On the Vocational Career Development and Labor Market \sim A Comparative Study of Employees' Self- development Training in Japan and Taiwan (1) \sim

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Abstract

Today, employees are encouraged to take self-development training to complement required knowledge, skills and abilities, and to facilitate their mobility. This study found that workers used to depend on Japanese Management might cause insensible of coming risks during the period of transition to more flexible labor market. Taiwanese employees accustomed to adapt the changes and map out their career clearly since the labor market wasn't impeccable. Deterioration of human resource might be a hindrance to economic and social development. Insufficient assistant for manpower might restrict the possibilities of technical innovation similarly. Implications for the future progress within manpower shall be emphasized.

Introduction

In general, Japan had been achieved high economic growth after the World War II due to the high quality of manpower. Yoshikawa (1997) represented that adequate supply of manpower from farming villages is regarded as one of the main reasons to lead rapid economic growth (pp. 116-126). Another reason was, the uniformly high quality of compulsory education which provided an unexcelled supply of labor force for Japanese enterprises, playing an important role in those decades (Vogel, 1979, pp. 161-177). Lastly, it has been considered that the cherishing of their workers was a key factor allowing Corporate Japan to be a winner in the international business world (Bureau of International Commerce, Department of Commerce, U.S., 1972, pp. 14-15). New graduates are employed as regular employees with a continuous education and training by their firms. The seniority-based wage system is used to let educated or trained workers working at the current

company for a long period of time avoid possible loss of educational investment. Scheme of retirement has held to allow people working until retirement age, of 60 years old in Japan. With that, an enterprise union has ever organized in each establishment by the regular employees who are supposed to engage in long-term employment extended to substantial lifetime employment afterwards.

It is reasonable to suppose that a seniority wage system, permanent employment commitment, trade unions associated by enterprises were well established in Japanese enterprises, especially in relatively large-sized corporations, during the 1940s and 1950s. Abegglen (1958) has named the characteristics mentioned above as the main framework of Japanese Management. Thereafter, the Organization for Economic Co-operation and Development (1972) stated that system of employment in Japan contributed toward progressing employees' sense of belonging, improving the stability of labor market and achieving a maximum of efficiency with investment of workers' vocational training in its Economic Survey on Japan.

The scheme of lifetime employment has recognized that new graduates to be recruited as regular employees have been encouraged to serve until retirement age, assuming no problem occur within the enterprise, or any fault made by the employees. In reality, it would be a gentleman's agreement to maintain the employment relation between labor and management. Suzuki (1999) has featured that the internal career system has integrated with permanent employment. That is, regular employees have trained on the job, and climbed to upper career levels through experiences and frequent changing of job assignments (p. 502). Hiranuma (1998) have revealed that the key concept of Japanese Management was taking new graduates, and also males employed as regular workers and adopting them as a component under the wage system based on seniority (pp. 87-88). Moreover, Tsuda (1988) has showed based on Census of Wage during 1965 and 1982 that long-term employment not only fixed in large-sized corporations, but also found among small and medium-sized enterprises from his examination (pp. 117- 123).

Wage system based on seniority has meant that workers' earnings will be increased annually as their age increased. Because of a boom in the economy in those days, Japanese firms used to reserve manpower to meet the demand of business. So a seniority-based wage system has been used for keeping sufficient labor force. Furthermore, it was formed due to the absence of labor force in the 1970s and 1980s. In order to secure the young manpower and to hire the permanent employees, Japanese enterprises hired new graduates all together in April. By doing this, the company not only offered an abundance welfare work for the regular workers, but educated them in the long run, making the newly hired graduates the enterprises' human resource by empowering them. Hashimoto and Raisian (1985) reported earning growth rates attributable to firm-specific tenure, rather than to the general market experience, were far greater for male employees in nonagriculture industries in Japan than in the U.S. (pp. 731- 735). Related findings suggest that both tenure and experience since entering the firm contribute to the percentage growth in earnings across each size of firms in Japan (Clark and Ogawa, 1992, 336-345., ; Hashimoto and Raisian, 1992, pp. 346- 354).

When capital was cheap, and corporate Japan were expanding rapidly, it was easy to promise young workers long-term employment. And the combination of lifetime employment, senioritybased wage system and rapid growth has encouraged firms to invest in wasteful training. The employees were rotated among jobs and locations in their career to enrich their working experiences and capacities since employed.

Taiwan has also reaped a rich harvest from rapid industrialization since the late 1970s in spite of a defect in coal, ironstone and petroleum to sustain its manufacturing industry. Fortunately, the sugar can industry had been well tapped in the colonial period. Tea, camphor and sugar were exported to exchange foreign currency in the post-war years. While, insufficient of skilled workers has been a hindrance to economic development at the initial stages, other research stated that Taiwan was poor in natural resources but rich in unskilled and semi-skilled manpower (Lin, 1973., & Galenson, 1979., & Ho, 1995., & Xing, Wu and Chung, 2002). Another, economic reform initiated in the late 1950s facilitated a smooth shift from the relatively low income labor force from primary industry to non-agriculture sectors which were having relatively high income. The shift has contributed to the economic development in Taiwan (Galenson, 1992, pp. 29- 32., ; Ho, 1995, pp. 237- 239). Whereas the quality of human resources might differ from Japan to Taiwan, an abundant supply of manpower for the Golden Age of both countries was similar.

Taiwan, as a Japanese colony between 1895 and 1945, the Japanese governor Kodama and civil secretary Gotou had developed an educational system since 1896, and the Imperial Rescript on Education obliged the former Taiwanese to go to school. The rate of entering school was only 5.3% a decade later, however, it reached to 29.0% in 1926 (Lin, 1929, pp. 52- 54), 46.9% in 1937, and attained to 64.8% near the end of the war in 1942 (Taiwan Daily News, April 1943, p. 17). Due to the end of the war and Taiwan being captured and governed by the Kuomintang troops, related official

statistics were unclear between 1943 and the 1960s.

Taiwan's population was 6.6 millions at the end of 1943. About half million of the population decreased with the withdrawal of Japanese troops and immigrants. It got back to 7.5 million excluding the military in 1950. It has been estimated that at least half million Japanese, including lots of engineers and government officials were forced to retreat after the war (Liu, 2004, pp. 18-22). The vacancy of technician and public servant positions had replaced by technocrats from mainland China. At the same time, the administration took into account the improvement of the future human resource. This has been identifying as a leading factor of growth in Taiwan's economy. Based on Census on Family Register of Taiwan and Demographics of Taiwan, over 42.9% of the population was unlettered people who were over 12 years of age in 1956. This dropped to 28.2% in 1965 (Liu, 1991, pp. 13- 34). Later, the rate of literacy went up to 85.1% in 1976 and 90.3% in 1986. Since the government made six years of primary schooling compulsory, 98.8% of enrollment in elementary school has achieved in 1978, according to the Statistics of Education. Galenson (1979) noted that clearly, the productivity of the labor force raised by the improvement in education (p. 395).

In review of the past rapid development in economics, it's easy to explain that Taiwan had acted as a follower of Japan on the process of industrialization if we used the flying-geese model that was coined originally by Kaname Akamatsu. However, characteristics of each labor market and the institution of employment seem to vary from one to another. Japan's employment system including the lifetime employment commitment, seniority-based wage system and so on might affect employees' decisions of doing vocational career development. For instance, Japanese enterprises were famous for taking care of their employees, but it wasn't generalized in Taiwan excluding only a few large-sized corporations and the state-owned enterprises. In Japan, with tacit commitments of employment and stable raising earnings, workers seem to have more incentives and the willingness to involve in self-development training. The Japanese system of job rotation and firmspecific training provided its companies with some advantages over western rivals between the 1970s and the 1990s. While, Taiwanese employees were afraid of forcing to quit. Hence, the best way to be a survivor in the labor market was to take part in various of vocational training. Even though the employees bore most of expenses by themselves, they then expected to have a higher income in the existence firm or a new one after any career development implemented.

Vocational Career Development in Japan Seems to be in Decline

Because of economic recession in the early 1990s and prospect of the future is still uncertain, the essence of Japan's employment system seems to be transfigured. For example, the vital of seniority in its wage system has become weaker and weaker, more and more companies have switched their wage system to merit-based pay. In order to reduce personnel cost, and to enhance organizational flexibility, more Japanese companies begin to use the external labor workers or temporary workers rather than building employees' skill base through training and education, despite benefit of internal full-time employees' development of skills and capabilities has been identified (Bettis, Bradley and Hamel, 1992., & Hamel, Pradalad, 1994., & Lei, Hitt, 1995), greater stability and predictability of a firm's stock of skills and capabilities had revealed (Pfeffer, Baron, 1988). In addition, based on the Report of Basic Survey on Ability Development released by the Japan Institute for Labour Policy and Training (2003), it showed companies offering education opportunities only for selected employees increasing as well as those contributing chances for the entire laborer declined (pp. 33- 34).

Japan, one of economic advanced nations in Asia, ought to innovate in technology depend upon its outstanding manpower to keep the economic domination. Labor force in Japan also has expected to engage in high value-added business and improving their productivity by technological innovation. There is no more cost advantage to cope with economic developing countries in low value-added goods or services. On the other hand, the weight of increasing personnel costs fell on business administration of Japanese enterprises. Most of them could rare afford the educational investment for the whole employees in reality, and had a tendency to pay the bounded training expenditure for the selected laborers.

In 1999, a poll on Japanese employers who owned less than 100 employees and took the midcareer workers as regular full-time workers in the past year suggests that 55.8% of them are zealous in doing employees' vocational career development according to the Specific Survey on Needs of Manpower by the Japan Chamber of Commerce and Industry (see Table 1). In addition, Sato and Genda (2003) indicate that more employees in the enterprises, the higher probability that enterprises conducted the vocational career development for them, however, excluding enterprises whose employees more than 100 persons (pp. 35-36).

		Establishments	Extremely Approval	Approval	Disapproval	Extremely Disapproval	Unknown
Grand Total		4119	5.7	50.1	39.3	3.2	1.7
	Under 4	393	5.3	45.3	42.0	6.1	1.3
	5-9	751	5.7	48.7	40.2	3.8	1.6
	10-19	998	5.0	48.3	40.6	4.2	1.9
Number of	20-29	583	5.5	53.0	37.2	2.9	1.4
Employees	30-49	625	5.3	51.2	39.7	1.9	1.9
	50-99	630	7.9	53.8	36.0	0.6	1.7
	Over 100	33	15.2	36.4	45.5	0.1	3.0
	Increased	654	8.4	58.4	30.4	2.8	1.4
Return	Level Off	1105	4.7	50.5	40.6	4.3	2.1
	Decreased	1794	4.2	44.8	44.6	4.8	2.7

Table 1. Working on Employees' Vocational Career Development Actively

From "Needs of Manpower Survey," by the Japan Chamber of Commerce and Industry

Table 2. V	lorking on	Employees'	Vocational	Career	Development	Actively
	0					

Unit:%

Unit:%

		Extremely Approval	Approval	Disapproval	Extremely Disapproval	Unknown
Grand Total		3.5	40.4	45.4	3.7	2.0
	Under 30	2.1	32.3	51.9	12.2	1.6
	30-49	3.7	37.4	47.8	9.4	1.6
Number of Employees	50-99	3.9	40.0	44.6	9.0	2.5
1 - 5	100-299	2.9	44.9	43.9	6.8	1.6
	Over 300	4.5	53.4	37.6	3.9	0.8
	Under 50 Millions	2.0	38.0	44.0	12.0	4.0
	50-100 Millions	4.3	34.8	47.8	8.7	4.3
	100-500 Millions	5.2	38.6	44.1	10.5	1.6
Return	500-1000 Millions	4.1	35.5	47.5	10.9	2.1
Return	1-5 Billions	2.9	41.1	46.2	7.5	2.3
	5-10 Billions	4.5	42,2	41.6	9.7	1.9
	10-50 Billions	3.4	52.3	40.9	2.0	1.3
	Over 50 Billions	5.6	52.8	36.1	5.6	0.0

From "Basic Survey on Ability Development," by Mitsui Knowledge Industry Co., Ltd.

The similar question has been asking to the employers hiring more than 30 persons among industries in 2004, the result exhibited 43.9% of those polled thought they had been actively executed vocational career development for their laborers by the Basic Survey on Ability Development (see Table 2). It also represented that the more employees in the firms, the higher probability that employees' vocational development training conducted. Besides, Japanese employers don't seem to neglect the importance of human resource and still to develop training programs for their laborers actively. While merit-based pay spread wildly, the incidence of seniority-based components reduced, the Japanese corporations showed the convergence toward the principle that employees should take responsibility for their own vocational career development. Tendency of firms doing vocational career development for their employees were equivalent to the Needs of Manpower Survey, although the targets of survey were slightly different.

The sense of Japanese employers seems to be constant in enriching his quality of human resource. Workers of the enterprise implementing planned OJT, Off-JT, or assistant program for self-development training also seem to be highlymotivated. However, it has also revealed the transformation of employers' real intentions through the Basic Survey on Ability Development mentioned above. Over 70% employers considered that it is necessary to help employees developing their careers as well as less than 20% of them believed the responsibility of vocational career development on employees' shoulders. On the contrary, hereafter, employers who will take it as their duty decreased to 71.2%, regard it as employees' liability increased. The transition has clearly existed at the same researches in 2002 and 2003.

In addition, the Survey of Educational Training and Career Counseling conducted by the Japan institute for Labour Policy and Training from October 2003 collecting employers, trade unions as the object has proved that near 70% of them believed that the management beard the liability for doing employees' vocational career development, 3 in 10 considered that employees were in charge of their vocational career development until nowadays. Meanwhile, Okuda (2004) noted 49.5% of them were taking it as their own duties as well as 48.6% of them indicated that employees have to take the responsibility in the viewpoint of future (pp. 15- 17).

The subject of these surveys differ from one to another. it took employers having more than 30 workers as the object of the Basic Survey on Ability Development while there had four-fifths respondents came from enterprises, single unions, industrial unions employing over 1000 persons on the Survey of Educational Training and Career Counseling. We might recognize that large-sized enterprises made their modification on employees' vocational career development faster than the relatively small and medium-sized ones did although large ones could afford the educational investment easily.

In another dimension, return of the enterprise have also involved into the recognition of

responsibility concerning vocational career development. It revealed the correlative sales and employers' recognition of employees' vocational career development referring to the former Specific Survey on Needs of Manpower (see Table 1). About two-thirds enterprises that revenue increased had a positive attitude to conduct employees' vocational career development. By the same token, the same phenomenon appeared in the Basic Survey on Ability Development conducted by Mitsui Knowledge Industry Co., Ltd. in 2004 (see Table 2). The enterprises whose revenue are booming or relative higher return than others seem to have an affirmative attitude to think of enhancing human resource as a duty. However, most have replied that the estimate of business condition became worse whatever in manufacturing industry or others from the second quarter in 1992 by the Short-term Economic Survey of Enterprises in Japan (see Figure 3). Therefore, we might reasonable assume that the significance of employees' vocational career development had degraded after the early 1990s speculative bubble. Most existing models of vocational training held by the government or the management such as planned OJT and Off-JT have became not to correspondent to each individual's career development lightly. Highly motivated employees ought to do self-development training that meet the demand of labor market on their initiatives.





A Hindrance to Further Development in Taiwan

As to Taiwan, due to the appreciation of the New Taiwan Dollar and the price of land ascended gently since the 1980s, currency restrictions deregulated by Taiwan government in 1987, foreign investment increasing rapidly. The Economist, a weekly paper edited in London, said that even the Asian Financial Crisis occurred between 1997 and 1998, Taiwan stood out as a special case because of its healthier balance of payments and foreign currency reserves had been sufficient for defending its currency (2000, November 11). It didn't make the foreign investment slow down. Instead, it

accelerated Taiwanese enterprisers to put money into Southeast Asia countries where their currencies devalued to use cheaper labor there than before (1998, November 7). Although the innovation of technology lagged behind, Taiwanese entrepreneurs optimistic recognized that business chances would be increased while Taiwan became a member of World Trade Organization in 2000, it has stimulated labor- intensive industries shift to foreign countries to take advantage of cheaper manpower, especially in mainland China. Most had felt apprehensive for the de-industrialization, also called hollow-out would be appeared because lots of labor-intensive enterprises moved out from Taiwan. Once, Taiwan's economy contracted by 2.2%, the first whole year of negative growth in half a century, as well as the rate of unemployment surged from 2.9% in 1999 to 5.2% in 2002 (see Figure 4).



From "Economic Statistics Annual 2003," by Department of Statistics, Ministry of Economic Affairs and "Manpower Survey 2003," by Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Taiwan



Figure 5. Structure of Real GDP by Industry in Taiwan

From "Economic Statistics Annual 2003," by Department of Statistics, Ministry of Economic Affairs, Executive Yuan, Taiwan

Though Taiwan's economy has recovered quickly, but it seems have no more prosperous years than before. The rate of unemployment also rose considerably. Meanwhile, the index of labor productivity hadn't declined, kept the upside in high spirit. It has retained the trade surplus from 1976 to 2003, the declination of export competitiveness hasn't revealed. However, the share of the real GDP in manufacturing industry had hit a high record at 47.2% in 1980, then dropped to 30.4% in 2003 (see Figure 5). Figure 6 shows changing in the industrial distribution of the labor force accompanying rapid industrialization. The proportion of the working population in manufacturing industry showed the same trend. It has been established at 42.5% in 1980, hit a new high at 42.8% in 1987, and then fell into 34.8% in 2003. Manufacturing industries has still maintained a population of 3.3 to 3.4 million workers in Taiwan, but the growth rate of employed persons has shrunk. Namely, manufacturing industry cannot afford more employment opportunities than before (see Figure 7).



Figure 6. Structure of Employed Persons by Industry in Taiwan

From "Economic Statistics Annual 2003," by Department of Statistics, Ministry of Economic Affairs and "Manpower Survey 2003," by Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Taiwan





From "Manpower Survey 2003," by Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Taiwan

It might put workers in manufacturing industry at a disadvantage to be hiring with raising labor productivity. Another, labor-intensive industries shift to capital- or technical-intensive industries have also led to reduction of job opportunities for manufacturing workers. Ministry of Economic Affairs (MOEA) has announced that most firms have active innovated upon automation equipment over the last decade. According to the report released by MOEA (2003a), annual investment of automation equipment in manufactures per capita has been at NT\$ 1.2m in 1991, increased to NT\$ 5.4m in 2002, approximately 4.5 times increased. In particular, per capita at information technology industries in 2002 has been at NT\$ 6.1m, also expanded about 10 times as large as per capita in 1991 (see Table 8). As an outcome of electronic and automation, the average economic effect of reducing personnel cost has been NT\$ 9.3m, and then 9.8% of existent manpower curtailed, 17.3% of the labor productivity improved.

LII	ipidyee by ind	Ţ	Unit: N.T. \$ milli	on per capital			
	Grand Total	Industry					
Year		Metal & Machinery	IT & Electronic	Chemistry	Others		
1991	1.2	1.1	0.6	2.5	0.8		
1993	1.3	1.4	0.8	2.6	1.0		
1995	1.6	1.8	0.9	2.9	1.2		
1996	1.8	2.0	1.1	3.0	1.3		
1997	2.0	2.2	1.5	3.0	1.5		
1998	2.2	2.3	1.9	3.3	1.7		
1999	2.5	2.5	2.2	4.2	2.1		
2000	3.0	2.6	2.8	4.8	2.3		
2001	4.9	3.8	5.3	7.6	2.7		
2002	5.4	4.1	6.1	8.0	2.9		

Table 8. Investment of Automation Equipment in Taiwan Manufactures per Employee by Industry

From "Report on Automation & Electronic of the Manufactures 2002," by Department of Statistics, Ministry of Economic Affairs, Executive Yuan, Taiwan

The amount of employed workers in manufacturing industry seems to be flattening or reduced. According to the same MOEA report mentioned above, insufficient skilled technicians has been a delicate issue while the mechanical facilities innovated in Taiwan's firms. As half of examined enterprises requested, Taiwan authority has supposed to be training skilled workers that meet the demand of labor market. In spite of employed persons in manufacturing industry have been on the decrease, the demand of skilled workers who are capable of operating and maintaining the automatic equipment have still strong. Moreover, most of automatic equipment were imported, namely, the production in Taiwan's manufacturing industries have relied upon foreign companies those dominated the key technology. It has represented that more than four-fifths majority of machinery in information technology and electronic industries, nearly half of the automatic equipment in metal & machinery industries, chemistry industries imported (see Table 9). The equipment merely innovated or sold by the domestic companies. In other words, even an

Industry Metal & Machinery		Foreign	Domestics
		59.2	40.8
	IT & Electronic	85.5	14.5
Chemistry		43.8	56.2
	Others	36.9	63.1

Table 9. Ratio of Automation Equipment Investment in Taiwan Manufactures by Source, Industry

From "Report on Automation & Electronic of the Manufactures 2002, by Department of Statistics, Ministry of Economic Affairs, Executive Yuan, Taiwan

overwhelming majority of Taiwanese educated compulsorily and most of them have achieved a high level of educational attainment, the level of technological hadn't developed fully yet.

Not only automatic production made an impact on employment, but foreign investment also had an effect on it. Ku (2002) stated that the amount of laborers increasing 19.3% in firms have invested outward, but only 2.7% in those firms hadn't been doing it between 1993 and 1999 (pp. 63- 66). Briefly, foreign investment might cause the losing of job opportunities when production transferred to overseas. As the factory expanded in foreign countries, more jobs seem to be certainly created in the home country than others. However, a distinction between growth rate of workers and staff in these multinational corporations is considerable. The amount of workers only increased in 4.8% while the staff grew up to 18.1% at the same time. We might speculate the demand of workers got lower and lower due to labor-intensive industries removed from home land, but the managerial staff corresponding to the development of multinational corporations has still in demand.

Ito (2003) pointed out the total number of workers in Taiwan's manufacturing industry has been diminishing since 1987 while the number of staff increased (p. 25). Precisely, with the transformation of industrial structure, the demand of labor in manufacturing industry inclined for declining, the service sector has expected to be creating more jobs for the labor.

Even, it hasn't much call for workers in services industries, the demand of staff has been mounting and vice versa. One of objects to the transformation might be the sophisticated business, and the development of information technology. Furthermore, construction industries offered a large quantity of jobs for non-skilled worker, and made a good use of them before 1995. Against a backdrop of recession in real estate business of the late- 1990, most workers in construction industry have lost their jobs. While as the rate of unemployment climbed suddenly, the structural unemployment also became a matter of great urgency. Especially, the young, relatively loweducated labor, those haven't accumulated skills, knowledge, working experiences yet tended to suffer terrible pain from jobless.

High talents are essential to do further research and to develop advanced technology. The outcome of technological innovation would be an industrial base of Taiwan. We almost could emphasize that the further growth of economic won't be done unless the quality of manpower improved. Within the fierce competition of international trading against the developing countries and insufficient of talents in Taiwan, it becomes a pressing matter that how can we enhance employees' capability and to make the most of their skills and abilities. Here we consider that the employees' self-development training would be the best solution to enrich the quality of the labor force in Taiwan.

Definition

The theoretical review and general recognition of economic development supporting this study address labor market difference and vocational career development for full-time workers, before developing these thoughts, it's important to discuss the use of the terms "career development" and "self-development training".

Some prior researches have used the term career as the pattern of work-related experiences that span the course of individual's life (Greenhaus, 1987, p. 6., & Thomson and Mabey, 1994, p. 123). Also, career have been described as the unfolding sequence of individual's work experiences across time (Arthur, Hall and Lawrence, 1989, p. 8), a general course that a person chooses to pursue through out his or her working life (Mondy and Noe, 1996, p. 300). Hall (1996) emphasized that career is managed by the laborers themselves, not organization. And it's a lifelong series of identity changes and continuous learning (p. 9). The opposite of careers conceived to unfold in a single employment setting is so-called boundless careers since individual may be comprised of one or many jobs (Arthur & Rousseau, 1996, pp. 4-5).

The meaning of career development noted as a process designed to assist workers in managing their careers looks at the long-term career effectiveness and success of organizational personnel (De Cenzo and Robbins, 1996, p. 267). From the management's point of view, career development regard as a formal approach taken by the organization to ensure workers with appropriate qualifications and experiences are available when needed (Mondy and Noe, 1996, p.300). Riverin-Simard (2000) stated that career development is in constant change due to adults in the second half or working life meet with numberless new beginnings and career transitions (p. 115). The National Career Development Association (NCDA), a division of the American Counseling Association (ACA) has been defined "career development" as the total constellation of psychological, sociological, educational, physical, economic, and the chance factors that combine to influence the nature and significance of work in the total life span of any given individual.

In this paper, the process of work-related experiences and continuous learning designed to assist workers through out his or her working life is adopted as our definition of the term career development.

Another, the concept of self-development training, Nagai (2004) has defined it as a method that learning knowledge by self-discipline in a broad sense, not restricted within vocational career development (p. 133), and differed from in-house training, emphasized the subject of it was workers themselves (Okui, 2002, p.231). On the contrary, Hanami (2001), a former president of the Japan Institute of Labour, defined the self-development training as employees setting the goal, planning how to achieve it, and then challenging to take kinds of certification or conducting vocational career development by themselves (p. 81).

Japan Industrial Training Association (JITA) interpreted self-development training as a matter that individual makes every effort to exercise, exhibit his or her vocational ability or capacity to the maximum or the best (1964, p. 730). Beyond that, the meaning of self-development training defined in the General Survey on Private Educational Training Conditions conducted by Ministry of Health, Labor and Welfare (MHLW) as a kind of training concerning vocational career development what employees conduct it to improve, advance their capacity independently. It means that the nature of self-development training emphasized upon employees' determination of conducting vocational career development, differs from other educational training held by enterprises.

The definition of self-development training would be a kind of vocational training decided to do it on employees' own initiative. Neither enforced to implement it by their employer, nor their linemanager or staff, and it has expected to reinforce their long-term employability.

Under the Necessity of Self-development Training

Reasons why self-development became an important expectation or requirement in Japanese firms nowadays would be described below.

OJT had been one of the most important methods to do vocational career development in Japanese enterprises. However, the young laborer's recognition of working and employees' concern in the work place seem to transform a lot. Half of young member of unions who working in electronic of information industries remarked that they were not trained sufficiently beyond the routine business according to the data released by the Japanese Electronic and Information Union Research Institute (2004), it also stated 1 in 3 respondents rejoined that they even could not feel the atmosphere of training employees at work.

Genda (2004) has indicated that most enterprises doubted the effect of employees' training since their revenue decreased recently years. Japanese employers focused training on the core human resource and recruited non-regular employees like temporary workers that meet the business conditions from the external labor market (p. 163). Instead, other researchers try to view workers' situation practically, they considered that workers to be taking self-development training to build his or her own longtime career on the basis of in-house training that only offered firm-specific skills in common since the employment won't be no more stable (Fujimura, 2003, pp. 15- 26., & Yoshida, 2004, p. 40). Henceforth, Individuals made endeavor to do self-development training, or educated in school initially counted for something. Depend upon the vocational career development that operated by the enterprises would not be the best policy any more.

The actual implementation of employees' vocational career development has been diminished according to the Report of Basic Survey on Ability Development released by the MHLW(Japan Institute of Labour, 2002; Mitsui Knowledge Industry Co. Ltd., 2004). In 2003, only 2 in 5 enterprises held the OJT for their employees deliberately. In this connection, the enterprises offering the Off-JT for their workers also has declined. It had been to maintain at 80.6% in 1986, but fell down to 48.7% in 2002. The labor force that had been got the Off-JT decreased from 75.0% to 26.6% between 1990 and 2003. Then, the average training expenditures enterprises paid for Off-JT was \pm 6.7 million in 2001, approximately 24.6 thousands Yuan per capital. However, both of them had fell down to \pm 3.7 million per establishment and 20.9 thousands Yuan per capital in 2004. Another, meritocracy might mitigate the development of core skills and capabilities. Depend on the result of the Questionnaire Concerning About the Life of Working and Task conducted by the Japan Productivity Center for Socio-economic Development (JPC-SED) in 1998, plenty of employees noticed that no more prone to educate subordinates and junior partners since the wage system based on their merits innovated.

Mondy and Noe (1996) told that today's workers realize that if they do not continuously add value to the organization, their future is getting diminished (p. 313). Fundamentally, involvement with the whole employees has also been welcomed (Leibowitz and Mosley, 1990, p.38). London and Smither (1999) recognized that self-development training is significant to individuals in today's financially constrained organizations that need to innovate to ensure success in a changing environment. They then suggested that people have to engage in continuous learning to keep up with changes and organizational expectations (pp. 4- 5).

In substance, the training expenditure per capital in Japanese corporations decreased in recent years. On the other hand, working patterns have faced a conversion in the attitudes and consciousness of employee toward work. Young workers those lack of enthusiasm for working have been designated as a severe employment problem. Therefore, it has become a significant issue to encourage employees taking responsibility for his or her career.

In Taiwan, it seems individuals are zealous for schooling and training. However, most enterprises used to treat employees' vocational career development as workers' affairs that we'll introduce later. The supervisors seldom had been responsible for providing support, advice and feedback of their career development and future visions. Therefore, to build the career without boundary, Taiwanese workers are supposed to seek information to identify skill gaps, and anticipate how changes elsewhere in the company, the industry, even the whole world may affect the requirements for jobs whatever in quantity or quality. It means the basis for the decision to excuse career development only can rely on their personal judgment, and the workers shall assume full responsibility for the sequence certainly.

Above all, employees' self-development training should be emphasizeed in Japan and Taiwan. It would be regarded as the optimum solution in correspondent to rapidly changing labor market and the present conditions of vocational career development.

Objective

To date, there has been theorizing about vocational career development in Japan. The subject of it has been recognized as OJT and Off-JT conventionally. There had been limited empirical work to measure the effect on employees' self-development training. Only a few concerned self-development training, sort of vocational career developments and its benefit would be sharing with the labor and management. Another, the prior studies we mentioned above have stated that strength of Japanese enterprises is nothing but the quality of labor force. Japanese enterprises have contributed more training opportunities than those in other countries, the workers had also motivated to participate self-development activities. Accompany with transfiguration of labor market and diversification of working styles, the necessity of self-development training has been emphasized. In this study, we would like to consider the present condition in self-development training, and it's not clear that how the characteristics of each labor market affect the employees' determination of doing selfdevelopment training.

Excepting partial large-sized companies, and national enterprises, Taiwanese employers don't place a special emphasis on the workers' vocational career development. Since the severe international competition among medium-sized and small enterprises in Taiwan, the employers there can't afford sufficient training opportunities for their employee may justly be considered. Consequently, the responsibility of taking education went backward to the workers themselves. The effectiveness of self-development training is disputable.

Thus, our objective in this paper is to reflect upon the decisively difference between Japanese employees and Taiwanese employees, and to conjecture about the characteristics of both labor market from the 1980s, the period of economic growth. The raw data collected by questionnaire.

Hypothesis

As we had mentioned above, Japanese firms are famous of its well treatment for the labor force. The young laborers had used to foster in a long-term perspective. Based on the so-called Japanese Management, offering vocational career development opportunities and the implementation of seniority-based pay were commonly given to individuals due to the management had felt an overwhelming desire to preserve manpower. It had been encouraged the workers to enrich their human resource through continuous training under the scheme of lifetime employment fundamentally. Accordingly, it seems that Japanese employees had took part in planned OJT and Off-JT on the enterprises' initiative as well as self-development of his or her own account under the umbrella of the corporations.

Both the ratios of newly opened business and closed ones in Taiwan is higher than each one in Japan. In addition, only a few Taiwanese enterprises are still alive since found. The rate of labor turnover in Taiwan has been recorded high in 3 decades, that is to say, labor movement has proceeded rapidly, and long-term employment in Taiwanese enterprises hadn't generalized as Japanese enterprises had. The firms in Taiwan would rather recruit human resource simply from the external labor market, than training their existing manpower who also might quit the job unexpectedly. Taiwanese enterprises had executed limited education activities and training, but the product of vocational career development had rarely verified in empirical work yet. It's indispensable for the workers to build their career in order to respond to rapid changing in the economic environment without sufficient assistance. We might reasonably doubt that Taiwanese employees are hard to map out their future career to develop human resource required.

Because the workers have the so-called Japanese Management, here we formulate a hypothesis that Japanese employees are eager to take self-development training than Taiwanese employees do.

Methodology and Limitations

To verify the hypothesis, we had conducted a questionnaire survey during 20 Dec. 2003 and 20 Jan. 2004 in Taiwan as well as the most and feasible samples collected during 10 Feb. 2004 and 10 Mar 2004 in Japan. Without regard to age, sex, or occupation, we made the most of regular employee who was working in secondary industry or those in tertiary industries, mainly the service industry. One of my occasions doing that was we could not predict how many samples will be collected with a restriction of expenditure and the limitation of research schedule. Second, we also didn't comprehend the characteristics of workers' behavior toward self-development training with mere foregoing studies, so we assembled as more opinions as we could.

In Taiwan, the delivery of questionnaire had done through cooperative companies and acquaintances. Recovery of survey had completed by mailing. Five of replies companies are relatively large-sized ones who had over one thousand workers, in brief, most of the respondents

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are affiliated with medium-sized and small companies. The seat of them had distributed widely throughout Taichung county, Taichung city, Taipei city, Taipei county, and both of Hsintsu and Tainan Science Industrial Estate where are renowned as newly IT & semiconductor industrial zone.

In Japan, we have telephoned cooperative companies, chiefly from registered member lists of the Chamber of Commerce and Industry in Takasaki city, Maebashi city, Isesaki city, Ota city, and Shibukawa city, and the rest of those have selected from telephone directory properly, for filling out the questionnaire. The population companies were all belonged to manufacturing industry and service sector. After the selected companies agree with our survey, and then we deliver the questionnaire by mailing as well as the process of recovery. Due to the insufficiency of empirical studies, we positioned the research as a fundamental survey to clarify the present state of employees' self-development training. The poll has conducted in Gunma Prefecture alone, autonomy between metropolises likes Tokyo and the provinces like Niigata Prefecture or Nagano Prefecture. It might have bias toward collected respondents, and the amount of samples didn't as higher as we collected in Taiwan. And most of cooperative companies have defined as medium and small-sized business, it might hard to apply to large-sized corporations in Japan. Namely, it would be inadequate to describe the whole circumstance in Japan. We would like to enlarge the scope of research geographically, and increase the samples reasonably according to the necessary condition in our future study.

Unit: Persons					
	Samples	Total	Female	Male	
	Samples	138	40	98	
	Under 19	2	1	1	
	20-29	33	15	18	
Age	30-39	43	10	33	
Age	40-49	33	9	24	
	50-59	25	4	21	
	Over 60	2	1	1	
	Under Junior High School	1	0	1	
Educational	Senior High School	64	18	46	
Attainment	College	33	18	15	
	University	40	4	36	
Average Age		38.1	35.2	39.3	

Table 10. Attribution of Samples in Japan

Unit: F				
Samples		Total	Female	Male
		747	448	299
	Under 19	4	2	2
	20-29	358	250	108
Age	30-39	273	148	125
Age	40-49	91	40	51
	50-59	20	8	12
	Over 60	1	0	1
	Under Junior High School	32	18	14
	Senior High School	163	99	64
Educational Attainment	College	272	174	98
	University	236	149	87
	Graduate School	44	8	36
Average Age		31.5	30.2	33.5

Table 11. Attribution of Samples in Taiwan

To redeem the validity of this paper, we quoted some statistical data issued by public offices to help us demonstrate the differences between labor markets in Japan and Taiwan, in addition, how does each labor market make an impact on employees' behavior of self-development training. Items of questionnaire has been written below, such as have you ever been to implement self-development training in the past 5 years, the methods of implementation, who paid for the training expenses, the incentives that make you to do self-development training, what was the toughest matter you had been faced while you chose to involve in the training, what did you acquired, learned, or gained through the training and et all. were asked to Japanese workers and Taiwanese workers. Unidentified and incomplete answer sheets have eliminated from gathering, effectual respondents in Japan have reached to 138. And meanwhile, it has also attained the useful respondents of 747 in Taiwan. The attribution of respondents has been revealed above (see Table 10 & 11).

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Bibliography

Abbegren, James. C. (1958). *Nihhonn no Keiei* [The Japanese Factory : Aspects of Its Social Organization]. (Urabe, Kuniyoshi & Mori, Yoshiaki, Trans.). Tokyo: Diamond Publishing Company

Arthur, M. B., & Hall, D. T., & Lawrence, B. S. (1989). Handbook of Career Theory. New York: Cambridge

On the Vocational Career Development and Labor Market (MOGI · WANG)

University Press

- Arthur, M. B., & Rousseau, D. M. (1996). Introduction: The Boundaryless Career as a New Employment Principle. In Arthur M. B. & Rousseau, D. (Eds.), *The Boundaryless Career: A New Employment Principle for a New Organizational era*. New York: Oxford University Press
- Bank of Japan (1984-2004). *Tankan* [Short-term Economic Survey of Enterprises in Japan]. Tokyo: Bank of Japan

Becker (1975). Human Capital. New York: Columbia University Press

- Bettis, R.A., Bradley, S. P., & Hamel, G. (1992). Outsourcing and Industrial Decline. Academy of Management Executive: 6(1), 7-22
- Chang, Kuo-hsing (2000). *Senngou Taiwan Roushikannkei no Kennkyu* [The Labor Relations in Postwar Formosa]. Fukuoka Japan: Chugoku Bookstore
- Chen, Tsung-hsiung (2003). *Taiwan no Keizaihattenn to Seifunoyakuwali* [Growth of Economic and Function of Government in Taiwan]. Tokyo: Sensyu University Press
- Clark, Robert L., & Ogawa, Naohiro (1992). Reconsidering Tenure and Earnings Profiles of Japanese Men. *American Economic Review*: 82(3), 336-345
- De Cenzo, David A., & Robbins, Stephen P. (1996). Human Resource Management. New York: J. Wiley
- Deyo, Frederic C. (1989). *Beneath the Miracle : Labor Subordination in the New Asian Industrialism*. Berkeley and Los Angeles, California: University of California Press

Economist Newspaper Limited (1998, January 3). [weeklies] The Flexible Tiger. The Economist:346, 73

Economist Newspaper Limited (1998, November 7). [weeklies] The Survivor's Tale. The Economist:349, 10

- Economist Newspaper Limited (2000, November 9). [weeklies] Too Many Debts to Settle. *The Economist:357*, 109
- Fujimura, Hiroyuki (2003). Nouryokukaihatsu no Jikoukannri: Koyoufuan nomotodeno Syokugyounouryokuikusei wo Kanngaeru [Autonomic Career Development: A Consideration of Fostering Vocational Ability Under the Fluid Employment]. Japanese Journal of Labour Studies:514, 15-26
- Galenson, Walter (1979). The Labor Force, Wages, and Living Standards. In Galenson, Walter (Eds.), Economic Growth and Structural Change in Taiwan: the Postwar Experience of the Republic of China (pp. 384-447). New York: Cornell University Press
- Galenson, Walter (1992). Labor and Economic Growth in Five Asian Countries: South Korea, Malaysia, Taiwan, Thailand and the Philippines. New York: Praeger Publishers.

Genda, Yuji (2004). Job Kuriesyon [Job Creation]. Tokyo: Nihon Keizai Shimbun Inc.

Greenhaus, Jeffrey H. (1987). Career Management. New York: Dryden Press

- Hall, Douglas T. (1996). Protean Careers of the 21st Century. Academy of Management Executive: 10 (4), 8-16
- Hamel, G., & Prahalad, C. K. (1994), Competing for the Future. Boston: Harvard Business School Press
- Hanami, Tadashi (2001). *Jinnji Roumu Yougoujiden* [Dictionary of Personnel and Labor Terminology]. Tokyo: Nihon Keizai Shimbun Inc.
- Hashimoto, Masanori., & Raisian, John (1985). Employment Tenure and Earnings Profiles in Japan and the United States. American Economic Review: 75(9), 721-735
- Hashimoto, Masanori., & Raisian, John (1992). Employment Tenure and Earnings Profiles in Japan and the United States: Reply. American Economic Review: 82(1), 346-354
- Hiranuma, Takeshi (1998). Nihhonntekikeiei no Tenkai to Rousikankei [Development of Japanese Management and Labor- management Relations]. In Makino, Tomio (Ed.), Nihhonntekikeiei no Hensei to Rousikankei [Transition of the Japanese Management and Labor-management Relations]. (pp.87-120) Tokyo: Shin Nihon Publishing Co., Ltd.
- Ho, Samual P. S. (1995). Economics, Economic Bureaucracy, and Taiwan's Economic Development. In Ravenihill, John (Ed.), *China, Korea and Taiwan* (pp. 226-247). Aldershot, UK: Edward Elgar Publishing Limited.
- Hsiao, Hsin-huang (1992). Chieh-tu Taiwan Chung-hsiao-chi-yeh-chia yu Ta-chi-yeh-chia ti Chuang-yeh Kuo-cheng [The Analysis of Enterpriser's Establishment Process in Small and Medium-sized company, Large-sized company]. Journal of Taiwanese Sociology: 16
- Hsia, Lin-ching (1989). I-ke Hsiao-wai-pao-chang ti An-li-tiao-cha: Chia-ting Kuan-hsi yu Ku-yung Kuan-hsi ti Hsiang-hu Tso-yung [A Case Study of Subcontracting Firm: An Interaction Between Family Relations and Employment Relations]. *Taiwan: A Radical Quarterly in Social Studies: 2,* (n.d.).
- Huang, Tung-chun., & Fang Mei-yu., & Chou, Ting-an., & Peng, Jen-kui (1999, November). Wo-kuo Chihtsao-yen Jen-li-tzu-yuen Hsun-lien yu Sheng-chan-li Ti-sheng-tse-lueh chin Tan-tao [An Investigation of Strategy Training Human Resource and to Improve Productivity in Taiwan's manufacturing Industry]. *Chiu-yen yu Hsun-lien* [Employment and Training]: 17 (6), 49-53
- Ito, Shingo (2003). Taiwan no Sanngyoukuudoukamonndai to Taiwankeizai no Shinrou [De-industrialization Problem and the Future of Economic in Taiwan]. In Mizuho Research Institute (Ed.), Journal of Mizuho Research Institute: 2004 (2), 49-103
- Japan Electronic and Information Union Research Institute (2004). *Report of Investigation into Eagerness for Working and Career in the Young People*. Tokyo: Japan Electronic and Information Union Research Institute
- Japan Industrial Training Association (1964). Sanngyou Kunnren Hanndobukku [Handbook of Industrial Training]. Tokyo: Diamond Inc.
- Japan Institute for Labour Policy and Training (2000). *Nouryokukaihatu Kihhonntyousa* [Report of Ability Development Survey]. Tokyo: Japan Institute for Labor Policy and Training

On the Vocational Career Development and Labor Market (MOGI · WANG)

- Japan, Ministry of Health, Labour and Welfare, Department of Statistics and Information (1994-2003). *Census of Wage*. Tokyo: Foundation of Labour Law
- Japan, Ministry of Internal Affairs and Communication, Statistics Bureau (2002). Ad hoc Survey of Employment and Unemployment Conditions. Tokyo: Japan Statistical Association
- Japan, Ministry of Internal Affairs and Communication, Statistics Bureau (2004). Ad hoc Survey of Employment and Unemployment Conditions. Tokyo: Japan Statistical Association
- Japan Productivity Center for Socio-economic Development (1999). Syokuba to Kikyo no Rousikankei no Saikoutiku [Reconstruction of Labor-management Relations in the Workplace and Corporations]. Tokyo: Center of Labor Information, Japan Productivity Center for Socio-economic Development
- Koikei, Youiti (1988). Gijyutsukibann no Keisei [The Formation of Technical Foundation]. In Taniura, Takao (Ed.), *Taiwan no Kougyouka: Kokusaikakoukiti no Keisei* [Taiwan's Industrialization: The Formation of International Processing Base]. (pp.186-209) Tokyo: Institute of Developing Economics Japan External Trade Organization
- Ku, Ying-hua (2002). Tui-wai Chih-chien Tou-tzu tui Taiwan Chiu-yeh ti Ying-hsiang [Direct Foreign Investment's Influence on the Employment in Taiwan]. *Ching-chi Chien-chan* [Economic Outlook Bimonthly]: 63, 63-66
- Lei, D., & Hitt, M. A. (1995). Strategic Restructuring and Outsourcing: The Effect of Mergers and Acquisitions and LBOs on Building Firm Skills and Capabilities. Journal of Management: 21, 835-859
- Leibowitz, Zandby B., & Mosley, Sherry H. (1990). Career Development Works Overtime at Corning, Inc. Personnel: 67(4), 38
- Lin, Ching-Yuan (1973). Industrialization in Taiwan, 1946-72: Trade and Import Substitution Policies for Developing Countries. New York: Praeger Publishers Inc.
- Lin, Mo-sei (2004). Nihhon Toujika no Taiwan no Gakkoukyouiku: Kaihatsu to Bunnkamondai no Rekishibunseki [Public Education in Formosa Under the Japanese Administration: Historical and Analytical Study of the Development and the Culture Problems]. (Furutani, Noboru., & Chen, Ein-nan, Trans.), Tokyo: Takasyoku University (Original work published 1929 in New York)
- Liu, Chin-ching (1969). Taiwan no Roudouryoku to Syuugyoukouzou [Labor Force of Taiwan and Its Structure of Employment]. In Sumiya, Mikiyo (Ed.), *Taiwan no roudoujijyou* [Taiwan's Labor Situation]. (pp.14-100). Tokyo: Institute of Developing Economics Japan External Trade Organization
- Liu, Paul Ke-ching (1991). Jinnko Seisaku [Policy for Population]. In Kao, Charles H.C & Lee, Joseph S. (Ed.), *Taiwan no Yonjyuunen* [The Taiwan Experience: 1949-1989]. (Kobayashi, Mikio & Tsukagishi, Toshihiko Trans.). (pp. 5-38). Taipei: Commonwealth Publishing Co., Ltd.
- London, Manuel., & Smither, James W. (1999). Empowered Self-development and Continuous Learning. Human Resource Management: 38(1), 3-15
- Mondy, R. Wayne & Noe, Robert M. (1996). *Human Resource Management*. Upper Saddle River, NJ: Prentice Hall International

The Economic Journal of Takasaki City University of Economics vol.48 No.2 2005

- Nagai, Takeshi (2004). Jikoukeihatu to Supekutoramu [Self-development and Spectrum]. In Sato, Hiroki (Ed.), *Kawaru Htarakikata to Kyariadezain* [Changing of Working Style and Career Design] (pp. 133-158). Tokyo: Keiso Syobo
- Okuda, Eiji (2004, August). Kyouikukunnrenn to Kyaria Soudan [Educational Training and Career Consultant]. *Business Labor Trend: 353*, 15-18.
- Okui, Megumi (2002). Jikoukeihatu nikansuru Jissyoukennkyuu: Jyakunenn Jyousei Roudousya wo Taisyou Toshite [An Analysis of Self-development: Taking Female Labor as the Object]. In. Employment and Human Resources Development Organization of Japan (Ed.), *Shinseiki no Roudousijyou Kouzouhennka heno Tennbou nikannsuru Tyousakennkyuuhoukokusyo* [Research Report of Outlook on Transformation of Labor Market in the New Century]. (pp. 231-245). Yokohama: Employment and Human Resource Development Organization of Japan
- Pfeffer, J., & Baron, J. (1988). Taking the Workers Back out: Recent Trends in the Structuring of Employment. In Cummings, L.L., & Staw, B. M. (Ed.), *Research in Organizational Behavior: 10*, 257-303
- Riverin-Simard, Danielle (2000). Career Development in a Changing Context of the Second Part of Working Life. In Young, Richard A., & Collin, Audrey (Ed.), *The Future of Career*. (pp. 115- 129). Cambridge U.K.: Cambridge University Press
- Sago, Takashi (2002). Jinnjikannli to Roushikannkei: Nihhonn, Kannkoku, Taiwan, Doitsu [Personnel Management and Laber- management Relations: Japan, Korea, Taiwan, Germany]. Tokyo: Zeikeitou
- Sanno Institute of Management (2000). Annual Japan Summary Training Report. Tokyo: Sanno Institute of Management
- Sato, Hiroki., & Genda, Yuji (2003). Seityou to Jinnzai [Development and Manpower]. Tokyo: Keiso Syobo
- Shieh, Kuo-hsiung (1989). Wai-pao Chih-tu: Pi-chiao Li-shih-te Hui-ku [The Subcontracting Network: History Background]. Taiwan: A Radical Quarterly in Social Studies: 2 (1), 26-69
- Shieh, Kuo-hsiung (1999). Labor Only: Essays on the Labor Regime in Taiwan. Taipei: Academia Sinica
- Su, Chin-an (1986). Taiwan no Kigyoukeiei no Toshitsu ni Kansuru Itikousatu [A Consideration Concerning Characteristics in Business Administration of Taiwan]. Journal of Economic Studies of Seinan Gakuin University: 6, 1-27
- Sumiya, Mikiyo., & Liu, Chin-ching., & Tu, Chao-yen (1992). Taiwan no Keizai [The Economy of Taiwan]. Tokyo: Tokyo University Press
- Suzuki, Hiromasa (1999). *Development of Atypical Employment and Transformation of Labour Market*. Tokyo: Japan Productivity Center for Socio-Economic Development
- Taiwan Executive Yuan, Directorate-General of Budget, Accounting and Statistics (2003). Report on the Manpower Utilization Survey. Taipei: Directorate-General of Budget, Accounting and Statistics, Executive Yuan

Taiwan Executive Yuan, Directorate-General of Budget, Accounting and Statistics (2004a). Report on the

On the Vocational Career Development and Labor Market (MOGI · WANG)

Manpower Utilization Survey. Taipei: Directorate-General of Budget, Accounting and Statistics, Executive Yuan

- Taiwan Executive Yuan, Directorate-General of Budget, Accounting and Statistics (2004b). *Manpower Survey*. Taiwan: Directorate-General of Budget, Accounting and Statistics, Executive Yuan
- Taiwan Executive Yuan, Directorate-General of Budget, Accounting and Statistics (2004c). *Earning and Productivity Statistics*. Taiwan: Directorate-General of Budget, Accounting and Statistics, Executive Yuan
- Taiwan Executive Yuan, Ministry of Economic Affairs, Department of Statistics (2001). *Report on Automation & Electronic of the Manufactures*. Taipei: Department of Statistics, Ministry of Economic Affairs, Executive Yuan
- Taiwan Executive Yuan, Ministry of Economic Affairs, Department of Statistics (2003a). *Report on Automation & Electronic of the Manufactures*. Taipei: Department of Statistics, Ministry of Economic Affairs, Executive Yuan
- Taiwan Executive Yuan, Ministry of Economic Affairs, Department of Statistics (2003b). Economic Statistics Annual 2003. Taipei: Department of Statistics, Ministry of Economic Affairs, Executive Yuan
- Taiwan Times (1943, April). Taiwan niokeru Kougakkou no jyoukyou [The Circumstance of Public School in Taiwan]. *Taiwan Times*, 17
- Thomson, Rosemary & Mabey, Christopher (1994). *Developing Human Resources*. Oxford, U.K.: Butterworth-Heinemann Ltd
- Tsuda, Masumi (1988). *Nihhonntekikeiei no jinnjisennryaku* [Personnel Strategy on Japanese Management]. Tokyo: Doubunkan Publishing
- U.S. Department of Commence Bureau of International Commence (1972). *Kabushikikaisya Nihhon* [Japan The Government-Business Relationship]. (Oohara, Susumu., & Yoshida, Toyoaki Trans.). Tokyo: Saimaru Publisher
- Vogel, Ezra F. (1979). Japan as Number One: Lessons for American. Tokyo: Charles E. Tuttle Company, Inc.
- Wang, Yui-ching (1990). Taiwan ni Okeru Keiei [Business Management in Taiwan]. Japanese Journal of Labor Studies: 368, 56-63
- Xing, Mo-huan., & Wu, Hui-lin., & Chuan, Zu-tan (2002). Taiwan and the Philippines Industrialization and Trade Policies. Taipei: Academia Sinica
- Yoshikawa, Hiroshi (1997). Koudouseityou [Rapid Economic Growth]. Tokyo: Yomiuri Shimbun
- Yoshida, Keiko (2004). Jikoukeihatu ga Tinnginn ni Oyobosu Kouka no Jisyoubunnseki [A Practical Analysis of Self-development Training's Effect on the Earnings]. Japanese Journal of Labour Studies: 532, 40-53