A Study on the Effect of the Improvement of Investment Environment with Investment Incentive on National Economy

Jae-Young Moon[1], Won-Hee Lee[2†], Pyeong-Rak Choi[3] and Yung-Ho Suh[4]

[1]Division of Business Administration, Dongseo University, Busan, Korea
E-mail: jaymoon@gdsu.dongseo.ac.kr

[2]Int. commerce and logistics, Pukyong National University, Busan, Korea
E-mail: onlyoneheel@hanmail.net

[3]Korean Intellectual Property
E-mail: choepro@kipo.go.kr

[4]School of Business Administration, KyungHee University, Seoul, Korea
E-mail: suhyh@kcu.ac.kr

Abstract

This research is to investigate the effect of the improvement of investment environments with investment incentive on Korean national economy by looking into the foreign investment support system in Korea. To this end, first research model was set up based on our literary study and case study was conducted on 150 foreign companies that were located in industrial complex for foreign companies, received the tax benefit and government subsidization. And it was found that even though the foreign companies were contributing to the national economy in general such as in the area of production, export, employment, development of technology, there was no significant contributory difference between the investment incentive beneficiary and non-beneficiary foreign companies. Therefore it deemed reasonable to reconsider the way Korean government supports foreign companies in Korea and to reinforce foreign companies' relevance to national policy agenda with additional incentives to foreign companies located in comparatively less developed areas. As a way to promote foreign investment, promotion of investment infra such as improvement of follow-up services, openness to foreign investment, industrial deregulations in capital area, revitalization of free economic zone, efficient system to promote foreign investment and the reinforcement of public relations were considered necessary, especially the upgrading of economic structure and the integrated management of domestic and foreign investors deemed necessary for the optimal distribution of the industries.

† Corresponding Author

1. Introduction

As the world village races to its globalization, we are living in an era of multinational corporations which evolve internationally as well as domestically in search for comparative competitiveness. Since its IMF experience, Korea shifted to more active approach to secure s ; supply of foreign currency by opening up to foreign direct investments, and offering various investment incentives such as financial incentive for tax benefit, manufacturing site, subsidization for employment and training and education, and the result has been a dramatic increase of foreign direct investments into Korea. With the foreign exchange holding of more than two hundred millions in US dollars, recently more and more people with more conservative and defensive point of view are beginning to call for reconsideration of Korea's position and policy on foreign capitals. At the same time, strategic selection of foreign capital was proposed as a new direction of foreign investment policy, with more emphasis on its level of contribution to the competitiveness of Korean Economy than on just size of the inflow of the capital.

In reality, efforts to attract foreign investment is very competitive even among developed countries and BRICS the potential powers, to takes advantage of the positive aspects of foreign investments for the development of their own economy, such as expansion of investment fund and introduction of new technology, and their efforts are even intensifying for the improvement of their competitiveness, balanced regional development of their countries and the creation of new jobs. In Korea, not only the size of inflow of foreign investment was considerably small, compared to that of OECD member country, but also the outflow of Korean domestic capital overseas was so dramatic that Korea was in need of compensatory source of investment capital inflow, so that more active efforts to attract foreign investments was necessary for the investment to continue economic development, to reduce of high level of unemployment, to achieve balanced regional development, to introduce new technologies and management know-how. At the same time, giving opportunity for foreign investors to be major players in Korea could help improve both corporate business environments in line with global standards and Korea national security, therefore the promotion of foreign corporation friendliness was considered to be very important national agenda.

Of course, foreign investment had both positive and negative aspects, however if foreign investment is an inevitable choice for economic development of Korea, there should be a good system that can support foreign investment, maximizing the positive aspect while minimizing the side effects, to achieve a best result of foreign investment with the lest cost. Since the foreign exchange crisis, it is high time to review and evaluate Korean government policy on foreign investments and system to provide a better foreign investment environment that can maximize foreign investments. And it is necessary to attract multinational companies to increase foreign investments by improving investment environment for foreign capital.

Multinational companies are living organizations, sensitive to their changing environment, and many countries are competing to provide optimal environment for multinational companies, so that Korea should also make more efforts to offer better investment environments to multinational companies.

However, considering the fact that introducing foreign investments is a way to contribute to national economy, Korea should have appropriate strategic policy to achieve it. And it is because of the fact that interest of multinational companies does not always in line with Korea national interest. Even though it is basically very important to check whether government incentive system for foreign investments is in line with Korea national interest especially when incentives to foreign investment are supported by Korean taxpayers' money, it is pointed out that Korean system for foreign investments has been focused on just the size of capital inflow after the IMF crisis, therefore the incentive system should be reviewed whether it reflects the changing environments and some improvement measures should be provided. When the foreign investment policy is defined as 'a process of identifying an object of foreign investments to achieve the objective of national economy policy and providing appropriate support to maximize the foreign investments', the first thing to consider for a plan of investment policy is to set its economic objective and priority.

Therefore the priority should be set among the macroeconomic objectives such as job creation, stable supply of foreign currency, stable interest rate, improvement of international payment, financial improvement, and industrial policy such as advancement of industrial structure, development of advanced industry, and corporate objective such as improvement of competitiveness and restructuring, and when the priority is set by the government, the sub objectives and measures to achieve the higher objectives should be provided. And as a way to increase the quality of foreign investments, general investment environments should be also improved. Especially for those foreign companies who entered Korea in 1990s with supports from Korean government, their managerial achievement and contribution to Korean national economy should be analyzed to check whether the incentive system is in line with national strategic objective and to make improvement thereby.

Especially the development of the closest neighboring country China who is at the moment arising to be one of the most influential economic powers in the world can be a most critical factor for the future of Korea, so that it cannot be overemphasized for Korea whose strategic position is to be one of advanced trade countries in the 21^{st} century that the cooperation and collaboration with multinational companies is a very critical condition for Korean prevalence in the world. China who is located in the same Asia with similar industrial structure as Korea has always been in rivalry relationship with Korea, and in preparation for the possibility that Korea falls behind China into low-value added industrial and low export, low income country, Korea should accelerate its strategy of differentiation from China, focusing on R&D and Design by pairing up with foreign companies.

Hence, Korea is now in a situation to have to accelerate the change of its system of corporate environment to more open and networked corporate environment, therefore more efforts are necessary to convert to global network environment while positively embracing global practices.

The objectives of the study can be summarized as follows:

First, the importance of general trend of foreign investment environments is identified and the relationship of investment incentive and its contribution to national economy is looked into.

Second, the reaction to and evaluation of foreign companies in comparatively heavy weighted areas such as investment incentive system, management and living environment, investment infra and follow-up service which are highly influential in attracting foreign companies were looked into and improvement measures for general invest environments were looked for.

2. Theoretical backgrounds and hypothesis

2.1 Theoretical backgrounds

2.1.1 Investigation into the effectiveness of investment incentive

There are contradictory opinions in the analysis of the effectiveness of investment incentive by its type. Loree and Guisinge (1995) who investigated into foreign investments by US Corporations found that there was inversely proportional relationship between the tax rate and the level of foreign investment, and Mihir *et al.* (2001) who conducted the most of analysis in the field as a financial scholar suggested that tax, tax incentive are the most important factors in direct investment. At the same time, Markson (1995) found that the effect of tax on direct investment was so insignificant that he could not tell the difference.

Waker (1965) and Aharoni (1996), however, suggested that policy or non-policy factors are more important than the tax and subsidiary incentive when multinational companies select their business locations, but when it comes to incentive factors, the facilitation of free investment zone such as High tech complex is more better incentive than tax or/and subsidization incentives. Lee (1999) summarized the findings of existing investigations into the effectiveness of incentives as in Table1. Especially, investigation into the effectiveness of tax incentive is attracting a lot of attention recently. The "Incentive and foreign investment report" by UNCTAD published in 1995 emphasized that even though investment incentive including tax incentive, the effect was secondary compared to the general factor of foreign investments. At the same time, "Corporate tax incentive for foreign investment" by OECD published in 2001 emphasized that the effect of tax incentives is getting strength as the globalization and deregulation is accelerating.

Swenson (1994) suggested that investigation into the effectiveness of tax incentive by its kind and type of foreign investments can serve as a good guide for specified effectiveness analysis of investment incentive. He classified investment types into building new factory, merger and acquisition, joint venture in USA and investigated what effect the tax system had on the investments, and his finding was that the effect of tax was significantly different by the type of investments. In the case of new factory building or its expansion, the tax system had inverse relationship with the investment, the more the tax increased, the more the investment decreased. Similarly, there is an investigation showing that the reaction of foreign investors to the incentives can vary depending on their motivation behind the investments. Shatz and Venables (2000) classified the foreign direct investments into market approach investment and production base investment depending on their motivation of the investment, based on traditional theory. And the approach showed that the incentive e.g. tax was more effective to production base investment than' to market approach investment. The production base investment was sensitive to the profitability and tax, while market approach investment the main objective of which was to get around market barrier or to do the business more effectively was more likely to be affected by other factors than tax, to help ensure the stability of business activities and market approach.

In Korea, there have been some investigations that analyzed what effects general tax rates had on foreign investment before the introduction of tax incentive system. Lee (1999) found that the foreign investment decreased 3.35% for every 1% increase in the total tax rate, while the foreign investment increased 0.7% for every 1% increase in GNP. Therefore total tax rate, e.g. tax policy had more effect on foreign investment than GNP. And this kind of investigation called our attention to the importance of general tax policy and indicates tax cut is an effective policy for foreign investment, but more investigations was necessary to find if it still holds the same when the application of tax incentive was limited to specific industry as the case was then. That is, the recognition of the effect of incentive can differ depending on the real beneficiary, and the nature and location of beneficiary's business, and the incentive itself.

In addition, even there have been some investigations in which how much tax credit helped investment company was looked into. When asked of real benefit of tax incentive, 66.5% of the respondents said that the tax incentive helped their investment decisions, while 77.5% of them said that the tax incentive helped them with the introduction of new technology, therefore the tax incentive must have been quite attractive when it came to the introduction of new technology. From the fact that the 22 companies among the 34 foreign companies that said they would not have invested in Korea if they had not been offered tax incentive, said to have considered other countries as an alternative for their investments as well, companies besides those companies that aimed to enter Korean market were found to consider tax incentive such as tax credit for their foreign investment decision. 55.1% of the respondents said that tax incentive in Korea does not fall behind other countries, so that if some procedural difficult improved in Korea, the tax incentive system will competitive, compared to that of other competing countries. But in the light of the fact that 76.5% of the respondents said that they would have made investments in Korea regardless of the tax incentive, while 83% said that the tax incentive would not have had impact on their original investment decision, therefore tax incentive was not an critical variable when they made decision on the introduction of technology, the size and the timing of their investment.

Table 1. Summary of the findings of existing inventions on investment incentive

Investigator	Description	Results
Root and Ahmed (1979, 1981)	∘ Tax incentive has positive effect on foreign investment	Positive
Loree and Guisinger (1995)	∘ There is positive relationship between USA foreign investment and the tax incentive of the attracting country.	Positive
Porcano and Price (1996)	∘ Tax and financial incentive look less important than other factors ∘ while financial incentive is not important, tax incentive is more important than financial incentive, but its effectiveness is limited ∘ There are other factors that affect the effectiveness of the incentive and foreign investment.	Negative
Rolfe *et al.* (1993)	∘ The preference of the incentive differs depending on the characteristics and size of investments	Positive
Loree and Guisinger (1995)	∘ The incentive of attracting government plays a critical role when a foreign company makes its investment decision.	Positive
Cable and Persuad (1987)	∘ The effect of tax incentive is big by offsetting the effects of other factors on FDI decision.	Positive (Partially positive)
Rolf and White (1992)	∘ The effect of import tax exemption or credit is strong when offered in better condition than other incentives ∘ When financial and other incentives are not attractive, tax incentives such as tax credit and import tax exemption are not effective in attracting foreign investment.	Negative

Today, in Korea, even though cash incentive can be classified into financial incentive, there is neither record of the result nor case study since its inception in 2004. Recently, Ministry of Knowledge Economy of Korea asked Economic Policy Research Institute to do analysis and evaluation of the 164 companies that received financial incentives (e.g. land purchase cost, education and training subsidiary, lot sale difference support, rent support) from the government and the findings about the effectiveness on foreign investments, jobs creation, creation of additional value and profitability are as follow:

First of all, regarding foreign investment, the amount of money given to the 164 companies was 495,300,000 won (about 382,750 US dollars) in total and the reported amount of investment by the companies that received financial incentives was 3,900,000,000 US dollars and 1,880,000,000 US dollars arrived in Korea. When the reported investment was divided by the total financial incentive, the investment multiplier was 10.2 with the USD exchange rate at 1,200 Won per USD, and the investment multiplier was 4.9 for the total investment arrived in Korea. That is, every incentive of 1 won generated reported foreign investment of 10.2 won, while in terms of arrived investment, every incentive of 1 won generated 4.7 times more foreign investment.

Table 2. Effect of financial incentive on foreign investment

No of beneficiary companies	Amount of incentive	Amount of foreign investment (million US dollars)		Investment multiplier	
		Reported	Arrived	Reported	Arrived
164	4,593	3,903	1,881	10.2	4.9

Foreign companies that received the incentives, we were able to collect employment data from the 21 companies and the total incentive given to the companies was 117,000,000,000 won (about 97,500,000 US dollars) and the total number of employees was 9,534. To calculate the number of jobs created by the foreign investments, the number of the total employee was multiplied by the foreign investors' share in the company and the result was 8,267. To be more specific about the job creation effect of the financial incentive, the incentive amount per employee at the incentive receiving company was calculated.

The incentive amount per employee for the total number of employments at the company was 12,300,000 won (about 10,250 US dollars), while the incentive amount was 14,200,000 won (about 11,800 US dollar) per employee who were employed as a direct result of the foreign investments and this amount was only a third of personnel expense at foreign investment company which was 41,860,000 won (346,057 million won/8,267 employees) per employee, so that the return on financial incentive for job creation and foreign investment was quite high and effective. Also from the fact that the job creation number was just for 2004, the job creation effect of the financial incentive would be much bigger if the foreign invested companies continue to operate in Korea for considerable years (see Table 3).

The foreign invested companies, we were able to collect data about added value from 34 companies. The total incentive given to the 34 companies was 160,500,000 won (about 133,750 US dollars), and the total added value produced by foreign invested company for 2004 was 1.182 trillion won, while the total added value for foreign share was 0.8836 trillion won for the same year. Compared to the incentive amount given to foreign companies in 2004, the total added value by the companies was 6.35 times of the incentive (net 5.51 times).

Table 3. Job creation effect of financial incentive for foreign investment

No of foreign invested companies with access to employment data	Financial incentive given (hundred million won)	Number of employees		Incentive per employee (million)	
		Total no. of employees (as of the end of 2004)	No. of employees by foreign investments	Total no of employees	No of employees by foreign investments
21	1,170	9,534	8,267	12,3	14.2

Table 4. Added value effect of financial incentive given to the foreign companies (100 million won, 2004)

No of foreign companies with access to data on added value	Financial incentive given to the companies	Total added value		Multiplier of the added value	
		Total added value	Total added value for foreign share	Total added value	Added value for foreign share
34 companies	1,605	10,182	8,836	6.35	5.51

Given that these companies would continue to be operative in Korea for a considerable period of time, total added value will increase further accordingly, and this showed that financial incentive was closely related to foreign investments' contribution to Korean economy (see Table 4). Seen from personnel expenses point of view, the incentive's effect on the creation of labor income (see Table 5) was 0.4155 trillion won for 2004 which is 2.6 times the incentive 0.1443 trillion won given in the same year (0.346 trillion for foreign share). Provided that these companies would be operative for a considerable period of time, the effect would further increase accordingly.

Table 5. Incentive effect on the creation of labor income (2004)

No of companies with access to personnel expenses data allowed	Incentives given to the companies (Hundred million won)	Total personnel expenses of the companies		Labor income multiplier	
		Total labor expenses	Labor expenses for foreign investment	Total labor expenses	Labor expenses for foreign investment
34	1.605	4,155	3,460	2.6	2.2

From the profitability analysis of the incentive beneficiary companies (see Table 6), the companies' ratio of ordinary income to sale for 2003 was 4.87%, which was much higher compared to the average 0.8% of foreign invested companies and the average -23.5% of domestic companies. When it came to the ratio of net profit to net sale, the incentive beneficiary companies was 5.83%, which as much higher than the average -1% of foreign invested companies and the average -17.5% of domestic companies. The ordinary income to total assets and net income to total assets of the companies were 7.84% and 6.17% respectively which were also higher than those of foreign invested companies and domestic companies. The foreign invested companies that received financial incentives not only made big contribution to Korean national economy in the areas of investment, job creation and added value, but also excelled other foreign invested companies and domestic companies in the profitability of individual company, and this can be interpreted as reflects successful implementation of the financial incentives to foreign invested companies.

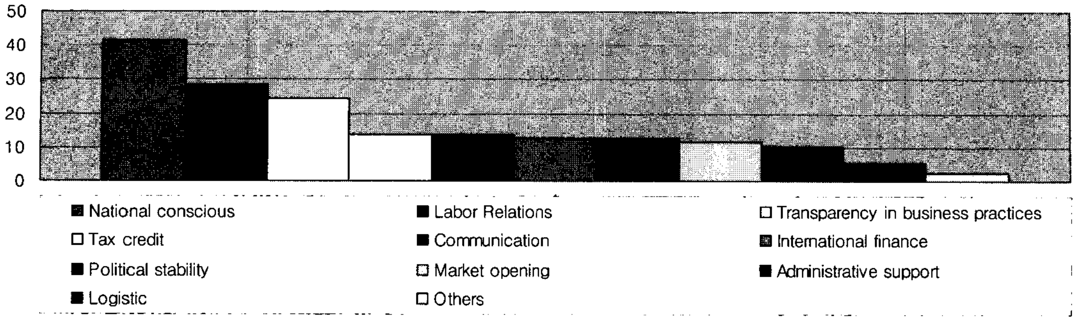
Table 6. Profitability analysis of foreign invested companies that received financial incentives

Financial indicators	2003's mean of beneficiary companies(41)	Foreign invested companies (upper 109 manufacturing companies)		Domestic companies (Companies listed in KISLINE)	
		03's mean	4 year mean of 2000~2003	03's mean	4 year mean of 2000~2003
Ratio of ordinary income to sales	4.87	0.8	1.9	-23.5	-13.7
Ratio of net income to net sales	5.83	-1.0	0.4	-17.5	-9.7
Ordinary income to total assets	7.84	5.6	6.2	-4.3	-3.1
Net income to total assets	6.17	3.3	4.3	-2.6	-1.6

2.1.2 Investigation into the management of foreign company and living environment for foreigners

As mentioned, Korean government has made systematic efforts to improve environment for foreign investments for many years with mid-and long-term plan, but virtually no specialized investigation has been done compared to the high level of foreigners' interest in the matter. Only KOTRA and some economic institutes conducted some casual questionnaire investigations to know foreign company's reaction to and evaluation of investment environments in Korea. But none previous researches about improving infra that developed countries consider as a very important factor to attract foreign investments was found in Korea. In (see Figure 1) "Report on difficult management environment foreign companies face in Korea" (Invest KOREA 2005), the major difficulties foreigners working in Korea indicated facing were lack of globalization in national conscious, unstable labor relations, lack of transparency in corporate business practices.

At the same time, foreign companies in Korea were suggesting Korean government for various system improvements such as labor relations, taxation, financial deregulations and such suggestions would be Korean government's agenda for the improvement of management and living environments, therefore consistent studies on this matter also deemed necessary.



Source: "Report on difficult management environment the foreign companies in Korea face" (Invest KOREA, 2005).

Figure 1. The difficulties that the management of foreign companies in Korea face

2.2 Research model and hypotheses

The hypotheses derived from above theoretical background and figure 2. Research model are as follows:

[Hypothesis 1] Foreign companies that receive the environment of investment are more satisfied with the incentive system than foreign companies that do not receive the incentives.

[Hypothesis 1-1] Foreign companies that receive the financial incentives are more satisfied with the incentive system than foreign companies that do not receive the incentives.

[Hypothesis 1-2] Foreign companies that receive the incentives are more satisfied with the management and living environments than foreign companies that do not receive the incentives.

[Hypothesis 1-3] Those companies with the incentive benefits (beneficiary companies) are more satisfied with the investment infra than those companies without the incentive benefits (non-beneficiary companies).

[Hypothesis 2] Beneficiary companies are bigger contributors to national economy than non-beneficiary companies.

[Hypothesis 2-1] Beneficiary companies are bigger contributors to balanced regional development of the nation than non-beneficiary companies.

[Hypothesis 2-2] Beneficiary companies are bigger contributors to North East Asia Business hub plan than non-beneficiary companies.

[Hypothesis 2-3] Beneficiary companies are bigger contributors to growth business of next generation plan than non-beneficiary companies.

[Hypothesis 2-4] Beneficiary companies are bigger contributors to the introduction of new technology than non-beneficiary companies.

3. Methodology and sampling

3.1 Data analysis

SPSS Window 12.0 was used for the analysis of the collected data and the details are as follows:

1) First basic statistics analysis was conducted to find out general characteristics of the sample companies.
2) Independent t-test was carried out to identify differences in the level of investment environment satisfaction and contribution to national economy between incentive beneficiary company and non-beneficiary company.
3) Paired t-test was carried out to trace the contribution change of the incentive beneficiary companies to national economy.
4) Descriptive statistical analysis and Multi Response Descriptive analysis was carried out to find out about current situation of investment environments and its improvement measures.

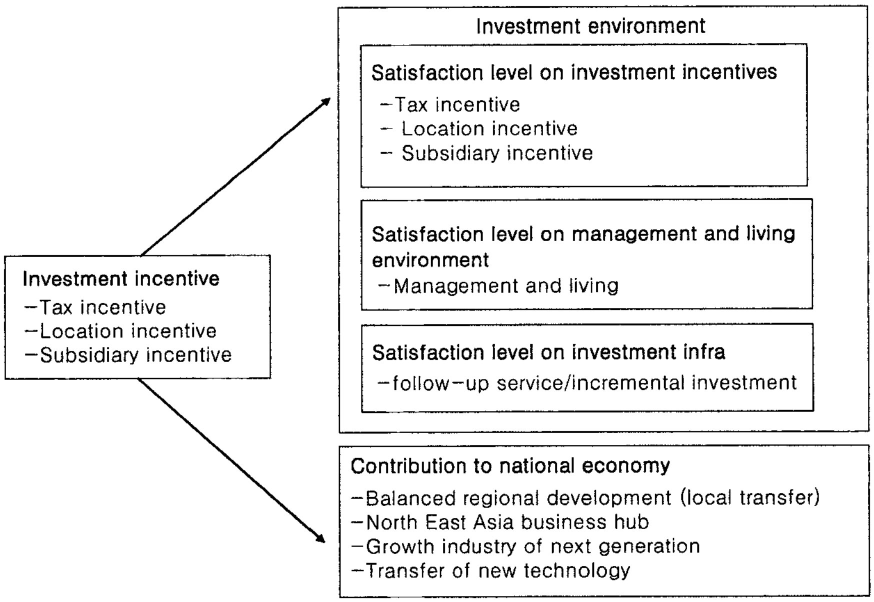


Figure 2. Research Model

3.2 Methodology

As mentioned, there were various investigations into the effectiveness of tax incentive system, and recently investigations into the effect of financial incentives such as location incentive were made, but there was no independent investigation into the effects of investment environment improvement on investment decision.

Therefore, in this study, questionnaire was distributed to find out the effect of each area of investment incentive system including tax, financial, market convenience incentives, and environment improvement (including follow-up service), investment infra, and especially the area of investment incentive were investigated in connection with its contribution to national policy agenda and national economy because the investment incentive was at the cost of taxpayers' money.

The data used were based on the questionnaire investigations, conducted from October through November, 2006 into 150 companies that were located in industrial complex for foreign company, or/and received the financial incentives and tax incentive from the government, the interview with foreign invested companies that took place during the Action Learning by Central Officials Training Institute and recent investment environment investigation by Invest Korea and other institutes. And the investigation regions included foreign invested companies and the Chamber of Commerce for Foreign companies located within Capital city, Busan and Jinhae regions in Korea.

The main points of the questionnaire are as follows:

① Evaluation of investment environment in Korea in general: Investment motivation in Korea, satisfaction level after investment, positive and negative factors of investment environments.

② Evaluation and expectation on foreign investment incentives: effectiveness of the incentive system and its improvement based on satisfaction level with investment incentives, effect of investment business area and motivation on investment decision, alternative country for investment.

③ Evaluation and expectation on management environment for foreign company and living environment for foreigners: evaluation of the government's effort for the improvement of investment improvements, difficulties surrounding managerial activity and living environment and their improvement measures.

④ Infra for foreign investment: satisfaction with investment infra, evaluation of free economic zones and information and communication infra, the relations between the investment infra such as industrial cluster, and foreign investments, satisfaction with follow-up service and their improvement measures.

⑤ Contribution to national economy: contribution to national economy and government policy agenda (North East Business Hub) regarding the investment incentive and the effect of additional investment incentive offering.

3.3 General characteristics of sample companies

The general characteristics of the sample companies are in Table 7. From the perspective of investment type, the largest part is 100% investment company for 49 (47.1%), the next largest part is joint investment for 28 (26.9%), the next part is 100% subscription for share for 17(16.4%), and partial subscription for share for 10(9.6%).

Table 7. General characteristics of sample companies

	Division	Frequency	Ratio (%)	Effective ratio (%)
Items	100% investment	49	33.11	
	Joint investment	28	18.92	26.92
	100% subscription for share	17	11.49	16.35
	Partial subscription for share	10	6.76	9.62
	Total	104	70.27	100.00
Head office location	Seoul	50	33.78	47.62
	Local region	55	37.16	52.38
	Total	105	70.95	100.00
Factory location	Industrial complex for foreign companies	32	21.62	43.24
	General location	31	20.62	43.24
	Both	11	7.43	14.86
	Total	74	50.00	100.00
Date of initial investment	Before 1990s	26	17.57	25.74
	In 1990s	27	18.24	26.73
	After 2000s	48	32.43	47.52
	Total	101	68.24	100.00
Size of initial investment	Less than 1 million USD	10	6.76	12.05
	Less than 10 million USD	34	22.97	40.96
	Less than 100 million USD	23	15.54	27.71
	More than 100 million USD	16	10.81	19.28
	Total	83	56.08	100.00

As for the head office location, 50 head offices (47.6%) were located in Seoul, 55 head offices (52.4%) were located in local regions. By the location of the factories, 32 factories (43.2%) were located in industrial complex for foreign companies, 31 factories were located in general regions and 11 factories are located in both industrial complexes for foreign companies and general regions. As for the size of initial investment, 10 investments (12.1%) were less than 1 million USD, 34 investments (41%) were less than 10 million USD, 23 investments (27.7%) were less than 100 million USD and 16(19.3%) investments were more than 100 million USD, so that about the half of the investments were small size investments.

Table 8 shows the incentive benefits status of foreign companies. 51 companies (34.5%) received 1 incentive, 43 companies (29.1%) received 2 incentives, and 9 companies (6.1%) received 3 incentives, while 45 companies (30.4%) did not received any incentive. Looking from incentive perspective, 71 companies (48.0%) did not receive tax incentive, while 77 companies (52.0%) received tax benefit, so that about half of them did not receive tax benefit. Regarding locality incentive, 60(40.5%) companies received the locality incentive, while 88 companies (59.5%) did not receive the locality incentive. When it came to employment and training subsidiary incentive, 33(22.3%) received the benefit, while the majority 115 companies (77.7%) did not receive the incentive, but no company received cash incentive at all.

Table 8. Beneficiary statuses of foreign investment incentives

Item	Division	Frequency	Ratio (%)
Number of benefits	1 incentive	51	34.46
	2 incentives	43	29.05
	3 incentives	9	6.08
	None	45	30.41
Tax incentive	Yes	71	47.97
	No	77	52.03
Locality incentive	Yes	60	40.54
	No	88	59.46
Employment/training subsidiary	Yes	33	22.30
	No	115	77.70
Total		148	100.00

3.4 Descriptive statistics of the measured variables

The represents the descriptive statistics of measured variables<see Table 9>. The highest variable of mean values on the investment environment satisfaction was follow-up service satisfaction 3.4 which was sub-item under the investment infra item. Satisfaction with the subsidiary incentive was the lowest at 2.54 which was because the size of employment and training subsidiary was comparatively small and no companies interviewed received the benefit.

With regard to the contribution to national economy, the highest contribution 2.95 was for the introduction of new technology, but in general, the contribution is small so that appropriate measures were considered to be necessary. And it seemed to be because of foreign invested companies' low interest and participation in the national policy agenda such as balanced regional development, North East Business Center (Business hub), growth industry of next generation. Originally contribution to national economy meant to be general contribution to production, employment, export, R&D, and in this regard, there was positive contribution as seen from table 1, which was the finding of existing studies.

As for the national policy agenda, the low contribution of foreign companies was due to their low recognition of the national policy agenda since 2004, and the irrelevance of their business to the policy agenda coupled with the lack of reflection of the contribution in the investigation.

Table 9. Descriptive statistics of the measured variables

Item	Sub items	Measured variable	Sample size	Mean	Standard deviation
Satisfaction at investment environments	Satisfaction at incentive	Tax incentive	127	3.09	0.91
		Location incentive	126	2.97	1.07
		Subsidiary incentive	121	2.54	0.88
	Management and living environment		132	3.07	0.70
	Investment infra	Follow-up service	144	3.40	0.88
Contribution to national economy		Balanced development of regions	141	3.40	0.88
		North East Business Hub	143	2.66	0.86
		Growth industry of the next generation	135	2.90	1.04
		Transfer of new technology	136	2.95	0.79

4. Empirical analysis

4.1 Empirical analysis of satisfaction difference in investment environments

In general, it was reasonable to find some differences in satisfaction at investment incentive between foreign companies who received and who did not receive the incentives, and it was also expected for beneficiary companies to contribute to national economy more than non-beneficiary companies. For this, the effect of the investment incentives on their satisfaction with the system and their contribution to national economy was investigated. Because foreign direct investments can be affected not only by investment incentive system but also general investment environments such as management and living environments, therefore management, living environments and investment infra besides direct investment incentives were also investigated to propose improvement measures on general foreign investment environments.

For this, foreign invested companies were divided into two groups, investment incentive beneficiary and non-beneficiary companies to see difference in satisfaction between the two groups and difference in their contribution to national economy was investigated by t-test. Especially for the analysis of their satisfaction level with tax incentive, locality incentive and subsidiary incentive, foreign companies were divided into two groups, who used the incentives and who did not use the incentives as show in Table 10. As for the contribution to national economy, the foreign companies were divided into two groups that received at least one of the three incentives and that received no incentive at all. And the results of the analysis are showing in the Table 11 in which those foreign companies that benefited from the investment incentives appeared to be more satisfied with the investment incentives than those foreign companies that did not benefited from the investment incentives.

To be more specific, the mean differences in the tax benefit between the two groups was analyzed, and the results showed that the beneficiary companies (mean = 3.34) were more satisfied with the tax incentive by 0.52 than the non-beneficiary companies (mean = 2.825) in which $t = 3.38$ with $p = 0.001$. And the results of analysis of the difference in satisfaction with location benefits between the two groups, beneficiary companies and non-beneficiary companies, the beneficiary companies (3.19) appeared to be more satisfied than non-beneficiary companies (2.78) by 0.41 ($t = 2.17$, $p = 0.032$).

The analysis of mean differences in satisfaction with the subsidiary incentive showed that the beneficiary companies (mean = 2.77) were more satisfied with the incentive than non-beneficiary companies (mean = 2.46) by 0.31, but it appeared to be significant in the range of $p < 0.1$ ($t = 1.76$, $p = 0.08$). In general, the findings of the investigation supported the Hypothesis 1-1, and it was interpreted as the incentive system helped increase foreign companies' satisfaction and had positive effect on attracting foreign investments. But there were no statistical differences between the beneficiary companies and non-beneficiary companies when it came to the area of management, living environment, and contribution to national economy, so that Hypothesis 1-2, Hypothesis 1-3, and Hypothesis 2 were rejected. And it was because other investment environments besides investment incentive had indirect effect on investment, not direct effect.

And this result showed that even though the benefit of investment incentive system had effect on the satisfactory level, the satisfaction was not translated into their contribution to national economy around national policy agenda. Therefore in the case of investment incentive that is given to foreign companies at cost of tax payers' money, the condition and problem with the system should be identified and investment policy that can provide improvement program to contribute to national economy especially national policy agenda was considered necessary.

Table 10. Difference analyses of investment environment satisfaction and contribution to national economy

Item	Sub item	Beneficiary companies		Non-beneficiary companies		Mean difference	t	Sig
		Mean	Standards deviation	Mean	Standards deviation	Mean difference		
Investment environment satisfaction	Tax incentive	3.34	0.84	2.82	0.91	0.52	3.38	0.001
	Location incentive	3.19	1.12	2.78	1.00	0.41	2.17	0.032
	Subsidiary incentive	2.77	0.96	2.46	0.84	0.31	1.76	0.081
	Management/ living environment	3.06	0.74	3.08	0.60	-0.02	-0.15	0.880
	Follow-up service	3.44	0.82	3.32	1.01	0.12	0.76	0.446
Contribution to national economy	Balanced regional development	2.29	1.11	2.00	0.91	0.29	1.51	0.134
	North East Business hub	2.73	0.87	2.51	0.82	0.22	1.46	0.147
	Growth industry of the next generation	2.97	0.92	2.77	1.27	0.20	1.04	0.301
	Transfer of new technology	2.93	0.80	3.00	0.77	-0.07	-0.50	0.620

5. Summary and conclusion

This investigation was to provide investment improvement measures to attract quality foreign investments into Korea by looking into the managerial reality and contribution to national economy of those foreign companies in Korea, thus to contribute to the development of national economy. Among other investment environments, especially investment incentive (tax, financial, marketability) that bears burden on taxpayers was investigated to propose improvement measures. And foreign companies' views on the investment environments in Korea such as investment incentive system, management and living environment improvement and the development of industry cluster were also collected, and general improvement measures for foreign investment environments was suggested.

Since 1990s China emerged as a black hole and a powerful rival not only in the area of foreign investments destination but also in many other areas of economy, so that attracting advanced foreign companies and cooperating with them would be necessary strategy for Korea to maintain competitive advantage over China, therefore landmark improvement of investment environments is urgent and important policy agenda. In attracting companies, besides being the 11^{th} baggiest market in the world, Korea should take advantage of not only her world level key industry such as semiconductors, auto, ship building and steel, but also the comparatively well developed information and communication infra. Korean should secure worldwide competitiveness by cooperating with multinational companies, and develop its investment environments in line with world standards without delay.

There are various investment environmental factors that affect foreign investments such as foreign investment policy, investment attracting organizations, investment incentives, national conscious, management and living environment, economy standards, industrial standards, but in this investigation the relationship between the factors that can be dealt with in short term basis such as investment incentive, management and living environment and industry cluster, and their contribution to national economy was identified, both individual and comprehensive measure for the improvement of each respective area and overall foreign investments. And special focus was on improvement measures to contribute to the national policy agenda such as 'balanced regional development', 'North East Asia Business Center' and 'growth industry of next generation' was searched for. For this investigation, questionnaires were distributed and interviews were conducted. To this end, the following areas regarding foreign direct investments were investigated with statistical analysis such as SPSS, new findings and problems were identified and alternative policy was suggested to contribute to national economy.

First, the foreign companies were, in general, positive about the Korean investment incentive system, still pointing out necessity to improve overall investment environment though.

Second, it appeared that there wasn't significant difference in contribution to Korean national policy agenda between the investment incentive beneficiary group and non-beneficiary group. Therefore uniform support with investment incentives which bears burden on Korean taxpayers should be discouraged and assessment system should be introduced to evaluate the system, while improving the investment incentive system to include national economy contribution factor into the conditions for the investment incentives.

Third, the improvement of management, living environments should be made under mid- or long -term vision, in line with global standards, with the focus of the management environment improvements be on deregulation, and the improvement of the living environments should be made in the way that local government should systematically improve overall administrative services to provide foreigners "from arrival to settlement" service which include from airport pickup to their settlement in new environment in Korea.

Finally, for the improvement of investment environments for foreigners, alternative measures are proposed such as reinforcement of follow-up services, investment infra, effective system to attract foreign investments, together with need for integrated management of both foreign and domestic investments to upgrade the economic structure of Korea.

In conclusion, the fact that in the investigation, the statistical analysis was used based on mainly literary study, and questionnaire distribution to identify current situation of the foreign direct investment and improvement measures, limited the collection of necessary data and the questionnaire answers, thereby the drawing up of the results of the analysis that well reflected the objective of the investigation. The fact that the investigation into the satisfaction level of foreign companies indicated no significant differences in contribution to national economy between beneficiary group and non-beneficiary group and there can be other complex factors beside the investment incentives that affect foreign investments put limit to the identification of the direct relationship between the investment incentives and their contribution to national economy.

References

1. Cable, V. and Persaud, B.(1987), "New trends and policy problems in foreign investment: the experience of Commonwealth countries," in V. Cable and B. Persaud eds.Developing with Foreign Investment, Croom Helm, London.
2. Choi, P. R.(2007), "A study on the effect of the improvement of investment environment with investment incentive on national economy," Doctoral Dissertation, Kyunghee University.
3. Lee, Y. S.(1999), "To analysis of tax support for foreigner's direct investment," *Korean institute of public finance*, Vol. 37, pp. 75-79.
4. Loree, D. W. and Guisinger, S.(1995), "Policy and non-Policy Determinants of U. S. Foreign Direct Investment," *Journal of International Business Studies*, Vol. 26, No. 2, pp. 281-299.
5. Loree, D. W., Stephen, E., and Guisinger, S. E.(1995), "Policy and Non-Policy Determinants of U.S. Equity Foreign Direct Investment," *Journal of International Business Studies*, Vol. 26.
6. Markusen, J. R.(1995), "The Boundaries of Multinational Enterprises and The Theory of International Trade," *Journal of Economic Perspective*, Vol. 9, pp. 169-189.
7. Mihir, A. D., Foley, F. C., and Hines Jr., J. R.(2001), "Repatriation Taxes and Dividend Distortions," *National Tax Journal*, Vol. 54, No. 4, pp. 829-851.
8. Rolfe, R. J., Ricks, D. A., Pointer, M. M., and Mccarthy, M.(1993), "Determinants of FDI Incentive Preferences of MNEs," *Journal of International Business Studies*, Vol. 24.
9. Rolfe, R. J. and White, R.(1992), "The Influence of Tax Incentives in Determining the Location of Foreign Direct Investment in Developing Countries," *Journal of the American Taxation Association*, Vol. 13, pp. 39-57.
10. Shatz, H. J. and Venables, A. J.(2000), "The geography of international investment," World Bank Policy Research Working Paper, No. 2338.
11. Swenson, D. L.(1994), "The impact of U.S. tax reform on foreign direct investment in the United States," *Journal of Public Economics,* Vol. 54, No. 2, pp. 243-266.