

# The Effects of Mt. Kumkang Tour Business on the National and Local Economy

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## Introduction

The dream of touring Mt. Kumkang has finally come true. An excursion ship for Mt. Kumkang departed Tonghae port on November 18th, 1998, heading for Changjin port in North Korea. After fifty years passed by since the division of the country, we have finally witnessed a breakthrough in inter-Korean relations that will promote massive exchanges of ordinary people between the North and the South. The total number of tourists reached 43,000, during the period from last November to March 22, 1999. As 70 trips were made during the period, an average of 600 tourists were on board per trip. Although the number of tourists so far is not as great as we expected for seasonal and economic reasons, the number will be increasing steadily.

The realization of Mt. Kumkang tour business was a historic one in many respects. Politically, it can be a good opportunity to restore confidence and cultivate an atmosphere for reconciliation and cooperation between the North and the South. Economically, it can also generate considerable benefits for both sides. For North Korea suffering from serious economic difficulties, it can be a good chance for earning foreign currencies, and for South Korea, it can be a chance for developing its tourism industry and expanding economic cooperation with the North. Furthermore, for the local economy

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of Kangwon province, the business can serve as an opportunity to increase the income and promote the development of the local economy.

Until recently, tourism industry was regarded mainly as a consumption-oriented service industry, thus not receiving any aids in the process of Korean industrial development. Nowadays, however, more and more people are accepting the idea that tourism industry can not only generate high values-added without smoke, but also earn a great amount of foreign currencies. According to one report, four foreign tourists have the effect of generating one employment. Acknowledging this point, the government also plans to develop the tourism industry as one of the nation's key strategical industries of the future. Investing 8,300 billion won from now till the year of 2003, the government plans to create grand tour complexes and expand tour facilities.

This article focuses on the economic significances and implications that Mt. Kumkang tour business has for the South Korean economy. After analyzing quantitatively its economic effects in terms of production, values added, and employment, the article will also suggest some alternatives to increase its benefits.

## **Significances of Mt. Kumkang Tour Business and History of Business Development**

### *Significances*

Mt. Kumkang tour business, as it occupies an important part of North-South Korean economic cooperation, can be evaluated as one of the most visible achievements of Kim Dae-jung government's new North Korea policy that emphasizes the separation of politics from economy. With the realization of the tour, a great of number of civilians can now walk on North Korean soil. Therefore, Mt. Kumkang will be not only a famous tourist spot, but also a landmark for national reconciliation.

Besides this symbolic significance, Mt. Kumkang tour and development will bring a great deal of economic benefits to both sides. North Korea can earn a considerable amount of foreign cur-

rencies not only in various forms of fees, e.g., fees for admission to Mt. Kumkang, entrance to the country, and using North Korean ports, but also through gift shopping by tourists. South Korea can also gain from the business, as it will have the effect of stimulating the tourism industry and expanding the economic cooperation with the North. Most significantly, however, the tour business can serve as a catalyst for national unification by mitigating ideological confrontation and conflict between the North and the South.

#### *History of Business Development*

The business idea of touring Mt. Kumkang by excursion ship was known to the public when Hyundai Business Group's Honorary Chairman, Chung Joo-young paid a visit to North Korea on June 16th, 1998. From that time, Hyundai began to work extensively on the business, setting September 25, 1998 as the target date for the first departure of an excursion ship. Due to some unexpected incidents such as North Korea's submarine infiltration, however, North-South Korean relations were cooled off for a while, thus delaying the tour business.

With patience and continuing efforts, Hyundai finally reached an agreement with North Korea on establishing a jointly-managed firm for Mt. Kumkang tour development in late July. The South Korean government also approved it as an official inter-Korean economic cooperation business on September 7th. Although there were some hurdles afterward in negotiating on the exact amount of various fees, Chung Joo-young's second visit to North Korea in late October settled the problems and fixed the schedule. Therefore, on November 18th, 1998, an excursion ship named "Hyundai Kumkang" finally departed Tonghae port, with 1,250 tourists and crew members on board.

### **The Economic Effects of Mt. Kumkang Tour Business**

#### *Premises of Analysis*

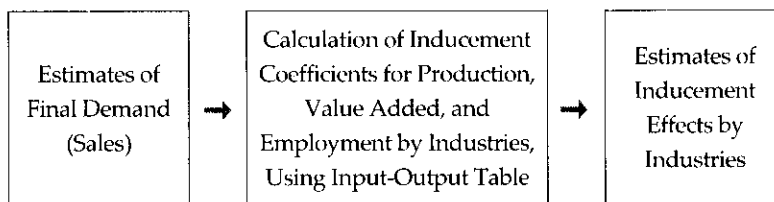
Consumption behavior, which is largely determined by one's

income level, leads directly to production, thus resulting in such economic effects as the creation of values added and employment. The economic effects can differ, however, depending on whether such consumption behavior occurs within the limits of one's budget (thus substituting other consumptions), or beyond the budgetary consideration (thus not affecting other consumptions). In short, the substitutability and independence of consumption behavior are important factors.

In general, consumption behavior tends to differ according to one's income level and tastes. In particular, there is a tendency for optional consumptions to have a higher level of substitutability than essential consumptions do. In this article, however, we disregard the possibility of substitutability for the sake of simplicity, and assume that any consumptions occurring from Mt. Kumkang tour are independent and additional consumptions. Based on this premise, we will estimate the effects of the tour business in terms of production, values added, and employment.

#### *Method of Analysis*

Estimates will be made first on the economic effects arising directly from the excursion itself, and then on those effects arising from tourists' stays and sightseeing in the region. By adding the two effects, we can estimate the total effects of the tour business on the national economy. For estimation, we employ the analytical tool that utilizes the inducement coefficients calculated from the Input-Output Table developed by the Bank of Korea in 1995.



*Problems in Estimating Inducement Effects and Substitution Strategies*

## 1) Problems

## (1) The Lack of Basic Data on Sales by Sectors

In order to estimate the inducement effects of Mt. Kumkang tour, we need to have reliable data on the amount of tour-related sales or consumption for each sector (e.g., transportation and lodging) Such data are lacking, however. Moreover, we do not have statistical data on sales for tour related industries such as foods, housing, wholesale and retail, and transportation in the region.

## (2) Difficulties in Calculating Inducement Coefficients from Input-Output Tables

Inducement coefficients calculated by final demands in each industry denote the effects of one unit increase in that industry's demand on production, value-added, and employment in other industries.

The tour business that we are analyzing in this article is special and somewhat different from other more general tour businesses. For instance, an increase of tourists for general tour businesses induces construction demands for restaurants and lodging facilities, which in turn induces demands for construction-related products. Mt. Kumkang tour now uses an excursion ship rented from foreign countries, however. Therefore, an increase of tourists would not induce demands for ships and other related products. Considering this peculiarity, the inducement coefficients derived from the Input-Output Tables may not be perfectly precise.

## (3) The Lack of Input-Output Tables for Local Economy

For Mt. Kumkang tour, tourists tend to consume mostly local products while they stay in the region before and after excursion. Therefore, in order to heighten the precision in estimating the business's effects on the local economy, it would be very useful to have Input-Output Tables based on the input structures within the region. Such tables are not available, however.

## 2) Substitution Strategies

### (1) Estimation with Regards to Excursion Tour

When basic data are available, one should apply inducement coefficients by industries, in order to maximize the precision in estimating the effects. As noted before, however, such data are lacking, and it is difficult to calculate inducement coefficients that are related exclusively to the excursion tour itself. We calculate, therefore, inducement coefficients only for wholesale and retail sector, whose data are readily available. For foods & lodging, and transportation & warehouse, we integrate the two sectors into one and newly calculate an inducement coefficient.

### (2) Estimation with Regards to Local Economy

In estimating the effects with regards to the local economy, it is necessary to first estimate the amount of tour-related sales since such data are not available. For estimation, we employ two different methods. One is to use the data on the average tour spending per one domestic tourist, reported by a study, "The State of National Tourism in 1997." The other method is to use the data from a sample survey of local businesses. In applying inducement coefficients, we integrate the three sectors of foods & lodging, transportation & warehouse, and wholesale & retail, and calculate a new inducement coefficient when employing the first method. When using the local survey data, we estimate inducement coefficients by each sector. In estimating the amount of local sales, we use the method of range estimation rather than that of point estimation.

### *Estimation of Tour Spendings*

#### 1) Estimation with Regards to Excursion Tour

##### (1) The Number of Tourists

The number of tourists in the first business year, 1998, was much lower than expected, for seasonal and macro-economic reasons. In 1999, however, the number is expected to rise with a gradual recovery of the national economy. Based on this optimistic out-

look, here we use the number estimated by Hyundai business group, 245 thousand tourists in 1999. The estimated number constitutes 86% of the maximum tourists possible, and it seemed to take into consideration a likely decline of tourists during the winter season.

#### (2) The Average Spending by One Tourist

The average spending per tourist can be estimated by first adding the sales on ship to the average excursion tour fare, and then subtracting from it various fees that are paid to North Korea and foreign countries (e.g., entrance fees, port fees, ship-renting fees, and other miscellaneous fees). The average spending per tourist thus estimated amounts to 483 US dollars, which translate into 579,600 Korean won.

**<Table 1> Calculation of the Average Spending per Tourist**

Average Spending per Tourist	(Average Tour Fare per Tourist) - (Fees Paid to North Korea) - (Ship-renting Fees) + (Sales on Ship)
Calculation	(816 US dollars) <sup>1)</sup> - (236 US dollars) <sup>2)</sup> - (115 US dollars) <sup>1)</sup> + (18 US dollars) <sup>2)</sup> = 483 US dollars

Notes: 1) These amounts are based on Hyundai's Mt. Kumkang tour business plan in 1999.

2) This number is based on the business plan that Hyundai presented to Kangwon Province in November, 1998.

#### 2) Estimation with Regards to the Effects on Local Economy

##### (1) Premise

There exists a possibility that some excursion tourists may bring their family members, who would stay around Tonghae without taking on excursion ships. It is difficult, however, to estimate the number of family members accompanied. Since the actual number of those from November to December of 1998 was known to be extremely small, we simply presume in this analysis that there are no family members who stay in the locality without taking on ships.

(2) Tour Spending in Addition to Excursion Tour Spending (Spending while Staying in the Locality)

- Using Average Tour Spending Based on the Study of Tourism in 1997

According to the study, "The State of National Tourism in 1997," the average daily spending by one domestic tourist is 38,000 won for over-night stays, and 25,300 won for one-day tour. We use these numbers in the following analysis.

- Using Average Prices Based on Sample Surveys on Local Businesses

For complementary estimation, we also use average prices that are derived from surveys on local businesses (e.g., restaurants, lodging, and gift shops)

(3) Estimating the Lodging Rate and the Number of Lodging Days

- Lodging Rate

According to surveys on local businesses, the lodging rate of Mt. Kumkang tourists from November to December, 1998 was around 10%. This low rate can be explained largely in terms of excursion ships' departure and arrival times. As the departure time is 5:00 p.m., and the arrival time 6:00 a.m., most excursion tourists arrive at Tonhae City on their departure day, and also go home on the arriving day. In 1999, however, tour schedule is being diversified, and more local tour products are being developed in linkage to the excursion tour. Considering these changes, we assume the lodging rate to be around 10-30%.

- Days of Lodging

As the current excursion tour is rather long, not many tourists would take additional tours around the region before or after the excursion. With this consideration, we assume the average number of lodging days to be from one to two.



*Estimation of Inducement Effects*

## 1) Inducement Effects with Regard to Excursion Tour Itself (A)

The total sales in 1999 of Mt. Kumkang excursion tour are estimated to be around 142 billion won. Based on this number, the business itself will have significant economic effects. The production inducement effects are estimated to be 219 billion won, the

**<Table 2> Inducement Effects of Excursion Tour Itself**

The Sales of Mt. Kumkang Excursion	Inducement Effects		
	Production (billion won)	Value-Added (billion won)	Employment (persons)
1,420	2,190	1,090	8,800

**<Table 3> Method of Calculating Annual Sales**

Calculation Method	[No. of Annual Tourists × (Average Tour Fare per Tourist - Fees Paid to North Korea - Ship-renting Fees) × Exchange Rate] + [No. of Annual Tourists × Average Spending on Ship per Tourist × Exchange Rate]
Calculation Result	[245,000 × (816 US dollars - 236 US dollars - 115 US dollars) × 1,200] + [245,000 × 18 US dollars × 1,200] = 136,710,000,000 won + 5,292,000,000 won = 142,002,000,000 won

**<Table 4> Method of Calculating Inducement Effects**

Calculation Method	[(Annual Sales - Spending on Ship) × Inducement Coefficient for One Industry Integrating Both Foods & Lodging and Transportation & Warehouse] + [Annual Spending on Ship × Inducement Effects for Wholesale & Retail]
Calculation Results	<ul style="list-style-type: none"> <li>• Production Inducement Effects: [136,710,000,000 × 1.542375] + [5,292,000,000 × 1.539609] = 210,858,000,000 + 8,147,000,000 = ₩219,005,000,000</li> <li>• Value-Added Inducement Effects: [136,710,000,000 × 0.761063] + [5,292,000,000 × 0.938379] = 104,044,000,000 + 4,966,000,000 = ₩109,010,000,000</li> <li>• Employment Inducement Effects: [136,710 × 0.063402] + [5,292 × 0.025506] = 8,665 + 135 = 8,800</li> </ul>

value-added inducement effects around 109 billion won, and the employ inducement effects around 8,800 persons.

## 2) Inducement Effects with Regards to Local Economy (B)

Inducement effects with regards to the local economy are estimated here in two different ways. Although the estimation results from the two methods reveal some differences in terms of the

**<Table 5> Inducement Effects with Regards to Local Economy  
(Using the Average Spending by One Domestic Tourist)**

The Tour-related Sales in the Local Economy	Inducement Effects		
	Production	Value-Added	Employment
6.5-9.9 billion won	10-15.3 billion won	5.6-8.5 billion won	274-417 persons

Note: The minimum values for the sales and the inducement effects are estimated under the assumption of the lodging rate of 10% and of one lodging day, while the maximum values are estimated under the assumption of the lodging rate of 30% and of two lodging days.

**<Table 6> Method of Calculating the Tour-related Sales**

Calculation Method	1) Number of Annual Tourists × [(Average One-Day Tour Spending per Person × 90%) + (Average Lodging Tour Spending per Person × 10%)]
	2) Number of Annual Tourists × [(Average One-Day Tour Spending per Person × 90%) + (Average Lodging Tour Spending per Person × 10% × 2 days)]
	3) Number of Annual Tourists × [(Average One-Day Tour Spending per Person × 70%) + (Average Lodging Tour Spending per Person × 30%)]
	4) Number of Annual Tourists × [(Average One-Day Tour Spending per Person × 70%) + (Average Lodging Tour Spending per Person × 30% × 2 days)]
Calculation Results	1) 245,000 × [(25,300 × 90%) + (38,000 × 10%)] = 6,509,650,000 won (minimum)
	2) 245,000 × [(25,300 × 90%) + (38,000 × 10% × 2)] = 7,440,650,000 won
	3) 245,000 × [(25,300 × 70%) + (38,000 × 30%)] = 7,131,950,000 won
	4) 245,000 × [(25,300 × 70%) + (38,000 × 30% × 2)] = 9,924,950,000 won (maximum)

ranges (from minimum to maximum), they are about the same in terms of the averages.

(1) Estimation Using Average Tour Spending per Person (Case I)

Using the average daily spending per one domestic tourist derived from the above-mentioned study, "The State of National Tourism in 1997," the tour-related sales in the local economy are estimated to be in the range of 6.5 billion and 9.9 billion won. Based on this range, the production inducement effects are estimated to be in the range of 10 and 15.3 billion won, the values-added inducement effects 5.6 and 8.5 billion won, and the employment inducement effects 274 and 417 persons.

<Table 7> Method of Estimating Inducement Effects

Calculation Method	The Tour-related Sales in the Local Economy × Inducement Coefficients for Production, Values-Added, and Employment
Calculation Results	<ul style="list-style-type: none"> <li>• Production Inducement Effects: <math>(6,509,650,000 \sim 9,924,950,000) \times (1.540849) \doteq 10,030,000,000 \sim 15,292,000,000</math> won</li> <li>• Values-Added Inducement Effects : <math>(6,509,650,000 \sim 9,924,950,000) \times (0.858860) \doteq 5,590,000,000 \sim 8,524,000,000</math> won</li> <li>• Employment Inducement Effects: <math>(6,509 \sim 9,924) \times (0.0420191) \doteq 274 \sim 417</math> persons</li> </ul>

Note: The inducement coefficients here are calculated for one industry integrating foods & lodging and transportation & warehouse.

(2) Estimation Using Surveys on Local Businesses (Case II)

When using the average prices based on surveys on local businesses, the tour-related sales in the local economy are estimated to be in the range of 4.5 billion and 12.4 billion won. Furthermore, the inducement effects in terms of production, values-added and employment are estimated to be in 7.3-20 billion won, 4.1-11.2 billion won, and 229-637 persons, respectively.

**<Table 8> Inducement Effects with Regards to Local Economy  
(Using the Average Prices Based on Surveys on  
Local Businesses)**

Sectors	Sales (billion won)	Inducement Effects		
		Production (billion won)	Values-Added (billion won)	Employment (persons)
Lodging	0.7~4.4	1.2~7.1	0.7~4.0	40~240
Foods	1.5~3.1	2.6~5.3	1.3~2.7	142~296
Agriculture & Fishery	1.0~2.0	1.6~3.2	0.9~1.8	14~28
Wholesale & Retail	1.2~2.5	1.9~3.8	1.1~2.3	31~62
Transportation & Warehouse	0.1~0.4	0.1~0.7	0.1~0.3	2~10
Total	4.5~12.4	7.3~20.0	4.1~11.2	229~637

(3) The Effects of Mt. Kumkang Tour Business on the National Economy (A+B)

The effects of Mt. Kumkang tour business on the national economy are calculated by adding the inducement effects of the excursion tour itself (A) and the inducement effects with regards to the local economy (B). The inducement effects in terms of production,

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**<Table 9> Inducement Effects with Regards to the National Economy**

	Excursion Tour Itself (A)	Local Economy (B)		National Economy (A)+(B)	
		Case I	Case II	Case II <sup>1)</sup>	Case II <sup>2)</sup>
Production (billion won)	219.0	10.0~15.3	7.3~20.0	229.0~234.3	226.3~239.0
Values-Added (billion won)	109.0	5.6~8.5	4.1~11.2	114.6~117.5	113.1~120.2
Employment (persons)	8,800	274~417	229~637	9,074~9,217	9,029~9,347

Notes: 1) Estimation using the average spending per tourist based on "The State of National Tourism in 1997"

2) Estimation using the average prices based on local business surveys

values-added, and employment are estimated in the range of 226.3-239.0 billion won, 113.1-120.2 billion won, and 9,029-9,374 persons, respectively.

#### *Summary of the Estimation Results*

##### 1) Effects on National Economy

The effects of Mt. Kumkang tour business on the national economy for this year will be significant. The inducement effects in terms of production, values-added, and employment are estimated to be, respectively, 230-240 billion won, 113-120 billion won, and 9,100-9,400 persons. The values-added inducement effects (113-120 billion won) constitute around 0.17% of the tour-related values-added (68,870 billion won) out of the GDP in 1997. The employment inducement effects constitute around 0.20% of the total number of tour-related employees in 1995. Moreover, if the business is expanded, thus attracting more and more foreign tourists in the future, it will also have the effect of earning foreign currencies.

##### 2) Effects on Local Economy

The effects of Mt. Kumkang tour business on the local economy, mostly from tourists' stays within the locality before and after their excursion are not yet that significant. Its inducement effects in terms of production, values-added, and employment are 7-20 billion won, 4-11 billion won, and 230-640 persons, respectively. These effects constitute only 3-9% of the effects on the national economy.

#### **Concluding Remarks**

As seen in this article, the economic effects of Mt. Kumkang tour business on the whole are judged to be quite significant. As this is an on-going business, it is expected to induce a great deal of production, values-added, and employment for our economy, not simply in this year, but also in the following years.

The only qualification here is that its effects on the local economy of Kangwon Province are not as great as anticipated. The major reason is that tourists simply do not stay in the region, touring around and spending their money. The current scheduling of excursion ships' departure and arrival times makes it possible for tourists from other regions to take excursion tours without staying in the region over-night. Some local people also worry that an increasing interest in Mt. Kumkan tour could cut down tour demand for Mt. Sorak. The local society wishes, therefore, that Mt. Kumkang tour business will be developed in connection with Mt. Sorak tour, and that utilization of more local products on ship, together with changes in the departure and arrival schedules, will bring greater benefits for the local economy.

Mt. Kumkang excursion tour business is at the first stage of Hyundai's comprehensive plan for Mt. Kumkang development. As this year can be seen as the first business year in a real sense, Hyundai will use this year's accomplishments as an instrument to judge the feasibility, and the possibility of success, of its comprehensive development project. Moreover, Kangwon Province also wishes a success of this business, as it can not only stimulate the local economy's development, but also lay foundations for the Province to become the center of Korea's tourism industry and inter-Korean trade in the coming 21st century.

Considering its significances in both political and economic aspects, Mt. Kumkang tour business must be a success, thus creating a great deal of positive economic effects. In order to increase its economic effects, the following points must be kept in mind.

First, it is important to attract more foreign tourists, thus heightening the effect of earning foreign currencies. Foreign tourists' spendings lead directly to the creation of national wealth. To be more specific, we should first target Chinese and Japanese tourists, who are the closest to us in terms of culture, national sentiment, and distance. Therefore, we should provide them with various conveniences (e.g., designation of the two countries' ports as the departure and/or arrival points) as well as useful tour information.

Second, tour products need to be diversified. Taking domestic

tourists' income levels and tour preferences into account, new tour products with shorter schedules should be developed. The current schedule of five days and four nights (four days and three nights during winter) is rather long, and can be too expensive for most domestic tourists. For these reasons, tourists tend to be heavily concentrated on vacation periods. Without more diversified tour products, therefore, Mt. Kumkang tour will have difficulties in attracting tourists all seasons long.

Third, the tour fares are rather high and should be lowered by cutting down various fees being paid to North Korea. Maintaining contacts and negotiations with North Korean counterparts is very important in this regard. Undoubtedly, lowered fares will bring about greater demands for the tour.

Fourth, the excursion ships that are now being rented from foreign countries should be replaced with domestically manufactured ships. In long term, land tour routes such as roads and railways should be developed in order to maximize the tour's economic effects.

Finally, local development leads directly to national development. The tour business, therefore, must be developed in full consultation with the local administration so that it can contribute greatly to the development of the local economy. Package tour products linking Mt. Kumkang tour and local tours (e.g., Mt. Sorak tour) together could be very helpful in this respect. <sup>EXR</sup>