

A Study on the Economic Impact of the Marine Leisure Sector Following the Designation of Haeundae as 'Convention, Movie, Marine Leisure Special Zone

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Abstract : This study is designed to analyze the production, employment, value added and income impacts that, in the event of designation and development of Haeundae as 'Convention, Movie, Marine Leisure Special Zone', its marine sector would have on the local economy. The realization of marine leisure special zone of Haeundae in Busan is expected to lead to a direct and indirect investment of approx. ₩13.6 billion, resulting in ₩68.0 billion in production impact, 850 jobs in employment impact, ₩28.0 billion in value added impact and ₩14.5 billion in income impact. This is expected to give a boost to a stagnant local economy, offering opportunities for the revival of Busan's tourist industry.

Key words : Marine leisure, Convention, Special local development zone, Haeundae

1. Introduction

There is an opinion that local development is the driving force of national development, which requires the right strategy and remedy to boost the resources, characteristics and potential of a region as much as possible (Son and Lee, 2003). However, the fact is that the central government is yet to prepare for foundations that will boost local characteristics.

To solve these problems, government has acknowledged that its uniformed national development efforts make it hard to reflect a variety of local government demands, transforming its policy in a direction that will boost local characteristics and facilitate local development through new differentiated approaches in line with localization. In other words, legal systems have been established that allow local governments themselves to select viable specialized development strategy for local development. Over recent years, these legal systems have led to increased efforts among local governments for specialized local development.

This study, therefore, selected Haeundae in Busan designated as 'Convention, Movie, Marine Leisure Special Zone' out of special local development zones, especially analyzing the local economic impact of Haeundae's marine leisure sector in terms of production, employment, value added and income impacts. To do so, this study selected businesses that could facilitate marine leisure special zone,

using Exogenous impulse analysis model, based on the estimated amount of money to put in each business.

2. Concept and Procedure

2.1 Conceptual Approach

1) Contents and Characteristics of Special Local Development Zone

Special local zone system was established under "Exemption Law on Special Local Development Zone" enacted in Mar. 2004, for the purpose of boosting balanced national development and local economy. The system has been a major line of policy for Roh Moo Hyun administration to successfully achieve localization and balanced national development, one of the administration's high-priority national assignments.

What special local development zone is about mainly boils down to three points: 1) deregulation necessary for specialized local development 2) the exclusion of direct connection of special zone to financial and tax benefits 3) giving priority to non-Seoul areas.

The meaning of Deregulations are as follows: 1) means that local governments should propose necessary deregulations first instead of the central government designating what is to be deregulated, transforming into local government-driven, selective deregulation. 2) means is

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to rule out financial and tax benefits by the central government in connection with special zone designation, allowing local governments to prepare financing on their own through inviting foreign and private capitals and issuing local government bonds. 3) means priority to be given to designating and operating non-Seoul areas as local special zone, prior to Seoul.

Special local zones are characterized: Special local zones differ from free economic zones and special tourism zones in their focus on deregulation and boosting local economy, especially in their ability to make the advantage of their local history and originality and autonomously select what is to be deregulated or abolished.

Free economic zones and special tourism zones are central government-driven, while special local zones are local government-driven. Also, while the formers take the form of uniformed deregulation, the latter is featured by the local government's ability to selectively choose regulations that should be applied to the special zone.

In the meanwhile, free economic zones are designed to invite foreign investments and focus on logistics around intranational airports and harbors, while special local development zones are characterized primly by deregulation and boosting local economy.

Korea's special local zones, that have benchmarked Japan's special zones for structural reform, are similar in

many ways, while Korea aims at non-Seoul areas, together with high favorableness from local governments.

2) Haeundae-gu and Special Local Development Zones

With special local zones enacted since November, 2004 24 special local zones have been designated until now through four times. Among them, Haeundae, the subject of this study, was designated as 'Convention, Movie, Marine Leisure Special Zone 'in February, 2005, involving U-dong, Jung-dong, Joa-dong and Songjeong area.

With convention, movie and marine leisure industries designated as specialized businesses, the exemptions applied include use of manpower participating in convention, permission for urban park and green zone use, handover of the approval of yacht center business, easing traffic control. With Haeundae special local development zone being in the same context with Busan's urban development strategy, the special zone development has been considered as crucial, in connection with Busan development.

2.2 Business Selection Procedure for the Special Local Development

This study selected businesses that will be appropriate to Haeundae special local development zone and help local economic development, using the benchmarks, internet data, and expert interviews of many nations and areas. Also, there were manifold inspections to secure their practicality

Table 1 Special local zone · free economic zone, special tourism zone

item	special local development zone	free economic zone	special tourism zone
relevant law	Exemption Law on Special Local Development Zone (04. 3)	Law on the Designation and Operation of Free Economic Zone(02.12)	Tourism Promotion Law (86.12)
purpose	To boost local economy through deregulation	To focus on business and logistics through inviting foreign investment	To encourage the inviting of foreign travellers
deregulation	Local governments should select exemptions to be applied to the special zones.	Uniformed deregulation in free economic zones	Uniformed deregulation in special tourism zones
financial/tax benefits	None	3-year 100 % and 2- year 50% reduction in corporate tax for manufacturing, tourist and logistical businesses that invite \$10 million in foreign investment.	None
requirements	Securing financing , the possibility of inviting investment, fitness for local characteristics. impact on local economy	Securing key facilities(international airport, international harbor), the possibility of inviting foreign investment, impact on local economy	Securing hotels and lodging places and tourist facilities, with more 100,000 foreign travellers over the past one year,
local requirement	Priority to be given to Non-Seoul areas	No restriction	No restriction
designator	Minister of Finance and Economy	Minister of Finance and Economy	Minister of Culture and Tourism

and objectivity.

The criteria for selecting businesses include three things: major-related businesses relevant to local characteristics; preliminary businesses; and businesses stressed by the local government major-related businesses, necessary for the special local development zone, selected businesses related to marine leisure control house, marine reports education center etc. Preliminary businesses, with major-related businesses excluded, selected supportive businesses. Businesses stressed by the local government selected the project of building Haeundae resort complex that is being pushed by the local government.

Each business for the special local development zone was selected through a two-staged procedure. The first stage selected 5 major-related businesses, 5 preliminary businesses and 1 local government-focused business before experts put together their opinion and chose 11 businesses. The second stage, with the characteristics of experts' and researchers' studies into consideration, selected 8 special local development zone businesses which include: building marine leisure base around Dongbaek island, Suyeong bay; building berthage along Suyeong river; building marine reports education center; building marine leisure control house; marine leisure base project along Haeundae beach; and marine leisure base project along Songjeong beach.

3. Economic Impact of Marin Leisure Section

Haeundae-gu office has currently made multilateral efforts to implement development projects in the marine leisure sectors of special local development zone, while having hard time due to the difficulty of selecting businesses and other terms and conditions. This study estimated the impact of marine leisure sector through the amount of expense to input, based on the 8 businesses selected above.

Table 2 Estimated amount of expense of developing the special local development zone

business	estimated expense
building marine leisure base around Dongbaek island, Suyeong bay	₩.2 billion
building berthage along Suyeong river	₩800 million
building marine reports education center	₩7.3 billion
building marine leisure control house	₩1.8 billion
marine leisure base project along Haeundae beach	₩1.1billion
marine leisure base project along Songjeong beach	₩600 million
total	₩13.6billion

3.1 Tools of Spread Effect Analysis

We use some models to analyze of regional economic effect, for example, Economic Base Model, Regional Econometric Model, Computable General Equilibrium Model, Regional Input-Output Model, etc.

In this paper, a new Regional Input-Output Table should be made for the analysis model because of absent of the regional data. Therefore, year of 2000 Regional Input-Output Table using RAS was used, which was established by Busan Development Institute. It is hypothesized that input structure is stable for a certain period, and Regional Input Model starts from input coefficient calculation which means input-output component. Production inducement coefficient indicates direct and indirect production spread effect by fluctuation.

If the value added of the first industry is V_1 , v_1 is divided by total input value X_1 , which is value added indicating scale of value added ratio. Next equation is input coefficient,

$$a_{ij} = \frac{X_{ij}}{X_j}$$

and input coefficient matrix is

$$A = \frac{X_{ij}}{X_j} = X_{ij} \times X_{i-1}$$

here, a_{ij} = input coefficient

x_{ij} = input amount from I part for j part production

X_j = total input of j part

Productive Model shows that one unit of last need change to industry j production, and equals to sum of row in multiplier matrix. The productive model to industry j production is

$$AX + Y - M = X$$

$$X = (I - A)^{-1} (Y - M)$$

substitute Y for upper equation

$$X = (I - A)^{-1} Y^*$$

change the equation to fluctuation ratio model

$$\Delta X = (I - A)^{-1} \Delta Y^*$$

here, A is input coefficient matrix, Y is final demand vector, M is income vector, I is identity matrix.

Employment Model shows that employment number of industry j production by 1 unit additional production. The equation is

$$\Delta l = a^j \times (I - A)^{-1} (\Delta y^*)$$

here, a^j is job coefficient.

Value Added Model shows that value added volume of industry j production by 1 unit additional production. The equation is

$$\Delta l = A^v \times (I - A)^{-1} (\Delta y^*)$$

here, A^v is value added coefficient.

Income Model is to estimate household income fluctuation by last demand change. The equation is

$$\Delta l = A^i \times (I - A)^{-1} \Delta(Y - m)$$

here, A^i is income coefficient.

3.2 Production impact

The estimated impact of Haeundae marine leisure industry construction is approx. ₩28.1 billion in direct impact and approx. ₩40.1 billion in indirect impact on other businesses, totaling ₩68.2 billion in direct and indirect impacts. The scale of indirect impacts by business shows transportation and storage highest with estimated ₩8.9 billion, plus primary metal industry with estimated ₩5.3 billion, real estate and business service with estimated ₩5.1 billion, and metal products with estimated ₩3.3 billion.

Table 3 Estimated production impact through marine leisure business

(unit: million won, person, %)

industry	production impact	
	impact	percentage
construction industry impact	28,051.71	41.14
non-construction industry impact	40,131.98	58.86
agricultural products	184.78	0.27
mining industry	32.46	0.05
food and beverage	180.05	0.26
fiber and leather products	221.43	0.32
wood and paper products	1,000.18	1.47
publishing	134.14	0.20
oil and coal products	72.04	0.11
chemical products	1,376.09	2.02
non-metal mineral products	2,000.64	2.93
primary metal products	5,289.27	7.76
metal products	3,274.11	4.80
general machinery	1,791.66	2.63
electric and electronic	1,211.88	1.78

precision machinery	121.65	0.18
transportation equipment	436.77	0.64
furniture and other manufacturing products	123.95	0.18
power, gas and water	1,151.99	1.69
wholesale and retail	2,716.72	3.98
restaurant and lodging places	1,231.51	1.81
transportation and storage	8,871.75	13.01
communication and broadcasting	633.45	0.93
finance and insurance	1,241.65	1.82
real estate and business service	5,105.51	7.49
public administration and defense	0.00	0.00
education and well-being	77.51	0.11
social and other services	104.84	0.15
others	1,545.95	2.27
total	68,183.69	100.00

3.3 Employment Impact

The employment impact of Haeundae marine leisure construction is estimated to create approx. 380 jobs in direct employment and 466 jobs in indirect employment, totaling 846 jobs in direct and indirect impacts. The scale of indirect impact by business shows transportation and storage highest with estimated 91 jobs, plus wholesale and retail businesses with estimated 66 jobs, real estate and business service with estimated 53 jobs and metal products with estimated 48 jobs.

Table 4 Estimated employment impact through marine leisure business

(unit: million won, person, %)

industry	employment impact	
	impact	percentage
construction industry impact	379.68	44.87
non-construction industry impact	466.45	55.13
agricultural products	6.18	0.73
mining industry	0.29	0.03
food and beverage	2.01	0.24
fiber and leather products	4.12	0.49
wood and paper products	12.74	1.51
publishing	2.98	0.35
oil and coal products	0.22	0.03
chemical products	13.52	1.60
non-metal mineral products	11.14	1.32
primary metal products	24.24	2.86
metal products	48.40	5.72
general machinery	23.22	2.74
electric and electronic	14.54	1.72
precision machinery	1.79	0.21
transportation equipment	4.10	0.48
furniture and other manufacturing products	2.75	0.33
power, gas and water	1.85	0.22
wholesale and retail	66.18	7.82
restaurant and lodging places	48.01	5.67

transportation and storage	90.79	10.73
communication and broadcasting	3.22	0.38
finance and insurance	18.49	2.18
real estate and business service	52.91	6.25
public administration and defense	0.00	0.00
education and well-being	3.55	0.42
social and other services	9.22	1.09
others	0.00	0.00
total	846.13	100.00

3.4 Value Added Impact

The impact of Haeundae marine leisure industry construction is estimated to create approx. ₩12.8 billion in direct value added impact on construction sector and ₩15.5 billion in indirect value added impact on other businesses, totaling ₩28.3 billion in direct and indirect impacts. The scale of indirect value added impact by business shows real estate and business service highest with estimated ₩3.6 billion, plus transportation and storage with estimated ₩3.3 billion, wholesale and retail with estimated ₩1.5 billion and the first metal industry with estimated ₩1.1 billion.

Table 5 Estimated value added impact through marine leisure business

(unit: million won, person, %)

industry	value added impact	
	impact	percentage
construction industry impact	12,802.58	45.16
non-construction industry impact	15,545.91	54.84
agricultural products	105.04	0.37
mining industry	16.05	0.06
food and beverage	57.33	0.20
fiber and leather products	74.89	0.26
wood and paper products	263.47	0.93
publishing	58.67	0.21
oil and coal products	21.37	0.08
chemical products	389.90	1.38
non-metal mineral products	564.69	1.99
primary metal products	1,099.21	3.88
metal products	1,033.02	3.64
general machinery	568.91	2.01
electric and electronic	386.70	1.36
precision machinery	41.04	0.14
transportation equipment	130.23	0.46
furniture and other manufacturing products	41.67	0.15
power, gas and water	606.99	2.14
wholesale and retail	1,537.83	5.42
restaurant and lodging places	317.33	1.12
transportation and storage	3,297.66	11.63
communication and broadcasting	300.43	1.06
finance and insurance	844.34	2.98
real estate and business service	3,580.18	12.63
public administration and defence	0.00	0.00

education and well-being	56.99	0.20
social and other services	65.06	0.23
others	86.91	0.31
total	28,348.49	100.00

3.5 Income Impact

The impact of Haeundae marine leisure industry construction is expected to create approx. ₩7.9 billion in direct value added impact and approx. ₩6.6 billion in indirect value added impact on other businesses, totaling approx. ₩14.5 billion in direct and indirect impacts. The scale of indirect income impact by business shows transportation and storage highest with estimated ₩2.2 billion, plus real estate and business service with estimated ₩1.8 billion and wholesale and retail businesses with estimated ₩700 million.

Table 6 Estimated income impact through marine leisure business

(unit: million won, person %)

industry	income impact	
	impact	percentage
construction industry impact	7,887.81	54.29
non-construction industry impact	6,641.32	45.71
agricultural products	33.02	0.23
mining industry	1.82	0.01
food and beverage	10.78	0.07
fiber and leather products	20.51	0.14
wood and paper products	61.26	0.42
publishing	14.73	0.10
oil and coal products	2.51	0.02
chemical products	83.91	0.58
non-metal mineral products	80.54	0.55
primary metal products	209.56	1.44
metal products	237.98	1.64
general machinery	124.43	0.86
electric and electronic	83.20	0.57
precision machinery	8.93	0.06
transportation equipment	27.01	0.19
furniture and other manufacturing products	9.39	0.06
power, gas and water	90.43	0.62
wholesale and retail	652.76	4.49
restaurant and lodging places	180.41	1.24
transportation and storage	2,216.61	15.26
communication and broadcasting	100.33	0.69
finance and insurance	525.61	3.62
real estate and business service	1,788.56	12.31
public administration and defence	0.00	0.00
education and well-being	46.38	0.32
social and other services	30.63	0.21
others	0.00	0.00
total	14,529.13	100.00

4. Conclusions and Suggestions

4.1 Conclusions

This study analyzed the production, employment, value added and income impacts on the local economy of the marine leisure sector, in the event of designation and development of Haeundae as 'Convention, Movie, Marine Leisure Special Zone'.

With this study proving that Haeundae marine leisure special zone project is sufficient as means of policy that will contribute to the local economy, there is a need for new alternatives that will maximize the impacts.

First, there are needs to push the above-mentioned projects as continuous businesses and present long-term vision through securing connection among them. Secondly, there are needs to extend the function and man power of special zone promoting team so as to move the special zone project smoothly. With the current man power and function, there could be overwork and a lack of expertise that would reduce the efficiency of the project. Therefore, there are needs to extend its manpower and function to increase the efficiency of jobs such as planning business development, managing execution plan and administrative support. Thirdly, there should be discretion in relations to compensation and permission caused by marine-related businesses. The compensation and permission of fishing right and fishery due to marine leisure are related to individual economy, requiring very cautious handling.

Finally, opportunities should be provided where local people can participate in the special zone development. The development project around Haeundae, the nation's greatest resort place, has close relation to the economy of local people, requiring a long-term vision that will benefit the local community. With these alternatives well-prepared, Haeundae would become the nation's greatest special local development zone.

4.2 Suggestions

Haeundae has now limitations: Tourism is limited to short summer season and has failed to serve as a tourist site all-year-around. Also, in spite of its good natural environment and a lot of facilities for year-around tourists, lack of facilities for marine leisure and information has prevented it from serving as a mecca for marine leisure.

To solve these community problems, there are needs to integrate businesses appropriate to the features of the community or connect them for the creation of new businesses.

The realization of Haeundae's marine leisure special zone project is estimated to bring the community, with ₩13.6 billion in direct and indirect investment: approx. ₩68 billion in production impact; approx. 850 jobs in employment impact; approx. ₩28 billion in value added impact; and approx. ₩14.5 billion in income impact. The outcome is expected to boost a stagnant local economy, providing opportunities for the revival of Busan's tourist industry.

Bringing about those impacts requires financing through partnership with the local government, private companies and state-owned companies. The central government, also, should support the local government's efforts through deregulation.

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