

Crisis and Restructuring of the Korean Textile and Clothing Industry between 1980 and 1997: Geographical Extension of Productive Forces and Intensive Accumulation Regimes

한국 섬유 의류산업의 위기와 재구조화(1980~1997) : 생산력의 지리적 확장과 내연적 축적체제

Sung Cheol Lee*

Abstract

Between 1980 and 1997 the Korean textile and clothing industry (KTICI) experienced the transformation of export-led accumulation regime rooted in domestically-derived price competitiveness into the combination between foreign mass production involving the geographical extension of productive forces and quality strategy based on upgrading technology and automation involved in the domestic market for high quality and price products. This restructuring of the KTICI is rooted at the crisis in the export-led growth regime implemented until 1986 due to the rapid increase in wage levels by the 'great labour movement' occurred in 1987. In particular, increased wage and collective bargaining realized through labour empowerment led to the crisis in the conjoin between mass production and mass export based on long working hours and low wage structure. The aim of this paper is to explore the transformation of development modes between 1980 and 1997 that can help us in understanding the fundamental reasons for the restructuring of the KTICI. To this end, the paper identifies the changing accumulation regimes between 1980 and 1997 mediated by wage-labour relations, inter-firm relations and state-firm relations, which are insitutional forms of the modes of regulation.

Key words: development modes, accumulation regimes, regulation modes, competitiveness, industrial restructuring, internationalization,

1. Introduction

In 1987 the model of development that underpinned the growth of the Korean textile and clothing industry (*hereafter* KTICI) broke down as there was 'the great labour movement'. Until 1986,

the development of the KTICI is regarded as export-led growth based on domestic-derived price competitiveness through increased working hours, constraints on wage increase, and increased labour productivity. Also, it was promoted by 'the three-low boom' implemented by the devaluation against the

* D.Phil candidate, University of Sussex, UK

Japanese currency, and the decrease in oil prices and interest rates in the mid of 1980s. However, since 1987 there has been a loss of price competitiveness because of the sharp increase in wage levels due to increasing labour empowerment. Also, due to changes in global textile and clothing trade regulation, the reinforcement of cost-competitiveness in developing countries has reduced the price competitiveness of the KTCI. It has led to a decline in the level of exports of the KTCI, which has constrained profits. As a result, the development of the KTCI achieved by export-led accumulation faced a crisis. This resulted in the international extension of the export-led accumulation regime through the way in which the KTCI relocated its production platform into developing countries on the one hand, to recover price competitiveness in price sensitive sectors. On the other hand, increasing wage level encouraged automation and quality strategy to respond the growth of purchasing power in high price and quality sectors. Therefore, this paper argues that the restructuring of the KTCI since 1987 is characterised by transition from export-led growth regime rooted in domestically-derived price competitiveness into the combination of foreign mass production involving the geographical extension of productive forces and quality strategy based on upgrading technology and automation.

The aim of this paper is to explore the changing development modes in the 1980s and the 1990s that can help us in understanding the fundamental reasons for the restructuring of the KTCI that

resulted from the crisis in the export-led growth regime. To this end, the paper considers regulationist approach to the restructuring of the KTCI involved changes the accumulation regimes and regulation modes of the KTCI in the historical context. The first section considers the structure of regulation theory and its relevance to the restructuring of the KTCI as the foundation of the analysis of this paper. The second identifies the accumulation regime of the KTCI stabilised by the Taylorist labour process until 1986 as the condition of crisis. The final section explores the way in which the KTCI recover the loss of price competitiveness between 1987 and 1997. It identifies quality strategy in the sector that produced high quality and high price. It also identifies the internationalisation of Korean textile and clothing productive capital which has accelerated as a result of the loss of price competitiveness induced by the highly increased wage level since the late 1980s in the sectors that produced low quality and price-sensitive products.

2. Regulation Theory and Industrial Restructuring

Restructuring often refers to changes in or between the constitution parts of an economy, emanating from either the dynamics of economic development or economy's conditions of existence (Johnston *et al* 1994:532). In particular, industrial restructuring involves changes in social and economic relations of production and the

organisation of production and distribution induced by technological change or conflicts between labour and capital in the workplace. It does not mean that the creation of new economic system or institutional forms, but the dynamic transformation and development of them in the historical context in a particular economy. In this viewpoint, regulation theory is a critical approach to industrial restructuring as it is an approach to processes of socio-economic development and crisis and their spatial and temporal variations (Dunford 1990; Jessop 1990; Smith 1994; 1998). Also, it involves a process of abstraction derived from the dialectical materialism of Marx that identifies relations through which accumulation and regulation occur, such as the *capital-labour* relations, relations between *various capitals*, and *capital-state* relations

However, regulation theory has tended to focus on advanced capitalist economies¹⁾, while it has tended to neglect developing economies²⁾ In this section, I aim to consider the structure of regulation theory and in relation to the restructuring of the KTCL.

1) The structure of regulation theory

The terminology of *development* should involve not only *growth*, which means a quantitative changes, but also qualitative changes in technology, institutions, culture and society. In turn, it implies the transformation of structural and institutional changes *with time and spatial variations* (Boyer 1992:17).

Regulation theory focuses on processes of *development* within specific structural contexts, such as the social relations of capitalism or state socialism, and aids in the identification of how strategies and actions unfold and shape these contexts (Smith 1998:9). Therefore, regulation theory is different from the neoclassical tradition, which is focused upon more abstract conceptions of economic logic and on 'growth without development'. Also, it is not orthodox Marxism, which is based on the analysis of 'development to socialism', and is different from dependency theory, which regards world capitalism as the dualism of 'development and underdevelopment'. It attempts to analyse different modes of development with temporal and spatial variation, history as the transformation of temporal and spatial modes (or models) of development, and the current world as the competition of temporal and spatial modes of development. As a result, the approach of regulation theory is to highlight *modes of development*.

Regulation theory identifies fundamental social relations, such as wage and labour relations and the system of commodity production for markets, to explore a specific model of development. The model of development in a particular society is composed of coupling of modes of regulation and regimes of accumulation. These enable us to investigate the organisation of distinct temporal and spatial expressions of general structures and relations existing in a particular society, and the way in which these contribute to the establishment of forms of

stabilisation and the emergence of crisis(Smith 1998:12).

Modes of regulation depends on institutional forms which are a codification of 'social relations' (Dunford 1990: 307). The institutional forms are the negotiable product of the contradictory and conflictual behaviour of the individuals who constitute a society. Therefore this undergoes a process of continuous change or transformation through negotiation between social actors. Because negotiation is implemented in the context of the 'rules of the game', institutional forms are the most important factor for determining the structure of the macroeconomy. Therefore, regulation theory argues that one economic society cannot be constituted by the market behaviour of rational individuals, that the macroeconomy cannot be determined by government policies, and that current capitalism is not dominated by the collusion of the government and monopoly capital. It also argues that the model of development in the specific capitalist economy would be identified by the institutional forms. Boyer (1986: 61-68) identified the economic implication of them through five institutional forms³⁾. In particular, Boyer (1986) as well as Aglietta (1979), Lipietz (1986) and Dunford (1990) place central importance on wage and labour relations, but they do not overlook others.

Regimes of accumulation are seen as the economic effect of institutional forms (Boyer 1986). For example, the wage and labour relations, the organisation of the labour process [*the division of*

labour] and labour mobility influence productivity, while wage levels, indirect wages [*i.e. social security*] and life styles of workers shape social demand. In this way, institutional forms lead to economic effects in both dimensions, production which is the supply side, and consumption which is the demand side. The availability of inputs is conditional upon the supply decisions of other capitalists, and demand depends on the investment and production decisions of other firms, on the distribution of income in the form of wages, rent, interest, and distributed profits, and on the consumption decisions of individuals (Dunford 1990:305). Therefore, the regime of accumulation is regarded as the articulation of production and consumption, which is regulated by institutional forms.

As a result the regime of accumulation involves the nature of production, its sectoral structure and the relationships between production [*supply*] and consumption [*demand*]. The mode of regulation involves wage-labour relations, enterprise-enterprise relations, enterprise-state relations and labour-state relations. This set of relations enables identification of models of development at an intermediate level. This regulation theory provides an insight into analyzing economic development trajectories through the stabilization of relations between production and consumption regulated by institutional forms. It also provides an understanding of the way in which the stabilization is regulated, and crisis emerged.

However, one main criticism can be directed at the Western regulationist analysis that has implication for this research and its contribution to a regulationist analysis of the restructuring of the KTCI. The focus of Western regulationist studies has tended to be at advanced capitalist countries, with little concerns for how regulation and accumulation forms of developing countries structured.

2) Regulation theory and its relevance to the restructuring of the KTCI

In this section I aim to develop a regulationist analysis of the KTCI as a frame for the approach to industrial restructuring in Korea.

The relevance of regulation theory to the restructuring of the KTCI is rooted at the fundamental reason for the emergence of crisis in the regime of accumulation and mode of regulation.

In general, the crisis of Western capitalist economies in the early twentieth century was the mismatch between supply and demand. The classical example can be found in the transformation of accumulation regime from the extensive to the intensive regime of accumulation⁴⁾ identified by Aglietta (1979) in the United States (USA) between 1918 and 1939. During this period, the USA where investment focused on the development of capital goods (department1) for industrial markets as opposed to private consumption experienced the transformation of accumulation regime to the intensive regime of accumulation resulting from the

introduction of Taylorist techniques of time management and mechanized production line. It led to the growth in consumer goods (department 2) and at the same time gave rise to the process of mass production. However, low wage levels and increased productivity in this period led to overproduction, but did not lead to mass consumption. In turn, it resulted in the vicious circle of intensive accumulation due to the absence of mass consumption. After the Second World War, this crisis was resolved by the expansion of consumption facilitated by increasing wage levels tied to the emerging structure of wage regulation (notably collective bargaining). In other words, there was a negotiation between capital and labour, which represents conjoin between Taylorist techniques and mechanization accepted by labour and the productive index wage or productive sharing wage system allowed by capital, what regulation theory called Fordist wage-labour relations' involved in monopoly regulation modes.

The crisis of the KTCI was rooted at the crisis of mass export and the absence of its regulation modes. Until 1986 the accumulation process of the KTCI was achieved through the way in which mass production and mass export as an alternative mass consumption are complemented. In fact, production in the KTCI was implemented by the addition of mechanization into Taylorist techniques, and involved the expansion of department 2. However, department 2 was not consumed by the domestic market, but exports. Also, income through this accumulation regime was not distributed through

collective bargaining regulated by non-market institutions (i.e. trade union), but through wage guideline regulated by the government and market competition. Until 1986, thus, although the KTCI experienced the Fordist production system, it was not Fordist as it did not go through the Fordist wage and welfare system.

In this viewpoint, 'the 1987 great labour movement' played a critical role for connecting the Fordist production system in supply side and the Fordist wage system in demand side in the KTCI as it led to a significant increase in wage levels through collective bargaining. However, the crisis of the KTCI was based on the increase in wage levels led by collective bargaining as it led to the loss of price and cost competitiveness in the export market, which has encouraged the geographical expansion of extensive productive forces. At the same time, it gave rise to increased wage earners' purchasing power which has facilitated the growth in the market for department 2. Therefore, it resulted in the growth in quantitative and qualitative demands in the domestic market. As a result, unlike the crisis and restructuring of the western capitalist economies where the crisis was based on the absence of mass consumption and restructuring was based on the rationalization and reorganization of the workplace conjoined with productive index wage or productive sharing wage systems, the crisis and restructuring of the KTCI underwent different reasons and trajectory. This paper focuses on the crisis and transformation of accumulation regimes and regulation modes of the

KTCI in the historical context, identifying wage-labour relations, relations between enterprises and enterprises-state relations.

3. The Development Mode of the Korean Textile and Clothing Industry between 1980 and 1986

1) The accumulation regime of the Korean textile and clothing industry until 1986

The accumulation of the KTCI until 1986 was realized through the extensive regime of accumulation based on price competitiveness to expand exports. In general, the extensive accumulation and the intensive accumulation process have coexisted in every era (Dunford 1990). During the 1970s and 1980s, the KTCI was accumulated not only by extensive accumulation, but also intensive accumulation through the introduction of new technology. Kim (1988:215-258) identified the establishment of mass production system in Korea, which involves the regime of intensive accumulation, through the index based on machinery equipment per operator, output per operator, labour productivity index and the degree of production standardization. In the case of the KTCI, he (1988) represented that the establishment of mass production system started at the early 1980s, although the mass production system in some sectors and big enterprises was already established in

the early 1970s. However, the production of KTCI was still dominated by the extensive accumulation regime in this period, as the growth in production was achieved through the extension of extensive productive forces, such as long working hours, increases in the numbers employed and construction of new enterprises. Thus, I regard the accumulation method of the KTCI in this period as the extensive regime of accumulation (see Figure 1).

Table 1 represents the growth in output and the extension of extensive productive forces of the KTCI between 1980 and 1986. The output of the KTCI increased significantly from Won 4,979 billion in 1980 to 10,608 billion in 1986, accounting for 8.8 % of annual average growth. Working hours in the KTCI was significantly long, accounting for an average 242 hours per month. Also, the number of workers and establishments grew rapidly from 622 thousand and 7.7 thousand in 1980 to 754 thousand and 13.1 thousand in 1986, respectively. In particular, the growth in the numbers employed enabled enterprises to keep wage levels low, that is the structure of low wage, and wage guideline enacted by the government constrained the growth rate of wage levels. For example, the annual growth rate in real wages in KTCI decreased from 6.7% in 1982 to 0.4% in 1986 (Figure 2). This low wage structure involved the high rates of profits, and resulted in the growth in investment in both departments 1 and 2. Therefore, it led to the growth in labour productivity in both sectors (Figure 1).

This growth of extensive productive forces led to

increases in productivity in department 2, while it did not lead to mass consumption. Consumption was channeled through mass export. As shown in Table 2, exports in the KTCI increased 32.3% between 1980 and 1986. Also, the composition of export in the KTCI was over 65%, while domestic consumption was less than 35% during this period. It means that the development of the KTCI in this period was based on mass export as an alternative of mass consumption, unlike the accumulation process under Western capitalist social relations, where the linking of mass production to mass consumption was central. In particular, between 1984 and 1986 the export of the KTCI was boosted by the so-called three low boom: low oil price, low interest rate, and a weak U.S. dollar, as it sharpened the industry's price competitiveness (Lee 2000). This mass export based on price competitiveness involved growth in the production and sales of department 2, which led to high profits achieved through trade surpluses that could be reinvested into the productive economy (Figure 1). To sum up, the accumulation of the KTCI can be represented as the extensive regime achieved through coupling mass production and mass exports based upon the extension of working hours, the increases in the numbers employed, the construction of new enterprises and low wages.

2) Regulation modes of the Korean textile and clothing industry until 1986

Up to 1986 the accumulation of the KTCI

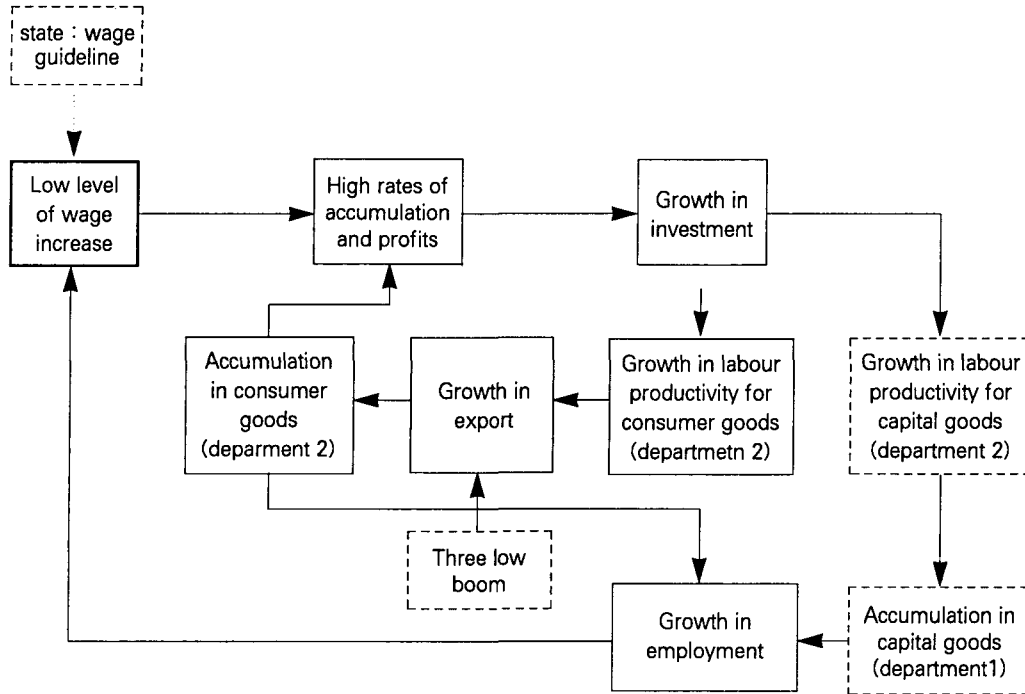


Figure 1. The extensive accumulation regime of the Korean textile and clothing industry until 1986

Table 1. The growth in output and the extension of extensive productive forces of the Korean textile and clothing industry between 1980 and 1986

(unit: number, %)

	Output (billion Won)	Establishment (thousand)	Employment (thousand)	Working hours (hours/per month)
1980	4,979.4	7.7	622.5	241.2
1981	6,164.8	8.5	653.7	241.7
1982	7,220.1	9.4	662.5	242.5
1983	8,162.7	10.3	676.0	242.7
1984	8,912.9	10.6	674.8	243.2
1985	9,421.1	11.3	683.9	242.0
1986	10,608.4	13.1	754.4	242.8

Source: elaborated from Korea Federation of Textile industries, 1985 and 1987, *Statistical Yearbook of Textile Industries*, and National Statistical Office, 1999, *Major Statistics of Korean Economy*.

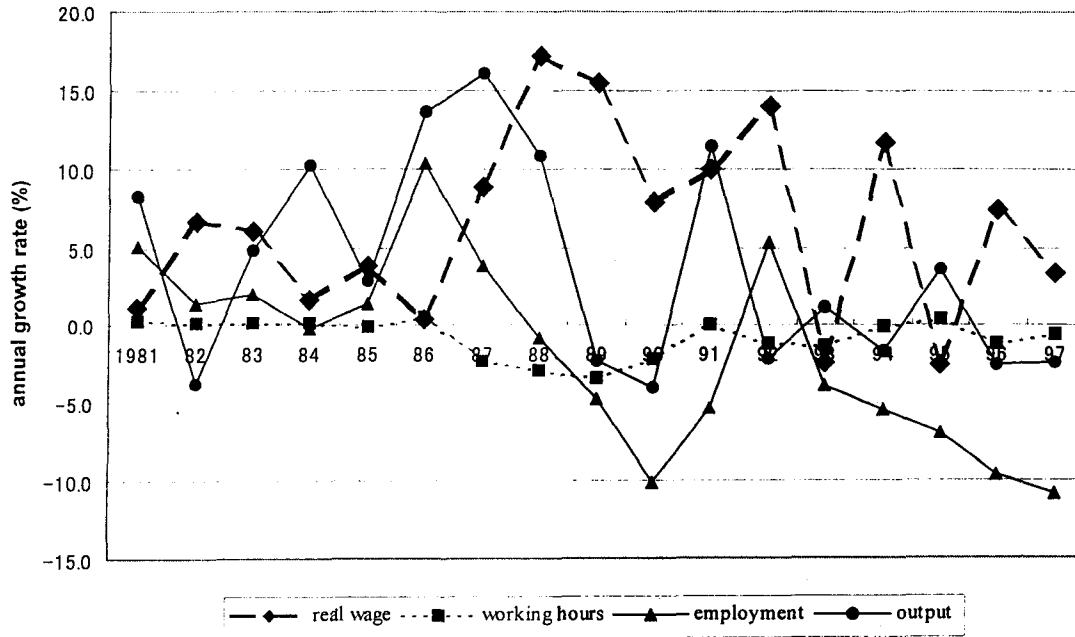


Figure 2. Trends in the competitiveness of the Korean textile and clothing industry

Note: The figure of output is based on constant 1990 price
 Source: elaborated from Korea Federation of Textile industries, 1985-1998, *Statistical Yearbook of Textile Industries*, Ministry of Labour, 1984-1998, *Yearbook of Labour Statistics*, and National Statistical Office, 1999, *Major Statistics of Korean Economy*.

Table 2. Changes in export and domestic demand in Korean textile and clothing industry

(unit: 100 thousand M/T, %)

	Domestic demand	Export	Shipment
1980	340(33.8)	667(66.2)	1,007(100.0)
1981	335(30.8)	754(69.2)	1,089(100.0)
1982	358(33.6)	706(66.4)	1,064(100.0)
1983	370(31.7)	798(68.3)	1,168(100.0)
1984	388(31.4)	848(68.6)	1,236(100.0)
1985	407(31.2)	896(68.8)	1,303(100.0)
1986	466(32.0)	989(68.0)	1,455(100.0)

Source: elaborated from Korea Federation of Textile industries, 1990, *Statistical Yearbook of Textile Industries*.

achieved through the extensive accumulation regime was stabilized by the regulation modes in capital-labour relations, capital-capital relations and capital-state relations. The first regulation mode of the KTCI based on export-led growth is found in wage and employment relations. Unlike western advanced countries where extensive accumulation was implemented in the context of competitive mode of regulation (Aglietta 1979; Dunford 1990), the extensive accumulation of the KTCI was stabilized by not only 'competitive regulation' but also 'state monopolistic regulation'⁹⁾, in the 1980s.

This development of the KTCI during this period was achieved through (1) the way in which the government constrained wage increases through wage guidelines, and (2) highly elastic supply of agricultural workers to urban industries.

Firstly, the decrease in the growth rate of real wage levels in the KTCI between 1982 and 1986 (Figure 2) was achieved through wage guidelines enacted by the government. Indeed, there were no direct wage guidelines for private enterprises during this period. However, wage guidelines as a means of constraining the wage levels of the public sector played a role as an indicator for controlling wage levels in private enterprises (Kim 1994). In other words, wage guidelines for the public sector determined by government were accepted as wage guidelines for private enterprises. In addition, the organisation of the labour union was confined to plant level, and the labour union, which was called the 'The Federation of Korean Trade Union'

(*hanguk nochong*), played a role in controlling the workforce. Therefore, the labour union in the Korean textile and clothing enterprises did not have real collective bargaining power. As a result, wage guidelines passed by the government was an alternative to collective bargaining for the determination of wage levels in the KTCI. This led to a decrease in the growth rate in real wage levels. For example, the growth rate of real wages in the KTCI decreased from 6.7 per cent in 1982 to 0.4 per cent in 1986 (Figure 2).

Secondly, the significant increase in the numbers employed in the KTCI, dominated by the unskilled workforce, led to competitive wages. It enabled Korean textile and clothing enterprises to keep wage levels low, while making it possible to increase the rate of output between 1982 and 1986. For example, the growth rate of the numbers employed and output increased from 1.3% and -3.7% in 1982 to 10.3% and 13.6% in 1986, respectively (Figure 2). These wage and employment relations based on low wages and increased numbers employed led to the significant growth in the exports of low prices and poor quality products. Therefore, until 1986 the accumulation regime of the KTCI was mediated by wage and employment relations based upon coupling mass export and mass production.

The second institutional form that regulated the export-led growth of the KTCI until 1986 was inter-firm relations [capital-capital relations] between large and small enterprises based on subcontracting arrangements. As subcontracting relations enabled

them to reduce risks to the changes in demands from advanced countries, large export enterprises favoured subcontracting relations. In particular, as Korean clothing exports were based on OEM production, the majority of large and small enterprise relations were capacity subcontracting relations to cope with the changes in demand (Kang 1995). Also, small and medium sized enterprises (SMEs) arranged re-subcontracting relations with sweat shops as a second tier. Sweat shops in turn had re-subcontracting with the family workforce as a third tier⁶⁾.

This subcontracting relationship was intensified by the export quotas of the KTCI dominated by large enterprises (LEs). As SMEs did not have enough export quotas, they had to have subcontracting relations.

The final institutional form of the KTCI stabilizing the export-led growth until 1986 was state and enterprise relations. These were achieved through government support to Korean textile and clothing enterprises. The major supports were related to the export promotion of the KTCI through the establishment of laws and provisions. In the 1960s and 1970s, Korean export textile enterprises were exempted from 50 per cent of corporation tax and income tax in the name of the promotion of exports (Seo 1997). Also, the enlargement of cotton and weaving facilities was generally not allowed, but enlargement of facilities for exports was accepted by the temporary law of textile industry facilities' [*sumyu gongup sisul imsi chochi bup*]⁷⁾ between

1967 and 1979 (Cho 1994). In addition, the KTCI was supported by general laws such as the custom law [*gwanse bup*], the law of restriction to tax reduction [*chose gammyen gyuje bup*] and the law of trade transaction [*muyek gerae bup*]. At the same time, the government protected the domestic market through the way in which raw and semi-finished materials produced by domestic firms could be utilized for export. Therefore, the KTCI was supported by laws and provisions related to the textile industries. Along with these promotion policies for export, the government restructured the KTCI in the 1980s through the establishment of the promotion law of the modernization of the textile industry [*sumyu sanup kundaehwa chokjinbup*] between 1979 and 1986 (Cho 1994). The major aim was to modernize and enlarge old facilities, and to develop technology. Notwithstanding the concentration of state support on the heavy and chemical industries during the 1970s and 1980s, the reason for the support for the textile industry was that the contribution of the industry to employment and export was high. Indeed, although the share of the KTCI in the number employed and export decreased from 21.1% and 29.8% in 1980 to 19.7% and 25.2% in 1986 respectively, the contribution of the KTCI to employment and exports remained high (Table 3).

Table 3. The share of employment and export of the Korean textile and clothing industry in manufacturing

	Employment (thousand person)			Export (million US \$)		
	Manufacturing	Textile & clothing	% as textile & clothing of manufacturing	Manufacturing	Textile & clothing	% as textile & clothing of manufacturing
1980	2,955	622.5	21.1	17,504	5,214	29.8
1981	2,859	653.7	22.9	21,253	6,365	29.9
1982	3,033	662.5	21.8	21,853	6,063	27.7
1983	3,266	676.0	20.7	24,445	6,167	25.2
1984	3,348	674.8	20.2	29,244	7,200	24.6
1985	3,504	683.9	19.5	30,283	7,083	23.4
1986	3,826	754.4	19.7	34,714	8,762	25.2
1987	4,416	783.5	17.7	47,280	11,736	24.8
1988	4,667	777.3	16.7	60,696	13,896	22.9
1989	4,882	740.4	15.2	62,377	14,896	23.9
1990	4,911	666.0	13.6	65,015	14,896	22.2
1991	4,994	630.6	12.6	71,870	14,425	20.3
1992	4,860	663.9	13.7	76,631	15,225	19.2
1993	4,677	638.3	13.6	82,235	17,164	17.9
1994	4,714	603.8	12.8	96,013	18,357	14.7
1995	4,797	561.8	11.7	125,058	17,877	13.8
1996	4,692	508.1	10.8	129,715	18,602	13.7
1997	4,482	453.0	10.1	136,164		

Source: elaborated from National Statistical Office, 1999, *Major Statistics of Korean Economy*, and Korean Foreign Trade Association, 1994 and 1998, *The Trend of Foreign Trade*.

4. The Development Modes of the Korean Textile and Clothing Industry between 1987 and 1997

From the late 1980s onwards, the development mode of the KTCI based on the extensive accumulation process faced significant crises in the accumulation regime. The accumulation of the KTCI in the 1980s possessed structural weakness in

that it was achieved through the extension of the forces of production. 'The great 1987 labour movement' and the disappearance of the three-low boom resulted in a crisis in the extension of production forces, as it accelerated the increase in wage levels. Therefore, it influenced price competitiveness significantly, and led to the crisis in the export-led accumulation regime of the KTCI. Korean textile and clothing enterprises influenced by the decline in price competitiveness relocated overseas to restore competitiveness in price sensitive

sectors, and introduced automation and new technology in high quality sectors. This section identifies the development mode of the KTCI since 1987.

1) Crisis and the regime of Korean textile and clothing accumulation in 1987-1997

After 1987 the extensive accumulation regime of the KTCI faced a crisis in price competitiveness as there has been a rapid increase in wage levels due to labour empowerment set in motion by 'the great 1987 labour movement'. For example, the growth rate of real wages increased significantly from 0.4 % in 1986 to 15.4 % in 1989. Also, between 1987 and 1997 the annual average growth rate of real wages was 8.3% (Figure 2). This significant increase in wages brought about two consequences: (1) the growth in wage earners' purchasing power (2) the constraint on profits.

The first consequence is the growth in wage earner's purchasing power (Figure 3). This resulted in a greater demand in the domestic markets for high and middle quality textile and clothing goods (department 2) produced by large enterprises. For example, the domestic clothing market increased significantly from 4.1 trillion won in 1989 to 13.9 trillion won in 1994 (International textile newspaper, May. 30 1994). Also, the expenditure of wage earners in purchasing textile and clothing products increased rapidly from won 44.6 thousand to 81.8 thousand per month (Table 4). Therefore, it increased accumulation in the consumer goods sector,

particularly in high price and quality sectors, and then led to the growth in rates of profits and productivity in department 2. In particular, the accumulation in the consumer goods sector [*textile and clothing goods sector*] led to the growth in markets for the capital goods sector [*textile and clothing machinery facilities sector*] to increase the rate of automation, to expand production facilities and to replace old machinery. As a result, increased accumulation in the capital goods sector led to growth in productivity in department 2. The growth in productivity in the department 1 and department 2 of the KTCI led to a high increase in wages again. In other words, the growth in the purchasing power of wage earners led to a virtuous circle in high quality sectors dominated by LEs.

The second consequence of increase in wages is the constraint of profits in the KTCI based on domestic-derived price competitiveness (Figure 3). In the labour intensive sector of the KTCI labour costs accounted for 66 per cent of total production cost (Table 5). This shows that labour cost played the most important role in creating high profits in the KTCI. However, since 1987 highly increased wages constrained these profits in the KTCI, and reduced price competitiveness. The KTCI has elaborated two strategies to overcome the depressive effects on profits: (1) a quality strategy based upon the growth in productivity and (2) the internationalisation of productive capital based upon low wages. Both strategies were implemented to regain price competitiveness.

Firstly, the growth in the KTCI in accumulation

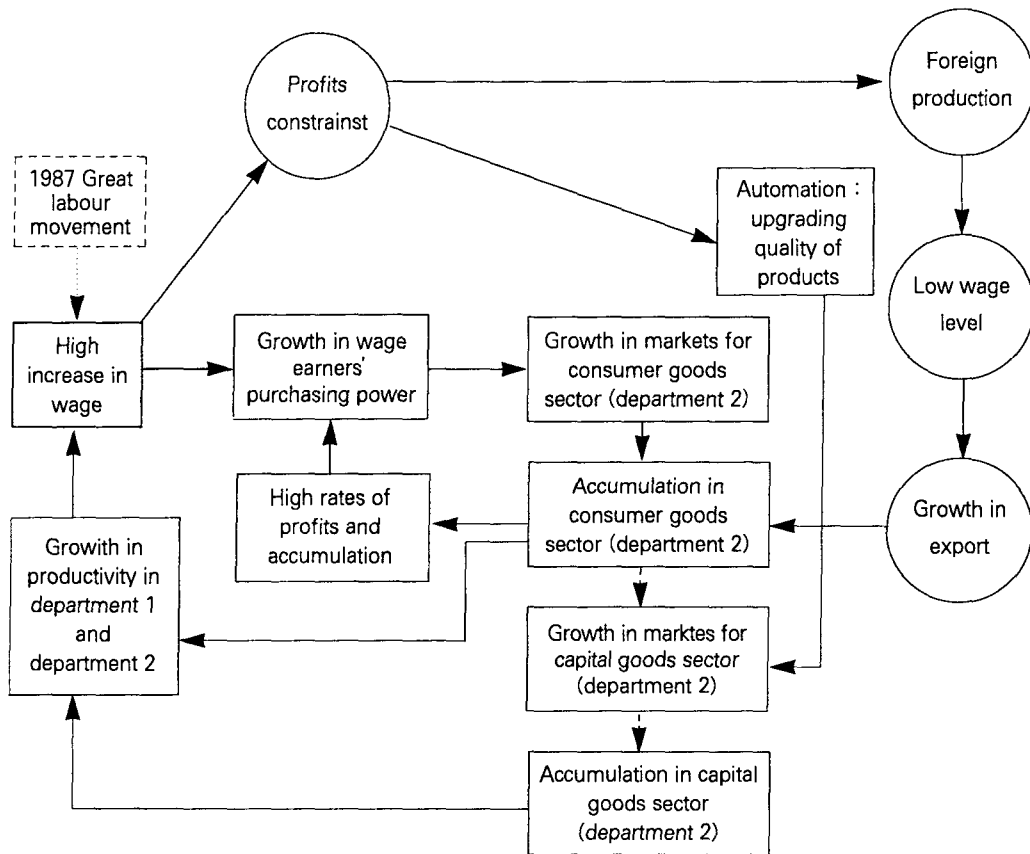


Figure 3. The accumulation regime of the Korean textile and clothing industry in the 1990s: the geographical extension of the extensive accumulation process and the intensive accumulation process in the domestic economy

Table 4. Monthly consumption expenditure in textile and clothing products per earners' households

(unit : thousand won)

	Outerwear	Sweater & Shirts	Underwear	Ohter	Total
1990	32.0	6.8	3.3	2.5	44.6
1991	36.7	8.1	3.8	3.3	51.9
1992	42.3	9.6	4.2	3.8	59.9
1993	43.5	10.5	4.4	4.1	62.5
1994	50.6	11.8	4.8	4.7	71.9
1995	58.3	13.3	5.3	4.7	81.6
1996	64.3	14.1	5.6	4.7	88.7
1997	57.6	14.2	5.6	4.4	81.8

Source : www.kofoti.or.kr/statistics/nation/e-consumption.html

Table 5. Composition of value-added production costs in the Korean textile and clothing industry

(unit: %)

	Natural fibres	Man-made fibres	Weaving	Dyeing	Clothing
Profit	18.0	15.4	16.8	8.3	14.9
Labour cost	47.1	33.2	51.0	66.6	65.4
Financial cost	10.0	11.4	13.9	10.9	9.0
Tax	1.0	1.1	2.0	1.5	1.2
Depreciation cost	23.1	36.8	14.3	10.8	5.9
Total	100.0	100.0	100.0	100.0	100.0

Note : The figures shown are percentages of value-added production.

Source: elaborated from KFTI, 1990, *Statistical Yearbook of the Korean Textile Industry*.

and productivity was achieved through the extension of automation implemented by the development of technology. The Korean textile industry has accelerated its automation since 1987, alongside the establishment of the law of industrial development [*kongup baljun bup*]. For example, according to Kim *et al* (1993), automation in the dyeing and finishing sector increased by 36% in 1991 by introducing advanced facilities and computerised dyeing machines. The fabric sector also underwent significant increases in automation through the introduction of advanced fabric machines such as a water-jet fabric machines. In this sector automation increased by 26% in 1987-1993 (Kim *et al* 1993:61). In addition to this, automation in the Korean clothing industry increased. For example, Samsung invested 5.3 billion won in the introduction of automation facilities between 1991 and 1992, so that factory automation increased from 46 per cent to 86 percent (Kang 1995:194). In particular, CAD (computer aided design) facilities have been introduced rapidly in the process related to patterning (patterning →

grading → marking)⁸⁾. The first CAD system was introduced by Daewoo in 1980, and the production process of 240 enterprises was operated by the CAD system in 1994 (Korea Sewing Research Institute 1994). It is linked into the CAM (computer aided manufacturing) system related to the automation of the production process, and thus helps increase productivity⁹⁾. There are three motivations for the extension of automation in the KTCI. The first is to improve the quality of products, as it reduces the production of inferior goods. Secondly, it contributes to transformation into a small batch production system, as it enables the industry to improve flexibility, productivity, responsiveness and resilience. Finally, it enables it to reduce employment, offsetting the impact of the increase in real wages.

However, increased automation has been dominated by large enterprises, while automation in SMEs is still low or limited. The level of automation¹⁰⁾ in most SMEs in the KTCI has been the partial automation of a machine. As the introduction of the CAD and CAM

system is very expensive, it is difficult for SMEs to achieve the complete automation of a machine. Therefore, complete automation through the introduction of the CAD and CAM systems in a machine has been restricted to large textile and clothing enterprises to increase productivity reducing the size of the workforce and working hours, and in this way obtaining non-price competitiveness. At the same time, this growth in investment by textile and clothing companies has accelerated the growth in markets for the textile and clothing capital goods sector [*department 1*], so that it has resulted in accumulation in department 1. To sum up, since 1987 the growth of wage earners' purchasing power due to increased wage levels has given rise to a demand in the textile and clothing markets for high and middle quality goods [*department 2*], and therefore the accumulated textile and clothing sectors can extend investment to improve productivity. It has resulted in high profits, and at the same time it has involved growth in markets for textile and clothing facilities [*department 1*]. The capital goods sector in the KTCI has undergone the same virtuous circle as the consumer goods sector. However, this intensive accumulation process of the KTCI is limited to high and middle quality products produced by large enterprises, while the KTCI based on poor quality and low price products has gone through a different adjustment process.

Secondly, the profits in the KTCI have been achieved through the internationalization of productive capital in the low quality and price goods

sectors to regain price competitiveness. Korean textile and clothing enterprises have relocated their production platforms overseas where a cheap workforce existed. The low wage levels overseas enabled them to extend the forces of production through the way in which subsidiaries are constructed, and a great number of workers are employed. It has led to the growth in price competitiveness of the KTCI, which has helped maintain the export market. In other words, the geographical shift, or the international extension of the forces of production based on low wage levels has enabled the KTCI to sustain the export-led accumulation regime. However, there are a few exceptions. For example, although Korean textile and clothing foreign direct investment (KTCFDI) has been concentrated in developing countries to extend the force of production, some large Korean textile and clothing enterprises, such as Samsung, LG, Bando and E-Land, have increased foreign direct investment (FDI) in the EU and North America to cope with changes in the market structure. The E-Land group increased investment in England by US\$ 10 million in 1995 in the form of M & A. This is the result of the removal of a great number of Korean clothing products from its GSP by the EU and anti-dumping quotas in 1995 (author's survey, 1996). However, according to statistics published by the Korea Federation of Banks, KTCFDI in Europe has been dominated by investment in Central and Eastern Europe (CEE), which accounted for 93.9 percent of FDI in 1995 and

93.7 percent in 1998 (The Korea Federation of Banks, 1996; 1999). This shows that although the regionalization of the EU has led to the growth of KTCFDI in Europe to deal with changes in the market structure, the characteristics of KTCFDI are still based for the most part price competitiveness.

This internationalization of the KTCI has facilitated accumulation in the textile and clothing consumer goods sector [*department 2*], while it has not led to growth in Korean markets for the capital goods sector [*department 1*]. The domestic market for the capital goods sector has not increased as the production facilities of KTCFDI enterprises are dominated by old machines transferred from headquarters in Korea or other countries. According to Park (1994), 88.1 per cent of the KTCFDI enterprises transferred old equipment. This figure was higher than the number of firm which transferred new facilities [*69 % of all firms investing overseas*]. 76.4 percent transferred plant and equipment from other countries. This figure was higher than the number of firm transferring plant and equipment from Korea [*61.4 % of all firms investing overseas*] (Park 1994:101-105).

Consequently, the accumulation of the KTCI has been implemented by a combination of the intensive accumulation process in the domestic economy and the international extension of the extensive accumulation process. The former has been implemented through coupling small batch production achieved by the growth in automation and mass consumption in departments 1 and 2 in the

domestic market. The latter has been achieved through the way in which mass foreign production implemented by the extension of the forces of production is coupled with mass export. Therefore, this paper argues that the rapid internationalization of Korean textile and clothing productive capital is the result of the constraints on profits as a result of the loss of price competitiveness. The KTCI has gone through the transition from the export-led growth accumulation based on price competitiveness into the combination of foreign mass production involving the extension of productive forces and domestic small batch production based on non-price competitiveness.

2) Regulation modes of the Korean textile and clothing industry in 1987-1997

Since 1987 the accumulation of the KTCI achieved through the intensive accumulation regime and the geographical shift in the extensive regime has been stabilised by changes in the regulation modes at the global and domestic level. Firstly, there were changes at the global level: the disappearance of 'three-low boom', the phasing-out of the MFA and the emerging competition from developing countries based on price competitiveness. These have resulted in the changes in the pattern of Korean textile and clothing exports after 1988. For example, emerging global quotas under the phasing-out of the MFA and the removal of the great number of Korean products from the GSP by the EC in 1988 have

reduced access to markets, which have led to the decline of exports into developed countries (Lee 2000). Also, emerging strong consolidation in the EU and North America, the process of regionalization, has led to the decrease in Korean textile and clothing exports as a result of anti-dumping and non-tariff barriers. Consequently, the deterioration of Korean textile and clothing market competitiveness arises from changes in trade regulation and exchange rate, and in the structure of the market at the global level.

Secondly, at the national level, regulation modes of the KTCI in the 1990s can be found in wage and employment relations, inter-firm relations and state and enterprise relations. Firstly, wage and employment relations have been the most important mode of regulating the change in the accumulation regime. As mentioned earlier, the great 1987 labour movement led to labour empowerment, so that the determination of wage levels was achieved through collective bargaining. This accelerated the increase in the wage levels from 1987. For example, the average annual growth rate of real wages between 1987 and 1997 (8.8%) is much higher than the average annual growth rate of real wages between 1980 and 1986 (3.3%) (calculated from Figure 2)¹¹⁾ At the same time, working hours also underwent negative growth after 1987. For example, working hours in the textile industry decreased from 243.8 hours per month in 1986 to 219.6 hours in 1997, and in the clothing industry they fell from 242.6 hours per month in 1986 to 200.8 hours in 1997 (see Figure 2).

Therefore, the intensive accumulation regime of the KTCI in the sector producing high quality and high priced products and the international extension of the extensive accumulation regime of the KTCI producing low quality and low priced products were regulated by the growth in wage earners' purchasing power and constraints on profit caused by highly increased wages.

In addition to this, there has been an increasing shortage in the workforce in the KTCI since 1987. Although it is not one of the regulation modes stabilizing the accumulation of the KTCI, it has played a crucial role in accelerating the internationalization of Korean textile and clothing productive capital. Poor labour conditions and the lower wage levels than in other sectors, which are the characteristics of the KTCI, have resulted in the increase in the movement of the workforce away from this sector. According to the survey of the Korea Federation of Textile Industries (1996: 73), the major reasons for the departure of workers were the low wages [60.7 % of surveyed employees], the tough labour process [68% of surveyed employees] and poor working conditions [20.5% of surveyed employees]. For example, the wage levels in the textile industry are only around 80 per cent of the manufacturing industry average, and in the clothing industry they are only around 67 percent (Table 6). This has led to an increase in the departure of the workforce from the KTCI, so that the numbers in the industry have fallen from 648 thousand in 1988 to 457 thousand in 1992 (Table 7). Also, labour

Table 6. Comparison of wage levels between manufacturing and textile and clothing industry in Korea

(unit: thousand won, %)

	Manufacturing (A)	Textile (B)	Clothing (C)	B/A	C/A
1984	245	196	165	80.0	67.3
1985	269	213	179	79.2	66.5
1986	294	235	196	79.9	66.7
1987	329	273	220	83.0	66.9
1988	393	320	266	81.4	67.7
1989	491	389	318	79.2	64.8
1990	591	461	383	78.0	64.8
1991	690	561	447	81.3	64.8
1992	799	689	537	86.2	67.2
1993	885	720	583	81.4	65.9
1994	1,022	868	690	84.9	67.5
1995	1,123	904	762	79.5	67.6
1996	1,261	1,003	852	81.1	67.3
1997	1,326	1,076	892		

Source: elaborated from Ministry of Labour, 1990 and 1998, *Yearbook of Labour Statistics*, and Korea Federation of Textile Industries, 1985-1998, *Statistical Yearbook of Textile Industries*.

Table 7. Turnover of labour forces in Korean textile and clothing industry

	Labour separation (%)		Number of employment (1,000 persons)
	Manufacturing	Textile	
1988	4.5	6.3	648.1
1989	3.8	5.9	605.7
1990	3.8	5.4	542.9
1991	3.9	5.8	497.8
1992	4.0	5.5	457.0

Source: elaborated from Korean Ministry of Labour, 1992, *Monthly Report of Labour Statistics*

shortages, especially in the operator of the clothing industry increased significantly between 1988 and 1991 (Table 8). For example, the shortage of operators category in manufacturing increased from 5.9% in 1988 to 9.6% in 1991, while for operators in the clothing industry the shortage increased from 8.4% in 1988 to 18.1% in 1991. Therefore, the

increasing shortage of cheap labour in the KTCI has given rise to the increase in FDI to utilize the cheap workforce.

Another institutional form of the regulation mode of the KTCI is *inter-firm relations* related to subcontracting arrangements. Until 1986, the dominant inter-firm relations regulating the export-

led accumulation of the KTCI was capacity subcontracting relations, as export products were dominated by OEM production, and export quotas were dominated by large enterprises. However, since 1987 the growth in domestic demand in high price products resulting from increased wage levels and small batch production has led to the transition to inter-firm relations based upon specialised subcontracting. Table 9 shows that increased earners' wage levels led to the growth in the

expenditure in high price products such as men's suit and women's suit. Also, Kang (1995: 196-200) argues that production for domestic demand would be directed at the small batch production system through the extension of the introduction of the bundle or block unit production system. Evidence could be found in that the production cost of export markets is cheaper than products for the domestic market, while the average lot and the numbers employed in the production line for export products

Table 8. Trends in the shortage of the Korean clothing industry

(unit : thousand persons, %)

	Manufacturing			Clothing		
	Average	Clerical & engineer	Operator	Average	Clerical & engineer	Operator
1988	128 (4.7)	8 (1.2)	120 (5.9)	18 (7.5)	5 (1.9)	17 (8.4)
1989	116 (4.2)	8 (1.0)	108 (5.5)	16 (8.1)	0.3 (0.9)	16 (9.7)
1990	150 (5.6)	11 (1.3)	139 (7.4)	25 (12.1)	0.5 (1.1)	24 (15.0)
1991	197 (7.0)	14 (1.5)	183 (9.6)	32 (14.2)	0.9 (1.5)	31 (18.1)

Note : The figures in the parenthesis are percentages as of shortage rate.

Source: elaborated from Ministry of Labour, 1989-1992, *Report on Employment Survey*.

Table 9. Monthly Consumption expenditure in clothing products per earners' households by conditions

(unit : thousand won)

	Korean clothing	Men's suit	Women's suit	Over-Coat	School uniform	Children's Suit	Jumper	Trouser	Sports wear	others	Total
1990	1.4	4.6	7.0	1.5	0.7	4.9	4.2	5.4	0.9	1.4	32.0
91	1.3	5.2	8.3	1.5	1.1	5.9	4.5	6.2	1.2	1.5	36.7
92	2.2	6.3	9.3	2.2	1.3	6.2	5.1	6.7	1.6	1.6	42.3
93	1.4	5.9	9.8	1.7	1.3	7.2	5.3	7.2	1.6	2.0	43.5
94	2.1	7.1	11.6	3.0	1.4	7.5	5.3	8.2	1.7	2.6	50.6
95	2.3	8.6	13.7	3.7	1.6	8.2	5.6	9.8	2.1	2.6	58.3
96	3.4	9.2	14.4	5.5	2.0	8.4	5.7	10.9	2.7	2.6	64.3
97	2.5	7.8	13.1	4.7	2.2	7.7	4.6	10.6	2.4	2.0	57.6

Source: www.kofoti.or.kr/statistics/nation/e-consumption.html

is smaller than products for the domestic market (Kang 1995: 200). This growth in the domestic market of high quality and price products and the introduction of small batch production system led to the transition of subcontracting relations to specialised subcontracting relations through cooperative development in the quality and technology of production between LEs and SMEs, although SMEs is still subordinated to LEs in economic activities¹²⁾.

In addition to this, subcontracting arrangement for existing low quality products have continued to be dominated by capacity subcontracting. However, alongside the increased wage levels and the lack of cheap labour such arrangements have decreased, as the cost of the capacity subcontracting arrangement is higher than the cost of OEM import.

According to Kang's interview with a domestic clothing subcontractor (1995:206), LEs have

recently argued for subcontracting relations at very low prices, as the cost of OEM import is lower. However, increased wage levels have made it difficult for subcontractors providing low price goods to meet LEs requirements. This has led to a geographical shift of production platforms to extend the forces of production. Table 10 shows trends in the composition of Korean textile and clothing production. The composition of subcontracting production in the KTCI declined from 31.5% in 1994 to 23.4% in 1996, while foreign production increased from 6.8% in 1994 to 11.5% in 1996. In particular, this trend can be clearly seen in the clothing industry as the production of clothing was traditionally a labour intensive process. For example, in cotton clothing production, the composition of subcontracting decreased from 34.5% in 1994 to 18.4% in 1996, while foreign production increased significantly from 17.9% in 1994 to 41.0% in 1996.

Table 10. Trends in the composition of Korean textile and clothing production

(unit : %)

	Total textile & clothing			Spinning			Weaving			Cotton clothing			Knitting clothing		
	94	95	96	94	95	96	94	95	96	94	95	96	94	95	96
Direct production	61.8	66.2	63.3	86.0	81.8	79.6	66.8	75.1	77.4	47.5	37.3	40.6	69.0	72.2	69.2
Sub-contracting	31.5	25.8	23.4	12.9	14.9	14.9	31.8	24.1	21.4	34.5	24.9	18.4	21.3	14.8	12.9
Foreign production	6.8	8.0	11.5	1.1	3.3	5.5	1.4	0.8	1.2	17.9	37.8	41.0	9.8	13.0	24.2
Total production	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Note : The figures shown are percentages of production.

Source: Korea Federation of Textile Industries, 1996, *15th Report on the Korean Textile Industry*.

This shows that the crisis in the extensive accumulation regime based on price competitiveness in the late 1980s has been regulated through the international extension of the forces of production.

Finally, state-capital relations for the development of the KTCI have been significant, especially in the growth in the outward KTCFDI. Focus here is placed on the role of state for facilitating KTCFI. By 1994 the government had promoted KTCFDI related to sectors aimed at relocating old production facilities. Also, KTCFDI related to geographical shifts of production platforms aimed at extending the export market was supported on the condition that over 50% of production facilities and over 30% of

raw materials should be supplied from Korean textile and clothing enterprises for three years (Kim 1995:196). On the other hand, some KTCFDI sectors involved in the reduction in exports, the increases in imports and the decline in facility investment and employment, were subjected to restrictions from the government. For example, 11 sectors including spinning and weaving products, involving dyeing and finishing process, polyurethane textile and carbonic textile, were subject to restrictions to protect key technologies (KOTRA 1996:164). However, since then the government has accelerated the deregulation of KTCFDI. Support from the state for promoting

Table 11. Government support for Korean outward foreign direct investment

Support	Institution	Content	
Finance	Export and import bank	Fund of foreign investment	1. Promotion sector: 80% of total investment capital (90% for SMEs) 2. Normal sector: 70% of total investment capital (80% for SMEs) 3. Interest rate : 8%/year (7% for SMEs) → period: 10 years
	Foreign exchange bank	Foreign loan	1. Promotion sector: 70% of total investment capital (80% for SMEs) 2. Normal sector: 60% of total investment capital (70% for SMEs) 3. Interest rate : LIBOR + 1.5% per year → period : 10 years
	Cooperation fund	Loan for foreign investment	Interest rate : 5 - 6% per year → period : 15 years
	Federation of SMEs promotion	Finance support for a transfer of production facilities	1. Facility fund : 100%, Interest rate: 7% → period : 8 years 2. Working fund : 90%, Interest rate : 7% → period: 3 years
Tax	Office of tax administration	1. Reserve fund for FDI 2. Exemption of foreign tax 3. Reduction of income tax	
Investment information	Government institutions	Information supports for foreign investment	
Insurance		90% compensation within 90% of investment (Shares, real estate, bond)	

Source: reorganised from Kim, 1995, *Strategy of globalisation through Korean foreign investment*, 198-199.

KTCFDI can be seen in the benefits of finance, tax, insurance and investment information (Table 11). For example, the Korean Export and Import Bank provides investment funds of 80% of total investment for LEs and 90% for SMEs, and a reduced rate of interest to 8% [and 7 % for SMEs] for 10 years. Furthermore, the Federation of SMEs Promotion provided finance for up to 100 per cent of production facility costs and 90% of working capital at low interest rates [7 % for 8 and 3 years respectively]. Also, KTCFDI enterprises are supported by the Korean Tax Administration with exemption from foreign tax and reduction in income tax. Consequently, the international extension of extensive accumulation in the KTCI led by the crisis in price competitiveness has been promoted by changes in state and enterprises relation.

5. Conclusion

This paper has identified the transitions in the development modes of the KTCI to explore the fundamental reason for the restructuring of the KTCI in the 1990s. In the 1980s, the development of the KTCI could be regarded as export-led growth implemented by coupling mass production and mass consumption. It was achieved through an extensive accumulation process regulated by the reduction in the growth rate of the wage levels and the expansion of working hours to extend the forces of production, together with the way that large enterprises arranged capacity subcontracting relations with SMEs to increase elasticity of supply to meet world demands, and the way in which the government provided support to the KTCI through

the establishment of certain provisions and laws. However, the great labour movement' that occurred in 1987 played a crucial role in the crisis in the extensive accumulation regime based on price competitiveness, as it accelerated the growth in wage levels. The large wage increases in the KTCI led to two sets of changes in the accumulation regime after the late 1980s. Firstly, it resulted in the growth in wage earners' purchasing power, so that an intensive accumulation process emerged in the sector producing high quality products. This was implemented by coupling small batch production and mass consumption.

Secondly, it also constrained profits in the sector producing low quality products. It led to a geographical shift in the extensive accumulation regime to recover price competitiveness through the international extension of the forces of production

At the same time, it involved changes in wage-employment relations, inter-firm relations and state-enterprise relations, which are institutional forms of the modes of regulation. Firstly, growing labour empowerment has led to the changes in wage determination based on collective bargaining. Secondly, there has been a transition from inter-firm relations based on capacity subcontracting arrangements to specialised subcontracting arrangements due to the growth in demand for high quality products. This reduced the composition of subcontracting production in low quality products, and led to the increase in foreign production. Finally, there has been a change in state support dominated by promotion policies for export in the 1980s to promotion policies for KTCFDI in the 1990s.

NOTES

- 1) Exception are Kardor (1990), Altvater (1993) and Smith (1998). They explore the establishment of societal structure of state socialism within Central and Eastern Europe. Also, Lipietz (1986) has developed regulation theory, suggesting the difference in regimes of accumulation and modes of regulation between centre (Western capitalist economies), semi-peripheral (newly industrializing economies) and peripheral (less developed economies) countries through the internationalization of Fordism.
- 2) Although there are a number of researches on regulation theory in Korea (Kim 1991; Jung: 1991; 1992; Chon: 1994; Park 1992; Kwon 1993; Shin 1991), only few researches have been applied to the Korean economy and industry (Cho *et al* 1991; Jung 1993).
- 3) Boyer(1986:61-68) suggests five institutional forms to identify the specific economy. The first is wage and labour relations. It is focused on the mode of labour organization and the way of wage determinants. It also involves the norm of consumption. The second is the form of competition. For example, it concerns whether interfirm relation is the oligopoly or liberal competition as competition form determines the formation of price and the attitude of enterprises. The third is the form of state. Different forms of state reflect diverse economic roles of state. Wage and labour relations and competition forms influence the operation of economic public expenditure, while the state plays an important role in that it provides some institutional forms through the recognition of laws, rules and ordinances. The fourth is the form of entry into the international system. For example, it concerns whether on state enter into central or peripheral role in the international system. It is determined by commodity trade, the location of production platform through foreign direct investment. Finally, he pointed out the difference in monetary forms. It is institutional form related to whether the currency system is based on the gold standard or not, and the finance of enterprise is based on direct or indirect financing.
- 4) The regime of accumulation is a product of the form of production organization, the way in which economic surpluses are achieved and the distribution of social product and consumption (Dunford 1990). There are two mechanisms for organizing the accumulation process: extensive and intensive accumulation. Productivity increases in the extensive accumulation process are achieved through the construction of new enterprises, increases in the numbers employed or the extension of working hours, as they involve a process of expanding the means and relations of production through the expansion of productive forces (Smith 1998). Unlike this, productivity increases in the intensive accumulation process are achieved through the rationalization and reorganization of the workplace to increase the efficiency of work done over a given time period (Smith 1998: 69). Also, the intensive accumulation process is different from the extensive regime in that it is implemented through high increases in wage levels. See Dunford (1988; 1990) for useful review.
- 5) During this period, the accumulation of the KTCI was not regulated by monopoly regulation mode as wage levels were not determined by collective bargaining. However, as wage levels were regulated through wage guideline enacted by the government, I regard the mode of

regulation in this period as state monopoly regulation.

- 6) Cho (1985) identified subcontracting relations between export LEs and SMEs through the way in which SMEs were accumulated by the use of low wage employee and the structure of employment.
- 7) The characteristic of the promotion law of the modernization of the textile industry is different from 'the temporary law of textile industry facilities'. As the latter was established to restrict the over-competition among domestic textile enterprises, the enlargement of facilities was restricted through the intervention of institutions. On the other hand, the former was established to improve productivity (Seo 1997).
- 8) Grading is the changing process of garment size, and marking is the process of that optimizes the allocation of pattern to protect the loss of raw textile products.
- 9) Notwithstanding the improvement in productivity through the introduction of CAD, enterprises have faced some problems to do with the lack of an engineering workforce. First of all, the cost of training for the CAD system was high. Also, there are few engineers who are able to deal with CAD (Korean Sewing Research Institute 1994).
- 10) The Korea Institute for Industrial Economic and Trade (1993) divided the automation level of the KTCI into four stages. The first stage is the partial automation of a machine. The second is the complete automation of a machine. The CAD/CAM system and robot are used in this stage. The third is the production automation of the production line. This stage includes a continuous process under the computerized control. The final stage is the complete automation of a factory, that is, factory automation.

- 11) The calculation way of annual average growth rate is as follows:

$$g = \frac{\log(A_t/A_0)}{t}$$

t denotes time, A_0 denotes initial year value and A_t denotes final year value.

- 12) For example, E-land group possessed 26 own-branded name branches has specialized subcontracting relations divided into regular and spot cooperative firms, according to the characteristics of brands. The former is involved in planned production with a particular contract period, while the latter is involved in irregular production (Seo 1993:41).

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연구
논문

한국 섬유 의류산업의 위기와 재구조화 (1980-1997): 생산력의 지리적 확장과 내연적 축적체제

이 승철*

1980년에서 1997년 사이에 한국 섬유 의류산업은 국내 가격경쟁력을 기반으로 한 수출주도형 성장체제에서 생산력의 지리적 확장을 가져오는 해외생산 그리고 고급의류 내수시장의 증가로 따른 기술 발달과 자동화에 기반을 둔 질적 성장체제로 전환하였다. 이러한 재구조화는 1987년 노동자 대투쟁으로 인한 임금의 급상승으로 1986년까지 진행된 수출주도형 성장체제에 위기가 왔다는데 일차적 원인을 들 수 있다. 특히 임금상승과 노동의 세력화에 따른 단체교섭의 형성은 장시간 노동시간과 저임금 구조에 기반을 둔 대량 생산과 대량수출의 결합체제에 위기를 가져왔다. 따라서 본 논문의 목적은 1980년과 1997년 사이에 발생한 한국 섬유 의류산업의 발전모델 또는 양식의 전환을 밝히고자 하는 것이다. 이를 위해 본 논문은 역사적 맥락에서 1987년 이전과 이후의 축적체제의 변화와 함께 조절양식의 제도적 형태인 임금용 관계, 기업간 관계 그리고 국가와 기업관계의 변화를 살펴보았다.

주요어 : 발전양식, 축적체제, 조절양식, 산업재구조화, 국제화

* 영국 서섹스(Sussex)대학교 박사과정