there are few studies analysing employee involvement's impact on small firms' performance. Consequently, it is only possible to infer what that impact might be from studies based on larger firms and firms in general. This is hazardous because there are theoretical reasons to suggest that the performance effects of employee involvement may differ according to establishment and firm size.

In seeking to explain a link between employee involvement and firm performance, the empirical literature draws on emerging but limited theoretical propositions. However, most authors identify improved labour productivity as the main mechanism by which employee involvement affects performance. This occurs if employee involvement elicits greater discretionary effort by increasing workers' intrinsic rewards from working, or by raising organizational commitment. There is empirical support for the proposition that employee involvement raises worker effort (Green and Mcintosh, 1996). Performance related payments may elicit greater effort by linking effort and reward more closely. Employees with high levels of involvement are committed to and fully apply themselves to their work. They are willing to spend extra time to get the job done and do extra work that is not part of their own job. Therefore, it is justifiable to expect a positive relation of employee involvement with organizational performance.

Workplace Cooperation (WC)

Workplace cooperation is a process whereby employees or their representatives participate with management, through consultation and discussion, in resolving issues of common concern. It is a communication mechanism enabling both parties to understand each other's needs, interests and difficulties. The competitive edge in any business can be enhanced when an employer is able to build up a highly motivated, dedicated and efficient team of employees to serve their customers. To have an effectiveworkplace cooperation mechanism in place is one of the means to achieve this end. The dominant spirit underlying workplace cooperation is management support and employees involvement. For workplace cooperation to be effective, top management's commitment is crucial. An effective workplace cooperation mechanism helps minimize unnecessary misunderstanding, especially in times of changes and uncertainties. While setting up or strengthening the mechanism for workplace cooperation may sound complicated, costly and time consuming, it is worthy investment which will bring enormous benefits to the enterprise in terms of enhanced efficiency, productivity and competitiveness. Specifically, an effective workplace cooperation mechanism helps an enterprise to improve its decision making process and organizational performance, improve the employees' performance and commitment, and build up mutual trust between management and staff, Increase job satisfaction, improve working environment. Employees exhibiting high levels of cooperation are supportive of one another in their roles and expect to cooperate with others and to receive cooperation from others in performing their responsibilities. In par with above merits, it is reasonable to expect workplace

cooperation to have a good relationship with organizational performance.

These positive behaviours of employees in the company in turn should lead to higher levels of operationaland business performance. Operational performance is any kind of performance resulting from the operations of the business and could include items such as high labour productivity, high quality, new product development or innovations, and improved customer satisfaction. Financial performance refers to performance measures taken directly from the company financial statements such as profit or revenue growth.

2.5 HRD, HR Outcomes, and Operational & Financial Performance

Operational performance is important to business leaders because it is an indication of the effectiveness and efficiency with which the company is providing its particular products or services. Several measures of operational performance are usually used for studies: labourproductivity (LP), product quality (PQ), new product development (NPD), and customer satisfaction (CS). Each is a measure of how the company performs in relation to their competitors who were the similar organizations in those areas. Labour productivity is a measure of efficiency of the organization in utilizing its human resource. Quality is a measure of the level of guality of the products or services provided by the company. New product development measures the rate at which new products, services or solutions are deployed and customer satisfaction is a measure that indicates the extent to which the company is able to please its customers or clients. SMEs leaders are faced with many different concerns related to operational performance and this study attempts to address concerns that are especially important to SMEs leaders. Financial performance is also very important to small business leaders because strong financial performance will allow SMEs leaders to meet current obligations, invest for the future and provide a return to the owners and managers. Financial performance are usually measured with growth in sales, growth in profits, growth in market share, liquidity etc. comparing with a certain period in the past.

3. OPERATIONALISATION OF VARIABLES

- 3. 1 Human Resource Development Intensity
 - Human Resource Development (HRD) is one of the im-

portant functions of HRM aim at helping employees develop their personal, professional and organizational knowledge, skills, attitudes, and motivation. HRD includes such opportunities such as employee training & development, employee career development, performance management and development, coaching, mentoring, succession planning, key employee identification, tuition assistance, and organization development.

There are three fundamental component of human resource development (HRD): individual development (personal), career development (professional), and organizational development. Individual development refers to the development of new knowledge, skills, and/or improved behaviors that result in performance enhancement and improvement related to one's current job (training). Learning may involve formal programs, but is most often accomplished through informal, on-the-job training activities.

Career development focuses on providing the analysis necessary to identify the individual interests, values, competencies, activities, and assignments needed to develop skills for future jobs (development). It is career planning and career development. It includes both individual and organizational activities. Individual activities include career planning, career awareness, and utilizing career resource centers. Organizational activities include job posting systems, mentoring systems, career resource center development and maintenance, using managers as career counselors, providing career development workshops and seminars, human resource planning, performance appraisal, and career pathing programs.

Organizational development is directed at developing new and creative organization solutions to performance problems by enhancing congruence among the organization's structure, culture, processes, and strategies within the human resources domain. In other words, the organization should become a more functional unit as a result of a closer working relationship among these elements. The ultimate goal of organizational development is to develop the organization's self-renewing capacity. This refers to the organization's ability to look introspectively and discover its problems and weaknesses and to direct the resources necessary for improvement. As a result, the organization will be able to regenerate itself over and over again as it confronts new and ever-challenging circumstances. This occurs through collaboration of organizational members with a change agent (an HRD practitioner), using behavioral science theory, research, and technology.

In this study HRD is operationalized as an organized learning that provides the possibility of performance change and improvement towards individuals and groups through development of their knowledge, skills and abilities (KSA's) necessary for the successful performance of the organization. HRD is supposed to covers the practices of training & development, organizational development, and career development.

Training and Development

Training & development is one of the dimensions of HRD practices where firms invest on development of their employees' knowledge, skills ability and other required skills to improve the productivity of employees. Training & development is the HRD function that formally and systematically provides new learning to increase employees' capabilities. The primary purpose of training and development is to increase organizational performance by increasing employee performance. Training & development can transform human resource to human capital where skilled employee would better perform in the success of organization as compared with none or lesstrained employees.

Career Development

Career development is usually accepted as one of the three aspects of practice for HRD. Although career development has been seemingly overshadowed by research and discourse addressing other aspects of HRD, there are strong arguments for increasing the relevance of career development to the field of HRD. The idea of career development may seem at odds with many current workplace issues such as high unemployment rates, job losses due to workplace reductions, changing nature of employment contracts. However, career development theories that describe adult career development are important contributions to HRD practice because they describe adult progressions through work roles.

Organizational Development

Organizational development is an evolving discipline that draws on knowledge and methods from the behavioral sciences that is concerned with the performance, development, and effectiveness of human organizations. Its primary emphasis is on relationships and processes between and among individuals and groups. Organizational development also encompasses the overall performance of the organiza-
tion, its effectiveness, structure, and internal and external system impacts. Thus this particular field covers on topics that include change process and implementation theories, model of change and organization intervention strategies. In overall, organizational development is the field of study and practice that focuses on various aspects of organizational life, aspects that include culture, values, systems and behaviour.

3. 2 Operational Performance (OP)

Operational performance is those related to the goals of an organizational operation, including productivity, product quality, organizational innovations, and customer satisfaction. The following operational outcomes are considered for the study.

Labour Productivity

Mark Huselid (1995) in his study comprehensively evaluated the links between systems of High Performance Work Practices (HPWP) and firm performance. Results based on a national sample of nearly one thousand firms indicate that these practices have an economically and statistically significant impact on both intermediate operational outcomes (turnover and productivity) and short-and long-term measures of corporate financial performance. Katz, Kochan, and Weber (1985) demonstrated that highly effective industrial relations systems, defined as those with fewer grievances and disciplinary actions and lower absenteeism, increased product guality and direct labor efficiency and Katz, Kochan, and Keefe (1987) showed that a number of innovative work practices improved productivity. Katz, Kochan, and Gobeille (1983) and Schuster (1983) found that quality of work life (QWL), quality circles, and labor-management teams increased productivity. Bartel (1994) established a link between the adoption of training programs and productivity growth, and Holzer (1987) showed that extensive recruiting efforts increased productivity. Guzzo, Jette, and Katzell's (1985) meta-analysis demonstrated that training, goal setting, and socio technical systems design had significant and positive effects on productivity.

Product Quality

Much research has conducted to find any relations between HRM outcomes and product quality taking samples in big businesses. In one such study, having surveyed 1,243 employees in the 64 centers on service process quality, as measured by customer surveys; call handling time, revenues per call, and net revenues per call, Batt, R. (2002) concluded that that human resource management practices emphasizing employee training, discretion, and rewards lead to higher service quality, higher revenues per call, and higher net revenues.

A burgeoning body of strategic HRM research has shown that the use of systems of HR practices intended to enhance employees' knowledge, skills and abilities, motivation, and opportunity to contribute is associated with positive outcomes such as greater commitment (Gong, Law, & Xin, 2009), lower turnover (Batt, 2002), higher productivity and quality (MacDuffie, 1995), better service performance (Chuang & liao, 2010), enhanced safety performance (Zacharatos, Barling, & Iverson, 2005), and better financial performance (Huselid, 1995).

Organizational innovations

Organizational innovations highest in companies where employees had high levels of commitment to their supervisors, high levels of trust in management and high levels of cooperation among employees. There was also some indication that that low levels of turnover intentions have somewhat of an impact on new product or service development. The conclusion that can be drawn from these findings is that companies that are able to foster high commitment to supervisors, high trust in management and high levels of cooperation and, to a lesser extent, low turnover intentions among employees are more likely to effectively develop new products or services. Likewise, companies wishing to improve their new product or service development should focus on increasing commitment to supervisors, trust in management and cooperation among employees.

Customer satisfaction

Customer satisfaction is the degree of satisfaction provided by the goods or services of a company as measured by the number of repeat customers. It is extremely important for business firm as they decide the fate of the business. If a company fails to satisfy their existing customers there are many other firms who would like the opportunity to win the business. The external customer satisfaction heavily depends on the satisfaction of internal customers, i. e., employees of the business firm. Therefore, employees' job satisfaction is a crucial determinant of external customer satisfactions that has a lot to do with HRD to enhance internal customer satisfaction.

Financial Performance

Financial performance reflects the fulfillment of the economic goals of organizations. Typical financial outcomes include sales growth, return on invested capital, and return on assets. Much of research conducted in large enterprises has demonstrated statistically significant relationships between measures of HR practices and firm profitability (Delery and Doty, 1996; Guthrie, 2001; Huselid, 1995). Using the results of the survey, Luc Selsetal. (2006) examined the link between the score for HRM intensity, some performance outcomes and the financial performance of the organization using structural equation modeling. The results show that intensive HRM also offers added value for smaller organizations. Firstly, HRM intensification has a highly positive effect on productivity and, through productivity, reduces personnel costs/added value. This effect is sufficiently strong to compensate for the increased costs

4. CONCEPTUAL FRAMEWORK

For the purpose of this study, combining all three aspects of HRD practices; training & development, career development and organizational development, a cumulative index called HRD intensity, which shows the intensification of HRD practices was developed. In order to examine the mediating relationship, nine (9) HR outcomes discussed above; knowledge quality (KQ), occupational health and safety (OHS), job satisfaction (JS), employee commitment (EC), employee attitudes (EA) employee motivation (EM), employee loyalty (EL)), employee involvement (El)), and workplace cooperation (WC) were considered. By using nine HR outcomes a cumulative index called HR Outcome Index was developed. Labor productivity (LP), product quality (PQ) organizational innovation (OI) and customer satisfaction (CS) was taken into considerations as operational variables. Growth in Sales and Growth in profits were taken as financial variables. Then, the relationship between HRD practices and business performance was examined exploring the mediating relationship of HR outcomes. Based on the above theoretical underpinning, a conceptual frame for the study was constructed as in Figure 2.

According to the model in Figure 2, the bundle of HRD practices, reflected by HRD intensity index, first establish a relationship with HR outcomes and then translate these HR outcomes into operational financial performance. The model goes on explaining the process through which HRD-practices are linking with organizational performance.

5. METHODOLOGY

A structured questionnaire was developed as the main data collection instrument. Three dimensions of HRD; training & development, career development and organizational development were considered for the study. Sixteen (16) items (Training & development, 10; career development, 3; organizational development, 3) were included in the scale. Nine (9) HR outcomes; knowledge quality (KQ), occupational health and safety (OHS), job satisfaction (JS), employee commitment (EC), employee attitudes (EA) employee motivation (EM), employee loyalty (EL), employee involvement (EI)), and workplace cooperation (WC) were considered for the study. Three (3) items for each HR outcome variables were included in the questionnaire. In order to measure operational performance four (4)variables namely; labour productivity (LP), quality of the product (PQ), organizational innovation (OI), and customer satisfaction (CS) were used. Three (3) items for each operational variable were included in the questionnaire. Two (2) items for financial performance, growth in sales and growth in profits, were considered to measure financial performance. The questionnaire was first developed in English and then translated into Japanese to make respondents better understand it.

Four hundred thirty six (436) questionnaires weredistributed to a randomly selected sample of manufacturing SMEs in Nagoya in Aichi Prefecture. An electronic data file maintained by the Nagoya Chamber of Commerce was used to draw the sample. One hundred five (105), equivalents to thirty two percent (32 percent), positively responded to thesurvey. Data was analyzed by using SPSS version 16. Descriptive statistics were used to understand the characteristics of firms and person product movement correlation coefficient was used to examine the relationships among variables.

Reliability and Validity of the Questionnaire

In order to measure the reliability of instruments, Cronbach's alpha coefficient is widely used. According to Sekaran (2005), if the alpha value is greater 0.7, the instrument is said to be acceptable. The internal consistency reliability coefficients (Cronbach's alpha) for the scales used in this study are well above the level of 0.7. Each variable has got more than 0.8 alpha values which are well above the norms and thus are acceptable for the analysis purpose. Validation procedures



Figure 2: Conceptual Framework of the Study Source: Author Constructed, 2013

involved initial consultations with subject matter experts about the questionnaire prepared. The experts also judged the face and content validity of the questionnaire and decided as adequate. Hence, the researcher was satisfied with the reliability and validity of the scale.

6. RESULTS OF THE SURVEY

HRD Intensity, HR Outcomes and Business Performance

Table 2 shows Pearson product movement correlation coefficients among HRD intensity, HR outcomes, operational and financial performance. According to the table 2, HRD intensity that represents the intensification of all three aspects of HRD; training & development, career development, and organizational development shows very strong and positive correlation with HRM outcomes. This relationship is strong and statistically significant (r=.483, p<0.01.). HRD intensity is also directly related with all four types of operational performance. First, HRD intensity shows high correlation with labour productivity (r=.417, p<0.01). This relationship is positive and statistically significant which conveys that the existence of the relationship is not by a chance. The magnitude of the positive relationship between HRD intensity and product quality also strong and significant (r=.529, p<0.01). It positive and statistically significant (r=.587, p<0.01). The correlation between HRD intensity and customer satisfaction is also positive and significant (r=.456, p<0.01). The degree of the magnitude of the relationship between HRD intensity and organizational innovation is the highest among all four operational variables while labour productivity records the lowest but positive and statistically significant. Again, HRD intensity and financial performance also establishes positive and significant relationship between the two (r=.358, p<0.01). Financial performance measure is a combination of growth in sales and profits. These relations imply that the intensification

VARIABLE	HRDI	HROC	LP	PQ	OI	CS
HRD Intensity (HRDI)	1				-	
HR Outcomes (HROC)	.483**					
Labour productivity (LP)	.417**	.631**				
Product Quality (PQ)	.529**	.533**	.403**			
Organizational Innovations (OI)	.587**	.503**	.462**	.492**		
Customer satisfaction (CS)	.456**	.669**	.692**	.420**	.484**	
Financial Performance (FP)	.358**	.142	.276**	.097	.233**	.248*

Table 2: Correlations among VariablesSource: Survey Data, 2013

of HRD practices directly influence business performance by improving growth in sales and profits.

MR outcomesand Operational Performance

According the table 2, HR outcome index which represent the totality of all nine HR outcomes, is highly correlated with labour productivity (r=.631, p<0.01). This relationship is positive and highest in terms of the magnitude over all three operational variables. The relationship between HR outcomes and quality of the product also very positive and statistically significant (r=.533, p<0.01). The link between organizational innovations and HR outcome is also positive and significant (r=.503, p<0.01). The link between HR outcome index and customer satisfaction also positive and significant (r=.669, p<0.01). The relationships between all these operational variables and HR outcome index are statistically significant at p<0.01 giving the fact that these linking are in existence not by chance but worth further studying. These findings highlight the fact that HR outcome mediate the link between HRD practices and operational performance. However, although HR outcome index shows positive correlation with financial performance, it does not show any statistical significance (r=.142).

7. DISCUSSION OF FINDINGS

HRD Intensity and HR Outcomes

Based on the analysis of data, it was found positive and statistically significant correlation of HRD intensity with HR outcomes. It implies the idea that three types of HRD practicesrepresented by HRD Intensity Index are keeping positive relations with HR outcomes. As all these relations are positive, with the increase of the usage of the said HRD practices, HR outcomes;knowledge quality, occupational health and safety, job satisfaction, employee commitment, employee attitudes employee motivation, employee loyalty, employee involvement and workplace cooperation will be increased. Therefore, the conclusion that can be drawn from this finding is that, SME owners/managers who are concerned about HR outcomes should be prepared to employ effective HRD practices discussed above.

HRD Intensity and Operational Performance

Analysis of the data clearly establishes very high positive correlations of HRD intensity with operational performance. It means that deploying of HRD practices influences operational performance of business firms. According to the findings HRDintensity is highly and positively correlated with labour productivity. With this correlation, an increase of the usage of above HRD practices gives rise to higher productivity. HRD intensity also highly and positively correlated with product quality. The long term success of any business heavily depends on the quality of the product or service the firm produced or rendered. Therefore, owners/ mangers of SMEs who are very much concerned about the quality should focus more attention to HRD practices discussed above. The relationship of HRD intensity with organizational innovations is also significantly positive. The firms who are deploying more HRD practices are said to be able to generate more new products or innovations. This study establishes positive and significant relationship of HRD intensity with customer satisfaction. Firms who use HRD practices so sparingly will be benefited by increased customer satisfaction that will lead to customer loyaltywhich is crucial to long term success of their businesses. Drawing from these findings, it can be concluded that those owners/mangers in SMEs who are concerned to increase their labour productivity, product quality and organizational innovation and customer satisfaction should focus on effective use of HRM practices prescribed above.

HRD Intensity and Financial Performance

It was found very strong correlation in between HRD practices and financial performance of firms. Financial performance index that represent growth in sales and growth in profits was highly and positively correlated with HRD intensifications giving some signals to SME owners / manager to be immersed with employing HRD practices effectively.

HR Outcomes, Operational and Financial Performance

This study establishes very clear positive relationships of HR outcomes with operational performance. HR outcome

index that represents nine HR outcomes influences operational performance to a greater extent. First, HR outcomes are strongly linked with labour productivity. This highlights the fact that increase in HR outcomes gives rise to labour productivity. This leads to the inferring that HR outcomes are mediating the link between HRD practices and labour productivity. It means that usage of HRD practices gives rise to labour productivity through increased HR outcomes. Second, HR outcomes are establishing very clear positive relationship with product quality. This also implies that increase in HR outcomes gives rises to increase in product quality. This relation enables one to assume that HRD practices relates to product quality through HR outcomes. Third, it is fond that HR outcome are keeping strong positive relation with organizational innovations. This finding also compels one to assume that HRD practices influence organizational innovations through HR outcomes. Finally, HR outcome are linked with customer satisfaction showing a clear mediating relationship in between HRD practices and customer satisfaction.

One of the objectives of this study was to examine the mediating relationship of HR outcomes between HRD practices and financial performance. According to the analysis, HRD Intensity Index shows positive and statistically significant correlation with financial performance. On the other hand HR outcome Index also establishes significantly positive correlation with financial performance. Therefore, it is intuitive to assume that HRD gives rise to financial performance through HR outcomes.

Do HRD practices lead to positive employee outcomes? The results of this study indicate that a higher use of effective HRD practices is directly related to higher levels of positive HR outcomes and then these HR outcomes lead to higher operational and financial performance of manufacturing SMEs in Japan. It clearly implies that HR outcomes mediate the relationship in between HRD practices and business performance even in manufacturing SMEs in Japan.

8. RESEARCH IMPLICATIONS, LIMITATIONS AND DIREC-TIONS FOR FUTURE RESEARCH

The results of this study offer several key theoretical and practical implications for SMEs owners and managers interested in improving business performance of their SMEs. Effective HRD practices lead to positive HR outcomes. The effective use HRD practices represented by HRD Intensity Index in SMEs was shown to be related to HR Outcome Index which represented knowledge quality, occupational health & safety, job satisfaction, employee commitment, employee attitudes, employee motivation, employee loyalty, employee involvement and workplace cooperation. These positive HR outcomesin turn are translated into positive operational and financial performance such as increase in labour productivity, product quality, organizational innovations, customer satisfactionand financial performance. This highlights the fact that employees do matter even for SMEs and are shown to have links with operational and financial performance in their businesses. Therefore, as the study highlights, when evaluatingmany options that are available to SMEs, it is very important to keep in mind not to discount the importance human resource management. Effective human resource management practices lead directly to positive outcomes on employees of the firm, which in turn lead to positive business performance for the organization.

This study is subject to certain limitations encountered in the research process. The study was based on the data collected only from 136 manufacturing SMEs in Aichi prefecture in Japan. Therefore, generalisability could have been increased if number of sufficient manufacturing firms representing all the prefectures in Japan were taken. This study focused only on the relationship, not the effect or impact, between HRD practices and business performance. However, it is better if this study focused on the effect of HRD practices on business performance too. Further analysis with sophisticated statistical testing is very much sought to examine the impact of HRD practices on labour productivity and mediating role of HR outcomes. However, future research with relatively larger samples expanding to other sectors in SMEs will be very much useful in deed in this direction.

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INDUSTRY TRANSFERRING ABROAD AND INDUSTRY HOLLOWING OUT

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Abstract

Industry transferring abroad and industry hollowing out have always been regarded as a necessary relation of cause and outcome. However, this relation is lack of theoretical foundation and should be tested whether it is true or not by some indicators. This paper, therefore, would try to combine Akamatsu's model of "flying geese pattern of development" (1935) and Vernon's model of "international investment and international trade in the product cycle" (1966) to establish a summarized model of circular flow for production, trade, and industry transferring abroad between leading and catching-up countries, and uses it to construct a "internationalized model of flying geese pattern of industrial development" so as to develop some indicators to test the possibility of industry hollowing out caused by industry transferring abroad. Taiwan will be the case study in this test. Moreover, this paper tries to use "bathtub theorem" in Economics to propose the flexible development strategies for keeping at least a balance of "injection" (creating or introducing industries from leading country) and "leakage" (industry transferring abroad) so as to avoid industry hollowing out and improve industrial structure.

Introduction

Industrial developments or industrialization first began with the Industrial Revolution in England in the late 18th century. From there, industrial developments spread to the United States, Canada and Western European countries in the 19th century through industry transferring abroad made by foreign direct investments (FDI). After World War II, the United States helped West Europe through Marshall Plan and Japan through United States-Japan Co-Defense Agreement to recover their economies from the devastation of the war, and then those countries enjoyed rapid industrial developments. Therefore, a "triad" bloc of foreign direct investment of the United States, EC and Japan was constructed, as shown in Figure 1, to dominate FDI in the world in the 20th century.

For example, three blocs accounted for 81% of the total outward stock of FDI in 1988¹ and took the share of 94% in 1999 and 91% in 2000 of total foreign direct investment in the world². It would be said that Japan and EU apparently have been following the United States to create the second surge



Source: The Economist, August 24, 1991

Figure 1: A "Triad" Bloc of Foreign Direct investmentsork

of industry transferring abroad since late 1990s when China and ASEAN ascended their economies and East European countries moving to capitalist economies that need great direct investment from abroad, especially, since 2002 when China joined in WTO that provides big market for the "triad" bloc at low tariff.

Industry transferring abroad, based on principle of com-

¹ The *Economist*, August 24, 1991

² World and Japanese's overseas direct investment, JETRO, 2002, P.6.

parative advantage, is a natural and necessary economic phenomenon in the process of improving competitive advantages and structures of industry and trade. It would be also the way to promote industrialization and improve the efficiency of resources reallocation among countries. However, on the other hand, it would probably result in industry hollowing out concerned by industry-transferring-abroad countries because such outcome would bring about some negative effects on the economy as follows:

- Competitive advantages in the world market would be weakened if advanced industries with adept managers and capitals are also transferred abroad.
- Domestic technical ability would deteriorate if the main factories with well-trained technicians were moved to foreign countries.
- Down-stream factories would bankrupt if the up-stream factories were transferred abroad. The whole chain of industry would be, therefore, transferred abroad. This is the key factor of industry hollowing out.
- 4. Number of unemployment would increase if most firms close their domestic factories.

Some papers and books about industry hollowing out were published in Japan. For example, a book "*Industry Hollowing Out*" by the Research Association of Economics, Keio University (1996), found that numbers of unemployment in manufacturing greatly increased by 172,000 in 1993 resulting from industries transferred abroad³ and suggested that Japan had possibility of industry hollowing out in 1993. However, if the unemployed peoples are absorbed by service sector, the unemployment rate in Japan would not rise. If it is true, it could be said that Japan probably did not experience industry hollowing out in the early 1990s, but said that Japan would advance to improve its industrial structure in that period of time.

Taiwan has also very concerned about industry hollowing out since 1990s when it permitted firms to transfer their industries to China, especially since 2010 when Ma Administration signed "Economic Cooperation Framework Agreement" (ECFA) in 2000 that has been spurring firms to greatly transfer industries to China for the purpose of increasing their market share in China at low or free tariff and promoting their products to other countries through Free Trade Agreement (FTA) made by China and its trade partners.

In contrast to a unique indicator of unemployment, this paper would try to develop some indicators, based on the summarized models from Akamatsu's model "flying geese pattern of industrial development" (1935)⁴ and Vernon's model "product-life-cycle pattern of industrial development" (1966)⁵, to test the possibility of industry hollowing out for industrytransferring-abroad countries. Moreover, this paper would also try to apply "bathtub theorem" in Economics to propose some flexible strategies of industrial development to avoid industry hollowing out on the one hand, and improve structure of industry on the other hand.

In order to reach the purposes mentioned above, this paper would cover two parts as follows:

Part I:

- 1. The meaning of industry transferring abroad.
- 2. A brief review to theoretical foundations of industry transferring abroad:

Akamatsu's model of "flying geese pattern of development" and Vernon's model of "product-life-cycle pattern of industrial development".

- A circular flow model of production, export, and industry transferring abroad among leading and catching-up country.
- A ladder type of internationalized model of "flying geese pattern of development" caused by industry transferring abroad.
- Adaptability of Akamatsu's or Vernon's model of industrial development would be questioned in the 21st century.

Part II:

- 1. The meaning of industry hollowing out.
- 2. The possibility of industry hollowing out.
- 3. Some Indicators to test industry hollowing out
- 4. A test to industry hollowing out in Taiwan.
- 5. The ways to avoid hollowing out.

³ *Industry Hollowing out*, published by Research Association of Economics, Keio University, 1996, P.7.

⁴ Akamatsu, Kaname: "The Trade Trend of Woolen Products in Our Country", Review of Business and Economy, First Half in Vol.13, 1935.

⁵ Vernon, Raymond: "International Investment and International Trade in the Product cycle", Quarterly Journal of Economics, May 1966, PP.190-207.

Part I

I The Meaning of Industry Transferring Abroad

Basically industry transferring abroad could be simplified as a country that moves its production base to foreign countries. Ryutaro Omiya (1969) defined industry transferring abroad as an activity that is practiced by a firm who moves its managerial resources such as capital, ability of business operation, and technology to other countries where the marginal productivity of resource is more efficient⁶. Kiyoshi Kojima (1981), Akamatsu's follower in Hitotsu Bashi University, defined it as an activity that is practiced by a firm who moves the whole package of capitals, ability of operation, and marketing to other countries so as to enjoy the monopolistic or oligopolistic profits in the host countries⁷. Brian J. L. Berry, Edgar C. Conkling, and D. Michael Ray (1997) defined a multinational enterprise as "a company that is headquartered in home country, but controls productive facilities and sales outlets in other countries, and its operations involve flows of capital, goods, services, and managerial and technical personnel among its subsidiaries8.

It is, therefore, likely to say that foreign direct investment is a necessary way to carry out industry transferring abroad. The size of a country's industry transferring abroad is not measured by how many cases of foreign direct investments it made, but by how much money of foreign direct investments it made in the foreign countries. It could be said that the more money a country invests abroad, the more industry transferring abroad it practices.

- II A Brief Review to Theoretical Foundation of Industry Transferring Abroad
- (I) Akamatsu's Model of Flying Geese Pattern of Industrial Development: From the Viewpoint of Catching-up countries

Industrial developments in Japan were lagged behind western countries until 1960s. As far as the catching-up country was concerned, Kaname Akamatsu (1896~1964), professor of Hitotsu Bashi University, Japan, proposed the model "flying geese pattern of industrial development" (1935), and hoped it could be served as a guide of strategies of industrial development. Following World War II, Japan was starting to recover from the devastation of the war. In the 1950s, "Made in Japan" still meant cheap and poor-quality products, but in the 1990s, "Made in Japan" meant expensive and hightech products with top-quality. By the 1990s, Japan's real per capita GDP exceeded that of the United States. This rapid economic growth happened in a country that has a land area smaller than California and a population half as large as that of the United States, and it was so-called "Japanese Economic Miracle" in 1980s. It could be said that one of successful factors was that the strategies of import substitution and export expansion suggested by Akamatsu's model dominated the Japan's development strategies.

The focus of this model is to illustrate how a catching-up country, Japan, improves its structure of industry through trade and foreign industry transferring inward made by the leading countries, the Unite States and west European countries. Akamatsu maintained that countries in the world, based on their industrialization levels and technology capability, could be categorized into advanced or leading countries and relatively lagged (or catching-up countries), and that a catching-up country would follow the leading country's experience to improve its structures of industry and trade by adopting the strategies of import substitution and export expansion.

Akamatsu argued that a "basic pattern" of industrial development in the catching-up countries is constructed by the process of **import** \rightarrow **production** \rightarrow **export** at different time points. The curves of import (Mi), production (Pi), and export (Xi) of I industry, as shown in Figure 2, begin at t₁, t₂, and t₃, respectively. It shows that they would experience three stages: growth, peak, and decline. Akamatsu also argued that the same process would also be applied to the more advanced industry J at the later time points. This repeated process looks like a group of geese flying in the sky and it is called "flying geese pattern of industrial development." It indicates that the catching-up country would improve the structures of industry and trade from labor intensive to capital intensive at first, and then finally to high-technical intensive industries.

In practices, Akamatsu empirically proved that Japan's development of cotton & textile (1935)⁹ and machinery & tools industry (1956)¹⁰ were in accordance with what his model has

⁶ Ryutaro Omiya,: "*Direct Investment and Industrial Policies*" published in *Japanese Industrial Organization*, 1969, PP.324-325.

⁷ Kiyoshi Kojima: "Multinational Corporation's Direct Investment", 1981, PP.127-131.

⁸ Brian J. L. Berry, Edgar C. Conkling, and D. Michael Ray : *The Global Economy in Transition*, second edition, 1997.

⁹ Akamatsu, Kaname: "The Trade Trend of Woolen Products in Our Country", Review of Business and Economy, First Half in Vol.13, 1935.

¹⁰ Akamatsu: *"Flying Geese Pattern of Industrial Development in Our Country Japan)—Case of Machine & Tools"*, Review of Hitotsu Bashi University, No.5, Vol.38.



Source: Summarized from Akamatsu's basic and varied types of flying geese pattern of industrial development

Figure 2: Basic Flying Geese Pattern of Industrial Development

predicted. Since then, Akamatsu's students and his followers also used this model to test the process of various industrial developments. For example, heavy chemical industry was conducted by Yosihisa Hukushima (1985)¹¹, steel industry by Kiyoshi Kojima (1985)¹² and Itsuhira Yamasawa (1985)¹³, and fabric industry by Sikeharu Matzwura (1985)¹⁴, and they all got the same results as Akamatsu did.

Especially, Kiyoshi Kojima has devoted his academic life (1958~2003) to study and further extend the Akamatsu's model since 1950s, and finally he, at the age of 83 (2003), made a big contribution to those who study industrial development by publishing a great book "The Flying-Geese Theory of Economic Development"¹⁵ that collected all the papers he wrote earlier. Akamatsu and his followers, therefore, would probably be called "Akamatsu or Hitotsubashi School" that dominated the Japan's policies of industrial developments after World War II.

Japan's successful experience in adopting the policies of

import substitution and export expansion proposed by Akamatsu's model, therefore, is often held up as a lesson for other catching-up countries, especially for East Asian countries such as South Korea, Taiwan, Hong Kong, and Singapore (NIEs), ASEAN, and China, to develop their industries, and this lesson has proved that these countries were very successful in applying Akamatsu's model to develop their industries.

(II) Raymond Vernon's Product-Life-Cycle Pattern: From Viewpoint of Leading Country.

In 1961 and 1962, Akamatsu first introduced his model of flying geese pattern of development in the western journals by publishing two papers in English as follows:

(1) "A theory of unbalanced growth in the world economy".¹⁶
(2) "A historical pattern of economic growth in developing countries".¹⁷

Four years later (1966), in response to Akamatsu's model, based on viewpoint of catching-up country, Raymond Vernon, based on viewpoint of leading country, proposed a model "product-life-cycle pattern of industrial development". This model applies the concept of product life cycle: **new product** \rightarrow **maturing product** \rightarrow **standardized product** to explain that most new products are firstly created in the leading country, the United States, because of its big population and high income level, and then transferred from there to other advanced

¹¹ Yoshihisa Fukushima: "Industrialization or Heavy Chemical Industrialization and Flying Geese Pattern of Industrial Development", Published in World Trade in 1985, PP.63-84

¹² Kiyoshi Kojima: "*The Flying Geese Pattern of Industrial Development in Steel Industry in Japan*" Published in *World Trade* in 1985, PP.151-180.

¹³ Ippei Yamazawa: "*The Flying Geese Pattern of Industrial Development in Steel Industry*" Published in *World Trade* in1985, PP.183-197.

¹⁴ Sigeharu Matsuwura: *"Flying Geese Pattern of Industrial Development: Diversified Products in the Fabric Industry"* Published in *World Trade* in 1985, PP.201-236.

¹⁵ Kiyoshi Kojima: "*The Flying-Geese Theory of Economic Development*", Wen-zen Book Company, 2003.

¹⁶ Akamatsu: *Weltwirtschaftliches Archiv*, Band 86 (1961) Heft 2, PP.196-217.

¹⁷ Akamatsu: Ditto, *The Developing Economies*, Preliminary Issue No.1, March-August, 1962, PP.3-25.



Source: "The Product Life Cycle and International Trade," Louis T. Wells, Jr. Harvard University, 1972. P.15



countries through trade and foreign direct investment, and finally the standardized product was produced and exported back to the United States from the less developed countries. This is a cycle of an innovated product from the United States to itself.

Following Vernon, Louis T. Wells, Jr. (1972) published a paper "International Trade: The Product Life Cycle Approach" to argue that the United States is more likely than other countries to initiate certain new products¹⁸. One reason is that new products appeal more to customers with high income than those with low income. Another reason is that all new products are developed for buyers with high income. High technology, high income and high demand market thus constitute the necessary conditions for supporting the innovation of new products in the United States. The United States naturally becomes the leading country for new products, and then transfers its production to catching-up countries through foreign direct investment, as shown in Figure 2. Figure 2 shows that the product life cycle of all innovated products is divided into five phases from the United States to less-developed countries through trade and industry transferring abroad.

In practices, some empirical tests of product life cycle model were published. For examples, motion picture was tested by Gorden K. Douglass (1963)¹⁹, synthetic materials by Gary C. Hufbauer (1966)²⁰, U.S. export of consumer durable goods by Louis T. Wells, Jr. (1969)²¹, electronic product by Seev Hirsch (1967)²², petrochemicals by Robert B. Stobaugh (1972)²³, the role of the "middle countries" in the Phase III of the product life cycle by Tsurumi (1972)²⁴, Mousouris (1972)²⁵ and Hirsch (1972)²⁶, the exports of the less developed countries such as Mexico, Colombia, and Nicaragua in the Phase V of life cycle

¹⁸ Louis T. Wells, Jr. (1972): "*The Product Life Cycle and International Trade*," Harvard University, PP.3-26.

¹⁹ Gorden K. Douglas: "Product Variation and Trade in Motion Picture", Department of Economics, Massachuselts Institute of Technology 1963.

²⁰ Gary Hufbauer: "Synthetic Materials and the Theory of International Trade", Cambridge: Harvard University Press, 1966.

²¹ Louis T. Wells, Jr.: "Test of a Product Cycle Model of International Trade: U.S. Exports of Consumer Durables", Quarterly Journal of Economics, February 1969.

²² Seev Hirsch: "The United States Electronics Industry in International Trade" edited in The Product Life Cycle and International Trade, Harvard University, 1972, PP. 39-52.

 ²³ Robert B. Stobaugh: "The Neotechnology Account of International Trade: The Case of Petrochemicals" edited in The Product Life Cycle and International Trade, Harvard University 1972, PP.83-105.
 ²⁴ Yoshihiro Tsurumi: "R & D Factors and Exports of Manufactured Goods of Japan", edited in The Product Life Cycle and International Trade, Harvard University Press, 1972, PP.161-189.

²⁵ Sotiros G. Mousouris: "Manufactured Products and Export Markets: Dichotomy of Market for Greek Manufactures" edited in The Product Life Cycle and International Trade, Harvard University Press, 1972, PP.193-221.

²⁶ Seev Hirsch: "Technological Factors in the Composition and Direction of Israel's Industrial Exports" edited in The Product Life Cycle and International Trade, Harvard University, 1972.

by De La Torre (1972)²⁷, etc. These cases indicate that they were highly consistent with what the model of product cycle has predicted.

III A Circular Flow Model of Production, Trade, and Industry Transferring Abroad

In fact, Akamatsu's and Vernon or Louis T. Wells, Jr's models are two sides of one coin showing the idea that the process of industrialization in any country, no matter it is a leading or catching-up country, has been found. Both models, therefore, can be combined to construct a circle flow model of production, trade, and industry transferring abroad, as shown in Figure 4, and by which, an international product life cycle for an individual product can be found, as shown in Figure 5, and also a ladder type of industrial development from leading country to less developed one could be established, as shown in Figure 6, in the next section.

In Figure 4, the upper-half portion shows Vernon's model that the leading country would first produce and export the new products one-by-one to the catching-up country, and finally re-import them back to itself from the catching-up country. This process can be expressed by the following path: (1) production (2) export (3) import. On the other hand, the lower-half portion in Figure 3 shows Akamatsu's model that catching-up country would change this process by following different procedures: (1) import (2) production (import substitution) through foreign technology or industry transferring inwardly (3) export.

It is noted that the (2) export and (3) import in the leading country are in response to the (1) import and (3) export in the catching-up country, respectively, and that the catching-up country would probably transfer the old industry back to the leading country so as to avoid trade friction such as the car industry that was transferred from Japan to the United States in the 1980s.

This entire process of production, export, and import among countries in the circular flow mentioned above will never be stopped in a dynamic economy and globalization. The industry transferring abroad among countries will also never be stopped in this circular flow so that the leading country will continue to improve its structures of industry and trade by the evolution of P₁, P₂, P₃,----, and P_n through innovation, trade and industry transferring abroad; the catching-up country

will thereafter also follow the leading country's footsteps to improve its structures of industry and trade by the evolution of industries as shown by P_1 , P_2 , P_3 ,----, and P_{n-1} through trade and foreign investments in the domestic economy.

Therefore, it could be said that the track of an innovated product transferred from leading country to catching-up countries, as show in Figure 3 by Louis T. Wells, Jr', can be modified to find Figure 5 by operating around one circle, and so on in Figure 3.

Figure 5 shows that the production of any innovated product is transferred from leading country, the United States, to lagged countries like ASEAN(Indonesia, Malaysia, Philippines, and Thailand, etc.) in sequence at different time points. In other words, the industrialization among countries is led by the United States through industry transferring abroad. The completed process of industrial developments for both leading and catching-up countries in Vernon's and Akamatsu's models can be modified as follows:

Primary society: exports and also imports agricultural products on the base of comparative advantages.

Industrialized society:

1. Leading country: (1) production of new products \rightarrow (2) export \rightarrow (3) industry transferring abroad (export substitution) \rightarrow (4) import. This same process would be repeated for each innovated product, and the process of industrialization can be expressed by the evolution of industries of P₁, P₂, P₃,------, and P_n.

2. Catching-up countries:

(1) import \rightarrow (2) production (import substitution) \rightarrow (3) export expansion \rightarrow (4) industry transferring abroad (export substitution) \rightarrow (5) import. This same process would be also repeated for each imported product, and the process of industrial developments can be expressed by the evolution of industries of P₁, P₂, P₃,-----, and P_{n-1}

The track of industrial development for a catching-up country is, therefore, the same as that of a leading country. The only difference is that there are always time and industry lags for P_n and P_{n-1} in the process of industrialization between the leading and catching-up countries due to technology lag between them. There is also a time lag for the possibility of

²⁷ Jose R. De La Torre: "*Marketing Factors in Manufactured Export from Developing Countries*" edited in *The Product Life Cycle and International Trade*, Harvard University 1972, PP.227-259.



Source: Summarized from the combination of Akamatsu's and Vernon's models. Figure 4: The Circular Flow of Production, Trade, and Industry Transferring Abroad



P1: First Item of Product



industry hollowing out occurred at stage 3 (Export Substitution) in leading country and at stage 4 (Export Substitution) in catching-up country.

In addition, Figure 3 also shows that the greater the speed for an innovated product to go around one circle from stage 1 (production) to stage 3 (importation), the shorter the time it needs to finish. In other words, the world will become flatter and flatter in the development of industries among countries. Finally, new products created in the leading or advanced countries are being simultaneously produced in the catchingup countries through technology transfer or direct foreign investments. At that time, the world is flattened out in the development of industries due to the time and technology gaps that are closed through technology transfer or foreign direct investments.

IV A Ladder Type of Internationalized Model of Flying Geese Pattern of Industrial Development

The process of industrial development in both leading and catching-up countries illustrated in the circular flow model, as shown in Figure 4, can also be converted to establish an internationalized model of flying geese pattern of industrial development that displays a "ladder type of industrial development" among countries shown in Figure 6. This internationalized model is apparently different from Akamatsu's model "flying geese pattern of industrial development" in the individual country shown in Figure 2.

In Figure 6, the horizontal axis represents the evolution of industries denoted by P₁, P₂, P₃,----, and P_n in sequence. This process of evolution of industries is derived from the upperhalf of Figure 3 showing that the leading country A, the United States, by the operation of the circular flow of production, export (or industry transferring abroad), and import, would always continue to create new products/industries one by one so as to replace the old ones already transferred to those catching-up countries such as group B (EU and Japan), group C (NIEs) and group D (ASEAN, EU cluster) and to improve its own structures of industry and trade on the one hand, and also to avoid its industry hollowing out on the other hand. The improvement in structures of industry and trade led by leading country A can be expressed as an industrial evolution and represented by P1, P2, P3,----, and Pn in sequence, which actually look closely like a leading group of geese A flying in the sky.

The vertical axis represents the indicator of leading countries. It shows that leading country , the United States, acting as a leading group of geese (A), would always lead other catching-up countries such as EU (Group B₁) and EU cluster (Group Da), located at the U.S's left-hand side, and Japan (Group B₂), NIEs (Group C), and ASEAN (Group D₁) and China (Group D₂), located at the United State's right-hand side to fly forward all together to improve their structures of industry and trade. It also shows that the leading group A should continue to create new products so as to keep its leading position.

On the other hand, the catching-up countries, group B (EU and Japan), by the routine operation of the circular flow of import, production, and export shown in Figure 3, would try to compete for introducing and imitating the leading group A's innovated products first so as to catch up or even to take place of the leading position of group A in Figure 5. The improvement in the structures of industry and trade in the catching-up group B can also be expressed as the industrial evolution represented by P_1 , P_2 , P_3 ,-----, and P_{n-1} , which would look like another groups of flying geese (Groups B_1 and B_2) that are trying to catch up with the leading group A. This same process of improvement in structures of industry and trade would also be applied to other relatively lagged groups of catching-up countries, such as C and D etc. This process could be likened to a relay race that passes first bar from leading country to others in sequence.

The difference between P_{n-1} and P_n indicates that, due to a technology gap between leading group A and catching-up group B, there is always an industry lag between them, and that every new product / industry innovated by the leading country A would gradually fade to become an old one when it was imported from the catching-up group B. Groups B & C and Groups C & D, following the comparison like Groups A and B, would also have industry and time lags between them, which are represented by P_{n-2} and P_{n-3} , respectively.

These different groups of countries always compete with each other intensively for becoming the leader, and it would therefore constitute a dynamically beautiful image likened to a "ladder type" of various groups of geese from A to D in sequence flying in the sky. This image shown in Figure 5 would probably be called an "internationalized model of geese flying pattern of industrial development." It apparently indicates that if a leading country stops improving its structure of industries, other relatively lagged countries will catch up with it or even take over its leading position.

This ladder type of internationalized model of geese flying pattern of industrial development is apparently different from Akamatsu's individual map of flying-geese within a catching-up country such as group B_2 (Japan) shown in Figure 2.

However, just as shown in left side of the internationalized model, there is no group C like NIEs in East Asia in the right-hand side to play a role of bridge between the Group B₁ (EU) and Group Da (EU cluster). It could be said that this internationalized model slanted to East Asia in the 20th century. Its reasons could be listed as follows:

- Japan's successful experience in developing its industries by taking development strategies suggested by Akamatsu' model has been regarded as a regular model by the East Asian countries to promote their industrialization since 1960s.
- 2. Japan, the Group B₂, has played an important role in closing the technology lag between the leading group A, the



Source: EU Cluster is cited from "The Economist August 24th," 1991; the Figure is summarized from Figure 3.



United States, and Group C (NIEs) or Group D₂ (ASEAN and China) in East Asia since 1950s. The pacific rim countries, by virtue of their close geographic locations shown in the map along an arc extending from the northern countries such as Japan and south Korea to the southern countries such as New Zealand, would always make Japan more easily transmit its "graduated or improved type of technological innovations" to those countries in sequence than to other catching-up countries in East Europe and EU cluster.

 There are different degrees of economic development among East Asian countries such as Groups of B, C, and D, and they are naturally linked in sequence like a ladder from the top step (Group A) to the bottom one (Group D) so that the leading group A, the United States, can more easily transfer its innovated products one by one, through industry-transferring-abroad made by foreign direct investment, to the catching-up groups B, C, and D in East Asian than those in other areas such as East Europe, South America, and Africa. In other words, the ladder type of different degrees of economic development among countries in East Asia would make the information linkage of technology work more effectively in this region.

4. In contrast to East Asia, before 1990, this ladder type of different degrees of economic development did not exist between EU and its cluster (Group Da) because Berlin Wall or communist economies interrupted the information linkage of technologies in these regions. The developing countries in EU cluster, therefore, could not develop to become the newly industrialized countries such as NIEs in Group C in 20th century.

- 5. East Asian countries, especially, NIEs have shared a common characteristic in the history of political stability under economic system of open-dictatorship that has benefited them to follow Japan's footsteps to adopt policies of import substitution and export expansion to develop their own industries in the different time periods since World War II. Their successful experience that copied from Japan, therefore, is also held up as a lesson for other develop-ing countries such as ASEAN and China to develop their industries and also get great results. Especially China has gradually developed to become a manufacturing center in the world since 1990s.
- 6. The successful experience of NIEs, however, cannot be held up as a lesson for other developing countries in EU cluster, or Middle-South America and Africa because the shift of moving a policy from import substitution to export expansion would hurt those who benefited from protection against foreign competition under the policy of import substitution. For example, special interests in these developing countries would bring down the government if the policy of import substitution was replaced with that of export expansion. It is apparent that learning the lesson and being able to use that knowledge in the real world are different things.

In practice, some developing countries, especially East Asian countries, were actually verified that their processes of industrialization were in accordance with the what Akamatsu's or Vernon' model predicted in the 20th century. For examples, it could be found that, after WWII, the United States became the world center of manufacturing and led other countries to develop their industries. However, since 1970s, the United States has gradually lost its competitive advantage of manufacturing in the world market so that the center of manufacturing shifted from the United States to Japan and West Germany in 1970~80s, to NIEs in 1980~90s, and to ASEAN (Indonesia, Malaysia, Philippines, and Thailand, etc.), China, India in 1990s~ 2000s in sequence. East Asia, therefore, has become the center of economic growth in the world since 1970s.

 V Adaptability of Akamatsu's or Vernon's Model of Industrial Development Would Be Questioned in the 21st Century. However, this traditional ladder type of industrial development among countries has been more flattener and flattener since late 1990s due to some happenings as follows:

- The revolution of information technology occurred in the 1990s that provides a "flat-world platform", as proposed by Thomas L. Friedman (2006)²⁸, to improve the ease, speed, quantity, and quality of information flowing from leading countries to the catching-up ones.
- 2. The change in the world's economic structures resulted from some happenings that are listed as follows:
 - Berlin Wall tumbled down in 1989, and since then, Eastern European countries have been moving rapidly to market economies.
 - (2) Soviet Union collapsed in 1991.
 - (3) BRICs have been ascending their economies since 1990s.
 - (4) India turned from autarky to an opened economy in 2000.

Both main factors would make anyone or firm to collaborate and compete globally with each other in the "flatworld platform" in the late 1990s. As a result, the leading or advanced countries such as the United States (Group A), EU and Japan (Group B) would more directly transfer their productions of innovated products to the catching-up or developing countries such as China and EU cluster (Group Da) through this platform, but not necessary through NIEs (Group C).

Entering the 21st, economic ascents in the countries of East Europe and EU-Dollar Region, therefore, would have gradually balanced both sides of new internationalized model of Figure 6 that slanted to East Asia in the 20th century.

3. Entering 2000, this flattening trend would be more evident due to intensive competition among countries for becoming the leader in the model of Figure 6 on the one hand, and the leading country, the United States, has its bottleneck in developing or producing new manufacturing products, and its productions of innovated products were transferred to catching-up countries on the other hand.

For examples, even software systems of Android was created by Google, iOS by Apple, and Windows Phone by Micro Soft in the United States in the early 2010s, their hard products of mobile phones, based on the specification of each software, were produced by HTC and Foxconn in China and

²⁸ Thomas L. Friedman: *The World Is Flat*, published by Farrar, Straus and Giroux, Chapter 2, 2006.

Taiwan, by Samsung and LG in Korea, and by Sony in Japan in the same year as those software developed by them.

In other words, the productions of manufacturing industries in catching-up countries has been gradually catching up and closing to leading country, the United States, in model of Figure 6 since 2000. Therefore, it could be said that Akamatsu's or Vernon's model would probably be no longer regarded as a regular model for the catching-up countries to develop their industries in the flattening world. The adaptability of "flying geese pattern of development" would be questioned reasonably²⁹ in the 21st century.

Part II

I The Meaning of Industry Hollowing Out

Although industry transferring abroad made by leading country would contribute to industrial developments for itself by the evolution of industrialization of P_1 , P_2 , P_3 ,-----, and P_n , and for catching-up countries by P_1 , P_2 , P_3 ,-----, and P_{n-1} , as shown in Part I, it would also probably result in industry hollowing out that has been concerned by some countries, especially by Japan and Taiwan. Some papers and books about industry hollowing out were published in both countries, and they had some different explanations about this economic phenomenon.

For examples, Hara Masayuki (1985) regarded industry hollowing out as "a shrinkage and weakness of domestic manufacture sector that was caused by industry transferred abroad through foreign direct investment, and weakness of a sector means getting worse of imbalance of payment, increasing unemployment, decreasing investments, and making a low level of researches and developments"³⁰. Research Association of Economics, Keio University (1996) regarded industry hollowing out in Japan as a negative effect on employment resulting from industry transferring abroad caused by Japanese Yen's appreciation against US\$, high production costs, and incentives of foreign markets.³¹ Hideo Kobayasi (2003) regarded industry hollowing out as "an industry that, due to losing competitive advantage in the world market, would be forced to give up the production in home country or to be transferred to foreign countries to maintain its operation so that there was a gap in the structure of industry in home country, and it, in turn, increases unemployment because the gap could not be filled up by the new industry in time".³² Although they had some differences in explaining the term "industry hollowing out", it could be said that they focus "industry hollowing out" on its negative effect on employment resulting from industry transferring abroad.

In contrast, some papers that were published in Taiwan regarded "de-industrialization" as industry hollowing out and found that Taiwan did not experience industry hollowing out until early 1990s.³³ In fact, both economic terms mean different things. For examples, Singh (1977) defined de-industrialization as the secular decline in the share of manufacturing employment in the advanced economies.³⁴ He argued that de-industrialization is not a negative phenomenon, but is the natural consequence of the process of economic development. Rowthorn and Wells (1987)³⁵ as well as Rowthorn and Ramaswamy (1997) followed this definition and proved that de-industrialization would increase the level of well-being.³⁶

It could be said, therefore, that the negative industry hollowing out caused by industry transferring abroad is not the same as the positive "de-industrialization" caused by change in structure of industry, and that Taiwan, as for a catching-up in the early 1990s, needed industry transfers from abroad to develop its industries. There was no condition for greatly transferring industries abroad that resulted in industry hollowing out in that time period. Therefore, a finding that Taiwan did not experience industry hollowing out in the early 1990s would be questioned undoubtedly.

II The Possibility of Industry Hollowing Out

According to model illustrated in Figure 5, the leading country A starts product life cycle of a new product at time t_1 , and

²⁹ Hsieh, Kuan-yu: *A Questioning on the Adaptability of "Flying Geese Patten of Industrial Development Among Countries in the 21st Century*, Meijo Asia Research Center, Vol.3 No.1, 2012.

³⁰ Hara, Masayuki: Foreign Direct Investment and Japanese Economy, PP.105-106, 1992.

³¹ *"Industry Hollowing Out"* by Research Association of Economics, Keio University, P.3. 1996.

³² Kobayasi, Hideo: *The ways to overcome industry hollowing*, published by Central Book Company, P.8, 2003.

³³ (1) Tien-chi Chen: "Does Taiwan Experience Industry Hollowing", Review of China, June, 1988, P. 780.

⁽²⁾ Fei-lin Wu: "Foreign Direct Investment and Industry Hollowing", Finance of Export and Import, Nov. 1997.

⁽³⁾ Fei-lin Wu and Tien-chen Chou: "Change in Structure of Industry and Industry Hollowing in Taiwan", Industry of Free China, Oct. 1990, PP.11-25.

³⁴ Singh, Ajit: "UK Industry and the World Economy: A case of *De-industrialization?*", *Cambridge journal of Economics*, 1, 1977, PP.113-116.

³⁵ Rowthorn, R. E., and Wells: "*De-industrialization and Foreign Trade*", Cambridge University Press, 1987, P.8.

³⁶ Robert Rowthorn and Ramana Ramaswamy: "De-industrialization: Causes and Implications IMF Working Paper for the May 1997", World Economic Outlook, WP/97/42, P.4.

the catching-up country B at time t₃, respectively. It indicates that country B begins to produce the new product at time t₃. Country A, therefore, will transfer the production of its created product to country B through its foreign direct investment. Countries D and C would also do the same thing as country B did at the later time points in sequence. Figure 5, therefore, indicates that different countries would probably experience industry hollowing out at different time point due to different degree of economic development if they stop to create or introduce the another new product to fill up the old one that had been transferred abroad. The possibility of industry hollowing out would, therefore, occur at the different time points among countries as follows:

- (1) The leading country A, the United States, would experience industry hollowing out after t₃ when it transfers an innovated product to catching-up country B such as Japan and EU and stops to create another new product for itself.
- (2) The catching-up countries B such as EU and Japan would experience industry hollowing after t₅ when it transfers industry to the relatively lagged country C such as NIEs and stops to introduce another new product for themselves.
- (3) The catching up country C such as Taiwan or other members of NIEs would experience industry hollowing after t₇ when it transfers industry to relatively lagged country D such as ASEAN and China and also stops to introduce another new product. Is it true for Taiwan?

In practices, the Research Institute of Long-Term Bank of Japan (I996), based on his empirical analysis, suggested that the United States experienced industry hollowing due to its trade deficit from US\$ 38.4 billions in 1982 to US\$170.3 in 1987 Billions caused by industry transferring abroad through FDI even if the share of unemployment of manufacturing in total unemployment did not decrease in this time period³⁷. In other words, the United States experienced industry hollowing out in 1980s.

Masayuki Hara (1992), from a macroeconomist's viewpoint, found that in Japan the relationship between industry hollowing and industry transferring abroad was weak before 1985, and, therefore he thought that Japan did not experience industry hollowing till 1985. The reason is that foreign direct investment made by Japanese main manufacturing industries such as machines, electronics, and conveyers, only shared 12% of total foreign direct investment and the rate of unemployment was also maintained at low level³⁸. However, A book "Industry Hollowing Out" by Research Association of Economics, Keio University (1996) found that number of unemployment in sector of manufacturing increased by 172,000 in 1993 and therefore suggested that Japan experienced industry hollowing out this year.³⁹ Some reasons for experiencing industry hollowing out in Japan could be attributed to both factors of production costs and market shares that are listed as follows:

- Japanese Yen has been appreciating against US Dollar from since Summit Meeting of Group 7 held in 1985. It forces Japan, in order to improve competitive advantage in the world market, to greatly transfer its industries abroad.
- Economic ascents in East Asia such as NIEs, ASEAN and China provide big market that spurs Japan's firms to transfer their production there so as to take a higher market share there.
- The whole chain industry from up-stream to down-stream such as Japan's AV industry usually has been transferred to NIEs, China and ASEAN since 1960s for the purpose of reducing production costs and expanding exports from there.

The background for Taiwan to transfer its industries abroad is similar to that of Japan. Taiwan's industries have been greatly transferred to China since 1990s when China greatly opened its market to foreign countries for attracting foreign investments, especially since 2010 when Ma Administration signed "Economic Cooperation Framework Agreement" (ECFA) that spurs Taiwan's firms to transfer industries to China for the purpose of reducing production cost, increasing market shares in China at low or free tariff and promoting their products to other countries through Free Trade Agreement (FTA) made by China and its trade partners. As a result, industry hollowing out has been very concerned in Taiwan since 1990s, and it will be the case study in the next sections.

These findings about industry hollowing out that occurred in the United States and Japan at different time points indicate that there is a time lag of industry hollowing out for different countries due to different degree of economic development and different time points for industry transferring abroad.

III Four Indicators to Test Industry Hollowing Out

According to the definitions made by Masayuki Hara, or by Research Association of Economics, Keio University, or

³⁷ Industry Hollowing Out for Some Manufacturing, by Research Sector of Long-Term Credit Bank of Japan, 1996, PP.24-26.

³⁸ Hara Masayuki: "Foreign Direct Investment and Japanese Economy", 1992, P.115.

³⁹ *"Industry Hollowing Out"*, by Research Association of Economics, Keio University, 1996 P.7.

by Hideo Kobayasi, an increase in unemployment rate is the only indicator to test whether industry hollowing out occurred or not in an industry-transferring-abroad country. However, the outcome got by using a unique indicator to do the test would probably be questioned. The reason is that the gap caused by industry transferring abroad would probably be closed by other new manufacturing and service industry or by industry transferring inward from abroad so that number of unemployment resulting from industry transferring abroad would probably be absorbed by those industries. Moreover, an increase in unemployment would also probably result from economic recession, and it could be improved when recovery comes again.

In contrast to a unique indicator of an increase in unemployment, the following sets of indicators, derived from the model of Figure 5 or 6, could be used to test whether a country has experienced industry hollowing out or not:

1. Net foreign direct investment (FDI) should be negative.

A net foreign direct investment (FDI inward minus FDI outward) would be a necessary indicator. The reasons are listed as follows:

(1) If net FDI is positive (FDI inward > FDI outward), it means that foreign industry transferring inward is greater than industry transferring abroad. An increase in unemployment rate is not an outcome caused by industries transferring abroad, but by an increase in structural unemployment or economic recession. Industry hollowing out is independent of industry transferring abroad.

(2) If net foreign direct investment is negative (FDI inward < FDI outward), it means that foreign industry transferring inward is less than industries transferring abroad. Other things being equal, it would be a necessary requirement for industry hollowing out caused by industry transferring abroad.

2. Rate of unemployment should increase.

As mentioned in the former analysis, industry transferring abroad will probably result in an increase in unemployment for a country. It would be a structural unemployment and cannot be easily improved if it could not be absorbed by other new industries or by foreign industries transferring inward. The unemployment rate would increase in a country due to industry transferred abroad.

3. Share of manufacturing in GDP should decrease.

If the gap of FDI (net FDI < 0) resulting from industry transferring abroad cannot be filled up by other new industries or foreign industry transferring inward, other things being equal, the industry transferring abroad would bring about a decrease in output value of manufacturing. If this is the case, the share of manufacturing output in real GDP would then necessarily fall.

4. Growth Rate of Gross Domestic Product (GDP) would fall.

If net FDI is negative and the rate of economic growth is measured by GDP, not by GNP, the growth rate of GDP would naturally fall. However, this indicator is not a necessary, but a sufficient condition in testing industry hollowing out. The reason is that the gap caused by industry transferring abroad can be filled up by an increase in domestic demand so that GDP still keeps at an upward trend.

If indicator 1, 2, and 3 exist simultaneously in a country for a certain period of time, it would be likely said that industry hollowing out would happen in this country at this time period. On the contrary, if any one of these indicators doesn't exist at a certain period of time, industry hollowing out would not occur in the country. However, if four indicators exist simultaneously in a country for a certain period of time, it would be certainly said that industry hollowing out has occurred in the country at this time period.

In short, the unique indicator of an increase in unemployment caused by industry transferring abroad is only a necessary, but not a sufficient condition, to judge whether a country has experienced industry hollowing out or not.

IV Case Study: A Test to Industry Hollowing out in Taiwan

In contrast to the Unite States and Japan, Taiwan has been a catching-up country. After World War II, Japan's successful experience in developing industries by taking development strategies of import substitution and export expansion suggested by Akamatsu's model is held as a lesson for Taiwan. Therefore, following "Japanese economic miracle" created in 1970s, Taiwan also created its economic miracle in 1980s, and has been so-called a newly industrialized country since 1990s.

However, in the process of developing industries, Taiwan, following Japan, has also faces the same problem of industry hollowing out caused by industry transferring abroad since 2001 when China became a member of WTO, and especially since 2010 when Taiwan's Ma Administration signed ECFA with China. However, has Taiwan really experienced industry hollowing out? It is always concerned by Taiwan. Four indicators in Table 1 can be used to test it as follows:

 Since1990s, net FDI in Taiwan, except for 1995 and 1996, has been negative, especially since 2000, it has been increasingly expanding year by year and reached the maximum of --US\$16.67 billions in 2012.

			,	-
Indicators Years	Net FDI (Unit: US\$ Million) (1)	Unemployment ate (%) (2)	Share of Manufacturing in GDP (%) (3)	Growth rate of GDP (%) at 2006 price level (4)
1990	—	1.7	30.7	6.0
1995	407	1.8	24.9	6.4
1999	599	2.9	23.9	6.0
2000	-47,134	3.0	24.6	5.8
2001	-36,012	4.6	23.2	-1.7
2002	-46,781	5.7	25.0	5.3
2003	-46,834	5.0	26.1	3.7
2004	-52,982	4.4	26.8	6.2
2005	-60,157	4.1	26.5	4.7
2006	-72,516	3.9	26.5	5.4
2007	-102,517	3.9	26.5	6.0
2008	-118,072	4.1	24.8	0.7
2009	-114,265	5.9	23.8	-1.8
2010	-126,600	5.2	26.0	10.8
2011	-156,908	4.4	24.8	4.1
2012	-166,734	4.2	24.2	1.3

Table 1: Four Indicators of Testing Industry Hollowing Out Indicators

Note: - US\$174 in 1991, -1166 in 1996, -2914 in 1997, -1013 in 1998, -599 in 1999

Sources: (1) Taiwan Statistical Data Book, 2013, *Council for Planning and Development*. (2) Department of Economic Research of Taiwan Central Bank.

- Since 2001, the unemployment rate, as compared to below 3% in 1990s, has been increased and kept at a high level between 4 and 6%.
- 3. Since 1990, share of Manufacturing in GDP in Taiwan has gradually decreased from 30% in 1990 to 23.9% in 1999 and 23.2% in 2001, and then kept at a relatively stable range from 23.8% to 26.8% in 2000s and early 2010s.
- 4. Since 2001, the growth rate of Taiwan's GDP has been unstable, but it, as compared to keep at a high level of 6% in 1990s, appeared a fall trend in 2000s and reached to low level of 1.3% in 2012.

Four indicators of testing industry hollowing out existed simultaneously in late 1990s. It would be likely to say that Taiwan would experience industry hollowing out since late 1990s.

However, since 2000, indicator 2 and indicator 3 in Table 2 have not apparently displayed downward trends, and it could be likely said that industry hollowing out in Taiwan has been improved. In fact, it would be not true. On the contrary, industry hollowing out in Taiwan have been more apparent since 2000 due to Taiwan's share of outsourcing from 13.3% in 2000 to maximum 50.9% in 2012, as shown in Table 2.

The reason is that a high share of outsourcing in the order received by Taiwan would contribute to a more downward trend in indicator 3 (share of manufacturing output in GDP) and more upward trend for indicator 2 (unemployment rate), and it can be explained as follows:

 Since 2000, Taiwan's orders received from abroad and exports have been increasingly expanding year by year to maximum US\$441.0 billions and US\$301.18 billions in 2012, respectively, but its trend of outsourcing was also upward to maximum 50.9% in response. Especially, this upward trend greatly reflected in the share of production in China from 70.3% in 2000 to 93.0% in 2012.

However, for the political purpose, the share of outsourcing, especially from China, has been included to that of manufacturing in GDP and to Taiwan's GDP by government so as to prove that the operation of ECFA has made great contribution to growth of Taiwan's GDP.

In fact, outsourcing, based on the definition of GDP in Economics, cannot be included to the share of Manufacturing in GDP and also to Taiwan's GDP. Therefore, the real share of manufacturing in GDP and growth rate of Taiwan's GDP in Table 2 would be overestimated. In other words, entering 2000s, a downward trend of share of manufacturing in GDP (indicator 3) and that of growth rate of Taiwan's GDP (indicator 4) would be more apparent.

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Year	Orders Received from Abroad	Export	Share of Outsourcing (%)	Production in China (%)	Share of Manufacturing in GDP (%)	Unemployment rate (%)
2000	1534.2	1520.0	13.3	70.3	24.6	3.0
2001	1384.2	1263.2	16.7	74.4	23.2	4.6
2002	1506.0	1353.2	19.3	79.5	25.0	5.7
2003	1700.3	1506.0	24.0	87.7	26.1	5.0
2004	2150.9	1823.7	32.1	_	26.8	4.4
2005	2563.9	1984.3	39.9	84.8	26.5	4.1
2006	2993.1	2240.2	42.3	89.6	26.5	3.9
2007	3458.1	2466.8	46.1	90.9	26.5	3.9
2008	3517.2	2556.3	47.0	87.3	24.8	4.1
2009	3224.4	2036.7	47.9	91.5	23.8	5.9
2010	4046.2	2746.0	50.4	86.9	26.0	5.2
2011	4361.3	3082.6	50.5	92.7	24.8	4.4
2012	4410.0	3011.8	50.9	93.0	24.2	4.2

|--|

Sources: (1) Taiwan Statistical Data Book, 2013, Council for Planning and Development. (2) Department of Economic Research of Taiwan Central Bank.



Source: summariezed from table1 and table 2

Figure 7: The Trends of Indicator 1, 2, 3 and Taiwan's Outsourcing

2. Since 2000, the trend of outsourcing from Taiwan was upward from 13.3% in 2000 to maximum 50.9% in 2012. In contrast to it, unemployment rate (indicator 2) in Taiwan jumped from 1.8% in 1995 to 3.0% in 2000, and then to a relatively high level and stable range around 4.0~5.0% in 2000s in Table 2. However, it was still underestimated because outsourcing indicates that a country exports jobs to foreign countries, and, therefore, its unemployment

would increase. If the temporal jobs offered by public sector and temporal off-jobs with no salaries for keeping jobs in private sector in 2000s were regarded as unemployment, the unemployment rate would greatly increase, and more than that of official reports in Table 1.

Figure 7 that summarizes Table 1 and Table 2 would show the relation between share of outsourcing in order received from abroad and other three indicators (except for a necessary

indicator 1). It shows that since late 1990s, the trends for the share of manufacturing in GDP and for growth rate of GDP **have been downward** with an increase in share of outsourcing in order received from abroad, but upward for unemployment rate with an increase in that share. Especially those trends **have been more apparent** since 2000 if underestimation to unemployment rate and overestimations to share of manufacturing in GDP and growth rate of GDP are considered by official reports.

Figure 7, therefore, indicates that Taiwan has experienced industry hollowing out since late 1990s, and it would have being more apparent since 2000. In contrast to that of the United States in 1980s and Japan in early 1990s, it could be said that industry hollowing out would occur from leading to catching-up countries in sequence at different time point due to different degree of industrial development among them.

V The Ways to Avoid Industry Hollowing Out: Flexible Strategies of Industrial Development on the Application of "Bathtub Theorem"

The term "bathtub theorem" in economics was first used by the British economist Kenneth E. Boulding in the 1940s in his book "The Economic of Peace",⁴⁰ and its meaning was introduced in an article "*What is the Bathtub Theorem*?" by "*The Time of India*" in 2008.⁴¹ In fact, the "bathtub theorem" has been popularly used to explain that an equilibrium GDP can be reached if injection (consumption+investments +government spending+exports) equals to leakages (savings +taxes+import), that GDP would increase if injection > leakage, and that GDP would decrease if injection < leakage.

The concept of "bathtub theorem" can be formalized into Figure 8 by connecting three bathtubs to shows that a new industry is usually created and transferred abroad by leading country (A) to middle countries (B), and finally to the less developed countries (C) in sequence through foreign direct investment (FDI). As for country B, the water level in bathtub represents market values of manufacturing products; the faucet in bathtub indicates that injections liken to introduce new industries from leading country A (FDI inflow); the hole in the bottom of bathtub indicates that leakage likens to industries transferred abroad (FDI outflow); the plug in the bottom of bathtub indicates a control on industries transferring abroad.

As for country B, if there is a control like a plug on industry

transferring abroad for keeping the industries transferred inward (injection) at least greater than industries transferred outward (leakage), all else held constant, the water would be at least more than the original level. This is the case 1 and case 2. A positive net FDI (injection ≥ leakage) indicates that an increase in unemployment caused by industry transferring abroad would be absorbed by the new industries so that industry hollowing out would not occur in a country.

On the contrary, if there is no any control on plug and a gap of FDI (injection < leakage) is not filled up by introducing new industries from leading country or by expanding domestic demand, the water level would gradually fall till the bathtub is dried up and the unemployment rate would increase. In this case, a country would experience industry hollowing out.

This relation between injections and leakages in Figure 8 can be expressed as a function:

Leakage = f (Injection)

where Injections = FDI + Domestic New industries + Expansion of Domestic Demands.

> Leakages = Industries Transferring Abroad + Outsourcing.

For the above function, three cases and their effects would happen as follows:

Case 1. Injections > leakages:

Unemployment rate \downarrow , Industrial structure \uparrow , Value of manufacturing products \uparrow , and Real GDP \uparrow .

Case 2. Injection = leakage:

Its change directions are the same as that of case

1, but its effects are smaller than that of this case.

Case 3. Injection < leakage:

A gap exists between injections and leakages, unemployment rate \uparrow , improvement in industrial structure \downarrow , Value of manufacturing products \downarrow , and Real GDP \downarrow . These indicators would prove that a country has probably experienced industry hollowing out at a specific time point.

Case1 and Case 2 are apparently positive, but case 3 is negative to a country for developing its industries. Therefore, some flexible strategies of industrial development, as follows, are necessary for a country to adjust its leakages in response to a change in injections so as to keep at least a balance between injections and leakages (injections≥leakages), and then to overcome industry hollowing out.

 The plug would not be removed in country A or B so as to prevent the industry from transferring abroad until other new products that have been developed or introduced to

⁴⁰ Kenneth E. Boulding: "*The Economics of Peace*", New York, Prentice-Hall, Inc., 1945.

⁴¹ Boulding's *bathtub theorem* was introduced in an article "*What is the bathtub theorem*?" by *The Times of India*, April 20, 2008.



Figure 8: Devised by using the concept of injection and leakage in the "Bathtub Theorem"

replace the old ones.

However, the problem is that water level in bathtub would fall gradually and dry up naturally in the long run because the existing industries have lost their competitive advantages and the introduction of new products or industries are unexpected. In other words, this is not a case of industry hollowing out.

- 2. The plug should be removed in country B if injection from the faucet is new industries created and transferred by leading country A more than that of its transferring abroad from the hole of bottom. The share of manufacturing in GDP and growth rate of GDP would increase, and then industrial structure would be improved in country B.
- The faucet should be opened in country B, in addition to introduce new industries from country A(injections), should expand its domestic demand by increasing consumption, investments, and public spending so as to fill up the gap caused by industry transferring abroad (leakage).

In short, a country should take the flexible strategies of industrial development to keep at least a balance between injections from opening faucet and leakages from removing plug so as to prevent industry from hollowing out and also to improve industrial structure.

In practice, as for a middle country (B) like Taiwan, the United States and Japan can be taken as advanced countries (A). Before late 1990s, Taiwan enjoyed high growth rate of real GDP that was caused by FDI from the United States and Japan so that there was no problem of industry hollowing out. However, since then, with China's ascendance by opening its door to the rest of world, this problem has been increasingly serious resulting from the fact that Taiwan has been greatly transferring its industries to China.

In dealing with China, Taiwan's Lee administration (1988~2000) took an industrial development strategies of **"not in a hurry, but in a patience"** that kept at least a balance between injections and leakages in Figure 8. Taiwan, therefore, did not experience industry hollowing out during Lee administration because of its low unemployment rate and high growth rate of real GDP at that time period, as shown in Table 1.

However, Taiwan has fallen into case 3 of leakage > injection since Ben administration (2000~2008). The government, due to political pressure and loss of competitive advantage in some industries, did not follow Lee administration, but took another actively industrial strategy of "**positive opens, but effective supervisions**" that was more open to China than Lee administration did. Therefore, industry hollowing out in Taiwan caused by expanding the gap of leakage > injection has been gradually serious since 2000 when lower growth rate of GDP and higher unemployment rate were obvious during that period, as shown in Table 1, Table 2, and Figure 7.

In contrast, Ma administration (2008~2016), a friendly government to China, has almost completely removed the

plug by signing ECFA. As a result, Taiwan's industries have been greatly transferred to China, and a gap of leakage > injection has been expanding significantly. Industry hollowing out, therefore, in Taiwan has been more serious since 2008 resulting from the fact that lower growth rate of GDP and higher unemployment rates than those of Ben administration, as shown in the same tables.

Taiwan would still suffer from industry hollowing out in the coming years if Ma administration does not adjust but still takes strategies that greatly bias to China. It would be expected that industry hollowing out has been increasingly concerned by people living in Taiwan. In order to overcome industry hollowing out in Taiwan, the flexible strategies of industrial development should be taken to adjust the leakages in response to a change in injections so as to keep at least a balance between them.

Conclusion

For any country, industry transferring abroad is a necessary phenomenon on its way to industrialization. As for a leading country A, it should never stop to create the new industries for replacing the old ones that were transferred to the catching-up countries B so that it can always keep the leading position in the model of internationalized flying geese pattern of development. In contrast, a catching-up country should never stop to introduce the new industries that were created by a leading country so as to follow leading country to improving it structures of industry and trade.

Since 2000s, although the United States has fallen into its bottleneck in developing or producing new manufacturing products, its new financial industry, following manufacturing, has been developed to become a leading industry in the world even if its financial crisis occurred in 2008 that heavily damaged world economy. It is could be said that the United States would still lead other countries to develop new industry, especially high-tech electric industry such as software systems that are developed in the United States even if their mobile phones are produced in Japan, South Korea, China and Taiwan. It would be said, enter the 21st century, that the world is flattering in the development of industry, and that the adaptability of Akamatsu' or Vernon's model would be questioned reasonably.

Industry hollowing out caused by industry transferring abroad would be probably inevitable, but it could be regarded

as a positive momentum to upgrade the structures of industry and trade in a country. Moreover, industry hollowing out could be avoid by adopting flexible policies of industrial development for keeping at least a balance between the industry transferred inward and outward (net FDI \geq 0).

Four indicators prove that industry hollowing out has occurred in Taiwan since 2000, and it has been increasingly apparent since then. The reason is that Taiwan's outsourcing has increasingly expanded since 2000, especially expanded to 50.9% in 2012 that greatly slanted to China by 92.7% of this share resulting from ECFA signed by China and Taiwan in 2010. Industry hollowing out in Taiwan will be more serious if Ma administration still insists to keep it current policy of completely opening to China. People living in Taiwan begins to doubt that president Ma is pushing Taiwan to be united by China. But anyway, it would be said that industry hollowing out in Taiwan would be held as a lesson for other countries that greatly transfer industries abroad.

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コラム Column

FROM ASIA TO NORWAY: RESEARCH LIFE IN A GENDER EQUAL SOCIETY

By Mangalika Sriyani MEEWALAARACHCHI[†]

† Research Fellow of MARC, Meijo University

Currently, Being a resident of Europe, Bergen one of the most fascinated cities in the World, enjoying gender equal society I do conduct research in both fields of economic and sociology. This society reminds my doctoral research was on "The Impacts of Economic Globalization on the Labor Market with Special Reference to the Labor Market" few years back in Nagoya University.

The research contribution in the fiscal year 2013 can be summarized into 4 different projects as mentioned below. But I am interested in the subjectivities produced in each context, (being having different experiences in 3 country contexts, such as Sri Lanka, Japan and Norway) not as isolated or somehow innate to that context, but resultant of global interactions albeit in their proper contexts.

1. Work-Family "Reconciliation," in Gendered Welfare State Institutions

The arguments between "defamilialization," the significance of unpaid care work in families and the difficulties of workfamily "reconciliation," in gendered welfare state institutions have been productive in last two decades, since women's role is much criticized under the new patterns of paid work patterns in the globalized arena. Yet there has rarely been full "gender main-streaming," for the mainstream still resists, and has difficulties assimilating concepts of care, gendered power in the balancing the work life, dependency, and interdependency in new era of globalization. Thus, the agenda of gendering comparative welfare state studies remains unfinished. In line with this understanding of multiple interactions of discourse between gender ideologies and welfare state institutions policies, This research work is an inquiry into the current interactions under the "work life balance" discourse in Japanese nationalism in the with that of the Nordic model. To develop an understanding of what might be needed to finish that agenda, I do assess the gendered contributions to the analysis of modern systems of social provision, in the partisan

correlates of different family and gender policy models with special reference to the gendered division of labor.

2. Paradox of Marginalization by the Imported Citizenship Nordic Model vs. Japanese Nationalism in The Controversy of Globalization

Unless gender issues and concerns are understood, acknowledged, and addressed, globalization will only exacerbate the inequalities between men and women, even when its effects are contradictory.

This trend automatically leads to marginalization of labor or new wave of *citizenship* that are imbedded in what might appear to be hidden economic interactions. This project examines in a particular manner in both conceptually and empirically the relationship between gender divisions and gender relations in the emergence of flexibility in the coordinated market economies, Japan with Norway, Since some have argued that welfare arena have been partial, incompletely theorized, empirically limited and fragmented by discipline.

3. Women's Position and Disposition in the Process of the Social Modernization and Cultural Change

This research work focus on modernization theories those hypothesis women's position today, since modernization brings systematic, predictable changes in gender roles in both industrialization and post industrialization phases. Cultural shifts in modern societies are not sufficient by themselves to guarantee women equality across all major dimensions of life. There is a board concept that certain socioeconomic developments have been sweeping across many societies. 4. The Role of the Women in Ehnobiology in the Era of Globalization

Working as a co-researcher with Bhanumathi Natarajan educated from University of Oslo, Norway, worked on the project "Biodiversity Utilization-synthesizing Traditional Knowledge and Western Science", funded by The Research Council of Norway (NFR). Human evolution of the Traditional Ethnobotanical Knowledge (TEK) has been an essential form of human capital relied upon for nutritionally balanced, diverse, and stable supplies of food from wild plant sources. In many regions TEK lies dormant in the memories of elders, mostly women. They retain knowledge specific to the ecosystems in which they were raised. Current research argues that it may be necessary not only to protect the TEK where it is used in a dynamic or active sense, but also to revive this knowledge where it is not extinct, merely dormant in both developed and developing world contexts and also the role of the women in sustainable TEK.

All the above research findings were **sharpen** intellects, and revealed new areas of interest, and **refined** further more by Shared with the senior scholars in the same field. Few examples: Professor Ida Blom — as a pioneer within the field of gendered history, who has contributed with ground-breaking research within several fields of gender history, such as sexuality and reproductive matters, gendered work, gender and nationalism, gendered global history, health history and the history of women's political rights over the past 40 years in Norway and in international level. A building at the Bergen University is called by her name *IDA BLOM HUS*. Also I had a great chance to share the progress with Professor of Women's and Gender Studies **Jabir Puar**, Rutgers University from USA.

Findings will also be presented in several forthcoming international conferences and publications such as: (1) Black Venus: Body, Desire, Figuration, and Narrative in Bergen University (April 2014), (2) XVIII ISA World Congress of Sociology (July 13–19, 2014) to be held in Yokohama. (3) International Conference on Social Science in Colombo. Sri Lanka. March 2014.



Picture 1. University of Bergen



Picture 2. Bergen city : Bryygen is the symbol of Bergen city



Picture 3. with Professor Ida Blom at the "Ida Blom Conference", Bergen Oct, 2013

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