

CHAPTER 3

Economic Impacts on Olympic Host Countries

The first Olympic Games originated in Athens, the capital of Greece, in 1896. It lasts for a hundred and eleven years till 2007. The Olympic Games have been such high level games for athletic competition that all the countries are honored of holding the Olympic Games. Liang (1994) pointed out that the Olympic Games were not only the most influential sports event in the world but also peaceful business. Hardly could the contribution from the Olympic Games be replaced by other international events.

Although none of the host cities earned profits before 1984, there was a renowned case of motivating economic growth due to holding the Olympic Games. The Japanese put an extraordinary emphasis on public investment after it was admitted holding Tokyo 1964 Olympic Games. Furthermore, the government determined to make Olympic construction one of The Plan of Doubling National Income.⁵ Such basic constructions in a marvelous scale led to the prompt development of manufacturing, construction, service, transportation and communication. Wang (2002) indicated that the annual growth rate of Japanese GDP after holding the Olympic Games dramatically increased from 10.1% to 26.1%. The total amount of GDP was also more than those of some advanced countries in Western Europe such as England, France and Western German since 1968. As a result, the Olympic Games made Japan the second economy in the world as well.⁶ Such an economic prosperity was ever called The Boom of Tokyo 1964 Olympic Games.

Wang (2002) added that the remarkable performance in economic development after Seoul 1988 Olympic Games pushed Korea into one of the Newly Industrialized Countries (NICs) from the developing countries. The increased employment of 330 thousand workers and 12.4% of annual national income from 1981 to 1988 were motivated by Olympic constructions. Besides, GDP per capita boosted to 6300 US dollars from 2300 US dollars. Holding the Olympic Games stimulated 7 billion US dollars of production

⁵ It was issued by Ikeda Hayato, the former prime of Japan from 1960 to 1964. The plan aimed to double the national income in ten years. During this period, the annual GNP and national income amounted to, respectively, 4.16 and 3.62 times as many as those of the past. It was the plan that made Japanese economy a marvelous advance.

⁶ It was ranked by the amount of GNP. The World Bank issued that the first three economies in 2006 were the untied States, Japan and Germany.

and 2.7 billion US dollars of national income as well from 1981 to 1988. The miraculous growth made Korea one of East Asian Tigers. It was another notable case of Olympic Boom as well.

Sydney 2000 Olympic Games were praised as the best Olympic Games. Not only did achievements of Sydney 2000 Olympic Games improve environment, boost city construction, and stimulate the development of transportation, tourism and real estate, but also promote international reputation of the host city.

In contrast to successful cases of holding the Olympic Games, Athens 2004 Olympic Games failed to motivate the economic growth due to its deficient promotion and an enormous amount of expenditures. Wang and Chen (2005) said that the enormous amount of expenditure was as many as 12 billion US dollars. Such a big debt would be paid for 10 years long. With the eye on it, holding the Olympic Games indeed have a significant influence on the economic development of the host cities. Therefore, the economic impacts on Olympic host countries will be discussed as following sections in detail.

3.1 Tokyo 1964 Olympic Games

Being the defeated nation of the Second World War, Japanese economy was in a terrible situation in the 1950s. Therefore, it was next to emergency to develop its after-war economy. Fortunately, it was the turning point for the Japanese to improve its economy when gaining the right of holding the Olympic Games. Therefore, the Japanese put such an extraordinary emphasize on public investment, that developments of the industries such as construction, manufacturing, service, transportation and communication were stimulated.

Holding Tokyo 1964 Olympic Games started since 1960. The amount of investment on holding the Olympic Games was 6,825 million US dollars. Direct investment was 452 million US dollars, while indirect investment was 6,373 million US dollars. Each of them was 2.7% and 97.3% of total investment. The amount of indirect investment was an overwhelming majority.⁷

Table 3-1 reveals economic indicators of Japan from 1960 to 1966. Growth rates of GDP, investment, household consumption and government expenditure boosted since 1960. Growth rate of GDP kept increasing and heightened to 17.6% in 1964, while it lowered to 11.3% in 1965. Most of the investment was put in Pre-Game and Games-Year,

⁷ See Brunet (1995).

so that insufficient investment after the Olympic Games led to the sharp decrease of growth rate. Additionally, growth rate of gross investment was at the summit in 1961, and then dramatically dropped into 2.6% in 1965. Growth rate of household consumption was steady in this period, while that of government expenditure slightly decreased after 1963. What is more, growth rate of index value was at 36.5% in 1960 and dropped into -6.9% in 1961, which was the beginning year of holding the Olympic Games. Afterwards, it didn't turn into positive value until 1965.

Table 3-1: Economic Indicators of Japan — 1960~1966

	Unit: billion yen						
Items	1960	1961	1962	1963	1964	1965	1966
GDP							
Amount	16,010	19,337	21,943	25,113	29,541	32,866	38,170
Growth rate (%)	21.4	20.8	13.5	14.4	17.6	11.3	16.1
Investment							
Amount	5,260	7,130	7,507	8,477	10,213	10,477	12,377
Growth rate (%)	39.2	35.6	5.3	12.9	20.5	2.6	18.1
Household consumption							
Amount	9,395	11,031	12,653	14,772	17,028	19,239	22,142
Growth rate (%)	15.3	17.4	14.7	16.7	15.3	13.0	15.1
Government expenditure							
Amount	1,282	1,484	1,747	2,070	2,352	2,690	3,054
Growth rate (%)	14.7	15.8	17.7	18.5	13.6	14.4	13.5
TOPIX							
Price	109.2	101.7	99.7	92.9	90.7	105.7	111.4
Growth rate (%)	36.5	-6.9	-2.0	-6.8	-2.4	16.5	5.4

Note: TOPIX is a free-float adjusted market capitalization-weighted index that is calculated based on all the domestic common stocks listed on the Tokyo Stocks Exchange First Section.

Source: IMF, *International Financial Statistics Online*, <http://www.imfstatistics.org/imf/logon.aspx> and Tokyo Stocks Exchange, <http://www.tse.or.jp/english/index.html>.

Table 3-2 indicates the impacts of Tokyo 1964 Olympic Games on industrial development. GDP contributed from service was 45.2%, the most of all the industries. In addition, those of construction, transportation with communication and manufacturing

were 21%, 19.4% and 14.4% respectively. The Olympic Games brought about employment of 650 thousand workers. In detail, the increased employment from manufacturing amounted to 210 thousand, the most of all the industries. Also, employment from construction and transportation with communication was 180 thousand, while that of service was 80 thousand.

Although holding the Olympic Games succeeded in stimulating growth of GDP, the recession in 1965 made Japanese economy get into scrapes. The sharp decrease of growth rate of GDP amounted to 6.3% between 1964 and 1965. It was attributed to the excessively focused investment in Pre-Games and Games-Year. The investment on holding the Olympic Games of domestic investment was 19.1% in 1964.⁸ As a result, the follow-up deficient investment led to Japanese recession in 1965.

Table 3-2: Impacts of Tokyo 1964 Olympic Games on Industrial Development

Items	Service	Construction	Transportation	Manufacturing
Production/GDP (%)	45	21	19	14
Employment (thousand workers)	80	180	180	210

Source: "Investment Report: Olympic Economy and Investment Strategy of Beijing Olympic Games," <http://finance.qq.com/a/20061227/000468.htm>.

3.2 Seoul 1988 Olympic Games

Holding Seoul 1988 Olympic Games was just the time when Korea put a great deal of efforts on industrializing its economy. Therefore, it was no doubt that the Korean would spare no endeavor to prepare for Olympic investments. Seoul 1988 Olympic Games pushed Korea into one of the Newly Industrialized Countries (NICs) from developing countries. Holding the Olympic Games stimulated 7 billion US dollars of production and 2.7 billion US dollars of national income as well from 1981 to 1988.⁹ Not only did it bring 300 million US dollars of profits, but also promptly motivated constructional development in Korea.

The investment on holding the Olympic Games started since 1982. The Korean

⁸ See "Beijing's Post Olympic Economy," <http://big5.bjoe.gov.cn/hayjj/>.

⁹ See Korea National Statistic Office, <http://www.nso.go.kr/eng2006/emain/index.html>.

spent 3,296 million US dollars on Olympic investment. The amount of direct investment was 1,534 million US dollars, while the amount of indirect was 1,763 million US dollars. Each of the percentage was 46.5% and 53.5% respectively.¹⁰

From 1982 to 1988, GDP contributed from manufacturing as shown in table 3-3 was 127 million US dollars. Respectively, 35%, 33% and 20% were contributed from manufacturing, construction, and service. Moreover, the Olympic Games brought employment of 336 thousand workers. In detail, employment from service increased by 153 thousand. Those from construction and manufacturing were 94 and 54 thousand workers respectively.

Table 3-3: Impacts of Seoul 1988 Olympic Games on Industrial Development

Items	Service	Construction	Manufacturing
Production/GDP (%)	20	33	35
Employment (thousand workers)	153	94	54

Source: Same as table 3-2.

Table 3-4 illustrates economic indicators of Korea from 1982 to 1990. Before 1990, growth rates of GDP and gross investment kept expanding and climbed to the summit at 18.8% and 23.3%, respectively, in Games-Year. However, growth rate of GDP plumped into 12.2% in 1989. Furthermore, growth rate of investment boosted since 1982 and kept increasing after the Olympic Games. Additionally, growth rates of household consumption and government expenditure were stable before 1989, and they increased abruptly afterwards. As for growth rate of employment, it slightly fluctuated from 3.0% to 5.5%. Although growth rate of index value dropped into -25.3% in 1982, the beginning year of Olympic investment, they climbed to the summit at 87.3% in 1986, and kept amazing growing afterwards.

¹⁰ See Brunet (1995).

Table 3-4: Economic Indicators of Korea — 1982~1990

Unit: trillion won

Items	1982	1983	1984	1985	1986	1987	1988	1989	1990
GDP									
Amount	54	64	73	81	95	111	132	148	179
Growth rate (%)	14.8	17.5	14.2	11.4	16.7	17.2	18.8	12.2	20.6
Investment									
Amount	15.6	18.6	22.2	24.4	27.6	33.6	41.4	50.2	67.4
Growth rate (%)	16.4	19.2	3.6	10.0	13.1	21.7	23.3	21.3	34.2
Household consumption									
Amount	34.6	38.9	43.4	48.0	52.8	59.0	66.1	77.1	93.5
Growth rate (%)	13.1	12.4	11.6	10.6	10.0	11.8	11.9	16.7	21.2
Government expenditure									
Amount	6.4	7.0	7.4	8.4	9.7	11.0	12.9	15.6	18.7
Growth rate (%)	14.3	9.4	5.7	13.4	15.6	13.5	17.1	21.1	20.0
Employment									
Amount (million workers)	—	—	—	15.0	15.5	16.4	16.9	17.6	18.1
Growth rate (%)	—	—	—	—	3.6	5.5	3.2	4.1	3.0
KOSPI									
Price	120	121	131	136	254	453	693	891	702
Growth rate (%)	-25	1	8	3	87	78	53	29	-21

Source: Same as table 3-1, and DataStream.

3.3 Barcelona 1992 Olympic Games

Although Spanish economy was advanced-development, it encountered economic recession of Europe occurred in the 1990s. Under this circumstance, Barcelona's holding the Olympic Games was, inevitably, dramatically influenced by its negative impacts. Nevertheless, holding the Olympic Games still brought 1,699 million US dollars of direct revenues for the host city, and motivated its follow-up development in economy as well.

The amount of direct investment on holding the Olympic Games was 2,460 million US dollars, while the amount of indirect investment was 6,915 million US dollars. Each

of them was 26.2% and 73.8% of total investment.¹¹ The amount of indirect investment was almost more than that of direct investment. Table 3-5 shows the investment on Olympic construction in detail.

Table 3-5: Investment on Barcelona 1992 Olympic Games

Items	Amount (million pesetas)	Percentage (%)
Road construction projects	343,804	35.9
Construction at the Olympic area	212,682	22.2
Construction in other areas of Barcelona	117,974	12.3
Other projects in Barcelona	182,450	19.1
Projects in Olympic sub-sites	69,916	7.3
Other sports infrastructure projects	29,804	3.1
Total	956,630	100.0

Source: Brunet (1995).

As table 3-6 indicates that growth rates of GDP, gross investment, household consumption, government expenditure and employment kept declining from 1988 to 1994. Surprisingly, growth rates of gross investment even plunged into -0.4% and -7.7% in 1992 and 1993 respectively. In addition, negative growth rates of employment were -1.9% and -4.3% in 1992 and 1993. In other words, economic recession of Europe completely offset economic development from holding the Olympic Games.

¹¹ See Brunet (1995).

Table 3-6: Economic Indicators of Spain — 1988~1994

Unit: billion pesetas

Items	1988	1989	1990	1991	1992	1993	1994
GDP							
Amount	41,648	46,670	51,983	57,004	61,394	63,517	67,555
Growth rate (%)	—	12.1	11.4	9.7	7.7	3.5	6.4
Investment							
Amount	10,467	12,344	13,832	14,705	14,650	13,517	14,502
Growth rate (%)	—	17.9	12.1	6.3	- 0.4	- 7.7	7.3
Household consumption							
Amount	25,196	28,354	31,289	34,264	37,307	38,538	40,848
Growth rate (%)	—	12.5	10.4	9.5	8.9	3.3	6.0
Government expenditure							
Amount	6,551	7,580	8,663	9,893	11,212	11,951	12,307
Growth rate (%)	—	15.7	14.3	14.2	13.3	6.6	3.0
Employment							
Amount (thousand workers)	11,781	12,258	12,579	12,609	12,366	11,837	12,207
Growth rate (%)	—	4.0	2.6	0.2	-1.9	-4.3	3.1

Source: Same as table 3-1.

3.4 Atlanta 1996 Olympic Games

The host city of 1996 Olympic Games was Atlanta, the biggest city in southeast America. Because the United States was an advanced-development country, holding the Olympic Games didn't have much influence on its economic development. The amount of direct investment on holding the Olympic Games was 1,182 million US dollars.¹² Although the amount of revenues was as many as 1,705 million US dollars, it almost offset by the expenditure. Rarely did holding the Olympic Games bring any profit for Atlanta.

Table 3-7 illustrates economic indicators of the United States from 1992 to 1998. Growth rates of GDP, household consumption and government expenditure were steady, so that they didn't reveal any significant fluctuation with holding the Olympic Games.

¹² See Brunet (1995).

Growth rates of gross investment were exceptionally 12.5% and 10.6% in 1994 and 1997 respectively. Besides, growth rate of employment was roughly stable. The difference was merely 0.7%.

Table 3-7: Economic Indicators of the United States — 1992~1998

Unit: billion US dollars

Items	1992	1993	1994	1995	1996	1997	1998
GDP							
Amount	6,338	6,657	7,072	7,398	7,817	8,304	8,747
Growth rate (%)	—	5.0	6.2	4.6	5.7	6.2	5.4
Investment							
Amount	1,088	1,172	1,318	1,377	1,485	1,642	1,771
Growth rate (%)	—	7.7	12.5	4.5	7.8	10.6	7.9
Household consumption							
Amount	4,235	4,478	4,743	4,976	5,257	5,547	5,880
Growth rate (%)	—	5.7	5.9	4.9	5.6	5.5	6.0
Government expenditure							
Amount	1,048	1,072	1,104	1,137	1,171	1,217	1,256
Growth rate (%)	—	2.3	3.0	3.0	3.0	3.9	3.2
Employment							
Amount (million workers)	118.4	120.3	123.0	124.9	126.7	129.5	131.5
Growth rate (%)	—	1.5	2.3	1.4	1.4	2.2	1.5

Source: Same as table 3-1.

3.5 Sydney 2000 Olympic Games

Australia was renowned for holding Sydney 2000 Olympic Games. It brought a considerable sum of profits and motivated the follow-up industrial development of transportation, tourism and real estate. Specifically, the huge amount of direct revenues was as many as 2,605 million US dollars, the most profitable one in the Olympic Games. Additionally, it stimulated 500 thousand travelers for the tourism.

The investment was made since 1994. The amount of investment on holding the Olympic Games was 5,836 million US dollars. Direct investment was 3,724 million US dollars, while indirect investment was 2,112 million US dollars. Each of them was 63.8%

and 36.2% of total investment.¹³ The excellent management in using sports facilities and gymnasiums prevented from insufficient investment after the Olympic Games.

Sydney 2000 Olympic Games mainly boosted the development of industries such as construction, transportation, tourism and service. In Pre-Games, the most beneficiary was construction because most of investments were put on Olympic constructions. In addition, development of service and tourism was the rapidest in Games-Year owing to the demand for Olympic activities by a great many visitors. What is more, Wang (2002) pointed that the price of real property in Sydney from 1993 to 1999 grew by 10 % annually. Then, the price of real property dramatically dropped after Sydney 2000 Olympic Games, which was so called Bubble of Real Property.

Table 3-8 is the impact of Sydney 2000 Olympic Games on tourism. Growth rate of visitors climbs at 8.7% in 2000, while it plunges into -0.9% in 2002. Averaged growth rate of visitors in the three phases are 3.9%, 8.7% and -0.5% respectively. The demand for the Olympic Games in Games-Year stimulates development of tourism. Nevertheless, it is pity that deficient management of tourism decreases the amount of visitors after the Olympic Games.

Table 3-8: Impact of Sydney 2000 Olympic Games on Tourism

Items	Pre-Games				Games-Year	Post-Games	
	1996	1997	1998	1999	2000	2001	2002
Visitors Amount (thousand people)	7,122	7,475	7,579	7,976	8,672	8,662	8,598
Growth rate (%)	—	5.0	1.4	5.2	8.7	-0.1	-0.9
Averaged growth rate of visitors (%)	3.9				8.7	-0.5	

Source: Australian Bureau of Statistics, National Statistics, <http://www.abs.gov.au/>.

Table 3-9 shows economic indicators of Australia from 1994 to 2002. The growth rates of GDP, household consumption and government expenditure were stable. Growth rate of GDP climbed to the summit at 7.5% in 2000. It was attributed to the development of tourism and sales of TV rights.¹⁴ Nevertheless, growth rate of gross investment fiercely fluctuated from -1.3% in 2001 to 15.3% in 2002, a 16.6% of gap. Finally, growth

¹³ See Brunet (1995).

¹⁴ The sales of TV rights were worth as much as 5,770 million US dollars.

rate of employment slightly fluctuated from 1.0% to 2.9% since 1995. The difference was no more than 2.0%.

Table 3-9: Economic Indicators of Australia — 1994~2002

Unit: billion Australian dollars

Items	1994	1995	1996	1997	1998	1999	2000	2001	2002
GDP									
Amount	475	501	533	562	593	623	670	712	761
Growth rate (%)	6.0	5.5	6.4	5.4	5.5	5.1	7.5	6.3	6.9
Investment									
Amount	114	117	124	128	146	157	159	157	181
Growth rate (%)	12.9	2.6	6.0	3.2	14.1	7.5	1.3	-1.3	15.3
Household consumption									
Amount	278	298	313	331	350	370	395	422	450
Growth rate (%)	4.5	7.2	5.0	5.8	5.7	5.7	6.8	6.8	6.6
Government expenditure									
Amount	88	92	98	102	107	113	122	129	136
Growth rate (%)	3.5	4.5	6.5	4.1	4.9	5.6	8.0	5.7	5.4
Employment									
Amount	7.9	8.3	8.4	8.4	8.6	8.8	9.0	9.2	9.3
(thousand workers)									
Growth rate (%)	—	4.0	1.3	1.0	2.1	1.9	2.9	1.3	1.9

Source: Same as table 3-1.

3.6 Athens 2004 Olympic Games

With the eye on fabulous profits of holding the Olympic Games, the Greek put a good many efforts on Olympic constructions. Wang and Chen (2005) pointed that the expenditure for holding 2004 Olympic Games was more than 12 billion US dollars, the most one among the Olympic Games from 1984 to 2004. The amount of expenditure was twice as many as the budget. In addition, the Olympic facilities and gymnasiums were not invested until 2000. Therefore, the postponed construction led to a big sum of cost and inefficiency. The enormous expenditure was supposed to leave the Greek a great deal of debts, which amounted to 3% of GDP.

Table 3-10 reveals the impact of Athens 2004 Olympic Games on GDP from 2000 to 2006. The increase amount of GDP contributed from holding the Olympic Games was 1.2% GDP in 2004. Additionally, contribution to growth rate of GDP kept decreasing from 0.7% to -1.27%. As a result, the excessive expenditure led to its economic recession.

Table 3- 10: Impact of Athens 2004 Olympic Games on GDP — 2000~2006

Unit: %

Year	Contribution to GDP	Contribution to growth rate of GDP
2000	0.09	0.10
2001	0.77	0.70
2002	1.00	0.24
2003	1.15	0.15
2004	1.20	0.05
2005	- 0.01	- 1.27
2006	0.24	0.26

Source: “Greece in figures,” <http://www.invgr.com/indicators.htm>.

Table 3-11 illustrates economic indicators of Greece from 2001 to 2006. Growth rate of GDP was at summit of 9.1% in 2003 and slipped down to 7.7% in 2004 due to insufficient investment. Afterwards, it kept constant. Also, growth rate of investment climbed to the highest at 14.7% in 2003 as well, and then plunged 2.4% in 2005. As far as growth rate of household consumption was concerned, its slight fluctuation was from 6.6% to 10.8% at this period. What is more, growth rates of employment were the most in Pre-Games, while it was the least in Games-Year. Finally, growth rate of index value were negative before 2004. Then, it turned to positive afterwards and climbed into the summit at 33.6% in 2005.

Table 3-11: Economic Indicators of Greece — 2001~2006

Unit: billion euros

Items	2001	2002	2003	2004	2005	2006
GDP						
Amount	133	143	156	168	181	195
Growth rate (%)	—	7.5	9.1	7.7	7.7	7.7
Investment						
Amount	31	34	39	42	43	—
Growth rate (%)	—	9.7	14.7	7.7	2.4	—
Household consumption						
Amount	89	95	102	113	122	130
Growth rate (%)	—	6.7	7.4	10.8	8.0	6.6
Government expenditure						
Amount	23	26	26	28	30	31
Growth rate (%)	—	13.0	0.0	7.7	7.1	3.3
Employment						
Amount	4,086	4,176	4,275	4,313	4,369	—
(thousand workers)						
Growth rate (%)	0.0	2.2	2.4	0.8	1.3	—
ATHEX						
Price	2506	2137	1978	2332	3116	3699
Growth rate (%)	-36.8	-14.7	-7.5	17.9	33.6	18.7

Source: Same as table 3-1, and Datastream.

3.7 Comparison of Economic Impacts

The impacts on industrial structures from holding the Olympic Games are mainly construction, transportation with communication, service and tourism. In Pre-Games, Olympic facilities and gymnasiums will boost development of construction and transportation with communication. In Games-Year, tourism, service and transportation with communication will be the most beneficiaries from the demand for Olympic Games. In Post-Games, construction will dramatically plunge because of deficient investment.

Table 3-12 illustrates the amount of direct and indirect investment on holding the Olympic Games. Developing countries such as Japan, Korea and Spain spent much on indirect investment than direct investment. Specifically, the amount of indirect investment on Tokyo 1964 Olympic Games was whelming majority. Besides, the amount

of indirect investment on Barcelona 1992 Olympic Games was more than that of direct investment as well. On the contrary, as far as developed countries such as the United States and Australia are concerned, the amount of direct investment was the majority. Therefore, more indirect investment can strongly stimulate economic development.

Table 3-12: Direct and Indirect Investment on Holding the Olympic Games

Unit: million US dollars

	Tokyo 1964	Seoul 1988	Barcelona 1992	Atlanta 1996	Sydney 2000
Direct investment					
Amount	452	1,534	2,460	1,182	3,724
Percentage (%)	(2.7%)	(46.5%)	(26.2%)		(63.8%)
Indirect investment					
Amount	6,373	1,763	6,915	—	2,112
Percentage (%)	(97.3%)	(53.5%)	(73.8%)		(36.2%)
Amount of total investment	6,825	3,296	9,376	—	5,836
	(100%)	(100%)	(100%)		(100%)

Note: The figures in brackets stand for its percentage of total domestic investment.

Source: "Beijing's Post Olympic Economy," <http://big5.bjoe.gov.cn/hayjj/>.

Table 3-13 and 3-14 illustrate the trend and averaged growth rates of economic indicators. Among those Olympic host Countries, economic indicators of Atlanta 1996 and Sydney 2000 Olympic Games, are the least insignificant with holding the Olympic Games. It must be noted that Barcelona 1992 Olympic Games will be excluded from the comparison, because its economic indicators are almost offset by the occurred recession. When compared to economic indicators of other host countries, those of the United States and Australia are merely slightly influenced by holding the Olympic Games, because the two countries are the advanced ones.

In contrast to the above cases, economic indicators of Tokyo 1964 and Seoul 1988 Olympic Games such as GDP, investment and domestic expenditure are more than 10%. Especially, averaged growth rates of gross investment of the two host countries are over 20% and those of the two are more than 15% as well.

Table 3-13: Averaged Growth Rates of Economic Indicators

Unit: %

Olympic Games	GDP	Investment	Domestic expenditure	Employment
Tokyo 1964	15.8	19.7	15.1	—
Seoul 1988	16.8	22.0	15.6	3.8
Barcelona 1992	7.9	3.8	11.1	0.0
Atlanta 1996	5.6	8.4	3.6	1.7
Sydney 2000	6.6	5.0	6.3	2.2
Athens 2004	7.9	7.4	7.5	1.2

Source: Same as table 3-1.

Table 3-14: Growth Rates of Economic Indicators in the Three Phases

Unit: %

Olympic Games	Growth rate of GDP			Growth rate of investment		
	Pre-Games	Games-Year	Post-Games	Pre-Games	Games-Year	Post-Games
Tokyo 1964	16.2	17.6	13.7	17.9	20.5	20.7
Seoul 1988	15.1	18.8	16.4	14.9	23.3	27.8
Barcelona 1992	11.1	7.7	5.0	12.1	- 0.4	- 0.2
Atlanta 1996	5.3	5.7	5.8	8.2	7.8	9.3
Sydney 2000	5.6	7.5	6.6	6.7	1.3	7.0
Athens 2004	8.3	7.7	7.7	12.2	7.7	2.4
	Growth rate of domestic expenditure			Growth rate of employment		
	Pre-Games	Games-Year	Post-Games	Pre-Games	Games-Year	Post-Games
Tokyo 1964	16.8	14.5	14.0	—	—	—
Seoul 1988	12.5	14.5	19.8	4.6	3.2	3.6
Barcelona 1992	12.8	11.1	9.5	2.3	- 1.9	- 0.6
Atlanta 1996	4.1	3.0	3.6	1.7	1.4	1.9
Sydney 2000	5.5	7.4	6.1	2.1	2.9	1.6
Athens 2004	6.8	9.3	6.3	1.5	0.8	1.3

Note: 1. Growth rates of economic indicators in Pre-Games and Post-Games were averaged figures.

2. Domestic expenditure stands for the sum of household consumption and government expenditure.

Source: Same as table 3-1.

Table 3-15 shows real estates of the host cities of the Olympic Games. It can be concluded as the followings: The first one is that the enormous amount of Olympic investment before Game-Year often boosts the price of real estates. The excessive amount of investment will end up with bubbling. The second one is that the great demands of visitors for living in Game-Year will push up the renting price. Therefore, the boosted renting price will lift the price of real estates.

Table 3-15: Real Estates of the Host Cities

Cities	Situation of real estates
Seoul	The over-heat real estates ended up with bubbling after the Olympic Games. With the control from government, the price of real estates gradually dropped as well as the earning profit of industries.
Barcelona	The bubbles appeared before the Olympic Games, while they dramatically dropped instead at the end of the Olympic Games
Atlanta	Real estates in central area gradually appreciated.
Sydney	The bubbles appeared after the Olympic Games. However, with the intervention from government, the price of real estates was under control.

Source : “Beijing’s Post Olympic Economy,” <http://big5.bjoe.gov.cn/hayjj/>.

3.8 Summary

The impacts of holding the Olympic Games depend on different economic structure of the host countries. During the period of holding the Olympic Games, the host countries such as Japan and Korea just belonged to developing countries. However, with holding the Olympic Games, the enormous amount of investment stimulated economic development of the two countries. Tokyo 1964 Olympic Games pushed Japan into the advanced country, while Seoul 1988 Olympic Games made Korea a Newly Industrialized country.

In addition, the host countries such as Spain, the United States, Australia and Greece are developed countries. Except economic recession of Barcelona 1992 Olympic Games and inefficient investment of Athens 2004 Olympic Games, the impacts on economic development of the two advanced countries, i.e. the United States and Australia, are insignificant with holding the Olympic Games.

With the eye on the need for industrial transition, the Japanese and Korean greatly benefited from holding the Olympic Games. The boosted growth rate of GDP made Japan an advanced country and Korea a Newly Industrialized Country as well. They were the

two most successful cases of economic development. Furthermore, although Barcelona 1992 Olympic Games brought a considerable sum of revenues for the Spanish, it, inevitably, was offset by negative impacts of European recession. When compared to 1964 and 1988 Olympic Games, hardly did Atlanta 1996 Olympic Games lead to any economic development for the United States. As far as Sydney 2000 Olympic Games were concerned, they were considered as the most profitable Olympic Games ever since. In addition, with many successful cases of holding the Olympic Games, nevertheless, Athens 2004 left the Greek nothing but an enormous amount of debts. From the above, three conclusions can be made as followings:

1. Boosted amount of investment. Growth rate of investment, except Barcelona 1992 and Sydney 2000 Olympic Games, will keep increasing in Pre-Games and boost at summit in Games-Year due to the enormous amount of investment.

2. Splendid growth rate of GDP. The increased investment in Pre-Games and Games-Year will lead to splendid growth rate of GDP. Especially, averaged growth rates of Tokyo 1964 and Seoul 1988 Olympic Games were above 15%. However, Growth rates of Atlanta 1996 and Sydney 2000 Olympic Games keep stable instead of fluctuating because the two hosts are advanced countries.

3. Bubbling GDP in Pre-Games. Growth rate of GDP will dramatically decline after Games-Year due to the inefficient amount of investment. Reducing the percentage of Olympic investment to domestic investment is supposed to improve the sharp decrease of GDP.

4. Stable household consumption and government expenditure. Rarely do growth rates of household consumption and government expenditure appear significance with holding the Olympic Games.

5. Higher price of real property in Pre-Games and Games-Year. The boosted investment in Pre-Games and tourists in Games-Year result in higher price of real property. Over-heated price of real property will encounter the risk of bubbling.

6. Different economic structure. Holding the Olympic Games greatly stimulates and motivates economy of developing countries such as Japan, Korea and China. On the other hand, the impacts of holding the Olympic Games show insignificance with the advanced countries such as the United States and Australia.