International Journal of Urban and Regional Research Volume 25.2 June 2001

Contesting Flexibility: The Restructuring of Taiwan's Labor Relations and Spatial Organization*

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The last decade has witnessed an unprecedented change in the world economy. The Fordist mode of development, successful since the second world war, has finally run its course. Political-economic restructuring processes have been taking place everywhere, such as to modify, willingly or unwillingly, the development policies of the preceding period and to free market forces from political constraints in order to regenerate national competitiveness. Since the early 1980s, many of the advanced economies have identified labor-relations problems as bearing the major responsibility for stagnation during the crisis, with the result that firms and governments have come to question and sometimes substantially revise their policies (Boyer, 1988; Peck, 1996). Market forces have taken their 'revenge', as Boyer and Drache (1996: 1) put it. Flexibility is thought to be the remedy for unemployment, and the task is to combat rigidity in pursuit of the objective of economic growth. In the abundant literature on restructuring around post-Fordism, flexible specialization and flexible accumulation, the controversies have been at their most acrimonious with respect to the issue of labor (Piore and Sable, 1984; Aglietta, 1987; Boyer, 1988; 1990; Hirst and Zeitlin, 1990; Drache, 1996).

As the advanced economies have restructured toward flexible production (and flexible use of labor) in order to regenerate innovation possibilities, the newly industrialized countries, such as Taiwan, have also confronted new challenges, necessitating their adjustment to the new conditions. They are no longer able to enjoy the advantages of low costs in commodity chains, nor do their states have the high degree of autonomy that they previously enjoyed which enabled them to actively modify developmental policies to meet the challenges of the rapidly changing world economy. How have they managed this restructuring process with respect to labor relations? What are the roles played by the enterprises, the laborers and the state in responding to the new global conditions? Have these labor relations and their transformation exhibited spatial differences in the course of these processes? The purpose of this article is to analyze Taiwan's labor relations, their patterns of transformation and their spatial implications from the point of view of the regulation approach.

Clarifying labor relations in the regulation approach

Regulation theory has been regarded as one of the most integrative and productive approaches to the transformation of contemporary capitalism (Tickell and Peck, 1992).

* The author would like to thank two anonymous referees for their helpful comments and the National Science Council of ROC (NSC 87-2412-H-029-004) for financial support.

The principal contribution of the regulation approach lies in its theoretical integration of the roles of social, economic and political relations into the reproduction of capitalist societies. It presupposes that relatively stable capitalist accumulation simultaneously involves coherent processes of four levels of development (Aglietta, 1987; Lipietz, 1987; Boyer, 1990; Jessop, 1990). These are: (1) the industrial paradigm (or the labor/production process) at the microeconomic level; (2) an accumulation regime at the macroeconomic level; (3) a mode of regulation at the meso level; and (4) a model of development at the societal level. The regulation approach stresses the dynamic character of economic processes in which disruptions often occur and, as such, the mode of regulation may change and adapt to new structural conditions.

Regulation theorists are primarily interested in theorizing national variations in capitalist development and their transformations. The analysis of labor relations in these studies is sometimes applied at the level of the industrial paradigm (Lipietz, 1987; 1997), but most of the time it is applied to institutions of a mode of regulation (Boyer, 1988) or even an accumulation regime (Lipietz, 1987). In general, the regulation approach is more interested in the accumulation regime than modes of regulation, and this reflects, as Tickell and Peck (1992: 201) argue, 'a deep-seated, but unacknowledged, theoretical subordination of the mode of regulation to the accumulation system'. The conflation of the term to different levels of analysis creates confusion for the theory in analyzing how capitalist-labor relations are regulated in a society so as to sustain the reproduction of an economic order.

Labor relations determine the way in which wage-earners fit into society and the economic system, and comprise 'the network of legal and institutional conditions governing the use and reproduction of the work-force' (Boyer, 1988: 10). Labor power is a pseudo commodity in capitalist societies, requiring the human body to be disciplined so as to perform in an orderly way (Peck, 1996). Social and political regulations (and institutions) on work are therefore necessary to ensure the effective use of labor power and the reproduction of society. They generate the rules and the conventions that determine and guide collective and individual behaviors (Boyer, 1988: 9).

In this sense, labor relations can be simultaneously approached at the three key theoretical levels of the regulation approach. To begin with, at the level of the industrial paradigm, labor relations refer to a general organizing principle of labor and how labor power is utilized in the sphere of production. This involves organization of both the production process (referring to the method of organizational arrangement and the selection of technology for the production unit) and the labor process (referring to the mechanisms that translate raw materials into useful products). This level of labor relations is related to a large extent to the level of technology that determines the internal division of labor and the hierarchy of skill levels apparent in the production process.

Secondly, at the level of the mode of regulation, labor relations involve the ways in which labor power is regulated in the social, political and economic spheres. From this perspective, labor relations can be seen to consist of worker mobility (the possibility of a worker moving within and between firms), wage formation (workers' income based on productivity gains or other institutional arrangements) and consumption norms. These elements may relate to a given state's labor policies, union regulations, employment laws, wage policies and social norms of consumption and lifestyle.

Finally, labor relations at the level of the accumulation regime refers to a situation in which the mechanisms of the former two levels result in productivity gains and financial profits, and contribute to the reproduction of the economic system. This concerns the ways in which various types of labor regulations can become relatively stabilized institutional arrangements that sustain the production and reproduction of an economic system. As a whole, a labor regime describes this coherence of various types of labor regulation (see Figure 1).

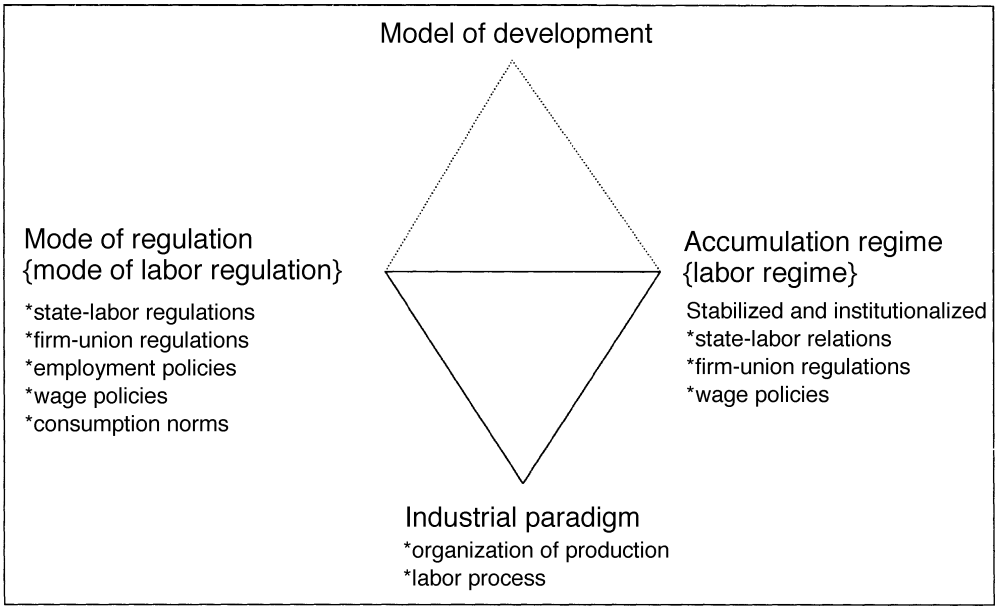

Figure 1 *Labor relations in the regulation approach (source: revised from Cho, 1997)*

Because the Fordist regime of accumulation is the era that the regulation approach has most concretely conceptualized, I use it as an example to illustrate these component dimensions of labor relations. Fordist labor relations at the level of the industrial paradigm are characterized by the Taylorist labor process (referring to the separation of mental and manual laborers and standardized mass production), typically dominated by large firms. At the mode of regulation level, the state adopts favorable union policies that ensure a union's ability to engage in collective bargaining and secure employment contracts with firms. The wage level is also monitored so as to ensure that it increases in step with anticipated productivity gains. At the level of the regime of accumulation, the Fordist labor regime creates a relatively stable workforce that can contain destructive struggles and provides sustainable wages which enable workers to consume goods. This

Table 1 *Levels of labor relations in the regulation approach*

Level	Dimension	Indicators	Example: Fordism
Industrial paradigm	Technical division of labor	• Organization of production • Labor process	• Taylorist separation of mental and manual labor • Dominant large firms
Mode of regulation	Labor regulations	• State-labor regulations • Firm-union regulations • Employment policies • Wage policies • Consumption norms	• Favorable union policy • Collective bargaining • Contract of employment • Wage is indicated by anticipated productivity
Regime of accumulation	Labor regime	• Stabilization of various types of labor regulations	• Fordist labor regime that sustains a mass consumption society

Table 2 *Dimensions of flexibility of labor relations*

	Organization of production	Labor process	Job mobility	Wage formation	Social protection
Directions of transformation of labor relations in the era of post-Fordism	• Ability to adjust plant to variable demands in volume and products	• Adaptability of workers to various tasks, whether complex or not	• Possibility of varying jobs and working time according to local or world economic situations	• Sensitivity of wages to the company's position and the labor market	• Elimination of conditions unfavorable to employment in the fields of taxation and social transfers
Type of flexibility	• Plant flexibility	• Functional and numerical flexibility	• Internal and external flexibility	• Labor-market flexibility	• Flexible state
Features	• Outsourcing many of the functions previously performed within the firm	• Multiskilling, broadening of job categories, and formation of flexible work teams	• Freedom of distribution of working time and job rotation in the firm • Temporary employment, part-time employment	• Freedom to outsource jobs to the external market labor force • Freedom of determining wages level by individual ability and firms' capability	• Reducing the total cost of the firm's financial burden in social and welfare programs • Suspension of labor union power in influencing decision-making

Source: Revised from Boyer (1988: 224).

produces a mass-consumption society that increases the profits and incentives of the firms to (re)invest (see Table 1).

However, it should be remembered that while regulation theory is best known for its wide-ranging historical analysis of generic or archetypal patterns of regulation (such as Taylorism and Fordism), in principle it is sensitive to national variations in the mode of regulation. It is thus a mistake to claim that Fordist labor relations can have only one configuration. In the same vein, the transformation of Fordism has also taken different forms in different countries (Boyer, 1988; 1990; Tickell and Peck, 1992; Lipietz, 1997). In contrast to Fordism, whose 'difficulties can best be captured in one word: rigidity' (Harvey, 1989: 142), the new regime (or the post-Fordist regime) can be epitomized by 'flexibility', broadly defined as 'the capacity to adapt to change' in the market situation (Rosenberg, 1989: 8). But as an emerging accumulation regime, post-Fordism lacks an 'institutional fix' (Peck and Tickell, 1994) and does not show a clear and coherent pattern. Nevertheless, based on the above theorization, key features of flexibility related to new labor relations can be identified, as shown in Table 2 (cf. Boyer, 1988: 223–7).

Moreover, since labor relations are socially regulated, they may create spatial differentiation according to their local institutional variability. Labor relations thus may have uneven spatial patterns and developments that result from the interaction between national labor regulations and distinctive local factors. As Peck (1996: 102) correctly argues, 'national labor regulation produces uneven geographic results ... Processes of labor regulation result contingently in uneven spatial effects due to the way in which they interact with, modify, and are modified by historically prior uses of space'. Space can matter in terms of the regulation of labor relations.

As a heuristic tool to study societal transformation, the regulation approach and its analytical concepts can be extended to undertake research on different societies and to develop an understanding of various types of accumulation regime (in our case, types of labor regime) according to these societies' modes of (labor) regulation. I will use these frameworks to illustrate labor relations in Taiwan, their transformation and the spatial implications.

Taiwan's labor relations before 1980 — a flexible Taylorist labor regime

It is necessary to situate Taiwan's economic development in the world system before discussing the configuration of its labor relations. Taiwan's economy has been based on export-driven industrialization, rather than on domestic consumption, in which low labor costs were the main competitive factor (Haggard, 1990; Wade, 1990; Liu, 1992). As Amsden (1990: 10) argues, whereas the Fordist model regards underconsumption as the major stumbling block to economic growth, the problem of industrialization in the third world is one of raising productivity and creating international competitiveness, not effective demand. Taiwan took advantage of the expansion of the US economy by adopting an export-oriented industrial policy in the 1960s in order to produce cheap industrial products for the US market. This was based on an international division of labor in which the multinational corporations (MNCs) had outsourced the low-skilled and standardized parts of manufacturing to Taiwan and utilized the locally available cheap labor for production. Gereffi (1994) described Taiwan's economy as one based on a type of buyer-driven commodity chain where big buyers in the US, for instance K-mart, placed orders through trading companies to the Taiwanese small and medium-sized enterprises (SMEs) to produce cheap commodities (for example shoes, umbrellas, garments etc.). This export-oriented industrialization differed greatly from the Fordist model where domestic full employment and mass consumption were the major concerns.

As regards labor relations, Taiwan's economic system had the following characteristics. First, the labor process in Taiwan was fragmented and Taylorist, but it was not Taylorist in a genuine sense. As discussed above, Taiwan's export products comprised mainly labor-intensive, low-cost and low-end merchandise. These were the standardized part of the product cycle where the skill level was lowest. Therefore, the jobs were fragmented and repetitive, lacking the link with the automated machine systems of Taylorism. Lipietz (1987: 74) calls this type of labor process 'primitive Taylorization', involving 'the transfer of specific and limited segments of branch circuits [from the advanced economies] to states with high rates of exploitation (in terms of wages, length of the working day and labor intensity)'. As Amsden (1990: 13) also argues, 'it is true that jobs in mass production industries in these [East Asian] countries have been industrially engineered for maximum efficiency. But work has not been managed in a top-down fashion. Technical ignorance at the highest managerial level, and inexperience on the part of the workforce, have made it impossible for borrowed technology to be optimized through a top-down, Taylorist approach to productivity and quality improvement'. The fragmented labor process produced a massive increase in the number of SMEs which depended on intensive networking for integration (Hsieh, 1989). This enhanced the flexibility of labor use and the labor market.

Second, production organization in Taiwan was mainly based on SMEs (Hamilton and Kao, 1990; Whitley, 1992; Chen, 1994). Even as late as 1986, 90% of the companies employed less than 50 workers. Firms whose employees numbered over 100 people accounted for only 4% of the total manufacturing firms (Hsieh, 1989: 17). Moreover, the export-driven economy was heavily dependent on SMEs (two-thirds of the value of exports was generated by them) and their ability to compete in the world market. Although state-owned and big privately-owned enterprises existed, they were not like the Japanese or South Korean big firms that have dominated the commodity chain (vertical integration) and been involved in export activities. On the contrary, they were driven by the demand of an export-oriented economy that was dominated by SMEs. These big enterprises were mainly oriented to the domestic market rather than to exports (Hamilton, 1996). While unions were recognized and developed in these firms, their functions were restricted. By contrast, because of their small size, it was not so easy for unions to develop in the SMEs. Labor relations in these firms tended to be more paternalistic and personal and unions played a nominal rather than substantive role (Deyo, 1989). Hence, the SMEs enjoyed a large degree of management flexibility.

Third, the Taiwanese state has been an authoritarian developmental state that made economic development, rather than citizens' rights, its primary policy goal. This differs from the policy orientation that would be expected from a Fordist model (Amsden, 1985; Haggard, 1990; Wade, 1990; Weiss and Hobson, 1995). In keeping with this priority, the state's labor policy was oriented to taming labor for developmental ends. A type of state-corporatist regime was set up by the Taiwanese state in order to secure a peaceful and investment-friendly environment for the economy. This state-corporatist regime has the following characteristics. Firstly, the state granted the workers some degrees of material welfare (e.g. provision of medical insurance, minimum wages, life insurance and so on), yet prohibited workers from organizing and mobilizing themselves for political and economic purposes. Secondly, although the state granted workers the right to organize unions, its intention was to mobilize workers for political support rather than to organize workers for their own sake (Lee, 1992). Therefore, the state carefully manipulated workers' rights so as to prevent unions from orienting their activities to the workers' ends and interests (Ho, 1990). Unions were carefully monitored and their functions strictly constrained to the welfare domain, rather than allowing them to represent the interests of labor (Deyo, 1989: 115). In the absence of state provision of unemployment compensation and other public welfare, workers were entirely dependent on wages for their livelihood. They were exposed to the market's despotic power. In other words, the

Table 3 *Labor relations in Taiwan before the 1980s — flexible Taylorism*

	Organization of production	Labor process	Job mobility	Wage formation	State's role
Characteristics of the flexible Taylorist labor regime	• Mainly SMEs, plus few state- and privately-owned big firms • Paternalism • Very low degree of social protection	• Primitive and flexible Taylorization	• High degree of labor-market flexibility	• Minimum wages, but largely determined by market competition	• State corporatism (minimum material provision, nominal union policy) • High degree of management flexibility

labor market before the 1980s was characterized by a high degree of flexibility (Lee and Wu, 1992).

Fourth, labor relations with respect to job mobility and wage formation were generally paternalistic and market determined, rather than being based on collective bargaining (Deyo, 1989). In big state or private firms, workers were protected by the state through the state corporatist institutions (Wang and Fang, 1992; Wang, 1998) and were better off than those in SMEs in terms of material benefits and job security. However, a dual labor market where the primary sector was better protected than the secondary sector did not exist. On the contrary, as noted above, unions were suppressed by the state, thereby disabling any attempt to mobilize workers in disputes. Workers in both big firms and SMEs were equally subject to dominance by management. Unions in big firms were powerless because of the state's suppression, whereas in SMEs, which had either no unions or company-controlled unions and no institutionalized arrangements for negotiation, workers only had themselves to depend on when bargaining with employers for wage benefits and job security.

In sum, this was a very flexible regime of labor relations, which may also be termed flexible Taylorist labor relations, as Sum (1994) suggests. It was characterized by a primitive level of mechanization in the organization of production, state suppression of laborers, a great deal of management flexibility in firms, a high degree of labor mobility, a high rate of exploitation (low wages and long working hours) and low levels of social protection (see Table 3).

The restructuring of Taiwan's political economy in the 1980s

Taiwan's political economy faced new challenges in the 1980s. On the one hand, the labor-intensive and export-oriented mode of economic development met new competition from adjacent countries and economic restructuring to a higher level of development was undertaken. On the other hand, the democratization of the political regime occurred during this period, in the course of which labor policies and the institutions of labor regulation were greatly changed. The flexible Taylorist labor regime was in the process of transition.

Economic restructuring

In the 1980s, Taiwan's economy met new challenges that led to the process of restructuring. Firstly, its labor and land costs had increased in the long process of economic development, rendering them unfavorable for the export-oriented, labor-intensive industries. Secondly, the opening up of China to the world market and the export-led industrialization policies adopted by the ASEAN countries reduced the competitive edge of Taiwanese products. Thirdly, Taiwan faced labor shortages in this period that created serious problems for the labor-intensive industries. Fourthly, the appreciation of the new Taiwan dollar against the US dollar put Taiwanese products in a disadvantageous position (Kim, 1993; Tsay, 1993). The full force of economic restructuring can be shown with reference to a number of features discussed below.

The first was the transformation of the employment structure. In 1978, employees working in the primary sector in Taiwan accounted for 24.92% of the total figure, those in the secondary sector accounted for 39.47%, while the tertiary sector employed 35.61%. However, by 1996, employment had fallen to 10.12% in the primary sector, increased to 37.49% in the secondary sector and risen to 53.39% in the tertiary sector. This transformation has resulted in a Taiwanese occupational structure similar to that of advanced economies, or displaying post-industrial characteristics. In terms of the value of GDP, the main production sector of the economy has shifted from the primary sector to the secondary and finally to the tertiary. The highest production value of the secondary

sector was in 1981, when it produced 50.24% of the total GDP. However, it has continued to decline over the years, while the tertiary sector has continued to increase in importance. By 1995, the primary sector produced only 3.29% of the GDP, the secondary 35.65%, while the tertiary accounted for 61.06%.

The second factor was the transformation of the manufacturing sector, in which the level of technology had been greatly upgraded. In terms of the level of technology and capital intensity of export products, the manufacture of high-technology intensive products as a proportion of the total increased from 18% in 1986 to 31% in 1993, while low-technology and labor-intensive products decreased from 48% to 28% (Wu, 1994). Moreover, the quantity of intermediate and mechanical goods for export had increased from 44% in 1986 to 68% in 1993, while the final products had decreased from 47% to 25% during the same period. In terms of growth rate, the most significant sector comprised the high-technology industries, which had increased by 131% from 1986 to 1993. These figures indicate the rapid transformation of Taiwan's manufacturing structure and its upgrading.

The third factor was that Taiwan's capital began to outflow to the adjacent areas, as a consequence of which Taiwan's economy changed its position in the international division of labor. Taiwan's capital outflow rapidly increased in the 1980s. Before the 1990s, the main destination of overseas investments had been the ASEAN countries (Indonesia, Vietnam, the Philippines, Malaysia and Thailand) and to a lesser extent the USA. Among the total foreign investments in the ASEAN countries, Taiwan was the main investor in Vietnam, the second largest in Indonesia and the third in the Philippines, Malaysia and Thailand in the early 1990s. Since 1993, when Taiwan began to allow capital investment in China, China has become the main recipient of Taiwan's capital investment, second only to that of Hong Kong (Qiu, 1996: 18; Ash and Kueh, 1993). According to the official data, there were 11,254 cases of investments from Taiwan to China between 1991 and 1995, totaling US $5.6 billion. Investment in China accounted for 44% of Taiwan's total overseas investment until 1995. Before 1980, Taiwan was situated in the lower orders of the global division of labor. In the 1990s, Taiwan's position has changed as it has become integrated into the Southeast Asian regional division of labor and has a vertically integrated relationship within it (Rimmer, 1994).

In sum, the restructuring of Taiwan's economy can be seen in three main areas: the employment structure has changed from a manufacturing base to a service base; manufacturing goods have upgraded from labor-intensive to higher technology-level products; and it has changed position within the international division of labor. How are these restructuring factors interacting with political democratization to shape and reshape the existing patterns of labor relations?

Democratization and the rise of the labor movement

Economic restructuring in Taiwan in the 1980s coincided with the emergence of political democratization in the late 1980s, in the course of which workers began to mobilize for labor rights which had been suppressed by the state for decades. In itself, political democratization does not necessarily lead to labor mobilization. However, because of the suppression of labor rights in the former authoritarian regime, political democratization had a spill-over effect that induced social groups to mobilize, including workers.

The process of labor mobilization can be seen as centrally connected with the state corporatist regime in its authoritarian stage (Deyo, 1989; Wang, 1998). As discussed above, the state granted workers the right to unionize, yet it prohibited unions from mobilizing around workers' aims and interests. Moreover, a new Labor Standard Law was declared by the state in July of 1984. This legislation, as Ho (1990: 37) has pointed out, provided workers with a focal point and the legal right to push for many demands. But,

like other previously instituted labor laws, it was not implemented after its legislation until 1987. The Labor Standard Law consequently played an important role in promoting labor mobilization and providing a safeguard for the workers when political democratization began in 1987.

The workers' mobilization in general was oriented by two aims: one was to establish autonomous unions of their own; the other was to induce companies to comply with the Labor Standard Law. Strategies such as strikes and workplace shutdowns were adopted, which had been unimaginable in the previous period. The burgeoning of labor disputes in this period is clearly indicated by the statistics: in 1984, there were 907 instances of such disputes, but this figure increased to 1,609 cases in 1987 and 1,943 cases in 1989. The working days lost to such action numbered 1,614 in 1987, 8,967 in 1988, and 24,157 in 1989 (Council of Labor Affairs, 1991).

Since the laborers used the existing laws to assert their rights against their employers, for example for better working conditions or overtime wages, enterprises in the monopolized sectors tended to grant them those benefits after the disputes in order to comply with the law. As the democratization process continued, the state also forced enterprises to comply with the law and to provide workers with the benefits provided for in the legislation. These steps indicated that the labor movement had begun to show its power in influencing social policy and its implementation. The capitalists were not able to enjoy such a high degree of management flexibility as they had previously. This eventually increased both the financial burden for employers and the rigidity of the labor market. In the next section we turn to look at the main characteristics of the new labor relations after the transformation.

Taiwan's labor relations in the 1990s — a new flexible labor regime in the making?

The restructuring of Taiwan's political economy has greatly transformed the regime of labor relations. On the one hand, the state has been restructured to a more democratic one in which the authoritarian features have been greatly reduced. On the other hand, the economic structure has become more differentiated and firms with different levels of technology are adopting different approaches to labor regulations.

The restructuring of the state and its labor policy

As the democratization process continued, the state was forced not only to materialize the former unimplemented labor policies, but also to legislate more welfare programs to satisfy the demands of the labor movement. In the wake of the new democratic party politics, which saw welfare provisions become one of the main campaign strategies to mobilize voters in periodic elections, many welfare programs have been instituted, such as the national health service. There are still many other policies presently being discussed and established in the state's agenda for the future, including unemployment insurance, a national insurance program, a national pension system etc. Democratization has led the state to provide more welfare programs than before. Contrary to the case in the advanced economies, where flexible policies have been adopted to remedy the rigidity brought about by the welfare state, the Taiwanese case has taken the direction of implementing a welfare state so as to protect workers and citizens in the current conditions of global capitalism.

However, in facing the challenges of severe competition from global capitalism, the developmentalist Taiwanese state has not hesitated to initiate many new strategies intended to upgrade the level of Taiwan's economy. These include: (1) building up Taipei as a new operations center for the Asia-Pacific region over the next ten years, in an effort

to play a key role in the region's economic integration in the twenty-first century; (2) aiming to build more high-tech parks on the island to establish Taiwan as a 'scientific-technology island'; (3) releasing large amounts of state-owned lands and relaxing environmental protection measures in order to create a friendly environment for investment. Indeed, the state wants to promote new development policies oriented to international capital in order to upgrade the economy (Wang, 1996).

However, the effects of the democratization process and the developmental strategies adopted by the state appear to run in contradictory directions. On the one hand, democratization has led to the emergence of a prototype of a welfare state. On the other, the state's strategy for global competition is leaning toward a more flexible market principle. How have these two trends been integrated in the state's policies?

As a whole, the Taiwanese state can be described as an instance of the neo-statist version of the Schumpeterian workfare state (SWS), to follow Jessop's (1993: 31) formulation. This means, as Jessop suggests, that rather than committing to Keynesian domestic full employment and redistribute welfare rights, the neo-statist SWS tends to emphasize labor-market organization as a source of competitive advantage. This involves a market-conforming but state-sponsored approach to economic reorganization by engaging in strategies of decommodification to compensate for structural weaknesses in markets while developing active policies to promote sunrise sectors of the productive base (Jessop, 1993). In the scenario of labor relations, the Taiwanese state has begun to redraw the Labor Standard and the Trade Union Laws in the arena of labor regulation. The new version of the Labor Standard Law adopts a more flexible and free-market principle. The state's labor policy is effecting a transformation from a state corporatist model to a pluralist one (Wang, 1998). For example, the state is giving up its one-shop, one-union policy to allow workers to choose their own unions or decline to join a union at all. Unions themselves will have to compete in order to win representation status, while management-labor relations will follow the model of collective bargaining.

Moreover, under the unemployment insurance act, enacted in 1999, workers who have lost their jobs are able to apply for unemployment allowance only under some very stringent conditions. The unemployment allowance is designed to secure for workers only their most basic living requirements during the period in which they are seeking new employment, so as not to reduce their incentive to seek work. In addition, in the new version of the Labor Standard Law that was revised in late 1996, the flexible working time principle was put into law, allowing managers more freedom to utilize labor power in order to increase the rate of machine use and productivity. Other changes introduced by the state in recent years include the following: more vocational education and in-job training programs have been put into practice in order to re/train workforces; the traditional values of familism have been greatly emphasized and promoted in order to limit the financial burden on the state; and a greater part of the state budget has been allocated to scientific and technology research institutes in order to promote innovation activities.

All these refinements indicate that the Taiwanese state has carefully manipulated the contradictory trends between democratization and further economic development. The state does not want to let democratization, which undergirds the rigidity of the labor market, harm economic development. Welfare is needed in a democratic and modern society, as the state acknowledges, however it should not deter economic growth and prosperity. This is a type of Schumpeterian workfare state, one which emphasizes market competition and innovation while only a minimum level of welfare is provided for the society (see Table 4).

Transition of labor relations at the industrial level

As Taiwan's economy faces new challenges from the ASEAN countries and China, the enterprises have been forced to adopt new strategies for the new competitive conditions.

Table 4 *The restructuring of the Taiwanese state*

	Former state form	Taiwan's SWS
Development strategy	• Cost-driven development policies • Market follower	• Human resource-driven development • Market guidance
Welfare provision	• Residual spending of workers' shelter • Market despotism	• Decommodification to compensate for market failures • Minimum welfare provision
Labor relations	• State corporatism	• Pluralism
Competition factor for the economy	• Low-tech, factor-driven competition	• High-tech, innovation-driven competitiveness
Labor market flexibility	• Inactive state labor policy, market force predominated	• Flexibility through active structural policy
Workforce	• Low-cost workforce and production	• Flexibility and innovation consistent with higher wages • More spending on reskilling and retraining

In general, the strategies adopted by enterprises include: diverting investment to low-cost areas overseas; upgrading their level of technology; importing foreign labor; and extensively subcontracting work to informal sectors in order to survive in the world market (Tsay, 1993). According to an official report (Ministry of Economic Affairs, 1996), production automation was the method that the enterprises adopted most frequently, followed by the use of foreign workers, outsourcing, improvement of labor welfare, in-house training, office automation, dismissal of incompetent workers, reorganization, encouragement of overtime work, flexible working hours and so on.

The main characteristic of the transformation has been the shift toward a knowledge-based approach to competition. According to another survey, 4 of the top 10 firms in manufacturing are high-tech and information-intensive firms; among the top 100, 47 belong to this category. In addition, of the most profitable 50 firms in the past three years, 43 are located in the high-tech sector (*Commonwealth Magazine*, 1997: 6). These figures indicate that the high-tech and information-intensive industries have replaced the petrochemical, food-processing and textile industries and have become the propulsive force for the economy.

Along with the transformation of the firms, labor relations at this stage are also changing. This change mainly relates to a firm's level of technology and size. In the high-tech industries (e.g. microelectronics, semiconductors), no matter whether they are big firms or SMEs, a non-union policy is the predominant practice. These firms tend to copy labor management practices from the high-tech industries of Silicon Valley in the USA and to utilize monetary policy in order to improve labor benefits and thereby to deter unionization which might interrupt production (Cheng, 1998). Under these circumstances, wages in this sector are normally higher than other sectors in Taiwan, in addition to which large year-end bonuses are awarded and shares in company stocks encouraged. The general practice of this industry is an approach to human-resource management in which jobs and wages are dependent upon individual performance.

As regards production organization, the high-tech firms are more specialized and tend to form strategic alliances with both foreign and domestic firms, intended to maintain their position and competitiveness in the world market. The labor process in the high-tech industries is knowledge-intensive and innovation-driven; it is also characterized by flexible work hours, team work and job rotation. Its flexibility is based on functional rather than numerical factors, where workers are required to perform a variety of tasks rather than a single specific job. Also, because of the high competitiveness of the sector,

full utilization of the labor force and therefore flexible working time is required. In general, labor relations in the high-tech sector are characterized by a high degree of flexibility, where management enjoys a large span of freedom, in addition to a knowledge-based labor process, job flexibility and non-union practices. These characteristics may be described as after-Fordist labor relations, or the 'Californian type' of industrial relations that Lipietz (1997) has identified.

In the industries located at the intermediate level of technology (such as petrochemicals, motor vehicles or steel), be they state-owned or privately-owned, the unions are stronger and were highly mobilized during the process of democratization. The state tends to sponsor these union activities and monitor the firms' labor practices. Managers or owners in this sector have not regained the flexibility of management they enjoyed in the previous era. The wages and job mobility in this type of labor relations are much more reminiscent of mini-corporatism, wherein unions and management have to work together on many important issues.

With regard to production organization, the big firm is the dominant form. These big firms continued to become conglomerates in this period by combining various types of productions and service functions. As Amsden (1990) argues, because the level of technology is not high and the market is not big enough, these big firms do not have the capability to become vertically integrated. They tend to invest in new profitable areas in order to expand their market share. Most of the big enterprises still build their production functions on extensive subcontracting, though they may occupy core positions in the production networks. In these industries, the dominant labor process is based on the Taylorist type, where highly-skilled job specialization coexists with a segmented labor market. Here, in-job training and internal promotion to the primary sector are practiced to stabilize a highly-skilled labor force, whereas for the secondary sector (the contract laborers), these practices are absent. Therefore, there exists a combination of functional and numerical flexibility in labor management in this industry. In sum, the labor relations in this industry tend to conform to a type of Fordism in the regulationist sense.

Finally, in the lower-level technology firms, like textiles and apparel, the labor relations of the firm typically remain wedded to the model of flexible Taylorism. The production organization of this sector is dominated by SMEs, though there coexist some big firms. In most of these SMEs, whether unionized or not, the companies tend to emphasize traditional interpersonal networks, and most of the time paternalist power rather than formal union-management negotiation to deal with wage and job issues. The state has rarely intervened in these SMEs with regard to union organization or other matters, as long as there are no labor disputes (Cheng, 1998: 105). However, because of the high replaceability of the labor force in the low-tech and labor-intensive SMEs, the inactive state policy towards these firms tends to contribute to unemployment. Foreign workers have replaced many of the indigenous workers in these industries. Because of this high market competition, job mobility and wages in this sector of industry tend to be determined by market value. It is a type of market despotism, where workers have to depend on the market situation to sell their own labor power. Therefore, this sector tends to be very flexible, as in the former stage, where numerical flexibility was dominant in labor management (see Table 5).

In sum, labor relations in the 1990s in Taiwan seem to take a diversity of forms that coexist in different sectors without a dominant pattern. The state tends towards a type of workfare state, while different sectors of industry practice different kinds of labor regulation. Unlike labor relations in the former stage, where a type of flexible Taylorist labor relation was prevalent in all sectors, now there is no dominant form. Although the element of flexibility is still a prominent characteristic in all sectors, as before, it has different contents. The new labor regime is still in the making; for the present it is characterized by hybridization and the coexistence of various forms of labor relations that appear to lack coherence.

Table 5 *Restructuring of the firms and labor relations*

Technology level features	Organization of production	Labor process	Job mobility	Wage formation	Union policy	Type of labor relations
Upper (e.g. micro electronics, semiconductors)	• Both big firms and SMEs knowledge-intensive	• Innovation and knowledge-based, team work • Functional flexibility	• Job rotation, depends on individual ability • Bonus, share of stocks	• Human-resource approach	• No union	• After-Fordism
Intermediate (e.g. petro-chemicals, steel, motor cars, household appliances)	• Big firms dominant • Capital intensive	• Taylorism • Both functional and numerical flexibility	• Segmented labor market	• Mini-corporatism	• Stronger unions	• Fordism
Lower (e.g. textiles, apparel)	• Mainly SMEs • Labor intensive	• Flexible Taylorism • Numerical flexibility	• High mobility, foreign workers	• Market despotism	• Weak unions • Paternalism	• Flexible Taylorism

Spatial implications

What kind of spatial implications might labor relations before and after the 1980s have for the geographical distribution of industries? This question needs to be looked at in relation to the historical trajectories of the geographic allocation of industries and their modes of labor regulation respectively.

With respect to the geographic allocation of types of industry before the 1980s, there were distinctive patterns of industrial location in Taiwan. The big firms and industrial complexes in the industrial upstream were mainly located in big cities, particularly in Kaohsuing, a major port and the second largest city in the southern part of Taiwan. This was due to the Japanese legacy from the latter part of its colonial rule. In the 1930s, the Japanese colonial government began to build an industrial base in Kaohsuing city to facilitate its southward-looking colonial policy in Southeast Asia. Many state-of-the-art upper stream industries, e.g. petrochemical, steel and utilities, were built during that period in this port city.

From 1945 onwards, Kaohsuing city has continued to be the main location of Taiwan's dominant big firms and industrial complexes, both state- and privately-owned. As the export-oriented economy prospered after the 1960s, the city gained much more importance in linking the Taiwanese economy to the world market, including an export-processing zone set up by the state. In terms of labor relations, however, unions tended to be suppressed by the state and by the firms in the city. The big firms in Kaohsuing city, as well as in other big cities, still enjoyed a high degree of management flexibility due to the authoritarian regime's supportive policy. The unions tended to be more nominal than real.

As regards the lower-technology sectors (mainly the SMEs), these were dispersed around the big and smaller cities and their surrounding rural areas. By utilizing the extensive networks and intermediate materials produced by the big firms, these SMEs produced cheap industrial products for the world market. Coupled with flexible Taylorist labor relations, these widely networked SMEs were also very flexible in organization and in production location. The segmented labor process had the effect of stimulating the growth of SMEs, enabling each segment to create many small firms which could re-link together via extensive networks (Hsieh, 1989). These small firms, located all over the island, tended to be managed in a paternalist manner due to weak unions or the absence of unions.

As discussed above, Taiwan's economy has been based on export-oriented industrialization. The motor of the development lay with the movement of demand away from the domestic market. Before the 1980s, the economy was dependent on the flexible Taylorist labor regime in all sectors of the industry to contain the labor force in order to produce cheap industrial products for the world (mainly the US) market. As a consequence, as far as labor regulations are concerned, the geographical allocation of the industry did not matter before the 1980s. A flexible Taylorist labor regime dominated all the locations and different sectors of industry.

It was only the reforms of the 1980s, particularly the political and economic restructuring process in the 1990s, which induced the differentiation of labor relations. The big firms and industrial complexes of the traditional industries continue to locate mainly in Kaohsuing city, although some are also located in other big cities and their surrounding areas. As the unions gained recognition by the state and by the firms, they tended to gain more power in collective bargaining. Consequently, Kaohsuing city has become a typical Fordist city in Taiwan — one in which Fordist labor relations are dominant. The city is, in the main, an intermediate materials provider for the economy, where the big firms and big unions are located.

With regard to the low-tech SMEs, these have either moved to China and Southeast Asian countries or tend to remain clustered in the smaller cities and surrounding rural

Table 6 *Spatial distribution of different types of labor relations*

Technology level features	Type of labor relations prior to the 1980s	Locations prior to the 1980s	Type of labor relations after the 1980s	Major locations in the 1990s
Upper (e.g. micro electronics, semiconductors)			After-Fordism	Hsin-chu Scientific Industrial Park
Intermediate (e.g. petro-chemicals, steel, motor cars, household appliances)	Flexible Taylorism	Kaohsuing and other big cities	Fordism	Kaohsuing and other big cities
Lower (e.g. textiles, apparel)	Flexible Taylorism	Big and smaller cities and their surrounding rural areas	Flexible Taylorism	Smaller cities and their surrounding rural areas

areas. The export-driven economy has continued to reproduce the flexible Taylorist labor regime in which foreign workers simply replace some sectors of local workers. Flexible Tayorist labor regulations continue to be the dominant form in these regions.

The high-tech industries, which were promoted and installed from above by the state in the early 1980s, are mainly located in the Hsin-chu scientific industrial park (about 100 kilometers south of Taipei city) and have become the leading sectors of the economy in the late 1990s. However, despite its location in the area, the scientific industrial park is much like an enclave that is more closely connected with Silicon Valley and global forces than with the local economy. This global embeddedness coexists alongside local estrangement. The typical space of flows in this region has coupled with a distinctive after-Fordist type of labor relations that is unique in the Taiwanese economic system (see Table 6).

Conclusion

This article has analyzed the transformation of labor relations in Taiwan. Using the regulation approach to decipher the patterns of labor relations prevalent before the 1980s and the existing ones characteristic of the 1990s, I have argued that the former stage was a flexible Taylorist labor regime in which flexibility and Taylorist labor regulations were the main features. This labor regime was coupled with an export-oriented economy where flexible use of labor was necessary to keep wages at low levels and to respond quickly to the world economy. In the 1990s, this has been transformed into a new flexible type of labor regime in which different types of labor relations coexist. This transformation is due to the upgrading and differentiation of the economy, plus the democratic movement that nurtured the emergence of unionism. On the one hand, the state has been transformed into a workfare state that offers more social provisions to workers, but which carefully manipulates its legislation so as not to harm the economy. On the other hand, different industrial sectors have tended to adopt different forms of labor regulation, none of which occupy a dominant position. Finally, this article considered the spatial implications of labor relations in Taiwan with regard to geographical distribution. Geographical location did not matter in the former stage when the flexible Taylorist labor regime was dominant.

However, in the 1990s, the differentiation of labor relations in different industrial sectors exhibits distinctive patterns of geographical distribution. Geography returns and matters at this stage.

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