JOB SECURITY MEASURES IN A GLOBAL ECONOMY: NEW CHALLENGES AHEAD

Ray Marshall and Arvil Van Adams

1. INTRODUCTION

Measures assuring job security are sought by workers and their representatives to protect themselves against economic fluctuations and the loss of jobs and incomes. In sectors of an economy that require a skilled workforce, employers are often willing to provide promises of job security in exchange for lower labor turnover to protect investments in the skills of their workers, facilitate internal flexibility, and improve labor relations. This contractual exchange serves the interest of both parties and when achieved in a market setting enhances economic behavior. Governments, on the other hand, are also interested in job security as an instrument of social policy to address market failures and equity concerns. Public interventions to stabilize employment can force firms to become more efficient by focusing adjustment on productivity instead of wages (Abraham and Houseman, 1989; Standing, 1989), or they can threaten the efficient operation of labor markets by introducing uncertainty and raising labor costs (Fallon and Lucas, 1991; Lazear, 1990; and Marshall, A., 1991).

The impact of job security measures on economic growth and social well-being in industrial and developing economies is an empirical issue. Economic literature has focused on two central issues: (i) the impact of mandated job security measures on labor cost and the disincentive for employment creation, and (ii) the rigidities these measures create impeding the efficient redeployment of labor in response to economic shocks. In this paper, we examine the literature involving these issues and trace the implications for government's regulation of job security. We contribute to the literature by placing job security measures in a broader historical and policy context. Historically, the shift away from mass

* Estudios de Economía, publicación del Departamento de Economía de la Facultad de Ciencias Económicas y Administrativas de la Universidad de Chile, vol. 21, número especial.

Job security as used throughout this paper refers broadly to the stability of employment in an enterprise rather than to stability in a given job or task within the enterprise. It is used synonymously with employment security.

production to high performance systems at the close of the twentieth century is leading to demands for positive incentive systems that include job security, but also to the adoption of other policies enhancing labor flexibility in a competitive, global economy.

Our review of the literature indicates that job security regulations are not a barrier to labor flexibility. Enterprises do adjust to economic shocks using a variety of strategies: flexibility of wages and hours of work, profit-sharing, subcontracting, improved management, and investing in workers' skills and fungibility. Maintaining labor flexibility thus goes beyond concern for job security regulations to include a broader array of government policies and regulations affecting labor markets and workers. While enterprises do find ways to adjust labor inputs in response to economic shocks, the cost of maintaining labor flexibility is reflected in evidence from the literature of slower employment growth with job security regulations.

The shift away from mass production to high performance systems will increase the willingness of enterprises to supply additional job security. This alone will reduce the pressure for government-mandated job security measures and decrease their importance in labor reforms. We argue, however, that the demand of workers for job security leading to government interventions can be reduced further by shifting attention to labor market policies that lower the transactions cost of adjustment for labor. Incomes security, retraining, and employment assistance are examples of these policies. Perhaps most important to the effectiveness of these policies is the foundation of basic education workers receive and the effect this education has on their adaptability in the enterprise. The capacity to adjust quickly to new technologies and work situations reduces the cost of change and concern for job security by replacing it with labor market security.

The paper begins with a description of job security regulations in the labor codes of industrial and developing countries and the strategies used by producers to maintain labor flexibility in the presence of these regulations. The economic framework surrounding job security regulations and the behavior of the firm is developed in Section III along with the historical context in which these regulations operate. Section IV reviews the literature on job security measures and the findings on the two central questions. In Section V, we trace the implications of the findings for government regulation of job security. We set forth a research agenda that would help guide the role of government in regulating job security. Finally, we warn against attributing high levels of global unemployment to adjustment problems caused by job security measures. Reductions in global demand bear a share of the responsibility for this unemployment.

2. JOB SECURITY REGULATIONS

Most developing countries attempt to encourage job security by raising the cost of layoffs. This is achieved by the introduction of mandatory severance payments, based usually on a worker's years of service to the employer. In many cases, this is coupled with requirements for government approval of layoffs. The procedures used can be lengthy and sometimes arbitrary. Government approval of layoffs may require a specified period of notice in advance of a layoff, a review of the employer's reasons for the layoff by a labor inspector, and an appeal process that can ultimately lead into a judicial system. The approval process, while focused on elements of due process for workers and employers, can impose uncertainty on the outcome of layoffs and substantially increase their cost.

Two types of procedures providing job security are usually found in labor codes. The first protects individuals against "wrongful discharge," while the second, which is the focus of this paper, applies to collective dismissals. The procedures for dismissals used in both cases are similar, although the criteria applied are different. Both influence labor costs, while the second is more important to adjustment. Labor codes in the case of individual dismissals usually name the conditions under which a worker may be discharged. Egypt's labor code, for example, names such conditions as: mistakes that result in "grave" material losses to the employer, failure to observe safety instructions after a written warning, and unapproved absences for more than 20 non-consecutive days or 10 consecutive days in a one-year period. Other conditions are cited referring to the divulging of trade secrets, conviction of a felony bearing on honesty or public morality, and substance abuse. A labor contract may be terminated voluntarily by both parties, of course, meaning that employers in a contentious case may reach a monetary settlement with an employee to leave "voluntarily."

The conditions under which collective dismissals proceed vary. A proposed Labor Code in Ethiopia indicates that collective dismissals may be considered where warranted by changing market conditions, the introduction of new technologies, or conditions of low profitability. Mali's recently revised Labor Code offers similar flexibility. However, Egypt's Labor Code states that the dissolution, liquidation, closure or bankruptcy of a firm does not relieve employers of their contractual obligation to employees. The only conditions under which a labor contract can be broken are those of force majeure like wars and earthquakes and those where a court liquidates a bankrupt firm. And if liquidation results in the sale of the firm, the new owners would still be bound to honor the employment contracts of workers. In each of these cases, the ease with

² See Article 61 of Public Law 137 of 1981.

³ See Article 28 of Draft Labor Proclamation of July 1992.

which firms can expect to introduce layoffs and collective dismissals influences the expected cost of labor, hiring decisions, and choices of technologies in production.

Administrative Procedures

Labor codes limiting labor dismissals typically include four provisions: (i) advance notice, (ii) consultation requirements, (iii) government approval, and (iv) separation pay. Advance notice requirements vary in length from country to country and are generally tied to the size of layoff and the length of service of the workers involved. For example, Germany requires 6 weeks of notice for workers with less than 5 years of service, but at least 6 months notice for those with 12 or more years of service. In the U.K., notice at the "earliest opportunity" is required for firms with 1 to 9 employees, but a minimum of 90 days when 100 or more workers are to be dismissed over a 90-day period. In the United States, smaller firms are exempted and a 60-day written notice of plant closings and layoffs is required for plants with 100 or more employees.

These procedures are similar to those found in many developing countries. In Argentina, the required period of notice a firm must provide workers is one month, in Peru it is three months, but in South Korea no notice of impending layoffs has to be given. There are two economic reasons for notice periods. First, it is thought that by giving a worker a chance to begin the job search early, the duration of any subsequent joblessness will be reduced. The outcome depends on the seriousness with which workers accept the likelihood of dismissals. Second, from a social perspective, it is thought that advance notice of layoffs enables communities and social agencies to prepare for the shock of layoffs with special programs to assist job losers and smooth the transition to new employment.

Consultation between labor and management is generally required to encourage both parties to seek alternatives to layoffs. Governments may intervene to facilitate consultations and planning. Canada's Industrial Adjustment Service, a unit of the Department of Employment and Immigration, maintains specially trained units that can move quickly into the field to assist employers, labor, and communities in planning layoffs and searching for alternatives. Such initiatives are potentially important to reducing the negative externalities that arise from collective dismissals. In addition to advance notice and consultations in developing countries, governments usually exercise the right to approve or not to approve collective dismissals. In a country like Ivory Coast, a labor inspector issues an opinion on whether the dismissal is legal. This involves application of the criteria for layoffs from the labor code. The labor inspector's opinion may be binding, or it may only be advisory in which case the employer can proceed with dismissal regardless of the opinion.

There is usually an appeal process to a tripartite committee formed by a Ministry of Labor representative, the employer, and a labor representative. There may be a second level of appeal to a higher level tripartite body. Finally, either party may carry the case to a Labor Tribunal or court of law. The cost of the process is rarely predictable. The major source of uncertainty is in the time required and, thus, the period during which wages must be paid and the cost of the administrative process. The lack of transparency in the process makes labor costs a risk factor for employers that become increasingly important as economies are opened and subjected to economic shocks. Some labor codes, such as Mali's, have improved transparency by fixing time limits on steps in the appeals process. For example, a labor inspector must issue an opinion within 15 days. However, once an appeal has reached a Labor Tribunal or court of law, it is difficult to anticipate the conclusion and the ultimate cost of the appeal in additional wages and administrative and legal costs.

It is a simpler task in many cases for employers to buy "voluntary" quits with generous separation payments. Separation payments mandated by labor codes typically provide a beginning point for such bargaining. The level of mandated payments usually recognizes the tenure of a worker. Paredes (1994) reports that in Hong Kong severance payments are equal to 15 days per year worked; in Chile, 1 month; and in Portugal, slightly more than a month. Mali's labor code provides workers with 10 or more years of service a payment that is 30 percent of an average month's earnings during the past 12 months times the number of years of service. A worker with 20 years of service is paid the equivalent of 6 months wages. In Hungary, the maximum payment mandated was initially 18 months' average wages, later reduced to 12 months. A case study of one large engineering enterprise in Hungary revealed that the payments actually made were twice those guaranteed by law (Lado, 1994:5). In Russia, the labor code mandates severance payment up to three months (Hess, 1994).

Provisions Influencing Labor Flexibility

The impact of dismissal laws on labor market flexibility is influenced by the restrictive nature of the law and the effectiveness with which it is enforced. Even in the presence of restrictive labor codes, labor flexibility may be maintained by (i) limiting coverage of the law, (ii) exemptions for some worker groups, (iii) use of fixed-term contracts, (iv) allowance of short-hours, (v) government subsidies, and (vi) weakened enforcement. The application of dismissal provisions in labor codes depends on coverage provisions. The length of the probationary period and the type of employment, for example, may leave certain employees uncovered by dismissal laws. In the Ethiopian Labor Proclamation, the rather flexible dismissal procedures are coupled with a relatively short 45-day probationary period. Other more restrictive legislation may extend the probationary period up to six months. In some developing countries labor codes apply to enterprises of a certain size and

larger. Firms with less than 10 employees, for example, may be exempted from coverage.

Job security guarantees implied by the labor contract often do not apply to "provisional," "temporary," and "seasonal" jobs, or to employment of non-nationals and unpaid family workers. A provisional job is a job that by its nature is not normally part of the usual activity of an employer and does not last for more than six months. A temporary job is a job requiring a specified period of time to achieve a specific goal and has a recognizable end point. A seasonal job is performed in regular seasonal intervals. Some labor codes tightly restrict the use of these classifications and make it difficult for employers to circumvent restrictions on individual or collective dismissals. A worker, for example, may be employed on no more than two consecutive temporary contracts and if offered a third contract, it would have to be as a regular employee. Where such restrictions are not applied, employers may attempt to classify large numbers of jobs under these headings to provide greater employment flexibility. Similar restrictions may be placed on the number of probationary periods served.

The most widely used option for retaining labor flexibility is the use of fixed-term contracts. State enterprises in China, for example, are no longer guaranteeing a job for life and are hiring workers under fixed-term contracts. Restrictions on use of shortened hours can also influence labor flexibility where laws of dismissal are highly restrictive, as can wage premia on overtime. In the Ethiopian Labor Proclamation, Article 63 indicates that full wages must be paid when normal hours are reduced, thereby limiting the flexibility of shortened hours. In Egypt, if material or other shortages prevent work, employees must be paid half their weekly wages. Countries with unemployment insurance programs, which excludes most low-income developing countries, may permit workers to claim partial unemployment benefits when working reduced hours. Germany offers this option to workers, for example, as do some States in the United States. Partial unemployment benefits reduce the need for layoffs where such layoffs are cyclical in nature, but do not prevent layoffs where the underlying conditions behind the drop in labor demand are longer-term in nature.

Governments may also provide alternatives to layoffs by offering early retirement subsidies. Finally, the chances of a firm being cited for labor code violations in many developing countries varies. In Indonesia, for example, there are approximately 700 enterprises to be inspected for every active labor inspector available.

3. JOB SECURITY AND THE BEHAVIOR OF THE FIRM

If labor and capital are perfectly mobile and other market failures are absent, then government restrictions on layoffs may well impede the efficiency of work force reductions (Houseman, 1990). In this market setting, there is ample room for efficient contracting of job security. Other factors may intervene, however, to introduce market failures that provide government with a role to play in mandating job security measures. Asymmetries of information and power available to workers and firms can provide some justification for government interventions as can the negative externalities to communities from mass layoffs that are taken into consideration by workers and firms in contracting. Finally, the changing nature of global production with the spread of information technologies and the movement to high performance systems is creating a shared interest among workers and firms in labor contracts ensuring job security.

Behavior in Competitive Markets

In the competitive economic model with mobile labor and capital, where technology and the organization of work are fixed, government-mandated job security may impede efficient market contracts. The economics of job security measures focus on the substitutability of wages and job security. Workers and employers are assumed to be willing to exchange one for the other. Where job security measures increase labor costs, net of any productivity gains, the exchange of wages for job security can be achieved while holding labor costs constant, leaving profit maximizing employers indifferent to the tradeoff chosen. So long as firms can reduce wages, either as a starting wage or the rate of wage growth vis a vis productivity, firms can adjust wages and leave their labor costs unchanged. Job security demands, in this context, are accommodated without altering the behavior of the firm. The firm, in turn, may choose voluntarily to offer job security as a measure to reduce labor turnover costs, particularly where the firm is faced with a need to invest in the skills of workers and wishes to reduce the risk of losing this investment through turnover.

The cost of job security in the firm's case can be offset by lower labor turnover cost and higher labor productivity. The worker's willingness to substitute job security for wages and the economic interest of the firm in job security in a market economy may produce significant levels of job security without government interventions. Government interventions to encourage job security, however, can distort the market when the costs of such measures are non-transparent to the firm and interventions in wage setting lead to rigidities and wage floors that are binding to employment. The absence of predictable timetables for administrative procedures increases the uncertainty surrounding the cost of these procedures and the ability to move ahead with layoffs. Contracting in an environment of uncertainty such as this leads employers to adopt risk-averse

For a model developing this outcome see Paredes (1994).

⁵ Kislev (1986) views job security as an aspect of efficiency wages. Both may be offered by employers without coercive legislation to reduce turnover of laborers with firm-specific human capital.

behavior in hiring and employment creation, but so might risk factors not associated with regulations. An uncertain macroeconomic environment might promote similar behavior.

Wage rigidities also limit wage and job security tradeoffs in contracting. Mandated wage increases in labor codes and the indexation of wages to protect real wages, a feature of countries in Latin America, reduce a firm's ability to adjust real wages in economic downturns to accommodate the cost of job security. Minimum wages set above market clearing levels for unskilled workers can also impede wage and job security tradeoffs. Binding wage floors pose a limit to the firm's ability to offer additional job security demanded by workers while maintaining constant labor costs. Once wages touch the floor and are unable to fall further, firms are unable to offer additional job security without moving to a higher level of labor cost. Raising the cost of labor in this fashion leads to incentives for capital-labor substitution. The implication of this, without other offsetting interventions, is slower employment growth.

Within the above framework, mandated job security becomes an issue where mandates are accompanied by policy measures that impede the flexibility of real wages or that increase uncertainty surrounding the cost of job security and the risk of economic volatility. In these instances, firms may adopt production strategies that minimize the use of labor. Other strategies are also available to maintain labor flexibility. Where allowed, firms may reduce labor costs by reducing hours of work to lower total labor costs. By the same token, firms may prefer to increase hours of overtime rather than add additional workers who would be subject to costly job security measures. Firms may also factor in the cost of voluntary buy-outs of labor contracts in hiring decisions. Temporary or part-time workers may be substituted for permanent employees as a measure to avoid onerous job security costs.

Japan is a country where firms are reputed to offer high levels of job security for workers without being mandated to do so. Firms remain flexible, however, by a combination of strategies. First, about 30 percent of Japan's work force are regular workers (honko) and are covered by the concept of lifetime employment. The remainder are temporary or contract workers. Firms invest heavily in the skills of regular workers and their fungibility within the enterprise. The job security offered binds these workers to the firm, makes them willing to change jobs, and increases the firm's willingness to train. Flexibility is achieved through the training of these workers and their movement throughout the enterprise. The emphasis here is on labor mobility internal to the enterprise rather than external to the enterprise.

Second, Japan's unique interlocking corporate structure (keiretsu) creates a family of firms doing business with each other and which owns a sizeable portion of each other's stock. Regular workers who become redundant in one member

of the *keiretsu* are "loaned" to other members. Third, overtime work, which is relatively cheap in Japan with 25 to 50 percent wage premiums, is used freely in response to peak demand. Wage flexibility with bonuses of up to 30 percent of total wages is a major source of flexibility for the enterprise. Fourth, the contracting out of production to smaller firms also allows larger firms to maintain flexibility while providing a core group of workers with high levels of job security. Adjustment in Japan, thus, takes place largely within the enterprise. In Sweden, by contrast, labor market policies that facilitate job changing provide employment security and flexibility external to the enterprise.

Behavior in Non-Competitive Markets

Asymmetries in the information and power available to workers and firms and negative externalities to communities from collective dismissals are among the economic conditions that can justify government interventions in markets involving job security. Asymmetries of information may arise as a market failure to impede efficient contracting. Firms typically possess better information on demand conditions than do workers and have an incentive to represent these conditions as worse than they actually are in order to extract concessions from workers. Conversely, workers, who have better information than firms about their alternative employment prospects, have an incentive to exaggerate their job prospects in bargaining with firms over wages and employment. Depending on the balance of bargaining power, these asymmetries can lead to inefficient levels of employment. This problem provides a rationale for government regulation where the private parties are unlikely to arrive at optimal contracts because of the high transaction cost of exchanging accurate information.

Job security measures may also provide a second-best solution to market distortions produced by public initiatives to smooth consumption incomes and support the political economy of market adjustment through unemployment insurance. Where the premium for this insurance is not set to reflect the risk of unemployment it creates excessive layoffs by firms in volatile sectors of an economy. The United States is the only country in the world that maintains an experience-rated unemployment insurance program, where premiums are increased for firms that engage in frequent layoffs. Experience-rating of the program reduces incentives for excess layoffs by internalizing the cost of these layoffs to the firm. Without adopting experience-rated systems which require considerable managerial and technical capacity, governments can intervene with mandated job security measures to reduce the economic incentive for excessive layoffs.

⁶ This section draws from the work of Houseman, 1990.

Where private parties face difficulties in arriving at efficient contracts for job security, governments can intervene as a third-party enforcer to achieve efficient contracts. For example, legal requirements that firms provide workers with certain types of information, including advance notice of layoffs and relevant data on the economic conditions facing the firm, and that parties bargain in good faith, may help the parties to achieve an efficient exchange of information and negotiate efficient contracts. Private parties may not be able to achieve this outcome on their own because their promises to offer accurate information may not be treated as credible by their bargaining counterpart.

In addition to their direct impact on workers, layoffs may impose negative externalities on communities, due to the spillover effects layoffs have on a regional economy. This is a concern in African economies with large scale civil service and parastatal restructuring threatening to displace substantial numbers of workers in geographically concentrated areas. It is increasingly a concern in Central and Eastern Europe and the former Soviet Union in one-company towns where industrial restructuring and downsizing of the workforce threatens the community as well as workers. Time is a factor here in giving communities an opportunity to introduce new private investment. Firms, however, may bargain with little concern for the negative externalities they produce unless these externalities are internalized through mandatory job security measures.

The adverse effects on an economy are likely to be an increasing function of the size of the layoff. This provides an argument for measures targeted on large-scale layoffs. Mandatory advance notice gives workers and communities time to prepare for the impacts of layoff or closure, and thus time to reduce its economic impact. Ehrenberg and Jakubson (1988) liken mandatory advance notice and severance payments, which raise the marginal cost of laying off workers relative to keeping them, to taxes. Both measures are mechanisms to help internalize the external effects of layoffs. Research in the United States has found that advance notice increases the probability of avoiding unemployment, but it does not reduce the length of an unemployment spell once it has started (Podgursky and Swaim, 1987 and Ehrenberg and Jakubson, 1989). Ruhm (1992) reports a 10 to 13 percent advantage in replacement earnings for workers who receive more than two months of written notice.

Thus, market failures arising from asymmetric information and externalities provide a rationale for government regulation to increase the efficiency of resource allocation. The case for interventions needs to be clearly made in these terms, however, as inappropriate restrictions on layoffs may have adverse effects on resource allocation. These effects would arise where binding constraints make it impossible to negotiate wage levels that offset the cost of mandatory measures. Wages, under these conditions, would not be reduced to compensate employers for the higher expected costs of advance notice, administrative procedures, or separation payments. The presence of binding wage constraints also needs to be

considered in making the case for mandatory job security measures. A key to the risk incurred in mandating such measures is whether or not these measures succeed in encouraging training and increasing worker productivity to offset higher labor costs.

Behavior in a Changing Global Environment

Changing global conditions are altering the context for job security and creating a shared interest in these measures on the part of workers and firms. Rapid technological changes and the opening of economies to trade and competition are changing modes of production. Industrialized countries with whom developing countries are now competing are moving away from mass production systems and moving to high performance systems that stress quality, productivity, and flexibility. This shift is bringing with it a demand for workers who have higher order thinking skills and who are able to work together with management to achieve mutually agreed goals. High performance systems place a premium on worker loyalty and skills. Consensus and trust are important. The negative reward system of mass production, however, based on fear of discharge or punishment, does not produce these qualities in workers. High performance systems cannot function with negative rewards and, instead, depend on positive incentives. Job security is one of these incentives and it will play an increasingly important role in high performance systems of the future. There is also a positive role to be played by labor organizations in this framework.

In order to demonstrate these conclusions, and the need to consider job security measures in context, it is useful to contrast the institutions associated with a mass production economy, in which many contemporary job security regulations are rooted, with a more competitive and knowledge-intensive global economy which has rendered less viable many features of the mass production system. We do that in the following section.

Mass Production. One of the most important American contributions to economic organizations was the mass production system, developed in the 19th century and made possible by the large, wealthy and growing internal American market. The mass production system emphasized economies of scale and greatly reduced the cost of consumer durables and other mass-produced goods and technologies. The most important early mass production experience undoubtedly was Henry Ford's assembly line, which reduced the price for a touring car from US\$850 to US\$360 between 1908 and 1914. This system was used in many other products, making it possible to greatly improve productivity and incomes.

The automobile industry also popularized "scientific management," developed by Frederick Winslow Taylor between 1882 and 1911. Taylor's model involved the following main elements:

- 1. fragmented tasks and a minute division of labor among workers;
 - 2. many layers of management and technical staffs;
 - the belief that there is "one best way" to organize and perform work and that it is management's responsibility to develop these "best ways" and impose them on workers;
 - 4. the development of rigid work rules to protect the interests of both managers and workers; and
 - 5. the belief that efficiency requires an authoritarian system in which management has unchallenged control of: (a) the design and introduction of technology; (b) investment, plant closing, and location decisions; and (c) job functions and qualifications. In short, workers were to be integral components of the production process, thoroughly integrated with the machines (Layton, Jr., 1971).

Taylor's basic approach was, thus, to reduce the amount of skill required to produce products, and not just to overcome shortages, but also to reduce the skilled workers' control of the work, and to transfer skills to machines and management, who would then have greater control of the worker (Haber, 1944). Workers often became appendages to machines, but were willing to endure these conditions at first because of relatively high wages and limited alternatives for relatively uneducated and unskilled workers. America's successes, especially during and immediately after World War II, led companies in other industrialized countries to adopt some features of the mass production system with its Tayloristic work practices (Marshall and Tucker, 1992).

The mass production system had a number of problems that were gradually ameliorated through the adoption of supporting institutions and processes. Because it had high fixed costs, early mass production companies faced a threat of price instability in markets characterized by intense rivalry and price competition. As a consequence, most of these firms developed oligopolistic pricing arrangements whereby prices were "sticky" and companies adjusted to change by varying output and employment and holding prices constant. In most of the industrialized countries, job security regulations were designed to protect workers from market fluctuations brought about by this oligopolistic adjustment strategy and by business cycles related to the simultaneous existence of competitive and non-competitive markets. Where workers were able to organize and bargain collectively, unions attempted to gain job security through regulations designed to limit employers' discretion to lay off workers at will. Job security regulations were superimposed on the Tayloristic organization of work, whose alienating and degrading nature gave workers strong incentives to organize. Collective bargaining therefore codified work rules by contract, and was reinforced by such governmental protection as limitations on arbitrary discharge, minimum and prevailing wage regulations, and unemployment compensation.

Worker protections and collective bargaining were reinforced by Keynesian economics, which sought primarily to deal with another major problem of the mass production system: periodic recessions and depressions caused by the tendency for production to outrun consumption at administered prices and wages. The basic Keynesian remedy was to stimulate sufficient demand to keep the mass production system running at a high level of capacity and employment. Job security thus became an integral component of the Keynesian-mass production paradigm.

Erosion of the System. Toward the end of the 1960s, there were growing signs that America's traditional economic system was in trouble. The main forces of change were technology and increased international competition, which combined to render anachronistic much of the traditional mass production system and its supporting institutions. These changes also dramatically altered the conditions for economic viability. In this more competitive world dominated by knowledge-intensive technology, the keys to economic success became human resources and a more effective organization of production systems, not natural resources and traditional economies of scale. Technology not only contributed to the globalization of markets, but also made the mass production system and traditional economies of scale less viable in high wage countries. The mass production model is based on standardized technology operated by relatively unskilled workers. In a global, open economy, this production system will shift to places where these skills are available at lower wages. Companies that wish to remain in high wage countries therefore find it necessary to either lower wages or develop and use non-standardized technologies. While it was possible to automate the assembly line, there were more efficient uses for new technology (Zuboff, 1988). Computerized technology provides many of the same advantages of economies of scale, but through flexible systems that have enormous advantages in a more dynamic and competitive global economy.

Technological change and international competition also caused the mass production system's reinforcing policies to be less viable. Information technology makes new organizations of production possible, but competition makes them necessary for those who wish to maintain and improve incomes. This applies to industrialized as well as developing economies. This is so because a more competitive internationalized information economy has very different requirements for the success of nations, firms, organizations, and individuals than was the case for largely national goods producing systems.

One of the most important changes for public policy purposes is that national governments have less direct control of their economies. A country no longer can maintain high wages and full employment through traditional combinations of monetary-fiscal and international trade policies, administered wages and prices, worker protections, and fixed exchange rates. In the 1970s and 1980s, internation: lization weakened the linkages between domestic consumption,

investment, and output that formed the basic structure of the traditional "Keynesian" demand management policies that sustained national mass production systems.

These altered economic conditions have eroded the economics of mass production, but they have not just changed the magnitude of the requirements for economic success — they have fundamentally altered the necessary structures and policies for this success. This is so because in a more competitive global economy, firms, countries or individuals can compete in only two basic ways: they can reduce their incomes or they can improve productivity (Klein, 1988: 309). In the more competitive global information economy, success therefore requires greater emphasis on factors that were much less important in traditional mass production systems. These new factors are quality, productivity, and flexibility in production.

In a more competitive environment, the industrial relations systems rooted in the Great Depression and the mass production system also became less viable. Unions can no longer maintain and improve their members' incomes and job security mainly through bargaining with mass production-Tayloristic oligopolies or regulated monopolies. To be successful, collective bargaining rules and worker protections must coincide with the scope of the markets. In an international market, it is no longer possible to remove labor from competition through national labor regulations and collective bargaining. Unions, like companies, must be more concerned about productivity, quality, and flexibility. Indeed, in a more dynamic economy, security is achieved through flexibility and not merely through stability reinforced by rules and regulations, especially if those rules and regulations are incompatible with new economic realities.

This does not mean, however, that employment security is no longer important, because it is. Now, however, employment security mechanisms must be considered within the context of new conditions for competitiveness. The following section examines these conditions more closely.

High Performance Systems. The fundamental issue is how to arrange production to achieve quality, productivity, and flexibility. The answer appears to be to encourage high performance production systems that develop and use leading edge technologies. Productivity is improved by work organizations that reduce waste of materials through better inventory control, promote the efficient use of labor, and develop more effective quality controls to prevent defects rather than trying to detect them, the method used in mass production systems. High performance systems have increased employee involvement in what would have

⁷ There are at least two basic quality concepts. Within a firm, internal quality refers to zero defects. However, this is not as appropriate for competitiveness purposes as meeting customers' needs. Timely delivery or convenience might be more useful to customers than zero defects.

been considered "management" functions in Tayloristic systems. Indeed, in more productive and flexible systems, the distinctions between frontline "managers" and "workers" become blurred. In short, high performance organizations cannot be achieved through marginal changes in mass production systems — they require radical reorganization of those systems or the creation of fundamentally different organizations.

High performance systems encourage worker participation and lean, decentralized management structures. In this system, workers must have more knowledge and skills. And skilled, educated workers are less tolerant of monotonous, routine work and authoritarian managerial controls. Second, quality, productivity, and flexibility are all enhanced when production decisions are made as close as possible to the point of production or contact with customers. Mass production bureaucracies were designed to achieve quantity, managerial control, and stability, not flexibility, quality, or productivity in the use of all factors of production. Mass production systems are based on managerial information monopolies and rules to control workers and define their rights and duties; in high performance systems workers must be free to make decisions. To accomplish this, information must be shared, not monopolized, because machines do more of the routine, direct work and frontline workers do more indirect work formerly done mainly by administrative staffs.

Several features of a high performance system reduce the efficacy of hierarchical management systems. First, since frontline workers take over more of the administrative and clerical work, there is less need for inspectors, schedulers, and other indirect workers. Second, since workers manage more of their own work, individually or in teams, there is less need for managers. Thus, the control of the information flow, a major function of Tayloristic managers, can be performed more effectively by computers and other information technology, which can provide everyone with a common data base or "score" to use an orchestral analogy. The role of managers therefore shifts from "bossing" or supervising to teaching, building consensus, and enabling and supporting frontline workers, who assume more responsibility for quality, productivity, and flexibility.

High performance workers not only need to be self-managers, but also must perform a greater array of tasks and adapt more readily to change. This requires a reduction of Taylor's detailed job classifications and work rules. Well-educated, well-trained, highly motivated workers will be much more flexible and productive, especially in supportive systems that stress equity and internal cohesion or loyalty. Humans are likely to be the most flexible components in a higher performance system.

Creating Positive Rewards. The explicit or implicit rewards in any system are basic determinants of its outcomes. High performance organizations stress positive rewards. Mass production incentives, by contrast, tend to be negative —

fear of discharge or punishment. Mass production incentives are sometimes even perverse in that they actually impede improvements in productivity. Process and time-based mass production compensation systems, for example, assume that output is controlled by management and machines and are often unrelated to productivity or quality and may even be counterproductive, as when workers fear they will lose their jobs if productivity improves.

Positive incentives enhance flexibility as well as productivity and quality. Group rewards that include job security encourage flexibility by simultaneously overcoming resistance to the development and use of broader skills and motivating employers to invest in education and training to develop these skills. Similarly, bonus compensation systems simultaneously can create more flexible compensation systems and provide greater incentives for workers to improve productivity and quality. Participative systems are also components of positive reward systems. In essence, the high performance system substitutes clearly defined goals and objective and positive incentives for the mass production systems' rules, regulations, supervisors and administrators.

It would be hard to overemphasize the importance of equity, internal unity, and a positive reward system for high performance, knowledge-intensive work places. This is so in part because all parties must be willing to go "all out" to achieve common goals. In traditional mass production systems workers are justifiably afraid to go "all out" to improve productivity for fear they will lose their jobs. This is the reason employment security is one of the most important incentives in a high performance firm. Positive rewards are required, in addition, because the effective use of information technology gives workers greater discretion. It is difficult to compel workers to think or even to tell whether or not they are doing it. It is also hard to force workers to go "all out" to improve quality and productivity.

Independent worker organizations can play a positive role in high performance systems. It is difficult to have cooperative relationships between parties of unequal power. Cooperation is weakened when the stronger party makes unilateral decisions, forcing the other party to seek countervailing power. Moreover, the relationships between workers and managers are inherently adversarial as well as cooperative. Adversarial relations are functional in that they provide processes to resolve differences. Workers therefore need an independent source of power to promote their interests in these adversarial relationships. The challenge, of course, is to maximize common interests and prevent conflicts from becoming "functionless" by making all parties worse off. It is unlikely that workers will be willing to go "all out" to improve productivity and quality unless they have an independent source of power to protect their interests in the process.

Production is necessarily a joint undertaking. Whoever makes decisions about the distribution of the joint gains is naturally tempted to appropriate most of the gains for themselves, especially when distributive processes are not transparent. A participative process is likely to increase productivity and quality because it is more likely to be transparent and to induce greater productivity by making it easier to relate rewards to outcomes.

Because workers need an independent source of power to perform at their optimal level, the nature of the relationship between unions and managers is an important determinant of whether unionized firms can become high performance organizations. A good orienting hypothesis, therefore, is: with mutual acceptance and respect between unions and managers, unionized firms probably can achieve higher performance than non-union firms.

4. JOB SECURITY, EMPLOYMENT, AND ADJUSTMENT

To recapitulate, the impact of security regulations depends on whether or not these measures strengthen or weaken the requirements for economic success in a more knowledge-intensive and competitive economy, where governments, firms, and labor organizations must adjust to economic realities. Government-imposed regulations can force firms to compete more by improving productivity and quality if firms have highly skilled and motivated workers and the flexibility to develop and use leading-edge technology and organize for high performance. Public policy must ensure the proper environmental conditions for high performance, including a supportive regulatory and competitive market environment, education and training systems, support systems for those who either cannot work or are not expected to work, a stable or predictable macroeconomic environment, and labor market adjustment processes.

Governments that provide these conditions in a comprehensive manner are more likely to motivate their companies to compete by improving productivity, quality and flexibility. Those governments that rely entirely on market forces, by contrast, are likely to get the low-wage option, which implies lower and more unequal incomes and limited economic progress. Similarly, those governments that impose costs on firms without the supportive conditions are likely to generate stagnation, unemployment, and lower living standards. The stark choice of competing through wages, productivity or some combination of these systems is an unavoidable reality.

Thus, unless the cost of job security is offset through improvements in labor productivity and flexibility within the firm, it will have negative economic implications. The potential cost of static job security measures threaten to become more important in an open global economy where economic shocks are quickly transferred across borders. The downturn of economic activity and high

unemployment in Western Europe, for example, can swiftly translate into a recession for export-oriented East Asia. Measures intended to smooth employment in periods of short-run economic volatility can become barriers to deeper structural changes in an economy as economic reforms open countries to trade and production begins to shift from non-tradeables to tradeables and efficient import substitution. The political upheaval of Central and Eastern Europe followed by that in the Soviet Union have turned upside down production in these countries. Large-scale labor redeployment is called for in the transitional economies, but also in industrial and developing economies undergoing stabilization and adjustment programs. The fear has been that job security measures not only slow employment creation, but they also slow labor redeployment.

As might be expected, since the effects of these measures are conditioned by different policies and institutions, evidence of these effects for developed countries, where job security measures are strictly enforced, is mixed (Freeman, 1992). The evidence tends to confirm the negative influence of job security measures on employment growth, while tending to discount the influence of these measures on the capacity of enterprises to adjust in response to economic shocks. By and large, enterprises do adjust to economic shocks through a variety of means and not just by laying off workers. Houseman reaches this conclusion below in a number of studies of adjustment in OECD countries. At the same time, there is evidence from a number of countries that dismissal provisions in labor codes lead employers to be cautious in hiring decisions. These provisions do appear to lower the pace of employment growth and perhaps shape the characteristics of the employment created.

Houseman (1991) concludes that strong job guarantees in European countries, excluding Great Britain, produced smaller job losses in the hard-hit steel industry than in Great Britain where a more flexible environment existed for layoffs. Job security measures were seen as preserving employment. Seen from a different perspective, they could just as well be seen as delaying an adjustment process that would take place sooner or later. Lazear (1990) found that mandatory severance pay reduced employment across OECD countries, although his results were sensitive to the specification of the model used. Abraham and Houseman (1989) compared the processes by which the United States and Japanese employers adjusted employment and hours in response to short-run changes in production levels. Employers in the United States are perceived as offering less job security than employers in Japan. The authors found that total labor inputs and employment adjustments were significantly greater in the United States, although the average number of hours in adjustment were about the same in both countries.

Layoffs rather than shorter hours have important productivity implications where the response is to cyclical rather than structural changes. Abraham and

Houseman (1993) reach similar conclusions in a later review of the impact on labor market flexibility of employment protection in Germany, France, and Belgium with that in the United States. The three European countries feature strong job security regulations and well-established procedures for substituting reduced hours of work for layoffs. In a study of the adjustment of employment to changes in output, the authors find that these adjustments are much slower in the German, French, and Belgian manufacturing sectors than in U.S. manufacturing. However, the adjustment of total hours worked is much more similar. Abraham and Houseman conclude that the short-time system makes a significant contribution to observed adjustment in all three European countries. The United States, by comparison, relied more heavily on labor displacement for adjustment.

Fallon and Lucas (1991) examined job security regulations in India and Zimbabwe. The regulations were particularly strict in both countries. The laws require that employers obtain permission from the government to retrench workers and, if they receive permission, they must make significant severance payments. Using a dynamic labor demand model, Fallon and Lucas found that job security had a significant negative impact on the demand for workers at given levels of output, but there was no evidence that job security slowed adjustment in employment levels. Freeman (1992) considered this an odd finding, since job security provisions that do not affect wages or the speed of adjustment should therefore add no extra cost to firms that would discourage employment. However, job security requirements that limit management's control add uncertainty and therefore could limit employment at any level of output, even if they added no measurable costs. Standing (1989) countered Fallon and Lucas' findings in an ILO survey of Malaysian establishments. Employers stated that a comparable Malaysian job security law had no impact on their employment levels. However, Standing made no effort to control for other adjustment mechanisms, such as shortened hours, improved productivity, or purchase of voluntary quits, that might have softened the employment effect.

Spanish experience with job security regulations provides evidence that the relaxation of regulations could spur job growth (Alba-Ramirez, 1991). In 1980, the Spanish government introduced a fixed-term employment contract as an alternative to permanent contracts that dated back to Franco's dictatorship. In 1984, the fixed-term contract option was enlarged. The result was a growth of aggregate employment beyond what one would have expected on the basis of past productivity trends and output expansion. This growth consisted almost exclusively of persons on fixed-term contracts. Against this background, it is reasonable to conclude that job security measures do not slow the pace of adjustment, since employers do have other adjustment mechanisms allowing them to reduce labor costs. However, because many of these mechanisms do entail added costs, it is not surprising to find evidence that job security measures lower

employment levels. In Great Britain, Nickel (1982) found that dismissal laws significantly reduced hiring.

In Mauritius, the exemption of enterprises in an Export Processing Zone (EPZ) from rules regarding the termination of employment is associated with substantial employment growth and reductions in unemployment (Gill and Dar, 1994). Enterprises outside the EPZ were required to use the last-in first-out rule for workforce reductions, while those inside were allowed to dismiss at will. Other regulations such as severance payments, overtime, and advanced notice were relaxed for EPZ enterprises. As a consequence, employment in EPZ enterprises grew from less than 38,000 to about 100,000 from 1984 to 1991. EPZ employment grew as a share of the labor force from about 10 percent to nearly 25 percent. Unemployment dropped from 19 percent in 1983 to 3 percent in 1990. Per capita income rose during this period at a rate of 6.1 percent per annum.

In developing countries, with large urban informal sectors, job security measures are seen as inequitable by protecting workers in the formal sector and leaving workers in the informal sector unprotected. In studies of segmented labor markets, an increase in job security regulations is found to shift labor from formal to informal activities, causing total labor earnings to decline and the rate of "quasi-voluntary" unemployment to rise (Riveros and Paredes, 1990). Additional support for the notion that job security measures affect the type of employment in the modern sector is given by Adriane Marshall's (1991) finding that temporary and part-time work were more common in Lima than in Buenos Aires when Peru encouraged temporary contracts to reduce unemployment while Argentina did not.

A key issue, of course, is the effect of job security measures on enterprise investments in workers' skills and their productivity. In the case of Spain, Alba-Ramirez (1991) reported that workers under fixed-term contracts appeared to get less training than permanent employees. Job security likewise can be an important component of a positive reward system, and can create greater incentives for companies to invest in the training of their employees and for workers to undergo such training. Paredes (1994) asserts that it is quite possible that the provision of job security "appeases" workers and makes them more willing to accept job reassignments and even to make wage concessions. Thus, job security can lead to average productivity gains as workers are moved from less productive to more productive jobs in an enterprise. When a reassignment is accompanied by retraining, worker productivity is further enhanced. Knowledge that the relationship between the worker and firm is a long-term one may make both willing to invest in specialization. The willingness of workers and firms to invest in human capital promises to become an increasingly important feature of a firm's ability to compete in the global economy. Thus, the positive influence of job security measures on this investment must be weighed against the economic cost of these measures.

5. IMPLICATIONS FOR GOVERNMENT REGULATION OF JOB SECURITY

The continued opening of economies to trade and competition in the 1990s will bring with it access to information technologies and pressures to introduce high performance systems, both in industrial and developing countries. The countries that fail to react to these pressures will suffer lower incomes and slower economic growth. Countries will have to adjust labor market policies to fit new modes of production and achieve a balance between market forces and worker protections in the creation of labor market and economic policies. This balance will need to reflect each country's cultural, historical, and resource realities and be part of a strategic approach to long-run objectives. Although evidence points toward the self-interest of firms in adopting high performance systems and broadening access to job security through voluntary means, governments may also view mandated job security measures as a means to address market failures and to prevent firms from pursuing low-wage strategies that might maximize short-run profits at the expense of long-run social, political, and economic costs.

More complementary relationships between countries could be strengthened by a general encouragement for all countries to adopt high productivity strategies based on basic minimum international labor standards for such fundamental labor protections as occupational safety and health and the right of workers to organize and bargain collectively. This does not mean, of course, that wages would be equalized between countries in the short run, but it does give workers a better chance of improving their incomes as economic conditions permit. A productivity-improving strategy based on international standards implies that the gaps in international labor conditions would be narrowed mainly by raising those at the bottom faster than those at the top, not by reducing those at the top.

Supporting Efficient Contracts

The approach of governments to the regulation of job security should first be one of establishing a framework of policies that enable workers and firms to pursue their own self-interest in determining the level of job security to be provided in the work place. The expanded interest of employers and workers in job security that is expected with the movement of employers to high performance systems is an endogenous outcome that does not require government-imposed regulations. The case for these regulations instead should be firmly grounded in and motivated by market failures. In the absence of these failures, the focus of labor policies should be on support for efficient contracting for job security by employers and workers.

The policy environment for efficient contracting should begin with a predictable macroeconomic environment and clearly defined property rights. An effective industrial relations system is also important. The interests of workers and firms are best served where contracts can be negotiated under conditions where the parties have a balance of power. The right of workers to organize and bargain collectively is an important feature of the framework enabling workers and firms to pursue their self-interests. The role of governments is one of developing the law and the institutions of an industrial relations system. Developing effective institutions to manage conflict in labor-management relations supports the free operation of markets and the choice of market-clearing levels of job security.

Improving Transparency of Regulations

Where governments choose to mandate job security for reasons of market failure, attention should be focused on improving the transparency of these regulations and accompanying them with complementary labor market policies that maintain wage flexibility and the capacity of firms to adjust total labor costs to changing economic conditions. The research reviewed in this paper indicates that adjustment is not significantly impeded by job security measures. Firms through a variety of means find ways to adjust to economic shocks and to regulations. However, where these measures impose costs that cannot be offset by higher productivity, they discourage employment creation. Employment creation is a critical need world-wide. In Africa and South Asia high fertility rates have produced rapidly expanding populations and labor forces.

Governments seeking to mandate job security to reduce economic volatility must be prepared to balance this objective with one of pursuing employment growth. Mandating levels of job security whose cost cannot be offset by (i) increases in productivity, (ii) the reduction of real wages, present or future, or (iii) by other labor flexibility strategies, including changes in hours of work, will threaten slower employment growth. Governments can reduce the distortionary effects of job security measures on employment growth by improving the transparency of these measures and their costs. Improving the predictability of labor costs will increase efficiency in labor contracts. This requires attention to predictable administrative procedures enforcing job security legislation.

Developing Alternatives to Regulation

In transitional economies, governments have used firms as an instrument of social policy to provide income security through guaranteed employment and administered wages (Adams, 1993). To change this situation and enable firms to focus directly on their roles in production, formerly socialist governments are

moving to set up new social welfare institutions that will assume this responsibility. To a lesser degree perhaps, governments elsewhere, industrialized and developing, have intervened in labor markets and used these markets as instruments of social policy, at the expense to job creation and economic growth. The pressure to use labor markets in this fashion is due perhaps to the failure of governments to develop policies and programs for what Standing and Tokman (1991) call labor market security. Under their definition, "labor market security is high when job changing involves only modest personal costs and reasonable prospects of subsequent benefits, and is typically inversely related to the level of unemployment.... (p. 34)" Lowering the transactions cost of change for labor can reduce the demand for job security as a social policy. Governments rather than tightly regulating job security can provide security through labor market policies that would smooth the transition to new employment. These policies would include incomes protection through unemployment benefits, retraining, and placement services that would accelerate labor redeployment.

The shift from an emphasis on job security to one on labor market security has important implications for education. Lowering the transactions cost of change for labor is achieved by improving the "trainability" of labor. Narrow, job-specific training provided in vocational schools is at odds with the flexibility of workers faced by economic shocks. This is characteristic of the problems confronted by adult workers throughout the former Soviet Union and other industrialized and developing countries whose vocational schooling prepared them for specific jobs, but not for a rapidly changing economy and the need to adjust to new technologies and market demands. Deferring job-specific training until a solid foundation of general skills supporting trainability has been put in place will become increasingly important in a rapidly changing global economy. This strategy will be especially important to small, open developing economies where it will be difficult to regulate job security.

Expanding the Knowledge Base

The development of sound policies involving the regulation of job security by governments requires additional research. The increasing volatility of national economies as a consequence of global events and trade is a source of rising demand for job security and, with this, more information on the economic consequences of job security regulations. There is a paucity of this research in developing economies examining the effect of these regulations on the elasticities of demand for labor. A preliminary step in any research on job security is a descriptive review of job security regulations in developing countries. Cox-Edwards (1993) has carried out this task in Latin America and it now needs to be pursued in other regions, particularly Africa.

A list of issues emerge in this paper as candidates for further research in developing countries. First, there is the issue of what employers are willing to pay to buy "voluntary" quits and the extent to which the price of these quits exceeds the cost of mandated separation benefits. Any difference in the two could be used as an indicator of labor flexibility. High premiums paid for "voluntary" quits are most likely correlated with the absence of alternative, less costly, adjustment mechanisms. A second issue that builds on the first is where premiums for "voluntary" quits are low, what are the effective adjustment strategies employed by enterprises and how do they compare with countries where the cost of "voluntary" quits is higher? Any research involving these issues must, of course, control for the probability of re-employment as it affects the price of a "voluntary" quit.

The study of separation premia would require survey research in a set of comparator countries. Labor inspectorates may collect data on separation agreements in some countries, which might be used for this purpose, while in others, advance notice requirements and filings with labor inspectorates would provide a sample frame for a follow-up study of enterprises engaged in collective layoffs. While this would provide comparator data on the size of separation premia, it would not cover enterprises that were able to avoid layoffs by using other strategies for achieving labor flexibility. Studies of enterprise adjustment strategies in developing countries modeled after the studies carried out in OECD countries by Abraham and Houseman (1989, 1993) would provide a means for exploring the relation between labor flexibility and separation premia.

Another issue on which there is little systematic information in economic literature is that of the size of the negative externalities attached to collective layoffs and the factors influencing the cost of these externalities. How important is it for governments to intervene and internalize the cost of such layoffs? Can job security measures be more efficiently targeted and enforced to internalize the most costly layoffs? And how cost-effective are initiatives by governments to encourage consultation among employers, labor, and communities to find alternatives to large-scale layoffs and plan such alternatives so as to minimize their economic and social impact on communities? Are there some consultation strategies that are more effective than others?

Canada's Industrial Adjustment Service (IAS) has three decades of experience with consultative techniques. A number of States in the United States have adopted the IAS model and are applying it to mass layoffs. A sample of enterprises providing advance notice of expected plant closings and mass layoffs from States using the IAS model and those that do not might be used to study the community effects of planned layoffs and their outcomes and the impact of consultative techniques. Comparisons also might be made of large scale layoff cases in Canada where the IAS is involved with similar cases in the United States. Consultative techniques have in addition been introduced in Eastern Europe, for

example, in Hungary. Case studies, like that of Lado (1994), could provide useful insights into the community consequences of layoffs and the effectiveness of consultative strategies.

One of the more interesting issues raised in the paper is the incentive job security provides for human capital development in the firm. In terms of its potential positive impact on productivity and lowering the cost of job security, research should examine the nature of this relationship. Comparative studies of enterprise training in countries with different job security regimes would provide valuable information on this subject. More attention also needs to be given to the effects of job security on labor market segmentation in developing countries, especially in terms of understanding the poverty consequences of adjustment policies. Finally, it would be useful to pursue the extent to which high wage policies are successful in stimulating the growth of high wage employment. Singapore's experiment with this strategy would provide a good case study for this purpose.

Global Policies and Institutions

We conclude with a word of caution about attributing high levels of global unemployment to adjustment problems caused by job security measures. Part of the reason for higher unemployment is the slowdown in global demand since the 1970s. International cooperation to restore global growth could reduce some of the unemployment and facilitate the adjustment process by reducing the need for, as well as social and political support for, job security measures that are incompatible with economic realities.⁸

For a similar conclusion about the relative impact of labor market policies and unemployment in Europe, see Robert Solow, 1994.

REFERENCES

- ADAMS, ARVIL V. (1993): "Labor Markets and Market-Oriented Reforms in Socialist Economies," HROWP14, Washington, D.C.: World Bank.
- ALBA-RAMIREZ, A. (1991): "Fixed Term Employment Contracts in Spain: Labor Market Flexibility or Segmentation?," manuscript, The World Bank.
- ABRAHAM, KATHERINE and SUSAN HOUSEMAN (1989): "Job Security and Work Force Adjustment: How Different are U.S. and Japanese Practices?," NBER, Working Paper 3155.
- Lessons From Germany, France, and Belgium. Kalamazoo, MI: W.E. Upjohn Institute.
- COX-EDWARDS, ALEJANDRA (1993): "Labor Market Legislation in Latin America and the Caribbean," LAC Technical Department, Report No. 31. Washington, D.C.: World Bank.
- EHRENBERG, RONALD G. and GEORGE H. JAKUBSON (1988): Advance Notice Provisions in Plant Closing Legislation. Kalamazoo, MI: W.E. Upjohn Institute.
- FALLON, PETER and ROBERT LUCAS (1991): "The Impact of Changes in Job Security Regulations in India and Zimbabwe," *The World Bank Economic Review*. Vol. 5, 395-413.
- FREEMAN, RICHARD (1992): "Labor Market Institutions and Policies: Help or Hindrance to Economic Development?," World Bank Annual Conference on Development Economics. Washington, D.C.
- GILL, INDERMIT S. and AMIT DAR (1994): "Sustainable Employment Growth," Education and Social Policy Department, Washington, D.C.: World Bank.
- HABER, S. (1944): Efficiency and Uplift: Scientific Management in the Progressive Era, 1890-1920. Chicago, IL: University of Chicago Press.
- HAMERMESH, DANIEL (1994): "Unemployment Insurance for Developing Economies," in Arvil V. Adams, Luis A. Riveros, and Elizabeth M. King (eds), Efficiency, Equity and Adjustment in Labor Markets. World Bank, forthcoming.
- HESS, JOLANTA (1994): "Managing Large Scale Labor Restructuring," Europe Central Asia Region, Washington, D.C.: World Bank.

- HOUSEMAN, SUSAN (1990): "The Equity and Efficiency of Job Security: Contrasting Perspectives on Collective Dismissal Laws in Western Europe," in Katherine G. Abraham and Robert G. McKersie, New Developments in the Labor Market: Toward a New Institutional Paradigm. Cambridge, MA: The MIT Press.
- (1991): Industrial Restructuring with Job Security. Cambridge, MA: Harvard University Press.
- KENDRICK, JOHN. W. (1961): Productivity Trends in the United States. Princeton, NJ: Princeton University Press.
- KISLEV, YOAV (1986): "Wages, Turnover and Job Security," Report No. DRD196, Development Research Department, Washington, D.C.: World Bank.
- KLEIN, LAWRENCE R. (1988): "Components of Competitiveness," Science. 241, July 15, 308-315.
- LADO, MARIA (1994): "Labor Shedding in Four Acts: Case Study of a Hungarian Engineering Company", Budapest: Institute for Labor Research.
- LAYTON, E.T., Jr. (1971): The Revolt of the Engineers: Social Responsibility and the American Engineering Profession. Cleveland, OH: Western Reserve University Press.
- LAZEAR, EDWARD (1990): "Job Security Provisions and Employment," Quarterly Journal of Economics. Vol. CV, 699-726.
- MARSHALL, ADRIANE (1991): "The Impact of Labour Law on Employment Practices: Temporary and Part-Time Employment in Argentina and Peru," Labour Market Programme DP/38, Geneva: International Labor Office.
- MARSHALL, RAY (1994): "Organizations and Learning Systems for a High-Wage Economy," in Clark Kerr and Paul Staudohar (eds.), Labor Economics and Industrial Relations: Markets and Institutions. Cambridge, Mass.: Harvard University Press.
- MARSHALL, RAY and MARC TUCKER (1992): Thinking for a Living: Education and the Wealth of Nations. New York: Basic Books.
- NEVINS, A. and F.E. HILL (1954): Ford: The Times, the Man and the Company. Vol 1. New York: Scribner.
- NICKEL, STEPHEN (1982): "The Determination of Equilibrium Unemployment in Britain," Economic Journal. Vol. 92, 556-575.
- PAREDES, RICARDO (1994): "Job Security and Labor Market Adjustment," in Arvil V. Adams, Luis A. Riveros, and Elizabeth M. King, Efficiency, Equity and Adjustment in Labor Markets. World Bank, forthcoming.

- PODGURSKY, MICHAEL and PAUL SWAIM (1987): "Job Displacement and Earnings Loss: Evidence from the Displaced Worker Survey," Industrial and Labor Relations Review, Vol. 47, 17-29.
- RIVEROS, LUIS and RICARDO PAREDES (1990): "Factores Estructurales y Cíclicos y la Composición del Desempleo en Chile," Análisis Económico, Vol. 5, 47-60.
- RUHM, CHRISTOPHER J. (1992): "Advance Notice and Postdisplacement Joblessnesss,"

 Journal of Labor Economics, Vol. 10, 1-32.
- SOLOW, ROBERT (1994): "Europe's Unnecessary Unemployment," International Economic Insights. Vol. 5, 10-11.
- STANDING, GUY (1989): "The Growth of External Labour Flexibility in a Nascent NIC:

 A Malaysian Labour Flexibility Survey," World Employment Program, WP35.
- STANDING, GUY and VICTOR TOKMAN (ed.) (1991): Towards Social Adjustment.

 Geneva: International Labor Office.
- ZUBOFF, SHOSHONA (1988): In the Age of the Smart Machine. New York: Basic Books.

MARSHALL, ADBLANC (1991): "The Impact of Labour Law on Employment