

Worker Adjustment to Liberalized Trade: Costs and Assistance Policies

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WORKER ADJUSTMENT TO LIBERALIZED TRADE: COSTS AND ASSISTANCE POLICIES

This work in progress report is part of an inquiry being undertaken by the World Bank in conjunction with scholars from twelve industrial countries into the penetration of the markets of industrial countries by exports of manufactures from developing countries. The project seeks to establish the shares of industrial country markets held by the developing countries, changes in such shares in the 1970s, and why they vary among industry groups and countries. The aim is to assist developing and industrial countries to improve their policies through a better understanding of trade patterns and protectionist pressures.

This paper analyzes the potential usefulness of properly designed worker adjustment policies, defines the measurement and empirical issues which must be addressed in designing specific programs, and points out the critical considerations for their implementation. Estimates of the government financial assistance required are provided for one region in Canada to illustrate the magnitudes involved. The paper concludes that economic welfare can be improved at home and abroad by appropriate worker adjustment programs.

The Canadian component of this inquiry has been undertaken jointly by the World Bank and the North-South Institute of Canada. The views expressed in this paper, however, as those of the authors'.

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1. Introduction

The issues which confront governments concerning the choice between trade or protection are related to three distinct yet inter-connected policy problems, namely: international trade policy, national industrial development policy, and political platform policy. The theoretical economics literature as well as most policy analysis tends to approach each of these problems in a different manner and often tends to ignore the essential inter-relationships among them. As a result policies which might provide partial solutions to all three problems tend to be overlooked or dismissed because they do not provide a complete answer to any one. Worker adjustment assistance policies are of this type. The purposes of this paper are to indicate the potential usefulness of properly designed worker adjustment policies, to define the measurement and empirical issues which must be addressed in designing specific programmes, and to point out critical considerations regarding their implementation. Estimates of the government financial assistance required for worker adjustment assistance are provided for one region in Canada in order to illustrate the magnitudes involved.

Before proceeding into the main body of the paper it may prove useful to sketch briefly the policy problems mentioned above. The chief problems addressed by international trade policy are how to promote an efficient allocation of production and consumption between countries so as to make the best use of the world's scarce resources and how to promote a more equitable international distribution of income between countries, particularly between developed and developing countries. The traditional policy recommendation of trade liberalization has been based on the potential for long-run benefits

from increasing trade according to comparative advantage. Industrialized countries of the north have to some extent also recognized their responsibility to assist developing countries of the south through foreign aid and related programmes which foster improved health, education and technical training. More recently the third-world countries have demanded more trade, and policies which promote trade are considered good while those which impede or restrict trade are considered bad. It is interesting to note, however, that the theoretical arguments in favour of increased trade have until fairly recently overlooked the adjustment problems faced by workers and the owners of productive facilities in trade-impacted industries in developed countries. Trade liberalization, for example, will not lead to an actual Pareto improvement in world wellbeing unless displaced workers in developed countries are compensated to leave them as well off as they would have been under continued protection. At the same time, from the perspective of the developed country as a whole the complete or rapid removal of trade barriers may reduce economic efficiency because the short-run dislocation of factors of production inflicts a cost on the economy. In a second-best economy with price-distorted markets, furthermore, although welfare gains are captured through the lower consumer prices associated with freer trade, it is still possible that long-run economic efficiency considerations would argue for maintaining production levels higher than those that would prevail under freer trade.¹

The second policy problem which influences a government's choice between trade and protection is its national industrial development strategy. Over recent years governments in market-oriented economies have tried to develop a broad range of industrial adjustment assistance programmes not only in order to cope with changing trade patterns but also in order to achieve domestic economic and social objectives.² Among other objectives these

programmes usually endeavour to create or to maintain employment opportunities by means of capital grants to firms which expand in slow-growth regions, financial assistance to troubled firms in declining industries, subsidies to encourage research, development and innovation in expanding sectors, government procurement policies, and last, but by no means least, a plethora of protectionist measures including tariffs, quotas, and other non-tariff barriers.

Although industrial development policy and trade policy both create adjustment problems, there are fundamental differences between them. First, industrial development policy is decidedly nationalistic, not internationalistic in its orientation. Second, trade policy is designed to promote international development through increased trade. Industrial development policy is intended to foster the economic opportunities available to domestic residents, and consideration is given to its impact on trade volumes only as international agreements constrain the use of protective measures or as certain assistance policies might invite foreign retaliation.³ Third, whereas trade policies have tended to neglect the domestic economic costs of adjusting to any realignment of trade patterns, industrial development policy must face the issue head-on. This neglect of domestic costs has been significant in retarding trade liberalization and in the failure to counter non-tariff protectionism, and hence, in restricting the international gains from trade.

If some industrial sectors in a country have excellent growth potential while others are declining, the key adjustment problems which must be tackled are how to decide which firms in the declining sectors ought to receive government financial assistance, how to determine the magnitude of that assistance so as to avoid wasting resources, how to compensate any displaced workers for their expected income loss, and how to reduce the overall economic

costs of adjustment by encouraging the re-employment of displaced workers in an economically efficient manner. The trouble with most adjustment assistance programmes, and where they run into conflict with trade policy, is that they are seldom designed to promote an economically efficient use of the country's resources. In the Canadian context, for example, there is not one government programme which alters the amount of its financial assistance to take into account the extra economic cost of using domestically produced goods which are protected from international competition when less expensive imports may be available.⁴ Nor do these programmes recognize that Canadians as a whole can be made worse off from industrial financial assistance intended to delay layoffs if the economic benefits from retaining jobs in place are less than the economic costs of the continued operation of the firm.

Industrial adjustment and worker adjustment assistance can improve the wellbeing of all Canadians, and can avoid interfering with trade policy, only if the magnitude of the assistance is geared to the economic costs and benefits of the actions taken. The largest component of the economic benefits of delaying layoffs, for example, is usually the saving in economic costs from postponing worker displacement. When the latter is accurately estimated, it provides a benchmark for the amount of financial assistance the government should consider offering the firm to keep it in business. By the same token whatever subsidy or assistance is paid to encourage the re-employment of displaced workers should be based on the net economic benefits derived therefrom. These benefits will obviously be greater if re-employment occurs in expanding industrial sectors rather than in declining sectors which are reliant upon various protective measures for their continued survival, and an economically efficient re-employment programme ought to vary its incentives accordingly.

The third policy problem mentioned above was labelled political platform policy. Elected governments need to retain office in order to implement their objectives, and to this end they pursue policies which are likely to improve the probability of re-election. The simple fact is that workers and the owners of capital all vote, and no elected politician can ignore the adjustment problems caused by trade policy or industrial development policy for his constituents. In order to foster international trade or to achieve other socially desired objectives, therefore, politicians must adopt policies designed to mollify the lobbying efforts of organized labour groups and business associations who generally favour protectionist policies.⁵

Political strategists ought to recognize that well-designed worker adjustment assistance programmes can be a useful plank in the party's platform. Problems can arise, however, if only a veneer rather than a solid plank is utilized. The U.S. Trade Expansion Act of 1962 encountered difficulty, for example, because the eligibility criteria for worker adjustment assistance were made so strict that "in the first eight years of its life no workers or firms were found to be eligible."⁶ Some programmes in Canada serve to forestall layoffs, but without regard to economic cost, while others, which are supposed to compensate laid-off workers, provide assistance in an efficiency-negative manner. Work disincentives are frequently built into these programmes as a result of taxing back the compensation payments from employment earnings which are received while displaced workers are on the programme.

Trade liberalization offers long-run benefits for consumers and workers in general at the short-run cost of higher unemployment for displaced workers and capital. It is evident that the degree of trade liberalization a politician is willing to recommend is constrained by the potential income

losses that workers and capital owners in his constituency perceive they will suffer. For any given degree of trade liberalization already undertaken by a country, adjustment assistance programmes can be designed to reduce the private and economic costs of adjusting to changing trade patterns. In addition, the availability of well designed programmes makes the further lowering of trade barriers by a country both politically feasible and economically attractive. They similarly also provide an alternative policy to the use of non-tariff barriers as have been employed in recent years to forstall adjustment to the declining international competitiveness of industries such as clothing and footwear. As developing countries and consumers continue to press the developed countries for increased trade in addition to foreign aid, adjustment assistance programmes will serve to enhance the ability of countries like Canada to adjust to changes in the international economic order.⁷

The focus of this paper is exclusively on the adjustment process to which workers are exposed and on the private and economic costs of that adjustment.⁸ Worker adjustment assistance programmes should aim to reduce the overall economic costs of adjustment and to compensate individuals for the private costs of being laid off. To design such programmes estimates are required both of the costs borne by the economy as a result of worker adjustment and of the expected private income losses of workers directly displaced. The magnitude of government financial assistance either to support troubled firms or to encourage re-employment should be based on the reduction in the economic costs of worker adjustment. "Positive" adjustment assistance of this kind is consistent with an efficient use of the country's resources and with a rational international trade policy. The appropriate magnitude of government financial assistance to compensate workers for being laid off is a separate calculation and relates to considerations of both equity and efficiency.

There are a number of important reasons for focusing on worker adjustment assistance. Foremost among them is the fact that affected workers are more numerous than capitalists and can create more serious political opposition to government policy changes. The likely costs of worker dislocation as a result of increased foreign competition, trade liberalization or industrial development is frequently used as an effective political lever not only by organized labour but also by business firms and business associations which have become dependent on protection and government largesse. A second reason for exploring worker adjustment assistance in particular is that the economic benefits derived from delaying layoffs or encouraging earlier re-employment have not been well defined empirically in the economics literature. Nor has the distinction between the private and the economic costs of laying off workers been made clear; this, of course, is crucial for defining considerations of equity versus efficiency. These issues pose challenging conceptual and empirical problems. If these problems are not solved satisfactorily, then the term worker adjustment assistance will remain an interesting, but not a very practical, means of furthering the objectives of both trade and industrial development policies.

In June, 1978 the Council of the Organization for Economic Cooperation and Development, meeting at a Ministerial level, approved a number of resolutions pertaining to "positive" adjustment policies. Eight of the points which are directly related to the problems addressed in this paper are summarized as follows:

- (1) There is a need for well-designed short-term, selective policies to cushion the impact on labour of industrial adjustment.
- (2) These policies should be designed to achieve their goals while minimizing the loss in reduced economic efficiency.
- (3) Adjustment assistance policies for labour must be short-term in nature and must not permanently preserve unviable industries or impede trade.

- (4) The emphasis of any special employment policies should be to assist those directly affected and prepare them for new types of employment.
- (5) Policies should be carefully designed to ensure that over time, they do not unduly affect attitudes to work and willingness to accept necessary change.⁹
- (6) Policies should facilitate movement of labour and capital from inefficient productive activities to those which possess a comparative advantage.
- (7) In the absence of such policies externalities may exist in the labour market which could lead to a divergence between private and social costs and benefits and thus create distortions in resource allocation.
- (8) Adjustment assistance programmes should operate to promote marginal firms in growth industries rather than support declining industries.¹⁰

These resolutions indicate a clear set of objectives for a positive adjustment policy and the general direction of policy formulation. However, it is also clear that most discussions of adjustment policy do not contain operational definitions for terms like economic efficiency, economic externalities, economic distortions, economic costs or economic benefits. Most economists, generally speaking, have a good theoretical idea of the meaning of such terms, but making them operational is essential if positive adjustment assistance is to become a reality. The remainder of this paper is directed at achieving this end.

Section 2 of this paper begins with an examination of the adjustment problem facing displaced workers. A distinction is made between the private and economic costs of laying off workers, this distinction being essential to the subsequent policy discussion. Estimates of the durations of unemployment, employment and the long-run equilibrium probability of laid-off workers being subsequently at work are provided for one region in Canada to

indicate the seriousness of the adjustment problem. Section 3 is concerned with the decision process the government should follow in choosing between alternative policies for providing worker adjustment assistance. A framework is also established for determining the appropriate magnitude of government assistance under specific programmes. In Section 4 estimates are provided of the economic and private costs of workers' losing their jobs and of the gross economic benefits of the alternative worker adjustment assistance programmes discussed in section 3.

2. The Private and Economic Costs of Worker Adjustment

(a) The Private Costs of Adjustment

When workers are permanently laid off for whatever reason, some retire and the rest are usually unemployed for a spell before finding subsequent employment. Their next job may be less permanent, may offer less favourable working conditions and may pay less than their previous employment. There may also be a loss of pension benefits. If their subsequent employment is temporary, then there will be another spell of unemployment, another job, and so on such that the probability of their being at work following layoff may be less than before layoff. The reduced probability of being at work plus any reduction in wage rates combine to create expected income losses for displaced workers. These income losses constitute part of the private costs of being laid off, and their magnitude is specific to the workers directly affected.

The expected income losses can be estimated as follows. Before being permanently laid off, workers receive their net-of-income-tax earnings when employed, and if they are unemployed for part of the year, they receive their net-of-income-tax unemployment insurance payments plus the value of the time spent on non-market activities. This combination of net-of-tax earnings from

employment, unemployment insurance benefits, and value of leisure is referred to as the workers' full private income before layoff. As the proportion of time spent employed and unemployed, and the wage rate earned, are altered after layoff, the expected full income also changes. The difference between the two full income streams before and after layoff measures the expected income loss over time.

The factors affecting the change in wage rates and in the proportion of time at work relate to the characteristics of the job lost, the characteristics of the workers, the region, and the economic conditions at the time of layoff. The permanent workers in these firms are often in quasi-fixed supply. That is to say, they have become specialized in their jobs through lengthy and specific on-the-job training, and their productivity and wage rates are often higher in their current employment than in alternative employment. Because they are often older, moreover, their geographical and occupational mobility is more limited. The costs of adjustment for such displaced workers are likely to be positively related to their age. Other socio-economic characteristics like sex, marital status, the number of dependents, and skill level also influence the speed and extent of adjustment and should be taken into account when estimating expected income losses.

The displacement of workers in large, heterogeneous labour markets generally results in shorter periods of unemployment and a smaller change in earnings. Proximity to an urban centre also ensures a greater demand for housing so that the prices of homes do not decline as much if a firm is forced to shut down and to lay off its workers. Hence workers are less likely to face a capital loss on the sale of their homes if they have to move to find another job.

The private adjustment costs are usually larger in regions which are

relatively more isolated from other large labour markets and which lack diversity in the type of skills demanded. If a major firm in the community shuts down, the number of alternative job opportunities is more limited, and workers may have to migrate in order to find employment. They then also incur the costs of moving. Potential migrants might suffer such a sizeable capital loss on their homes as a result of the decrease in the demand for housing, that they cannot afford to move to an urban centre where housing prices are substantially higher. These factors, combined with family relations and social ties to the community, discourage migration to other labour markets and raise the costs of adjustment for both workers and the economy.

Not every displaced worker need be worse off. Some workers who have been employed in declining firms might find more lucrative employment in expanding sectors elsewhere. It remains an empirical problem to determine the magnitude of the expected income loss. Even in more isolated communities not everyone need be worse off as a result of the decline in the demand for housing services. Individuals who rent their accommodations, on the one hand, are better off if rental prices fall or do not rise as quickly; their landlords, on the other hand, suffer a capital loss. The timing of capital losses also varies from one home-owner to another. Those who decide to move out of the community soon after a firm shuts down must bear an immediate capital loss; their job prospects must be sufficiently good to offset the relatively more expensive housing costs which they will encounter elsewhere. Older workers who lack marketable skills are more likely to remain in the community. They do not bear an immediate capital loss, nevertheless at a future date they, or their heirs, will be worse off by the decrease in the value of their estates.

The private adjustment costs are also closely related to economic conditions in the region and the economy at large. If the unemployment rate

is initially low and the demand for labour is growing rapidly, displaced workers can expect to experience a shorter duration of unemployment, a longer duration of subsequent employment, and to have a smaller income loss.

(b) The Economic Costs of Worker Displacement

The economic cost of permanently laying off workers is equal to the difference between the expected economic value of labour in the economy with and without the layoff. The economic value of employed time can be approximated by the gross-of-tax wage rate which in turn should be roughly equal to the marginal productivity of labour. The economic value of unemployed time is the value of time spent on non-market activities. While unemployment insurance payments are included in the private income of workers, these payments are considered transfers from the point of view of all persons in the economy, and hence, are not included in the economic value of unemployed time. By the same token personal income taxes are excluded from the private income of workers, but are included in the economic value of employed time. The consistent treatment of taxes and transfers is an essential element of the methodology developed in this paper and is crucial to the distinction between private and economic costs.

In a later section two models are used for the estimation of the economic costs of displacing workers and of the corresponding economic benefits from delaying that displacement. The models are described more fully in Appendix A. One is a partial equilibrium model which focuses on the change in the economic value of time of only the workers directly affected. When workers are permanently laid off, some will retire, others may find employment straight away, but most will experience some unemployment. As was indicated previously, it is possible to estimate the probability that displaced workers will be at work at any point in time following layoff. The changes in their employed and unemployed time can then be multiplied by their respective economic

values to estimate the change over time in the economic value of the workers' time. In most cases, the lower probability of being at work and decrease in wage rates after layoff will combine to reduce the economic value of labour below its value before layoff and thus to create a negative labour externality which is the economic cost of worker adjustment.

The central weakness with the partial equilibrium model is its implicit assumption that there are no other externalities created in the rest of the labour market when these workers are laid off. This will occur only if the displaced workers do not affect the job prospects of other workers. Although such situations could arise, it is more likely that laid-off workers would compete with other members of the labour force and would thus increase their duration of unemployment as well. Even if all the displaced workers were immediately to find alternative employment, therefore, the private costs of adjustment would be borne by others and the economic costs of adjustment would still exist.

In order to capture the overall response of the regional labour market to a disturbance like worker layoffs and to estimate the associated negative labour externality, a general equilibrium model has been constructed. This model simulates the changes in unemployment, net outmigration, labour force participation, the ability of other employers to fill existing vacancies, and secondary employment in the region compared to what would otherwise have happened without the disturbance.¹¹ The economic value of the time of those workers who are finally induced to adjust their supply of labour to the region, thereby bringing the labour market back to equilibrium, determines the negative labour externality created by the layoffs and the economic cost of adjustment.

Although any decrease in housing prices as a result of shutting down a firm in a more isolated part of the country may create a financial loss for home-owners, it does not create an economic resource loss. Because the stock of housing is fixed in the short run, there is no release of resources into the

economy. -The only economic cost from a regional perspective would be the forgone labour externality which might have been generated in new housing construction, and this forgone externality would be captured by the induced change in secondary employment in the general equilibrium model.

(c) The Expected Durations of Unemployment and Employment and the Probability of Being at Work

In the estimation of both the expected private income loss to laid-off workers and the economic costs of adjustment using the partial equilibrium model, the expected durations of unemployment and employment in other jobs, as well as the long-run equilibrium probability of displaced workers subsequently being at work, are important variables. Besides their use in estimating the private and economic costs of adjustment, these variables also indicate the seriousness of the adjustment problem. Organized labour groups and businessmen seem to get considerable political leverage from arguments which stress the dire consequences of worker layoffs. The estimates presented below suggest that although displaced workers certainly suffer some hardship, the adjustment problem is manageable.

Since the major concern of this monograph is with the choice facing the Canadian government between trade or protection, a region in Canada has been chosen for analysis which is especially susceptible to foreign competition from less developed countries. The rate of growth and development in these countries is very sensitive to their level of exports so from the point of view of international trade policy the decision to permit increased trade or to protect trade-sensitive industries has serious consequences. These same industries also pose problems for industrial development in Canada. This is particularly true for the weaker, more labour-intensive manufacturing sectors such as clothing, footwear, knitting and textiles, not only because they face