KDI SCHOOL WORKING PAPER SERIES

Riding into the Sunset: The Political Economy of Bicycles as a Declining Industry in Korea

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July 2004
Working Paper 04-15

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Abstract

This paper investigates the causes underlying the tragic story of Korea's bicycle industry from what appeared to be as competitive as Taiwan's up until the 1970s to its complete dissolution and collapse. Whereas Taiwan went on to overtake Japan as the world's number one bicycle exporter by 1980, Korea's bicycle industry peaked in the late 1980s without ever reaching its maturity both in terms of export and production performances and then hopelessly declined to fall apart by the late 1990s. This paper examines three key causal factors: Samchuly-Kia's monopolistic complacency; Korea's industrial structure and the assembler-supplier relations; and the state's unbalanced and big *chaebol*-biased industrial policies. In so doing, it contributes to rethinking and redefining the role of government and industrial policy in managing so-called sunset industries.

Key words: Bicycles, Sunset industry, Industrial upgrading, Small business, South Korea
JEL classifications: L52, O53, P16

I. Introduction

What has motivated this research is the following puzzle: While the bicycle industry in Korea[1] remained at least as competitive and promising as that in Taiwan up until the early 1970s, the subsequent development trajectories of the two have dramatically diverged since then. Taiwan went on to overtake Japan as the world's number one bicycle exporter by 1980,[2] but Korea's bicycle industry peaked in the late 1980s without ever reaching its maturity both in terms of export and production performances and then hopelessly declined to fall apart by the late 1990s.

The premature collapse of Korea's bicycle industry is also striking in comparison to the more normal development trajectories of Korea's other labor-intensive industries such as textiles and footwear. Korea's textile and footwear industries enjoyed no less prominent export shares of the US market than Taiwan's through the 1970s and 1980s. Even after they became labeled as sunset industries, they kept making as considerable contributions to their nation's economy in terms of export and employment as was the case in Taiwan. As of 2000, for instance, the textile industries in Korea and Taiwan still

[1] Korea means South Korea, unless otherwise noted.

[2] The number of Taiwan's bicycle exports was surpassed by that of China's in the mid-1990s, but it was Taiwanese firms in China that were responsible for the rise of China's bicycle production. More importantly, Taiwan still kept its position as the world's number one bicycle exporter in terms of total value output. Ming-chi Chen, "Industrial District and Social Capital in Taiwan's Economic Development," Ph.D. diss., Department of Sociology, Yale University, (May 2002), pp. 112 & 234.

accounted for ten and nine percents of the world's trade share, respectively.[3]

How then does one explain the puzzle? From a market perspective like the new global division of labor approach, the "natural logic of the market" is supposed to explain the rise and fall of labor-intensive industries: The industries enjoy growth and expansion only as long as they keep labor costs down and maintain competitiveness.[4] Yet this systemic and international level approach cannot explain why the bicycle industries in Korea and Taiwan have taken radically different development paths.

At the nation-state level of analysis, the *dirigiste* coalition politics approach provides a competing explanation that better captures why Korea and Taiwan have gone through different development trajectories that have respectively led them to maintain widely divergent industrial structures.[5] The approach goes beyond developmental state arguments[6] in examining the political causes underlying the variation between Korea's

[3] Korea's Ministry of Commerce, Industry, and Energy's website at http://www.mocie.go.kr.

[4] Folker Frobel, Jurgen Heinrichs, and Otto Kreye, *The New International Division of Labor* (New York: Cambridge University Press, 1981); Bela Balassa, et al., *Development Strategies in Semi-industrial Economies* (Baltimore: Johns Hopkins University Press, 1982); Vittorio Corbo, Anne O. Krueger, and Fernando Ossa, eds., *Export-Oriented Development Strategies: The Success of Five Newly Industrializing Countries* (Boulder: Westview Press, 1985); Grahame Thomson, eds., *Economic Dynamism in the Asia-Pacific: The Growth of Integration and Competitiveness* (London: Routledge, 1998).

[5] See Hun Joo Park, "Small Business in Korea, Japan, and Taiwan: *Dirigiste* Coalition Politics and Financial Policies Compared," *Asian Survey*, Vol. 41, No.5 (September/October 2001).

[6] Chalmers Johnson, *MITI and the Japanese Miracle* (Stanford: Stanford University Press, 1982); Chalmers Johnson, "Political Institutions and Economic Performance," in Frederic Deyo (ed.), *The Political Economy of the New Asian Industrialism* (Ithaca: Cornell University Press, 1987); Alice Amsden, *Asia's Next Giant* (New York: Oxford University Press, 1989); Robert Wade, *Governing the Market* (Princeton: Princeton University Press, 1990); and Peter Evans, *Embedded Autonomy: States and Industrial Transformation* (Princeton: Princeton University

weak and underdeveloped small and medium enterprises (SMEs) and Taiwan's flourishing ones as the major employers and exporters. It contends that the variance comes from the differences in the two governments' *dirigiste* development strategies and the formation of societal support coalitions. However, Korea's choice of an unbalanced, big business-oriented development strategy falls short of perfectly explaining the performances of its textile and bicycle industries which have varied in spite of the same national context.

In order to fully understand the government-business and assembler-supplier relations at variegated industrial sectors, therefore, this paper not only moves further down to the industry-level of analysis. But it also goes beyond different variants of structural models (international structure or free market constraints) and various types of technocratic, developmental state theories. Both types have a strong overlay of determinism, but the development trajectory is actually not something predetermined but a result of choice of one set of possibilities.[7] Building on the *dirigiste* coalition politics approach, therefore, the paper investigates how national development strategies are played out at the micro-, industry-level.

By focusing on the industry-level social processes and institutions, the present

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Press, 1995).

[7] See Hun Joo Park, "Between Development and the State: Recasting South Korean *Dirigisme*," *Asian Journal of Political Science*, Vol. 12, No. 1, (June 2004).

paper contributes to rethinking and redefining the role of government and industrial policy in managing so-called sunset industries, perhaps an ever-increasing fact of life in the globalizing international economy. It goes without saying that focusing on Korea's bicycle industry brings another analytical merit: the sunset industry offers a full spectrum of the life-cycle of growth, maturity, trouble and decline so that we can better assess the state-society interactions over the entire life-cycle.

The next section outlines the key argument of the paper in brief. Section III presents a synoptic history of Korea's bicycle industry. In an effort to understand the puzzling underdevelopment of Korea's bicycle industry, section IV examines the causal actions and motivations of Samchuly-Kia,[8] the company at the center of bicycle manufacturing in Korea during the critical decades of the 1960s and 1970s. Section V looks at Korea's industrial structure and the relationship between its bicycle assemblers and parts suppliers as another set of causes of the underdevelopment, while the section that follows investigates such causal factors as the role of the state in Korea and its big-push strategy of industrial expansion underlying the puzzle. Section VII reflects upon the

[8] Kia (previously Kyongsong Precision from 1944-1951) was the official company name that produced Samchully bicycles from 1952-1978. Kia, which started its operation in 1944 in bicycle manufacturing business, began to invest its capital accumulated from the bicycle industry into its automobile manufacturing division starting in 1952. Samchuly separated itself from Kia and became an independent, exclusively bicycle manufacturing company in 1979. For the sake of simplicity and clarity, however, by Samchuly this paper means Kia's bicycle division, whereas by Kia it refers to Kia's automobile division, unless otherwise noted. See *Kia's 45 Years of History,* (Seoul: Kia, 1989)

causes and recaps the key arguments, drawing some policy implications.

II. The Argument in Brief

In *Beyond Late Development*, Amsden and Chu stress upscaling as the key to industrial upgrading: The continued industrial competitiveness and development of latecomers such as Taiwan and Korea presumably depend on how successfully they shift from mid-tech, if more labor-intensive, to high-tech sectors.[9] Even in Taiwan, according to Amsden and Chu, the successful pioneering of high-tech industries in the recent decade came not from its otherwise prominent networks of small, vibrant firms, but from large-scale, nationally owned companies.[10] Since the technological level of many high-tech products often becomes "*mature*" by the time latecomers produce them for the international market, latecomers need big businesses to be able to exploit economies of scale and thereby to become second movers in the mature high-tech sectors.[11]

To the extent that upgrading is upscaling, Korean industries in general have fared superbly and probably more dramatically and miraculously than any other country's

[9] Alice H. Amsden and Wan-wen Chu, *Beyond Late Development: Taiwan's Upgrading Policies*, (Cambridge: the MIT Press, 2003), p. 1.
[10] Ibid.
[11] Ibid., pp. 7-8. Emphasis original.

including Taiwan's. Practically from scratch, Korea built up low-tech, light and labor-intensive industries and then shifted to mid- and high-tech sectors in less than four decades. It did so chiefly by selecting a rather small number of big entrepreneurs who carried out developmental orders as agents of the state and in return received privileged access to investment credits and the largely monopolistic or oligopolistic domestic market.[12] For instance, the Korean government's heavy and chemical industrialization (HCI) plan, which targeted six industries for investment (steel, petrochemicals, machinery, nonferrous metals, electronics, and shipbuilding), allocated a total of $9.6 billion investment capital for the HCI sector between 1973 and 1981.[13] One can easily see the magnitude of the investment drive when compared to the country's GNP of $10.6 billion in 1972.

Upscaling surely constitutes one way to industrial upgrading, but only one possible way, and from the perspective of a national economy it offers a partial solution at best. It is so because regardless of the level of capital intensity or technological superiority, creating higher-value added is as important to industrial upgrading as upscaling. As

[12] Even as of 1990, the share of monopolies and oligopolies in Korean manufacturing remained high at 81 percent in terms of number of products and 64 percent of total sales volume. Cha Dong-se and Kim Kwang-suk, eds., *Hankuk Kyongje Pansegi* [The Half Century of Korean Economy], (Seoul: KDI, 1995), p. 397.

[13] HCIPC, *The HCI Promotion Plan*, (1973); Suk-Chae Lee, "The Heavy and Chemical Industries Promotion Plan (1973-79)," in Lee-Jay Cho and Yoon Hyung Kim, eds., *Economic Development in the Republic of Korea,* (Honolulu: East-West Center, 1991).

Chen succinctly summarizes,

> high-technology industries also involve activities that utilize low technique such as repetitive assembly, and the labor-intensive industries may include links that require sophisticated skills such as product design, prototype development, or global logistics management.[14]

In fact, for instance, the districts of supposedly traditional, mature, and labor-intensive industries such as apparel and footwear in Northeastern Italy and textiles and auto parts in Southwestern Germany continue to make significant and respectable contributions to the prosperity of their respective nations' economies.

Against such a backdrop, it is important to note that Korea's heavily big business-biased political economy has been sorely suffering from the persistent problem of a pronounced gap or imbalance in industrial competitiveness between big business conglomerates known as *chaebol* and low-tech, labor-intensive small supplier firms.[15] For instance, the share of the five largest companies in the country's net manufacturing profits recorded 33 percent in as late as the year 2003, while the equivalent figure for all SMEs as a whole merely totaled 28 percent.[16] As a consequence, it is not too surprising

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[14] Mingchi Chen, "Industrial District and Social Capital in Taiwan's Economic Development: An Economic Sociological Study on Taiwan's Bicycle Industry," Ph. D. diss., Department of Sociology, Yale University, (May 2002), p. 70.

[15] See Korea Development Institute, *A Systematic Study of Korea's Industrial Competitiveness*, (in Korean), (Seoul: KDI, 2003).

[16] Korea Development Bank Research Bureau, "A Summary Report on 2003 *Corporate Financial Analysis*" (in Korean), KDB, (May 2004).

As another sign of the underdevelopment of its small suppliers, Korea imported 28 percent of input to produce one unit of output in 1985, as opposed to seven percent of input for Japan. Byung-nak Song, *The Rise of the Korean Economy*, (Oxford: Oxford University Press, 1990), p. 121.

that the Korean system of political economy has been subject to recurrent instability. Korea's 1997 economic crisis, which forced the nation to beg for a $58 billion IMF bailout package, in fact, represented only the latest manifestation of the problem of faulted industrial structure.[17]

While Korea suffered a negative GDP growth of 5.8 percent in 1998 in the wake of the 1997 Asian currency and financial crisis which spread like wildfire, on the other hand, Taiwan escaped it largely unscathed, maintaining a healthy 4.6 percent GDP growth even in 1998. The contrasting outcome of the crisis in Taiwan stemmed at least in part from the presence of its dynamic, export-oriented SMEs as well as its modernization strategy of sustaining macroeconomic stability, barring the rise of big private capitalists and practicing strict financial conservatism.[18]

Reflecting the general strength of Taiwanese SMEs, even its sunset industries have, in fact, done very well in industrial adjustment and rationalization even in the face of rapidly rising labor costs and local currency appreciation since the late 1980s. The bicycle industry in Taiwan, for instance, has remained highly competitive especially in high value-added products despite the rise of mainland Chinese competitors. Taiwanese

[17] See Hun Joo Park, "After *Dirigisme*: Globalization, Democratization, the Still Faulted State and Its Social Discontent in Korea," *The Pacific Review*, Vol.15, No.1 (2002).
[18] See Ibid.; Uk Heo and Alexander C. Tan, "Political Choices and Economic Outcomes: A Perspective on the Differential Impact of the Financial Crisis on South Korea and Taiwan," *Comparative Political Studies*, Vol. 36 No. 6, (2003).

bicycle firms have not only successfully eased resources out of the production of low value-added products by relocating it to China, but also maintained that of relatively high-tech and high value-added items at home. For instance, Taiwan remained the number one exporter to the United States bicycle market in as late as 1994: In that year, Taiwan's bicycle exports to America still amounted to over $323 million, controlling 62 percent of the market, which was almost double the amount of China's total exports to the U.S.[19] By then, in contrast, Korea's bicycle industry was practically melting down, with its bicycle assemblers shrinking to the status of mere merchants for the domestic market, and its parts and components manufacturers reaching a complete breakdown point. The next section briefs the rise and premature fall of the bicycle industry in Korea.

III. A Synopsis of the Bicycle Industry in Korea

Much like the Taiwanese counterpart, the bicycle industry in Korea underwent an import substitution stage in the 1950s, where the government prohibited imports of bicycle and some key parts to promote the local production of bicycles.[20] Although the Korean government started to promote export-oriented industrialization (EOI) policy in

[19] Chen, p. 117.
[20] See Wan-wen Chu and Jia-jing Li, "Growth and Industrial Organization: A Comparative Study of the Bicycle Industry in Taiwan and South Korea," *Journal of Industry Studies*, Vol. 3, Number 1., (June 1996).

the early 1960s, neither the output nor export performance of the bicycle industry changed much through the 1960s, a contrast with the Taiwanese case where exports started to grow along with production figures in the late 1960s (See Table 1 below). The seemingly slight difference or edge that Taiwan began to have in exports over Korea in the late 1960s turned into a marked disparity in industrial performance by the 1980s.

[Table 1 About Here]

As detailed in the fourth section below, Samchuly as Korea's predominant bicycle assembler was at the center of the story about the country's failure to turn its bicycle industry out to the international market. Initially established in 1944 as a bicycle parts manufacturer which also primitively assembled some bicycles with recycled parts, Samchuly succeeded in the domestic production of Korea's very first complete bicycle in 1952. Samchuly started to export to the U.S. in 1965, with its total export value to the U.S. reaching over $1 million by 1969.[21] Still, Samchuly remained too content with exploiting the domestic, monopolistic and highly profitable market to plunge into cut-throat export market competition.

As a consequence, Samchuly failed to exploit the excellent export market opportunities of the 1970s to the full, in contrast to Taiwanese firms. Thanks in part to

[21] *Kia's 45 Years of History; Bicycle life*, No. 18, Nov. 2003, p. 112.

the expansion of main customer base from kids to adults and also in part to the oil shock, in fact, the demand for bicycles in the U.S. market doubled from 5million sets in 1970 to 10 million in 1973.[22] As the U.S. domestic production could not keep up with the increased demand, its imports increased by over 3 million sets during the same period.[23] Despite the dramatic surge in the US demand during the 1970s, however, Samchuly's exports and thus Korea's bicycle production grew only modestly (See Table 1 above).

In stark contrast to the Taiwanese case, the Korean bicycle industry remained oligopolistic, if not monopolistic. A few late starters followed Samchuly, but the number of assemblers remained at around four at any given point in time. One of the two medium-sized assemblers which entered the market in the 1970s was Sunkyung, a *chaebol* which had accumulated its wealth in synthetic fiber was diversifying into other industries. The main reason why Sunkyung entered the bicycle industry by taking over a small bicycle manufacturer was to acquire one of the handful of lucrative general trading company (GTC) licenses from the government.[24] Big business conglomerates scrambled for the licenses because the government offered the selected GTCs virtually unlimited access to extremely cheap export loans and privileged, exclusive rights to

[22] Chen, pp. 83-93.
[23] Chu and Li, p. 40.
[24] Authors' interview with a former key Sunkyung personnel who had been involved with its bicycle manufacturing subsidiary, June 18, 2004, Daegu, Korea,.

import certain, highly-profitable products for the protected domestic market. In its bid to obtain a GTC status in 1976, Sunkyung not only had to meet the total annual export requirement of $100 million, but also carry at least seven manufacturing products of its own with an export value of over $500,000 each.[25] Partly reflecting the "birth defect," the top management of the Sunkyung group remained less than fully committed to its bicycle subsidiary and thus soon sold it to one of its employees, which then fizzled by the early 1980s.

Another challenge to Samchuly's predominance came from Corex, which having been founded in 1980, became Korea's second largest bicycle assembler by 1984.[26] Given Samchuly's practical monopoly over the domestic market, Corex pursued an export-driven growth strategy. It started out as an original equipment manufacturer (OEM) after buying a bankrupt Japanese-owned bicycle manufacturer in the Masan Free Trade Zone, which had assembled Japanese knocked-down kits for the North American market. Corex differentiated its products from Taiwan's low-end by using higher-quality parts and components imported from Japan. In 1984, it became a star exporter of bicycles by landing a vendor contract with Sears department stores in the

[25] Suk-Jun Lim, "Politics of Industrialization: Formation of Divergent Industrial Orders in Korea and Taiwan," Ph.D. diss., The University of Chicago, (1997), p. 140; Seok Ki Kim, "Business Concentration and Government Policy," Ph.D. diss., Harvard University, (1987), ch. 4.

[26] The following section on Corex draws on authors' interviews with its officials at its headquarters in Kyunggi province, Korea, on November 27, 2003.

United States. Another huge boon to Corex came in the form of a joint venture offer from Murray Ohio in 1986, then one of the top American bicycle manufacturers.

Thanks to the publicity and media exposure that Corex attracted, the Korean government and especially its Ministry of Commerce and Industry became highly supportive of Corex and the bicycle industry. The government helped the joint venture company with Murray Ohio set up a bicycle industrial district in Changwon, Kyungnam province, within which Corex's joint venture established an assembly facility with a maximum production capacity of 2 million sets. About one-half of the district was designed to be allocated to bicycle parts and components manufacturers so that Corex could nurture and upgrade its own suppliers.[27] Corex's assembly line in Changwon went into operation on December 1, 1987, and in that year, Corex had already surpassed Samchuly as Korea's number one bicycle exporter. Its 1987 export figures jumped to 805,887 sets from 285,250 sets of bicycles in the previous year, while Samchuly's 1987 exports recorded 509,873 sets.[28] Ironically, however, 1987 proved the beginning of Corex's precipitous downfall.

The June 29, 1987 declaration which allowed Korea's first direct presidential

[27] Although a sort of a bicycle industrial district was formed in Daegu in 1985 by Sunkyung's initiative, the Changwon industrial district represented the first full-fledged one, set up in 1987 to promote close cooperation between assembler and its suppliers with the government's full support. Samchuly followed the practice and tried to set up its own in Daegu in 1990.

[28] Internal statistical data from the Korea Bicycle Industry Association (KBIA); authors' interview with its officials on February 26, 2004 in Seoul, Korea.

election in 16 years, the onset of the subsequent process of democratization and the resultant explosion of labor unrest posed deep troubles on Corex' management. As it was more or less the case with other assembly firms in Korea, Corex ran on rather thin margins of no more than one to three percent of its total sales amount. Thus the ten-plus percent hike in labor costs as well as the costly process of resolving the internal labor conflict issue, from which Corex had to suffer in the wake of the labor unrest, put quite heavy burden on the company.

Making the already bad situation worse, a far more momentous external shock came to Corex towards the end of 1988 while it was still reeling from the internal management problems: Murray Ohio had been sold to a British company in March 1988, and in October 1988 its new management abruptly notified Corex of its complete divestiture from the joint venture. Corex desperately tried to survive the shock by restructuring and closing down the Masan plant, by shifting from mass to flexible production system of making more diverse products in smaller batches, by starting to sell its bicycles in the domestic market, and by diversifying beyond the North American market, especially into Western Europe with higher value-added products. However, the survival efforts could only go so far. Simply put, the rate of increase in Corex's domestic sales could not catch up with the rate of decrease in its exports. Then there

came yet another shock from the international market: With the rather abrupt and unexpected end of the General System of Preferences (GSP) in the European Union market in 1995— just as the already troubled Korean bicycle assembler turned to the region as its major export market, Corex could no longer benefit from the 17 percent tariff reduction as part of the GSP. When push came to shove with the 1997 financial crisis in Korea, Corex had no other options than filing bankruptcy at the court.

In retrospect, Corex's entry to the bicycle industry seems to have been rather belated— possibly by nearly ten years. For sound and long-term growth of the assembly industry, essential was the presence of networks of vibrant and competitive parts and components suppliers. In 1980 or in 1986, Corex had neither such a blessing nor the wherewithal to nurture it. It thought its joint venture with Murray Ohio would finally give it a sufficient economy of scale to develop and nurture competitive suppliers of its own. But Corex's rise turned out only meteoric and short-lived.

The fall of Corex practically ushered in the end of the bicycle industry in Korea. China had been fast becoming a new center of bicycle production since the late 1980s. Particularly the rush of cheap, imported bicycle parts from China to Korea began to drive the breakdown of Korea's parts industry in the 1990s. Even the most established company like Samchuly, which at its peak had had 60 supplier firms under its own

wings, had only 15 subcontractors by 2000. Competitive and technologically-equipped ones had shifted to other industries such as auto parts, and others simply folded up. Those companies which survived merely produced either various replacement parts or such extra items as horns and plastic baskets. As of 2003, 20 bicycle parts manufacturers were registered with the KBIA, but our research found that only seven of them were barely eking out their livelihood.[29]

Samchuly itself had closed its factory in Korea by 2001 and established a joint venture in China to assemble bicycles for the Korean market. Its headquarters in Seoul only takes care of design, development and marketing.[30] Corex, still reeling from the aftershocks of its 1999 bankruptcy, maintains a modest office in Kyonggi province and places OEM orders to China, also for the Korean market. Having failed to develop their own brand names or technological know-how to produce top-quality bicycles, Korean assemblers hopelessly degenerated into the ignoble status of mere merchants, solely depending on the lackluster domestic market.

IV. Samchuly-Kia in the 1970s: Monopolistic Complacency amidst the Company's Shift in Business Priorities

This section focuses on Samchuly in the 1970s, as the 1970s may well have been

[29] Authors' interviews with all of the major former and current bicycle assemblers and their suppliers from Fall 2003 to Summer 2004.
[30] *Bicycle life*, pp. 110-115.

the critical juncture where Samchuly could have helped make a "slight difference" or advantage for the long-term development of Korea's bicycle industry. As shown in Table 1 above, the bicycle output levels of Korea and Taiwan were on a par with each other at around a little less than a quarter million sets in 1970. By 1980, however, Taiwan churned out well over three million sets of bicycles, while Korea produced way below one million sets. The differences in export levels proved more revealing and momentous. In 1970, the bicycle industry's exports in Korea remained at a meager level of four thousand sets despite its earlier development than that in Taiwan, whereas Taiwan's export figures reached already over one hundred thousand sets by then. After a decade, Korea's bicycle exports numbered no more than 300,000 sets, while Taiwan exported almost three million sets (See Table 1).

Samchuly's predominance was unquestionable in the Korean market in terms of its superior technology, brand recognition, and market share. Throughout the 1970s and 1980s, it controlled over 65 percent of the market.[31] Accordingly, Samchuly exerted an enormous influence on the KBIA. Kim Chul Ho, Samchuly's founding owner, assumed the first presidency of the KBIA in 1953, and subsequently its CEOs or board members occupied the industry association's key positions. Although the association was not as

[31] Samchuly's market share still reaches about 50 percent today. *Bicycle life*, p. 115.

powerful as that of more export-oriented and prospering industries such as textiles, it stayed quite influential during the industry's heydays by virtue of its government-mandated control over the right of export recommendation and the entry barrier that effectively discouraged new comers in the industry.[32] Samchuly also enjoyed a firm and frequently exclusive control of its suppliers.

Samchuly's predominant market position surely came under the purview of the government's so-called fair trade laws. However, the Price Stabilization and Fair Trade Act of 1975, as practiced, failed to prevent excessive concentration of economic power or abuse that stemmed from predominant market positions. The 1975 law enforced only its price stabilization part,[33] and the bicycle industry represented no exception. The government tightly regulated the prices of bicycle products, but Samchuly could still indulge in the oligopolistic, if not monopolistic, market and thus be content with its lucrative business of domestic sales.

From Samchuly-Kia's perspective, an even better and more promising investment opportunity lay elsewhere: automobile production. In terms of aggregate sales, as shown in Table 2 below, the company's major products rapidly shifted from bicycle to

[32] Up until the 1980s, exporting bicycles required the industry association's recommendation, the fees for which constituted the association's main source of income. Authors' interview with a KBIA official on February 26, 2004 in Kyunggi province, Korea.

[33] Authors' interviews with Samchuly officials on February 9, 2004, Seoul, Korea; The Fair Trade Commission, *Kongjong Korae 10nyon* [The Ten Years of Fair Trade], (Seoul: FTC, 1991).

automobile from 1966. The share of the bicycle division plunged from 51 percent in 1965 to six percent in 1969, while that of the automobile division shot up from three percent to 57 percent during the same period. By the time the bicycle division separated itself from Kia in 1979, the bicycle manufacturing accounted for only about one percent of the group's total sales. The statistics on exactly how much of Samchuly's financial resources had been funneled to Kia were not available, but many of our interlocutors concurred that the bulk of Samchuly's investment capital had gone to Kia, incurring a huge opportunity cost problem for the bicycle manufacturing division in terms of investing in new technologies and production facilities.[34]

[Table 2 About Here]

Samchuly-Kia's relative negligence of the bicycle manufacturing also had a negative spill-over effect on its parts and components suppliers. As some bicycle parts suppliers also produced automobile and motorcycle parts, more competitive and technologically superior ones shifted their business focus to the latter. For instance, Kyungchang and Samrip used to be two of the largest and most successful bicycle parts suppliers, manufacturing brakes and head lamps for Samchuly, respectively. Starting in the 1970s, however, Kyungchang began to manufacture various cable systems for

[34] Authors' field research from Fall 2003 to Summer 2004.

automobiles, and Samrip automobile lamps; now both companies have long been out of the bicycle industry.[35]

V. The Industrial Structure and the Assembler-Supplier Relations

In addition to the problem of what Samchuly did or did not do, the differences in industrial structure constitute another critical factor in explaining the relatively low performances of Korea's bicycle industry vis-à-vis Taiwan's. As mentioned earlier, Samchuly enjoyed an almost monopolistic market in Korea especially during the earlier period, whereas Taiwanese bicycle firms lacked a sizable, let alone monopolistic or oligopolistic, domestic market to rely on.[36] The presence of numerous, robust, and especially export-oriented small firms better equipped Taiwan's bicycle industry to exploit the United States market opportunities when they came in the 1970s. By making the most of the opportunity created by the surge in the market demand for bargain-priced imports, as noted earlier, Taiwan's bicycle industry became a star exporter of the 1970s and went on to overtake Japan's leading position in bicycle exports by 1980.

As Table 3 below shows, the number of firms in the bicycle industry in Korea essentially stagnated and declined. The total number of enterprises in both bicycle

[35] Ibid.; see especially those with officials at Kyungchang Industrial Corp. on November 26, 2003 and June 18, 2004 in Daegu, Kyungbuk province.
[36] See Chu and Li, p. 44.

assembly and parts manufacturing sectors peaked at 89 in 1970, up from 66 in 1965, but it declined to 67 by 1990. In contrast, the equivalent figure for Taiwan steadily and rapidly increased to 1,307 by 1991, up from 255 in 1966. On the other hand, the average size of the firm in Korea's bicycle industry remained much larger than that in Taiwan's. As shown in Table 3, for instance, the average number of employees per Korean firm varied between 40 and 50 from 1965-1990, except 1970 or the early 1970s. However, the comparable figure for Taiwan remained less than 27 throughout the same period. Clearly, the bicycle industry was no exception to the general historical pattern of divergent industrial structure between Korea and Taiwan: big business-based vs. small business-based.[37]

[Table 3 About Here]

The bicycle industry in Korea basically consisted of a small number of assemblers and their small or petty suppliers, and the great majority of the small and weak parts and components suppliers never attained sufficient economies of scale to gain necessary investment capital for significant improvement in technology, quality standards, and

[37] The same pattern existed in Korea's other labor-intensive, so-called sunset industries such as textile and footwear. In the textile industry, for instance, big firms with 300 or more regular employees accounted for almost 70 percent of total exports in 1984; in the footwear industry, such big firms created 87 percent of the total value-added in 1981. KDI, *A Comprehensive Study of Korea's Industrial Competitiveness* (In Korean), (Seoul: KDI, 2003), p. 547; Brian Levy, "Transaction Costs, the Size of Firms and Industrial Policy: Lessons from a Comparative Case Study of the Footwear Industry in Korea and Taiwan," *Journal of Development Economics*, 34:1, (1991), p. 154.

genuine independence from their vendor. Various estimates suggested that the industry needed a total production size of at least two million sets per year in order to develop and sustain a viable and competitive network of bicycle parts suppliers.[38] However, Korea's total output volume, not to mention that of a single assembler, remained far less than the required minimum for the long-term development of the parts industry, with the exception of only a few, if belated, years in the late 1980s (See Table 1).

Reflecting the general weakness of the bicycle parts suppliers, the relationship that they had with their assemblers remained largely exclusive and hierarchical. This seems to have been the case especially between market-predominant Samchuly and its suppliers. The average export ratio of Korea's parts and components manufacturers amounted to less than ten percent even after the early 1980s, whereas Taiwanese counterparts historically constituted strong exporters.[39] According to the available statistical data from the KBIA, as a result, Korea has always been a net importer of bicycle parts and components with the exception of 1985, when the export figures unusually, if barely, surpassed the imports by less than a million dollars.[40] With little export capacities of their own and thus weak bargaining position, the parts suppliers in

[38] Authors' interviews with officials at Alton Bicycle Co. on November 17, 2003 and May 19, 2004 as well as with officials at Corex on November 27, 2003. See also *Japan Cycle Press*, No. 20, (May 1985), p. 25; cited in Chu and Li, p. 48.
[39] Chu and Li, p. 44.
[40] Internal data from the KBIA.

Korea did not have much choice but to depend abjectly on their assembler; on the other hand, the assembler with their monopolistic or monopsonistic power frequently exacted compliance and subservience from its weak suppliers.[41]

During our interviews with bicycle parts manufacturers in their respective company offices, none of the interlocutors explicitly accused the big assemblers of any unfair trade practices.[42] Most of them did not wish to express any bitter criticism of the way the assemblers treated them. Some of them even emphasized the mutually beneficial aspect of the relationship which ensured the suppliers' basic profitability as well as the assemblers' keeping their costs of production down, barring extraordinary circumstances. Over dinner and drinks, however, many more or less acknowledged the existence of exclusive contracting relations between assemblers and suppliers. Samchuly in particular had taken advantage of its dominant market position and kept its parts suppliers more or less under its largely exclusive and relationship-ridden contracting practice. To be sure, the bargaining position of parts suppliers varied to an extent in accord with their competitiveness in terms of market share and technological level. But the fact that Corex, for instance, had to find and nurture its own domestic parts and components suppliers—apart from Samchuly's existing ones—in its effort to

[41] See Chen, p. 136.
[42] Authors' interviews in Seoul and Daegu from Fall 2003 to Summer 2004.

reduce its dependence on Japanese parts suggested that the assembler-supplier relations in Korea tended to be lopsided, hierarchical and exclusive.

Underlying the suppliers' dependency upon assemblers was the role of government policy. As was the case with the automobile parts manufacturing industry, where the Korean government discouraged imports of assembled cars while allowing tariff-free imports of components,[43] for instance, the government imposed different, if preferential, tariff rates on bicycle parts as opposed on complete bicycles. As of 1995, the tariff rate on bicycles parts was eight percent, while that on complete sets recorded 16 percent.[44] Thus, the following section turns to the role of the Korean state that often did make or break its particular industries.

VI. The Making or Breaking Role of the State

Chu and Li attribute the unsuccessful performance of Korea's bicycle industry to the lack of the government's big push: Had the Korean state picked its bicycle industry as a target of its big-push industrial policy in the 1970s, the industry might have been as successful as Taiwan's.[45] But the Korean government remained too preoccupied with

[43] See, for instance, Nicole Woolsey Biggart and Mauro F. Guillen, "Developing Difference: Social Organization and the Rise of the Auto Industries of South Korea, Taiwan, Spain, and Argentina," *American Sociological Review*, Vol. 64, October 1999, pp. 730-733.
[44] See http://www.bicyclelife.net.
[45] Chu and Li, pp. 49-50.

funneling financial and other resources to *chaebol*-based EOI and HCI projects to generate any significant policy support for SMEs in general or bicycle manufacturers in particular throughout the 1970s. In its effort to achieve the nation's rapid industrial transformation, the government was just busy easing resources out of even such sunset, but big business-dominant and export-oriented industries as footwear and textiles. It did so despite their continued, outstanding export performances: Although peaked in 1970 at 41 percent of Korea's total exports, for instance, the textile industry's export share remained at 11 percent as of 2001, compared to nine percent each for its automobile and semiconductor industry.[46] Against such a background, therefore, it was perhaps not at all surprising to find that scarce at best was the policy attention the government paid to the bicycle industry.

However, it should be noted that the otherwise less market-interventionist or far less aggressive industrial policy-driven state in Taiwan made at least two crucial contributions to the successful development of its bicycle industry.[47] First, from the early 1970s, it did set up and enforce industry standards for the quality control of export bicycles, which helped its bicycle exporters to maintain international competitiveness

[46] Kwang Suk Kim and Joon-Kyung Kim, "Korean Economic Development: An Overview," in Dong-Se Cha, ed., *The Korean Economy 1945-1995: Performance and Vision for the 21st Century*, (Seoul: KDI Press, 1997), p. 324; http://www.mocie.go.kr.

[47] Wan-wen Chu, "Causes of Growth: A Study of Taiwan's Bicycle Industry, *Cambridge Journal of Economics*, Vol. 21, (1997), p. 66.

by enhancing their product quality while keeping their costs low. Second, increasingly noting the R&D need for industrial upgrading, the government established the Taiwan Bicycle Industry R&D Center in 1991 in order to localize imported Japanese high-tech parts by improving the technological capabilities of parts and components manufacturers in Taiwan.

The Korean government's industrial policies became less unfavorable toward SMEs in the 1980s,[48] and so did they toward the bicycle industry to some measure. In 1982-1983, for instance, it allocated 5.5 billion *won* for bicycle export promotion by way of strengthening its parts suppliers, subsidizing their R&D, fostering their specialization, and assuring an adequate supply of basic materials.[49] Still, the Korean government's bicycle industry promotion policy remained rather meager and haphazard.[50] As discussed earlier, one exception that proved the pattern was the policy support and assistance with which the Ministry of Commerce and Industry provided Corex in establishing Corex's own industrial district for integrated bicycle production in Changwon in 1986.

The government also launched the nation's first bicycle racing in 1994, but the

[48] See Park, "Small Business in Korea, Japan, and Taiwan."
[49] Chu and Li, p. 49.
[50] According to authors' interviews, few interlocutors were aware of, not to mention directly benefiting from, any governmental bicycle industry promotion policy.

policy or enterprise has so far neither contributed to the revitalization of the industry nor stopped its helpless stagnation and utter decline. The KBIA had long advocated the introduction of bicycle racing since 1983 in an attempt to promote the industry in the way Japan had. While the annual profits from the bicycle racing enterprise now amount to 90 billion *won*, not even a single *won* has gone to benefit the bicycle industry directly.[51]

By the late 1990s, lame ducks were Korea's bicycle industry in general and its parts manufacturers in particular. At the rush of cheap bicycle part imports from China, Korea's desperate parts suppliers filed an anti-dumping case through the KBIA. But the last-minute effort ended in vain in 2000 as the government remained far from willing to risk a trade dispute with China for the "dying" industry. And the failure led to a practical dismantling of the KBIA: all but four assemblers withdrew their membership from the nation's one and only bicycle industry association.

VII. Conclusion

In explaining the rise and fall of Korea's bicycle industry, this paper has examined

[51] 17.5 percent of the profit gets accumulated to a fund for industrial development. But none of it has been used for the bicycle industry. The government has promised to funnel a part of the fund to the bicycle industry for its promotion starting in 2005, but virtually all the remaining people in the industry remain highly pessimistic, if not hopeless, about the possibility of reviving the nation's bicycle manufacturing industry. Authors' interview with officials at the KBIA; the Seoul Olympic Sports Promotion Foundation at http://sosfo.or.kr.

three key factors: Samchuly-Kia, the industrial structure, and the state policy. Without looking at Samchuly-Kia's monopolistic complacency and relative lack of export orientation at the industry level, one cannot fully explain the varying performances across Korea's such similarly sunset and labor-intensive industries as bicycle and textile. However, what shaped the country's monopoly or oligopoly-oriented incentive and industrial structure, in which Samchuly-Kia operated, was the state's unbalanced and big *chaebol*-biased industrial policies, which sorely gave rise to the development of underdevelopment of the bicycle industry. Especially striking in comparison to the Taiwanese case were the Korean industry's premature decline and the untimely demise of its parts and components suppliers, an outcome that was not in any way inevitable even for the small sunset industry.

The small and labor-intensive industry vis-à-vis automobiles remained a blind spot to the Korean government's industrial policy or targeting, and no *chaebol* entrepreneurs joined it except for Sunkyung (only marginally and by ulterior motive) and Samchuly-Kia (whose core commitment rather quickly shifted from bicycles to automobiles). The Korean government's big-push strategy of industrial expansion in favor of heavy and capital-intensive industries throughout the 1970s deprived especially the bicycle parts manufacturers of an opportunity to grow and make something of their own

entrepreneurship. The big push did not need to entail abandonment of the bicycle industry, albeit traditional or sunset. In light of the successful Taiwanese experience with the bicycle industry as well as the continued prosperity of districts of mature, labor-intensive industries such as those of Northeastern Italy, Southwestern Germany, and Western Japan, clearly, upscaling is not the only key to industrial upgrading even in the increasingly globalizing economy. The government's sensible industrial policies may include easing resources out of declining sectors and promoting new, technology- and capital-intensive industries. But no less important is its helping existing industries to move up the value-added chain and enhance competitiveness through constant and incremental innovation in products and production processes.

The tragic story of Korea's bicycle industry from what appeared to be as competitive as Taiwan's up until the 1970s to its complete dissolution and collapse illustrates the importance of providing an equal or fair chance of success to small firms as well as big ones for long-term growth and health of the economy. In the state- and *chaebol*-dominant Korean economy, the mal-development of small parts and components supplier firms has been notorious, not to mention the lack of Silicon Valley-type small high-tech companies. The deleterious consequences of Korea's relative lack of flexible, incrementally innovative, and higher value-adding small-scale businesses

included the political economy's recurrent instability, as manifested most recently in the nation's 1997 crisis.

Table 1. Export and Output Level of Bicycles: Korea and Taiwan

Unit: thousand sets

Year	Korea		Taiwan	
	Export	Output	Export	Output
1965	N/A	150	2	N/A
1966	N/A	180	0	N/A
1967	N/A	148	5	N/A
1968	N/A	171	17	107
1969	N/A	197	85	184
1970	4	214	107	217
1971	35	244	270	394
1972	120	384	1,051	1,192
1973	252	542	1,313	1,463
1974	109	674	866	1,026
1975	172	627	814	981
1976	302	770	1,519	1,709
1977	359	1,024	1,745	1,955
1978	389	1,318	1,848	2,088
1979	244	943	2,204	2,464
1980	299	776	2,979	3,257
1981	276	834	3,338	3,632
1982	231	847	3,210	3,515
1983	150	767	5,058	5,390
1984	379	917	6,329	6,700
1985	479	938	7,442	7,834
1986	789	1,350	10,239	10,681
1987	1,704	2,237	9,686	10,185
1988	2,117	2,842	7,152	7,684
1989	1,226	1,859	8,892	9,463
1990	849	1,534	9,380	9,975
1991	543	1,525	10,686	11,328
1992	424	1,265	9,678	10,354
1993	461	1,114	8,621	N/A
1994	414	1,187	8,752	N/A

Year	Korea		***Taiwan***	
	Export	Output	Export	Output
1995	284	1,045	9,064	N/A
1996	156	835	9,503	N/A
1997	119	762	8,826	N/A
1998	139	619	N/A	N/A
1999	120	670	N/A	N/A
2000	75	658	N/A	N/A
2001	54	629	N/A	N/A
2002	38	624	N/A	N/A

Sources: Compiled from Wan-wen Chu and Jia-jing Li, "Growth and Industrial Organization: A Comparative Study of the Bicycle Industry in Taiwan and South Korea," *Journal of Industry Studies*, Vol. 3, Number 1., (June 1996), p. 41; The Korea Bicycle Industry Association (KBIA), internal statistical data; and Ming-chi Chen, "Industrial District and Social Capital in Taiwan's Economic Development," Ph.D. diss., Department of Sociology, Yale University, (May 2002).

Table 2. The Breakdown of Kia's Aggregate Sales by Product Lines

Unit: Percent

Year	Automobile	Motor-cycle	Bicycle	Year	Automobile	Motor-cycle	Bicycle
1965	2.8	9.9	51.0	1973	66.2	10.6	10.1
1966	21.7	13.7	46.3	1974	79.3	5.8	8.8
1967	45.5	19.6	21.6	1975	85.7	4.4	5.9
1968	48.2	29.9	13.6	1976	89.3	N/A	8.4
1969	57.0	28.5	6.4	1977	92.5	N/A	7.5
1970	58.3	24.0	8.0	1978	94.7	N/A	5.3
1971	54.7	24.8	8.5	1979	98.6	N/A	1.4
1972	58.9	15.2	13.1	1980	100.0	N/A	N/A

Source: *Kia's 45 Years of History*, (Seoul: Kia, 1989), p. 263.

Note: The motorcycle division established a separate, independent company in 1976.

Table 3. The Difference in Industrial Structure in the Bicycle Industry: Taiwan v. Korea

Year	Korea		Taiwan	
	No. of enterprises	Avg. no. of employees per firm	No. of enterprises	Avg. no. of employees per firm
1965	66	47.3		
1966			255	15.71
1970	89	27.37		
1971			279	16.0
1975	81	48.32		
1976			447	20.66
1980	74	52.58		
1981			541	17.98
1985	63	53.68		
1986			867	26.47
1990	67	41.63		
1991			1307	23.45

Source: Chu and Li, pp. 42-43.