

The story of Gumi

Introduction

Gumi is a small city in Korea with less than 0.8% of total national territorial area, working population, and number of manufacturing firms, but produces 12.3% of the total national manufactured export (year 2002). (see table 1) The media has been celebrating Gumi as a rare successful case of Korea's decentralized locality, not only where manufacturing firms were thriving, but also where there has been inflow of population attracted by job opportunities. (see table 2) This economic growth in Gumi indicated recently by both high export manufacturing output and increase in population is considered unusual, as the nation still suffers with severe concentration of economic activities and population around its capital region, consisting of Seoul and the surrounding Kyungi Province. Specifically, the capital region has nearly half of Korea's total population (46%) as well as manufacturing firms (55%), within land that is only 11.8% of the national territory.¹ Such pronounced aggregation of population and industries is generally thought to bring problems such as lack of population, stagnant economies, and an imbalanced economical attention in other parts of the country. For example, table 2 shows how the North Kyungsang Province, where the city of Gumi is located, has constantly lost its population from year 1980 to 2000, whereas the capital region gained population. This is why Gumi's growth, as a city outside the non-capital region, has received much attention as an astonishing case of urban economic growth in Korea.

¹ Raw data are from Korea National Statistical Office for year 2000.

Table 1: Comparing Gumi in the national context²

	National	Gumi
Territorial area	99,461 km ²	616 km ² (0.6% of 99,461 km ²)
Population	45,985,000	339,000 (0.7% of 45,985,000 people)
Average age of total population	34 years old	29 years old
Manufacturing firms (#)	98,110	825 (0.8% of 98,110 firms)
Manufacturing employees (#)	2,653,000	73,000 (2.8% of 2,653,000 employees)
Annual manufacturing output	\$565 billion	\$31 billion (5.5% of \$565 billion)
Value-added manufacturing out.	\$220 billion	\$11 billion (5% of \$220 billion)
Export of manufacturing output	\$162 billion	\$20 billion (12.3% of \$162 billion)

Table 2: Population change³

	1980	1985	1990	1995	2000
Gumi	105,311	142,052	206,088	309,968	339,457
North Kyungsang	4,952,012	3,010,001	2,860,109	2,716,218	2,672,498
Capital region	13,280,951	14,418,372	16,757,609	17,855,119	18,791,724
National	37,406,815	40,419,652	43,390,374	44,553,710	45,985,289

Gumi's economic growth primarily driven by its national electronics industrial cluster, also called as one of the many NIEs (National Industrial Estate). The industrial cluster is the focal point of the city, because the creation of Gumi itself was a result from the state-planned NIE. For reference, Gumi was only a village of 20,000 people in 1963, with an annual population growth of less than 1%. However, after the NIE for electronics was built in 1971, the population began to increase at the rate of 5.1% or higher, and by 1978 it was categorized as a city with a population of more than 100,000.⁴ Furthermore, much of the city's economic successes being praised today are ultimately the result of the industrial cluster's growth. Therefore it would be more or less legitimate to attempt to understand the economic growth of Gumi with the view of its industrial cluster as a main facilitator of growth.

In this paper, I begin with the background of how the industrial cluster was built in 1970,

² Raw data are from Korea National Statistical Office for year 2000. Data regarding population is rounded up to 1000.

³ Raw data are from Korea National Statistical Office.

⁴ The construction business journal 2003-1

exploring various perspectives. Then the paper looks at how the industrial cluster developed till the 1980s, through the eyes of the electronics industry, and how its spill-over has affected the city. The paper ends with how the decentralization of the Korean government has influenced Gumi's industrial cluster in the 1990s, leading to the present. Hopefully, looking at the various structures, agencies and actors involved throughout the three different time frames will reveal some of the key factors for Gumi's success today.

Industrial cluster formation

Macro view of regional policy background

Korea had a highly centralized planning system for national development until the 1990s when decentralization and localization began to take place. Especially during the military regime of General Park, Chung-hee (1961-1979), the central government considered the entire nation as a single production base. It sought to maximize the efficiency of production with limited financial resources by providing infrastructure in selected locations that were deemed to be the optimum place for industrial development. Together with the "Five-Year Economic Development Plan" and the "Comprehensive National Territorial Plan", the government laid out the base stone for Korean capitalism.

In the 1960s, the central government converged public sector investments into a few selected metropolitan areas such as Seoul, Incheon, Busan, and Ulsan. As in the early stages of economic development, the government did not have enough financial resources, and therefore was forced to choose a few large urban areas that already had comparative advantages of labor and business service supplies. In the 1970s, the first National Territorial Plan, building upon the strategies from the 1960s, specifically proposed to do the following: 1) provide large scale

industrial estates (NIEs), 2) expand physical infrastructure such as transportation, communication, and urban facilities, and 3) develop lagging rural areas.⁵ One of the products of such plan is Gumi's electronics NIE.

The birth of Gumi's industrial cluster

It is then questionable why Gumi, a small countryside village at the time, was chosen for an electronics industrial cluster. A few different explanations based on political, infrastructure, and industrial sector issues can be developed that sometimes complement or contrast each other. However, the most general explanation is that it very well fitted the strategies and goals of the first National Territorial Plan. 1) It had vast land mostly vacant or being used for farming, 2) was located at the existing and expanding Seoul-South-East transportation corridor, and 3) was a lagging rural area, yet with a potential to easily pull the resources such as labor from the nearby Daegu Metropolitan, located only a 30 minute drive away.

The explanation weighted on the political view has two contrasting facets. One emphasizes the fact that it was a physically attractive site to be developed as a completely non-urban area, yet with the available resources for development from the near Daegu metropolitan. This allowed political propaganda of developing rural areas and redistributing the nationally led export-oriented developments. In other words, it was a good opportunity to show as an early gesture that the new military government had the concern for the development of rural, non-metropolitan areas. This not only differed from the past Rhee regime of the 1950s, when the import-substitute industry was entirely concentrated in Seoul, but also from its own other projects during the same time period, such as motor industry plants in Ulsan and large manufacturing complexes in Busan.

⁵ p.8, Kim, 2001, National territorial planning at the turn of the 21st century

However, the second explanation building on the political view contrastingly suggests that Gumi had a critical handicap to be used for political propaganda, because it was the birth place of General Park. Though he is reported to have said, “As an individual, I like the fact that an industrial cluster is being built in my hometown, but because I am a public official, I am against it”⁶, it is highly likely that Gumi’s electronics NIE is General Park’s gift to his hometown. He was able to carry this out, probably because he had omnipotent control during his regime, and no one could dare to publicly criticize his plans or actions. Yet, although the explanation based on General Park’s personal connections to the area was highly convincing, there were other objective explanations that supported the choice of Gumi over other areas for building an industrial cluster.

The first of these relates to the infrastructure development. The two largest metropolitan cities in Korea were Seoul and Busan, even before the centralized economic development. Seoul was the capital, while Busan was actively developed during the Japanese colonization era due of its position as a port facing Japan. The two were already connected by major railroads built by the Japanese, primarily to transfer goods to and from Japan via Busan. In addition, the lagging Korean economy had to rely strongly on Japan for rapid economic development. General Park’s policy to cooperate with Japan resulted in numerous trades with her, leading to industrial clusters in the southeast area around Busan. Therefore it was reasonable for Korea to build its first motor vehicle expressway, named Kyungbu Expressway, linking its then most developed Seoul and Busan in 1970. This resulted in the development of a transport corridor, leading to the development corridor itself. Building electronics NIE in Gumi, which was part of the corridor, (see the diagram above) was considered an efficient planning of using and building upon the new infrastructure development, which then was a scarce resource.

⁶ <http://www.egumi.net/main/index.asp>

The other explanation that supports the choice of Gumi is based on the fact that it was a cluster to be focused on electronics rather than other heavy industries such as steel, shipping, and automobiles. Because the Korean government led the export-oriented economic development policy, industries producing bulky or heavy products naturally located themselves around the seashores of South-East Korea, where the major ports leading to Japan and the Pacific Ocean were. However, electronics industries, which is comparatively light-weight and small-volume, did not require its production facilities to be located near the port and enabled them to be located inland, i.e. Gumi.

Also, when looking at the development of the electronics industry in Korea, it can be assumed that the central government recognized its potential to become the leading industry for the nation as early as the late 1960s. Although Korea's very first product in electronics was a commercial transistor radio produced only by 1958, already by the mid 1960s, the government started to focus on electronics, particularly for its high value-added export potential and its minimal dependency on raw materials. In 1965, Electronics Industry Promotion Law was enacted that required routine formulation of an electronics sector plan by Ministry of Commerce and Industry,⁷ including policy measures for government assistance such as various protections for the industry. Two most significant forms were the eight-year electronics development plan and the quasi-government organization named FIC (Fine Instruments Center), which later became the Electronic Industries Association of Korea, to implement the government policies.⁸ Since then, the industry started its rapid growth. Furthermore, by 1973, electronics was selected as one of six strategic industries to be promoted in the HCI (Heavy Chemical Industry) plan,

⁷ p. 85, Kang, 1989, Is Korea next Japan?

⁸ P. 143, Lim, 1998, Korea's growth and industrial transformation

even though it was neither heavy nor chemical.⁹ This massive investment sought to promote capital and technology intensive industries to foster those with potential competitiveness in exporting goods to international markets. Through the plan, foreign firms were attracted to form joint ventures with Korean domestic firms, which was the central government's strategy to import foreign technologies. In the spirit of such strategy, the Gumi electronics NIE provided foreign investors with a package of incentives and privileges such as permission to retain 100% ownership, tariff exemption on imported raw materials, corporate and income tax exemption for 5 years and for the following 3 years a 50% tax reduction. This induced Japanese firms to increase joint ventures with large Korean firms in the 1970s.¹⁰ The enactments of such strategic plans in the mid 60s to the early 70s indicate that the government has been perceiving the potential of electronics industry as the future leading sector in the national economy even before the Gumi's industrial cluster was built in 1971. This then loops back to the political argument that General Park may have given his hometown a gift of potentially the most powerful industrial cluster in the peninsula.

Despite the fact that the central government's planning probably was the most decisive factor in designating places for NIEs, there was also the local movement in Gumi to attract such development. The local residents of Gumi took the initiative by themselves in the late 1960s to contribute in bringing the industrial development to their area. The construction business journal notes this as a distinguishable character from other NIE locations. In 1969, Mr. Jang, Wal-sang, then the leader of Gumi's Farmland Improvement Association, created and led the committee for supporters of industrial cluster development in Gumi.¹¹ Although the magnitude of the influence this committee had in the government's decision-making is not documented, it seems that it at

⁹ p. 116, Lim

¹⁰ p. 115, Lim

¹¹ The construction business journal 2003-1

least greatly facilitated the gathering of farm lands to be used for the industrial cluster, unifying local individual farmers to sell their land. Such local movement of Gumi shows that already, even before the industrial cluster had been built, the local residents were capable of uniting and focusing their interests and attention to their main engine of growth, the electronics industrial cluster.

Industrial cluster development

When the Gumi electronics NIE was established in 1971, there was a total of eleven firms. They were Kolon (textile), Yoonsung Textiles, Dongkook Textiles, Jeil Synthetic Fibers, Gold Star (currently renamed as LG) Cable, Gold Star Electronics (the very first tenant of the Gumi industrial cluster), Gold Star Machinery, Dongyang Electronics, Orion Electronics, Korea Electronics, and Daewoo Electronics. As the list indicates, there were not only electronic firms, but a number of textile firms as well. The textile industry, which was then the leading sector, could have been attracted to the cluster by the central government intending to give some push to the economy of the cluster at its infant stage. Or they could have been attracted by themselves to the site of Gumi, because it provided a vast amount of land and the promise of good infrastructure, but most of all, was located only thirty-minutes away from Daegu Metropolitan, the nation's major textile cluster. Compared to Daegu, where industries were being pushed toward urban fringes, land was becoming expensive and scarce, and more contestants of the industry such as wealthy local residents were increasing as the city grew, Gumi must have been a very attractive site without these disadvantages, and yet provided close connection to the major textile industrial cluster. Whichever the reason may be, data shows that textile firms were present in the Gumi Electronics NIE from its very beginning, and even today (year 2000) is the second

largest sector of the cluster. However, present data also indicates that the electronics industry has become very dominant, composing 70.9% of the total value-added output produced in Gumi NIE, while the second largest textile industry produces only 6.7% of the total value-added output. (see table 3) In other words, the electronics industry seems to have grown to be the major engine of cluster's growth, and therefore the development story of Gumi NIE can be traced by focusing on the electronics industry.

Table 3: Composition of Gumi industrial cluster, year 2000¹³

	Total (Gumi)	Electronics	Textile (second largest sector)
# of firms	825	303 (36.7% of 825)	118 (14.3% of 825)
Employment	72,821	41,372 (56.8% of 72,821)	11,290 (15.5% of 72,821)
Total output	\$30,527 million	\$22,996 million (75.3% of \$30,527 million)	\$1,869 million (6.1% of \$30,527 million)
Value-added output	\$11,274 million	\$7,993 million (70.9% of \$11,274 million)	\$756 million (6.7% of \$11,274 million)

Others include, food, garment, wood, paper, print, mechanical, rubber, metallic, automobile and trailer industries.

Electronics Industry

Electronic industrial cluster in Gumi is known to have gone through rapid growth when the color television was produced for the first time in Korea in 1976.¹⁴ The spread of the consumption of color TVs in the domestic market must have fueled the economy of the electronics industry. However, the central government was looking further ahead. In the same year the color TV was first produced, the Fourth Five-Year Plan was announced. In this plan, the government's main objective regarding the electronics industry was to encourage the shift from the assembly-type consumer production to those of basic components and parts. This resulted in an ambitious investment in semi-conductor and computer related items, and Gumi electronics

¹³ Raw data based on the year 2000 are from Kyungbuk region Statistical Office, and Korea National Statistical Office. In parenthesis are percentage compared to the 'total' data.

¹⁴ <http://www.advertising.co.kr/blog/com/index.vw>

NIE was announced as the semi-conductor and computer industrial estate.¹⁵ Therefore, in the summer of 1977, the second estate, specifically categorized for semi-conductors industry, was established in the Gumi electronics NIE.¹⁶ Such large expansion of the industrial cluster must have added a large number of labors to the already growing population, because by 1978, the population exceeded 100,000, and Gumi finally became a city.¹⁷ However, by the 1980s, the domestic conglomerates such as those of Samsung and Gold Star became dominant with their own private assets and power, somewhat reducing the need for the government's assistance. As consequences, some of these large firms began to resist the government's direction regarding locations when they thought it unnecessary, and for example, Samsung's major Semi-Conductor related firms were built in Suwon, not in Gumi. Such loss of the central government's power to locate firms in Gumi might explain table 4, where the percentage of Gumi's export to the national total export remained the same from 1980 to 1990 at 4.6%. This suggests that the growth of the Gumi electronics NIE indicated by its increase in the export output and even the number of firms during these ten years is linked to the growth of Korea's electronics industry as a whole, which faced a exponential growth till the end of 1980s.

The electronics industry however slowed down from the 1980s and onwards, because of the loss of the price competitiveness due to the rising wages and appreciation of the Korean Won.¹⁸ Yet, table 4 indicates that from 1990 to 2000, the percentage of Gumi export had increased from 4.6% to 7.2% of the total national export output. This indicator suggests that Gumi's industrial cluster has fared well even in the slowing down of the industry. Also, this is when the decentralization and localization of the Korean government took place (1995).

¹⁵ p 144, Michell, 1988, From a developing to a newly industrialized country: The republic of Korea 1961-82

¹⁶ www.kimtw.co.kr

¹⁷ The construction business journal 2003-1

¹⁸ p. 121, Park, 1997, Korean Enterprise

Therefore, the city of Gumi must have factors that attract firms and help them to perform well. Such factors might become visible when looking at the industrial cluster's spill-over to the local economy.

Table 4: The development of Gumi electronics NIE¹⁹

Year	# of firms	# of employees	National export output	Gumi export	Percentage
1971	11	1313	\$1,068 million	\$8 million	0.75%
1980	219	40220	\$17,505 million	\$812 million	4.6%
1990	336	71348	\$65,016 million	\$2,977 mil.	4.6%
2000	520	68075	\$172,268 million	\$12,411 mil.	7.2%
2003	692	68297	\$193,944 million	\$20,566 mil.	10.6%

Spill-over to the local economy

Besides the sheer number of increased workers into the city from the neighboring areas, the large firms in the Gumi electronics NIE also set the standard for the quality of life of the workers. It is recorded that instead of free dormitory accommodations that were given to the workers by firms of other industries in Gumi, large electronics firms offered small apartments to be shared by two workers for free, which provided much superior situation to that prevailing in other areas. Gold Star reported that this was a major expense at the time of late 70s to mid 80s, but was necessary to attract highly skilled workers.²⁰ Samsung, which did not allow its workers to participate in a labor union, not only provided good housing, but also designed its surroundings of the firms and factories in Gumi as a large beautiful park, where workers could stroll, take a nap, or have lunch in their leisure time. Furthermore, workers were paid more in Gumi than in Seoul in the 1980s, as a compensation for not living in the capital, despite the living costs in Gumi were much lower. Therefore the workers were noted to be happier with their

¹⁹ Raw data are from the city of Gumi

²⁰ p. 147, Michell

work in Gumi, resulting in higher productivity and dedication.²² In general, such good provision of housing, amenities, and pay checks were necessary to attract workers, and at the same time possible, because 1) the land was easily available in Gumi, 2) the government provided various other incentives to the firms such as tax reduction, and 3) large “electronic” corporations had more capacity and resources to do so than other firms.

Gumi electronics NIE however, not only had large electronic corporations, but also had firms in other industries such as textile and machineries. Most of the workers of these firms that were not provided free housing inside the industrial cluster went out to the “new town”, located south of the old center of Gumi and east of the industrial cluster. In this new town, both the Korea National Housing Corporation and the private sector seeing the market opportunity, built massive amounts of affordable high-rise apartment complexes. Also, as these apartment complexes were developed, the necessary amenities such as fire station, post office, banks, police station, schools, markets, and restaurants were created.²³

This new town however is not the only creation of the Gumi electronics NIE’s spill-over effects. Seeing that the industrial cluster, and as consequence the population growing, the local leaders of Gumi saw the potential to develop Mt. Keum-O nearby. A Korean-Japanese capitalist, Park, Jin-Yong, also a native of Gumi, is recorded to have said, “If we build hotels and a cable car to the top of mountains, and make the lake recreational where people can ride boats, it will attract a lot of young workers from the industrial cluster”.²⁴ He then led to build Mt. Keum-O cable car and Mt. Keum-O Hotel in 1982.

While the new town and Mt. Keum-O developments were sparked by the Gumi electronics NIE, the old center of Gumi remained ignored by the local elites, the private business,

²² p. 147, Michell

²³ www.jugong.co.kr

²⁴ The construction business journal 2003-1

and the public. For example, only by the 1980s its roads were paved, whereas already in the 1970s the new town and the industrial cluster were full of well paved, wide roads and highways interconnecting the two, and also leading to the Kyungbu Expressway. Therefore, it can be concluded that the city of Gumi in the 1980s consisted of basically the industrial cluster and its new town.

Gumi in the decentralization era

Korea before 1995 was a highly centralized country as previously mentioned. There was no autonomy in the local level, and most decisions regarding industries were made by the central government. Such centrality created the Gumi electronics NIE, and helped to initiate its development. What then happened to Gumi as the government decentralized to empower and at the same time burden local municipalities?

In 1995, the local government was for the first time locally elected in Korea, marking the start of the decentralization. Especially after 1997's economic crises, the Korean economy was largely deregulated, and the opportunities and burdens for international economic competition were transferred down to the local municipal and provincial levels.²⁵ The city mayors now had important roles to promote their local economy by various means, including attracting industries. The city of Gumi, with its dependence on the industrial cluster focused on attracting industries. This focus however seemed very challenging for the following reasons. 1) Globalization and increase in the domestic labor cost are triggering many national corporations to relocate their manufacturing branches abroad and 2) Korean industries increasingly tend to concentrate in the capital region of Seoul. Yet, as the table 4 above shows, Gumi has maintained

²⁵ p.27, Douglas, 2000, Turning points in the Korean space-economy: from the developmental state to intercity competition, 1953-2000

its explosive growth throughout the 1990s and into the year 2003.

From the magazines and newspaper articles, two possible explanations emerge that try to answer how and why the city of Gumi succeeded in attracting not only domestic firms but also foreign firms after the decentralization. The first most cited explanation is that the mayor of Gumi is very entrepreneurial and proactive in attracting firms. He is said to have constantly invited many directors of foreign and domestic firms to the city, trying to convince them how investing in Gumi would be worthwhile. As the local elites of Gumi have historically been very active in favoring the development of industrial cluster, the locally selected mayor, who was also a native of Gumi, could have had similar traditional thoughts and values. Also, Gumi being a city composed basically of the inflow of industrial cluster's workers from other areas (out of 340,000 residents only 30,000²⁶ are genuinely local), the mayor must have realized the importance of fostering the industrial cluster's growth at all cost to maintain his political support.

The second explanation emerged was that existing LG and Samsung firms in the industrial cluster were very attractive to other firms, especially foreign ones. Because LG and Samsung have grown to be internationally well known corporations especially in the electronics, the fact that a number of their electronic firms were clustered in the Gumi NIE was enough incentive to foreign firms. This explanation therefore credits more to the past central government's effort and conditional factors that led to the creation and development of Gumi electronics NIE, rather than the current agency.

Conclusion

Gumi was able to economically develop, because of its industrial cluster created by various political, infrastructural, and industrial factors. Its development pattern was largely

²⁶ Rough approximation assuming that population grew at 1% since 1963.

influenced by the characteristics of its main electronics industry, leading to its current success in the globalization era. However, the local factors also contributed in shaping and maintaining the development of the industrial cluster. They are 1) local elites interested in the growth of industrial cluster, 2) current local population largely composed of immigrated workers from other cities 3) more or less homogenized small local farmers favoring the development, and 4) the spill over economy that largely depends on the industrial cluster. In other words, there was only a strong support and not much conflict in Gumi regarding the development of electronics NIE, because in the beginning Gumi only had a small population of poor farmers and local elites who favored the development, and soon afterwards was taken over by workers who had large stakes in the industrial cluster. Therefore, the city of Gumi can be said to have been created and developed by the industrial cluster, and such heavy reliance on it helped to constantly fuel its growth. This unique characteristic might be what distinguishes Gumi from other industrial clusters in larger cities with much more diverse interests and conflicts. In short, along with other political, infrastructural, and industrial factors introduced in this paper, such homogenized and concentrated efforts to foster and maintain industrial cluster's growth could also have helped Gumi to survive the global competition left to the local municipalities to face.

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